The Role of the Ancient Sudan in Enriching The Human Civilization : A perusal of the Archaeological Record

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Abstract:

Ancient Sudan played an important role in the development of the human civilization. Of the most outstanding Sudanese contributions in the intellectual and technological development of the Old World, were writing (Meroitic Inscriptions), invention of pottery and iron-working. It has been evident that ancient Sudan was the first place in Africa where pottery was manufactured (ca.8650B.C). The expertise acquired by ancient Sudanese (Kushites) as a result of long experimentation with the pyrotechnology of pottery (ca. 8650-3000 B C) and copper (cm 2500-1500 BC.) warrants their rapid inception of metallurgy. The assumption that the Kushite (Meroitic) Kingdom being the first state in Africa where iron was smelted and manufactured has been confirmed not only by radiocarbon dates but also by well-established industry in comparison with the contemporary African countries.

دور السودان القديم في إثراء الحضارة الإنسانية : قراءة في السجل الأثري

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مستخلص :

لعب السودان القديم دورا مهما في تطور الحضارة الإنسانية .وإجترح السودان العديد من المنجزات الفكرية والتقنية في العالم القديم لعل من أبرزها ابتداع نظام الكتابة الأبجدية (الخط المروي الإختزالي)، إختراع الفخار و صهر و تصنيع الحديد .

وأثبت الشاهد الأثري بكل تفصيلاته أن السودان القديم هو أول البلدان الإفريقية التي صنعت الفخار (8650 ق.م). ولا ريب أن معرفة قدماء السودانيين المبكرة لتقنية الفخار في الألف الثامن قبل الميلاد و بخاصة عملية التحكم في درجة الحرارة و استخدامها الأمثل بواسطة الأفران مكنتهم لاحقا من الإستيعاب السريع لتقنية المعادن (النحاس و الحديد) و الإستفادة منها في شتى مناحي الحياة .و تجدر الإشارة إلى أن مملكة مروى السودانية هي أول دولة في أفريقيا إستطاعت أن تقوم بعملية تعدين و صهر و تصنيع الحديد (القرن السادس عشر قبل الميلاد) إستنادا إلى التواريخ التي تم الحصول عليها بواسطة كربون 14 المشع، فضلا عن الأدلة المادية المتمثلة في المصنوعات الحديدية المتنوعة و الكميات الضخمة من نفايات الحديد التي عثر عليها في أمكنة متفرقة من البلاد . ويحاج هذا المقال -إرتكازا على أسانيد أثرية- بتفرد السودان ريادة و تطويرا في المجالات الفكرية (الكتابة) و التقنية (صناعات الفخار و الحديد) التي تقف شاهدا على تاريخه المجيد في أفريقيا و العالم القديم.

These achievements culminated by the acquisition of local alphabets (180-170 B.C.) the meaning of which, in most instances, remains a mystery. This paper argues for the pioneering cultural achievements of the ancient Sudan and hence enlightening us about its glorious history which stands as a major landmark in Africa and the Old World.

Introduction:

Ancient Sudan played an important role in the development of human civilization. Of the most outstanding Sudanese contributions in the intellectual and technological development of the Old world, were writing (Meroitic Inscriptions) ,inventory of pottery and iron- working. It has been evident that ancient Sudan was the first place in Africa where pottery was manufactured. The expertise acquired by ancient Sudanese (Kushites) as a result of long

experimentation with the pyrotechnology of pottery (ca. 8650±65 B.C.) (Sadig, 2012:139) and copper (2500-1500 B.C.) warrants their rapid inception of metallurgy(Fig.1).

The assumption that the Kushite (Meroitic) Kingdom being the first state in Africa where iron was smelted and manufactured has been confirmed not only by radiometric determinations but also by well established iron-industry in comparison with the contemporary African countries. Moreover, the Meroites developed a pioneering system of writing in Sub-Saharan Africa whose Language still remains a mystery. This research argues for the pioneering cultural developments of the ancient Sudan and hence enlightening us about its splendid history which stands as a major landmark in Africa and the Old World.

