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Cultural development in the final hunting-gathering horizons of the Middle and Upper Nile Valley

Introduction

"Is it unreasonable to suggest that in the Wavy Line Culture we have a Mesolithic culture, almost the first true Mesolithic to come to light in the Nile Valley?" This question was posed by Arkell (1949: 111) when he first defined the cultural context of Early Khartoum.

It has now been established that the term "Wavy Line Culture" can define only the earlier phase of the final hunting-gathering horizons. Arkell himself (1972: 221) recognized that the late horizon of Early Khartoum was characterized by unburnished dotted-wavy line ware and not by wavy line incisions. A stratigraphic sequence of the two phases is now well known at Shaqadud (Marks et al. 1985; Caneva & Marks 1990) as well as at Islang 1 (Mohammed-Ali 1982), El Qoz (Mohammed-Ali 1985) and Kabbashi (Caneva 1989).

As the diffusion of pottery decorations is certainly more likely to have been due to movements of ideas rather than to migrations of entire groups of people, the term of "Horizon-Style" is to be preferred to that of "Culture Area", as suggested by Hays (1976).

More appropriately the term "Mesolithic" rather than "Wavy Line Culture", has been used to identify the final hunting-gathering horizons in the Middle and Upper Nile Valley. However, this definition has never been applied to other African prehistoric contexts, except for the Sudanese one. The term was, in fact, created to define the final European hunting-gathering cultures, which generally had neither a production of pottery, nor semi-permanent settlements. Consequently, the term "Mesolithic" was rejected by several scholars, particularly the French speaking ones, who worked in the near-by Sahara desert (cf. among others Hugot 1980: 625).

Thus, "Early Khartoum" seems to be the most appropriate term, as it can clearly substantiate a particular horizon limited to a specific area, but extended enough to define a characteristic cultural context. Whether Khartoum is the origi-

nal area of diffusion now seems doubtful, as the Atbara region revealed a consistent quantity of dates earlier than those from the Khartoum area (Haaland & Magid 1992).

Early Khartoum evidence

The research on the Early Khartoum sites comprised within the concession area of the Italian Mission for Prehistoric Research in the Sudan of the University of Rome "La Sapienza" was extended to a study on the distribution of Early Khartoum materials over a larger territory (Fig. 1).

The combination of study of the materials at the Khartoum National Museum with on-site fieldwork, which included the excavation of archaeological deposits and analyses of the material culture, offered information at different levels. The former provided more general data on the composition of the cultural material of a given horizon and its horizontal distribution over a wide area; the latter offered more detailed study samples from a more concentrated area with stratified contexts.

The materials from the National Museum are from surface collections probably made rather randomly, with the means available in the 1940's and 50's. Nevertheless, they come from a large territory, included between the Khartoum area and the Egyptian border to the north.

On the other hand, the materials from the excavations of the Italian Mission result from stratigraphic sondages; the debris was sieved through a 2x2 mm mesh and all lithic, ceramic and organic materials were collected.

Geographic distribution

The study carried out at the National Museum in Khartoum included the classification of the lithic and ceramic assemblages collected by some of the then officers of the Sudan Antiquities Service, such as A. J. Arkell and O. G. S. Crawford. The purpose of the study was to define the cultural features common to the different sites and to consider the geographic extent of the Early Khartoum facies in the Middle and Upper Nile Valley.

All the collections were considered and 16 different assemblages were identified (Table 1). They were attributed to the Early Khartoum horizon according to the combination of at least two of the following features:

1. definition given by the collectors and noted on the cards in the files of the National Museum;
2. occurrence of wavy line and dotted-wavy line pottery;
3. occurrence of unburnished impressed pottery;
4. occurrence of microlithic industry.

Eight sites were already included in Arkell's list (1949: 116), even though their materials had never been described before (on Tab. 1 they are marked with an asterisk). As for the geographic distribution, all sites are included between Jebel Delgo (4742), north of Dongola and the Khartoum area to the south and

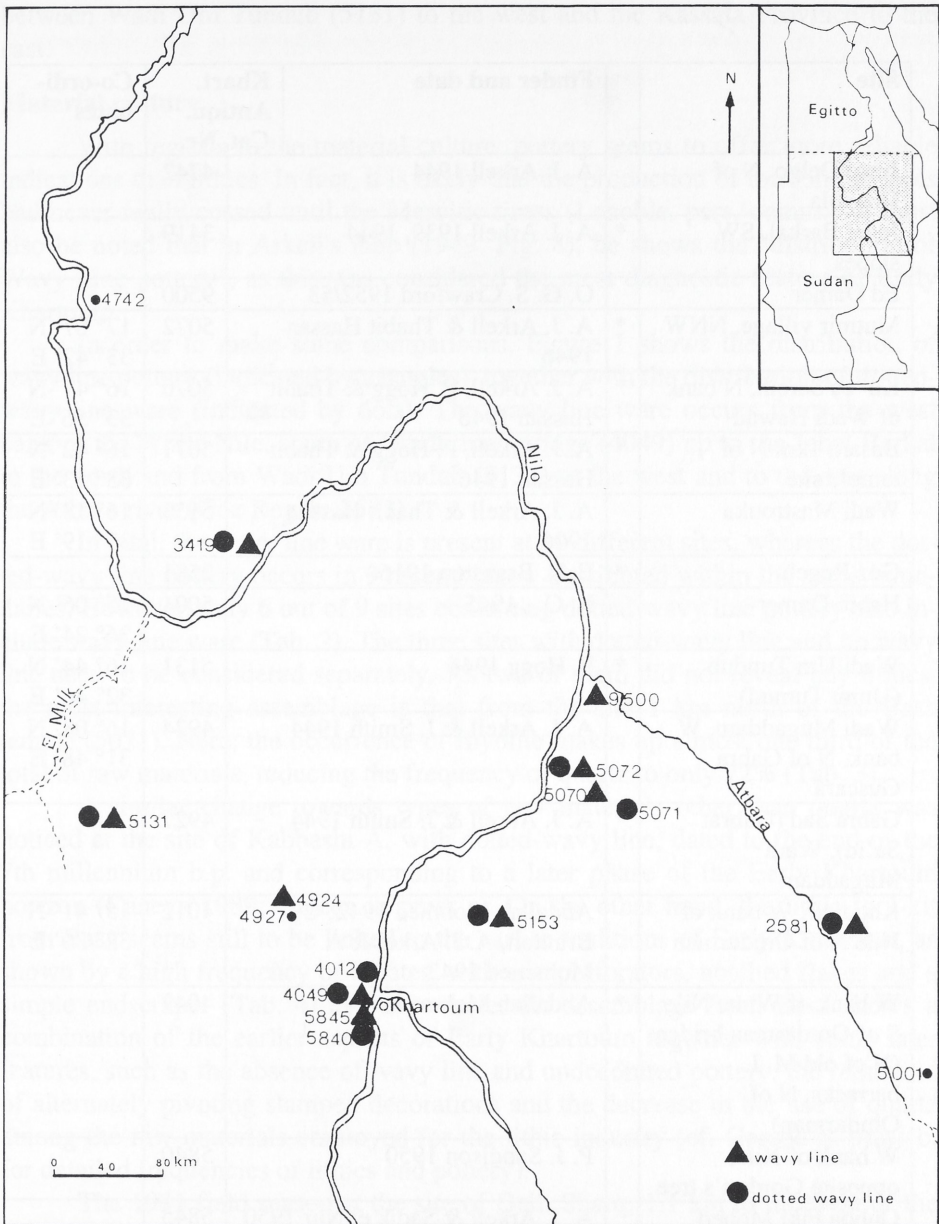


Fig. 1. Distribution of wavy line and dotted-wavy line pottery.

Site	Finder and date	Khart. Antiqu. Cat. Nr.	Co-ordinates
Jebel Delgo, N of Dongola	A. J. Arkell 1944	4742	
Jebel Barkal, SW slopes	* A. J. Arkell 1939, 1944	3419	
Ed Damer	O. G. S. Crawford 1952/53	9500	
Mutmir village, NNW	* A. J. Arkell & Thabit Hassan 1946	5072	17° 07' N 33° 42' E
Ku' es Sereih, N bank of Wadi Hawad	* A. J. Arkell, P. Hogg & Thabit Hassan 1946	5070	16° 47' N 33° 56' E
Basam 1km N of temple site	* A. J. Arkell, P. Hogg & Thabit Hassan 1946	5071	16° 42' N 33° 53' E
Wadi Mastrouka	A. J. Arkell & Thabit Hassan 1946	5153	16° 18' N 33° 19' E
Goz Regeb	* E. R. Branston 1916	2581	
Habib Damer	R. G. , 1945	5001	15° 06' N 36° 24' E
Wadi Um Tundub (Umm Tumud)	* P. Hogg 1946	5131	16° 44' N 32° 46' E
Wadi Mugaddam, W bank, N of Gabra Guscara	A. J. Arkell & J. Smith 1944	4924	16° 08' N 31° 48' E
Gabra Sad (Gabrat Sa'id), Wadi Mugaddam	* A. J. Arkell & J. Smith 1944	4927	
Khudjeir, W bank of Nile N of Omdurman	Abdallah Mohmed 1942; G. Brunton, A. J. Arkel & A. Mohamed 1943	4012	15° 41' N 32° 30' E
W bank of White Nile, S of Omdurman bridge (N of old M. I. barracks, N of Omdurman)	* Abdallah Mohmed, 1942	4049	
W bank of Nile, opposite Gordon's tree	P. J. Sandison 1950	5840	
Qubba Fiki Mohed Nur	A. J. Arkell & Sadik el Nur 1950	5845	

Table 1. Early Khartoum sites.
(* = sites published by Arkell 1949)

between Wadi Um Tundub (5131) to the west and the Kassala Province to the east.