Sudan witnessed the rise of various civilizations that played important roles in the history of the world since the dawn of the prehistoric period. Ancient Sudan had known the 'state' and the legitimate authority for over four thousand years ago when the first Kushitic kingdom (Kerma) had seen the horizon (2500-1500 B.C.) . The second Kushitic kingdom (Meroe) appeared in the middle of the Nile Valley since the earliest beginning of the 10th century B.C.(900 B.C.-A.D350).During the course of time this Kingdom occupied the northern Sudan and extended its suzerainty to rule Egypt in the mid of 8th century B.C. It became a formidable power including vast regions extending from the Blue Nile (Jebel Moya) in the south eastern of Sudan to the shores of Mediterranean littoral in the north (Egypt).

The subsequent archaeological excavations have provided us with numerous information about the significant intellectual and technological achievements of ancient Sudanese including the manufacture of pottery, metal-smelting (copper and iron), art of engraving, architecture, music .. etc. These achievements had been culminated by the invention of the alphabet (Meroitic cursive

writing). However, the present research gives a concise account about the most remarkable accomplishments of Sudanese in the history of the Old World (pottery-making, iron-working and the invention of writing).

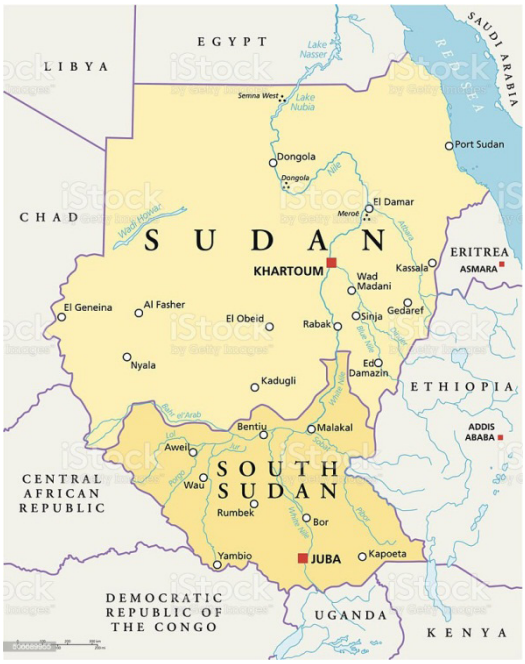


Fig.1: Map of Sudan (google.com)

1-Pottery:

It is noteworthy that the potter's craft even in its initial beginning does not seem to be primitive in the absolute sense of the word. Techniques and aesthetics of pottery were inherent in Man's feeling and possibly in his concepts. Man hands were already skilled in grinding and drilling techniques of shaping complicated forms and executing decorations varied and refined from stone shell and bone.(see Khabir1981:7).

When Man gained adequate knowledge and experience in preparing and mixing clays he transferred his acquired knowledge and skill to the newly-gained material. Moreover, the development of

the pyro technology which it stimulated leads towards the inception of metallurgy and in this respect the determination of firing temperature is essential. From the above cited evidence, it is apparent that the idea of pottery –making had deeper roots in Man's technological history which can be traced back to the Mesolithic period and it has traditionally associated with the "Neolithic" and often viewed as index fossil of Man the Farmer(see Daniel 1973:58).

The earliest radiometric dates for pottery-making in Sudan have been derived from Khartoum Province namely from the Mesolithic sites of Sarurab2(١٥°56 'N,32 32'E) (Khabir 1981) and Saggai-l(15° 57'N,32' 44E))(Caneva 1983)(Pl.1). The site of Sarurab2 was excavated by the present writer. This locality yielded material culture of Early Khartoum tradition Two calibrated radiocarbon dates came from square 27, leve3 and level4, c.30 cm and 40 cm below the surface the surface respectively. The oldest date (L4) being in the magnitude of (8817-8457 B.C.) (See Sadig 2012:139) the artifacts recorded in association with the charcoal producing levels include various types of wavy line pottery, stone tools and a complete barbed-bone harpoon with a grooved butt. The charcoal was in close association with the cultural material, adds to the credibility of these two dates for Sarurab2 of the Early Khartoum tradition (Khabir 1981:124-172).