Material culture

With regards to the material culture, pottery seems to offer more reliable indications than lithics. In fact, it is likely that the production of microlithic tools had never really ceased until the Meroitic times (Lenoble, pers. comm.). It must also be noted that in Arkell's map (1949: Fig. 8), he shows the "distribution of Wavy Line pottery", as this was considered the most diagnostic feature of Early Khartoum.

In order to make some comparisons, Figure 1 shows the distribution of wavy line pottery (indicated by triangles), together with the distribution of dotted-wavy line ware (indicated by dots). The wavy line ware occurs from the west bank of the White Nile, south of Omdurman bridge (4049) up to the Jebel Barkal to the north and from Wadi Um Tundub (5131) to the west and to the east along the Atbara river (Goz Regeb: 2581).

In total, the wavy line ware is present at 10 different sites, whereas the dotted-wavy line pottery occurs in 9 assemblages, distributed within the same boundaries. However, only 6 out of 9 sites containing dotted-wavy line pottery also include wavy line ware (Tab. 2). The three sites with dotted-wavy line and no wavy line need to be considered separately. As two of them did not reveal any lithics, the most interesting assemblage is that from the site 1 km north of the Basa temple (5071). Here, the occurrence of rhyolite makes up almost one third of the total of raw materials, reducing the frequency of quartz to only 72% (Tab. 3).

A similar change towards types of raw materials other than quartz was noticed at the site of Kabbashi-A, with dotted-wavy line, dated to the end of the 7th millennium b.p. and corresponding to a later phase of the Early Khartoum horizon (Caneva 1989; Garcea in press c). On the other hand, the lithic tool-kit from Basa seems still to be linked to the earlier traditions of Early Khartoum, as shown by a high frequency of lunates, with rare perforators, notched flakes and a simple endscraper (Tab. 4). On the whole, the assemblage from Basa shows a combination of the earlier aspects of Early Khartoum together with some later features, such as the absence of wavy line and undecorated pottery, the reduction of alternately pivoting stamped decorations and the decrease in the use of quartz among the raw materials employed for the lithic industry (cf. Garcea in press b, for detailed frequencies of lithics and pottery).

The 1991 field season at the site of Geili Sharq, 1.1 km to the west of the well-known cemetery of Geili, confirmed the evidence of a transition from an early to a late Early Khartoum horizon, already noticed at El Qala'a (Garcea in press a). In fact, the two sites share with Basa some new features of the later phase of Early Khartoum, such as a decrease in the importance of undecorated pottery and alternately pivoting stamped decorations, together with a lower frequency of perforators and the appearance of endscrapers and notched flakes.

Thus, the composition of these assemblages seems to conform with a date of 6600 years b.p. for El Qala'a as compared to the one of 6100 b.p. for Kabbashi-A.

Conclusions

In conclusion, the study of assemblages from a number of distant localities, even far away from each other, can provide information that could not be available within a restricted territory, such as a permanent concession area. Thus, it was possible to examine the diffusion of the Early Khartoum horizon over the wide region of the Middle and Upper Nile Valley.

Moreover, it is possible to consider the distribution of characteristic cultural elements such as, for example, wavy line and dotted-wavy line pottery. Different aspects of the Early Khartoum horizon were also identified, noticing the geographic differences, chronological developments and cultural changes. As for the location of the sites, their constant distribution in the vicinity of water courses confirmed that Early Khartoum hunting-fishing-gathering populations depended on riverine resources and a subsistence strategy based on a broad-spectrum extractive economy.

Ultimately, the research at Geili Sharq added some more information on the long-lasting Early Khartoum context. It is now clear that provided the same condition of preservation that is found under Late Meroitic tumuli, the thickness of the deposits can vary considerably, going from 160 cm at Kabbashi Haitah in the southern part of the concession area, to only 15/20 cm at Geili Sharq in the northern part of the research area. Such evidence could suggest a settlement system, with sites holding different functions, some of them being used more permanently than others.