A single sample based on Nile Oyster shell dated Saggi-1 Mesolithic site to 8130± 110 B.C. (Lab.no not stated). The date has been considered by the excavator as too early . Moreover, the association of the dates with the pottery and other remains of the Early Khartoum tradition have not been provided (see Caneva 1983:149).

Radiocarbon dates (based on mollusca) for the Mesolithic sites in the River Nile state, Atbara region(17° 35'N -17° 59'E) (Abu Darbein: uncalibrated, 8640-7700 B.C., EL – Damer: calibrated, 7040-6180 B.C. and Aneibis: 7910-5540 B.C.) are apparently younger than the ones obtained for Sarurab2 and Saggai-1

sites in Khartoum Province (See Haaland 1995:47-50) .It is noteworthy that subsequent excavations have revealed varied pottery types dated to the Neolithic period in the magnitude of the fifth to the third millennium b.c. in Sudan and peripheral territories(Pl.2)

From chronological standpoint it seems that the overall radiocarbon dates for the Mesolithic pottery from central and northern Sudan are generally in accord with those of the earliest pottery-producing sites in Saharan Africa (Ti-n-Torha site, Libya: 7400± 60B.C. Barich et al 1984:413, Bir kiseiba, Egypt:7870± 380 B.C and 6970±130 B.C.)(See Close 1993:32).

However, the oldest radiocarbon dates for a pottery-horizon in Saharan Africa, a single uncalibrated date- based on charcoal- from Temet site in Niger providing an age of 7600±100 B.C. (Close 1993:32). On the other hand, the earliest date for pottery bearing –sites in the Near East have been encountered in Iran (Ganjedareh: 7000 B.C.) and Turkey (Catal Huyuk: 6300B.C.) (Wendorf and Schild 1984:410).

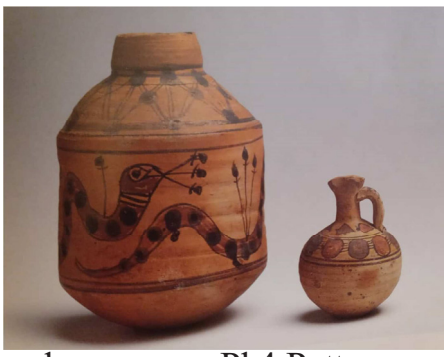
In the light of the absolute date from the oldest sites in Sudan and the Great Sahara, it seems much more likely that the wavy line pottery and other wares of the Early Khartoum Mesolithic tradition were the early independent development in Africa and Near East (Pls:1-2).

Pl.1 Pottery fragments of Khartoum Mesolithic – Pl.2 Pottery fragments of Khartoum Neolithic
(Khartoum Province)

The first Kushitic Kingdom (Kerma) developed the manu-

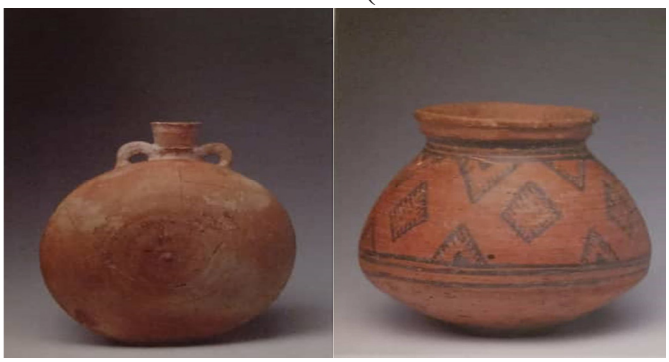
facture of the polished and black- topped red ware to degree of refinement never previously seen(Pl:3) .The second Kushitic kingdom (Meroe) witnessed the zenith of the Sudanese pottery industry in the form of shapes and decorations some of which closely resemble the gouard- vessels known as "bukhsa" used today in several rural districts in Sudan (Shinnie 1990:72,114 ,PL, B-6)(Pl:4).

Pl.3 Pottery vessels :Kerma Kingdom



Pl.4 Pottery vessels : Meroitic Kingdom

During the Christian era (543-1504 A.D.) the Sudanese pottery industry had maintained its high technical standard by the wide use of wheel-throwing and the production of distinct shapes and decorations (Chlodnicki 2015:261)(Pl:5) The subsequent Islamic archaeological sites (651-1820 A.D.) produced local hand- made ware in association with imported examples (white and red) embellished with relief and painted decorations(Pl:6) Glazed wares have also been found (see Adams 1986: 477-524,540-560).



Pl.5 Christian Pottery: Old Dongola –Abkur site

Pl.6 Islamic Pottery: Funj Kingdom

2- Iron-industry:

The idea of iron –smelting and manufacture was first known in western Asia (Anatolian Plateau) in the second millennium B.C. The first appearance of iron in the Nile valley was in concomitant with the Assyrian invasion to Egypt (671 B.C.). Large mounds of iron – slags were found within the boundaries of the town of Meroe. The raw material for the iron-smelting was easily available in the ironstone formation which caps the stone hills over much of the northern Sudan in antiquity in the island of Meroe (Shinnie 1971 :160-161-1990:110-111).

When Meroe was founded there must have been plenty of wood for the fuel necessary to smelt iron in the little depression south – east of the town (Arkell 1961:147). The archaeological excavations have brought to light a radiocarbon date indicates that the first appearance of iron in Sudan had seen the horizon in the six century B.C. The radiocarbon sample (based on charcoal) came from the layer no.16 of the tested –pit(M.50) inside the royal town of Meroe. It was associated with typical Meroitic pottery and this adds to the credibility of the sample (see Khabir 2000: 42).

The knowledge of iron-smelting spread to several districts in the north , central (Upper Nubia), western(central Darfur) and

south-eastern (Blue Nile Province-Jebel Moya) Sudan from the 4th century B.C. to the first century A.D(Pls.7-8).

Finds made of iron were reported from several Meroitic localities. These include ornaments (rings, necklaces, bracelets , anklets. Kohl-sticks, and forceps,) agricultural equipment (hoes and shovels), weapons (knives, axes, spears and arrowheads) and galvanized tools (scissors and knives) for surgical operations (Khabir 2000:46).

It seems that ancient Meroe was the center from which the idea of iron-smelting spread throughout Sub-Saharan. Africa This probability becomes much more plausible as the radiometric dates for the production of iron in Nigeria (Taroja) and north-west Tanzania(KM2 and KM3) are relatively younger (5th century B.C.) than the ones obtained for the town of Meroe (6th century B.C.) . It is to be noted that the famous iron-industry of Meroe caused the British philologist Sayce to say:«Meroe must have been once the Birmingham of ancient Africa, as indeed it must« (See Arkell 1961:147 and Adams 1977:301) .

The present archaeological evidence shows an extensive use of iron-products during the late dates of the Meroitic Kingdom. Nonetheless, this new technology did not bring about a major and drastic change in the socio-political structure of the state. The reasonable explanation for the aforementioned phenomenon has two facets and are as follows:-

Firstly, iron-industry did set foot in the Meroitic kingdom as a modernized enterprise and not deeply embedded in the suite of the Meroitic society. Secondly , the political upheavals struck Meroe in its latest eras inhibited the conversion of iron-industry into a national project for the purpose of the social and economic development of the state.

Pl.7 Iron slags : Meroe , Begrawiya

Pl.8 Iron Foundry : Meroe , Begrawiya

3- Meroitic Language:

The Meroitic Kush was certainly a civilization with rich culture. During the earliest epochs of the Meroitic Kingdom Egyptian writings were evident in the settlements of the state in lower and upper Nubia. Later, in the second century B.C. the Meroites developed a writing system of their own in which they wrote their own language . They used twenty – three signs in their writing in two forms: hieroglyphic, using, in modified form , a small selection of Egyptian hieroglyphs, and cursive, an abbreviated though not properly cursive form (Shinnie 1990: 114)(Fig.2).

During the Meroitic times the official language of the state was Egyptian, though Meroitic may have been the colloquial speech. The earliest Meroitic inscription dated back to the rule of Queen Shanak dakhete (180-170 B.C.). found in a temple at al Naqa site (Shinnie 1971: 134).