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SITE	4742	3419	9500	5072	5070	5071	5153	2581	5001	5131	4924	4012	4049	5840	5848
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
rocker: zigzags	100	68.3	92.8	54.4	66.0	70.6	44.7	30.0	50.0	44.4	81.0	54.5	36.5	76.2	71.4
rocker: dotted-w. l.	0	7.3	0	3.5	0	11.8	14.5	5.0	0	16.7	0	39.4	4.8	14.3	0
altern. pivot.	0	2.4	2.6	12.3	10.0	5.9	28.9	0.0	0	0	0	0	3.7	0	8.6
wavy-line	0	4.9	3.1	26.3	15.0	0	5.3	62.5	0	5.6	4.8	0	38.6	0	8.6
parall. incis.	0	0	0	1.8	3.0	11.8	0	0.0	0	0	9.5	0	3.7	0	8.6
undecorated	0	2.4	1.5	1.8	6.0	0	5.3	0.0	16.7	5.6	4.8	6.1	2.6	0	0
unclassifiable	0	7.3	0	0	0	0	0	2.5	0	0	0	0	2.1	0	0
intrusives	0	7.3	0	0	0	0	1.3	0.0	16.7	22.2	0	0	7.9	9.5	2.9
simple impres.	0	0	0	0	0	0	0	0.0	16.7	5.6	0	0	0	0	0
TOTAL	100	99.9	100	100.1	100	100.1	100	100	100.1	100.1	100.1	100	99.9	100	100

Table 2. Frequencies of pottery.

SITE	4742	3419	5072	5070	5071	5153	5001	5131	4924	4927	4049
	%	%	%	%	%	%	%	%	%	%	%
quartz	50.7	16.7	53.3	94.1	72.0	90.2	26.9	100	21.1	92.3	97.6
basalt	1.4	3.3	6.7	0	0	0	6.5	0	36.8	0	0
rhyolite	45.1	38.3	40.0	5.9	28.0	7.3	0	0	15.8	0	2.4
chert	1.4	33.3	0	0	0	0	65.6	0	10.5	0	0
petrified wood	1.4	8.3	0	0	0	2.4	1.1	0	15.8	7.7	0
TOTAL	100	99.9	100	100	100	99.9	100.1	100	100	100	100

Table 3. Frequencies of raw materials.

SITE	4742	3419	5072	5070	5071	5153	5001	5131	4924	4927	4049
	%	%	%	%	%	%	%	%	%	%	%
simple endscraper	10.7	0	6.7	0	5.0	0.0	23.5	0	20.0	0	0
simp. endscr. / retouched fl.	0	0	0	0	0	0.0	0	0	0	0	0
simple notched endscraper	0	0	0	0	0	0.0	0	0	0	0	0
simp. endscr. /retouched bl.	0	0	0	0	0	0.0	0	0	0	0	0
circular endscraper	0	0	0	0	0	0.0	0	0	0	0	0
perforator	14.3	11.1	13.3	0	10.0	0.0	5.9	0	0	43.8	0
notched perforator	0	0	0	0	0	0.0	0	0	0	0	0
double backed perforator	0	11.1	0	0	0	25.0	0	0	0	0	0
backed flake	7.1	0	0	0	0	0.0	5.9	0	0	0	0
partially backed flake	0	11.1	0	0	0	0.0	0	0	0	0	0
partially backed blade	0	0	0	0	0	0.0	0	0	0	0	15.0
backed bladelet	0	0	0	0	0	0.0	0	0	0	0	0
backed badelets/ rounded base	0	11.1	0	0	0	0.0	0	0	0	0	0
notched flake	50.0	0	40.0	45.5	10.0	0.0	41.2	0	20.0	18.8	35.0
denticulated flake	10.7	11.1	13.3	9.1	0	25.0	0	0	20.0	6.3	11.7
denticulated blade	0	0	0	0	0	0.0	0	0	0	0	0
lunate	0	44.4	20.0	45.5	75.0	50.0	5.9	100	0	25.0	38.3
triangle	0	0	6.7	0	0	0.0	0	0	0	6.3	0
continuously retouched tool	0	0	0	0	0	0.0	0	0	20.0	0	0
sidescraper	0	0	0	0	0	0.0	5.9	0	0	0	0
arrow-head	0	0	0	0	0	0.0	0	0	20.0	0	0
uncompleted arrow-head	0	0	0	0	0	0.0	5.9	0	0	0	0
fragments	7.1	0	0	0	0	0.0	0	0	0	0	0
TOTAL	100	99.9	100	100.1	100	100	100.1	100	100	100.2	100

Table 4. Frequencies of retouched tools.

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