The Meroitic Language is different from the Egyptian one. The latter comprises of 24 signs and hundred of pictographs. Moreover, Egyptian hieroglyphic is devoid of the vowel-letters.

It seems much more likely that the long discontinuity with Egypt coupled with the intention of the Meroites to create a local cultural identity motivated them to invent their own alphabet at the second century B.C. (see infra).

Several attempts have been done to decipher the Meroitic language (e.g. Brugsch 1987, Erman 1897, Griffith 1929, Hintze 1995, Mahmoud 1969 and Haycock 1974). Yet, they are all highly speculative. This is due to the paucity of words so far known. The phonetic values of the Meroitic signs can be read with reasonable certainty, but the meaning of whose words cannot be understood(-see Khabir 2005:15-18).

The failing of finding a bilingual text, of which the most likely would be one in Egyptian and Meroitic, the absence of similar living languages (Shinnie 1971:140)as well as the lack of an

appropriate scientific approach, are factors hindering the full decipherment of the Meroitic language .

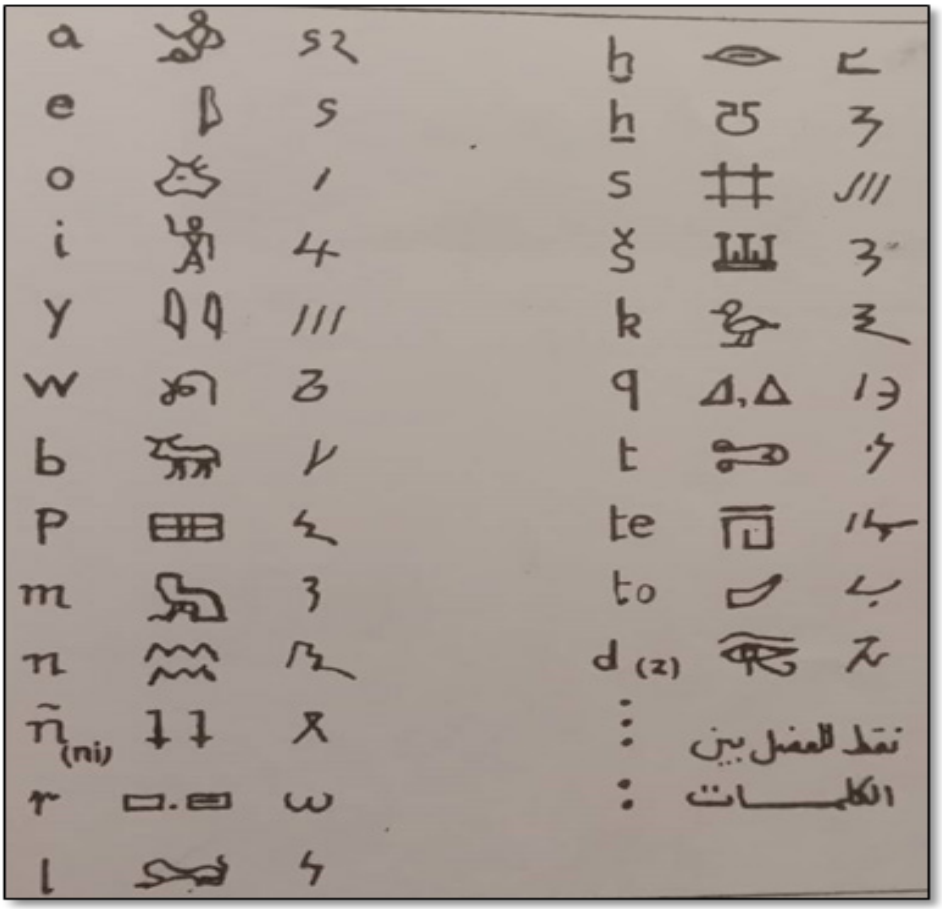


Fig.2 The Meroitic alphabet

4- Conclusion:

From the above mentioned information, it is clear that ancient Sudan played an outstanding role in the development of human civilization on both technological and intellectual levels since times immemorial. It is hoped that these prominent achievements could provide the present Sudanese with a spiritual motivation and inspiring them towards building a flourishing state recalling their glorious past.

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