

Social organisation at Jebel Moya, 5th – 1st millennium B.C.

Introduction

I am re-examining the site reports and materials from the combined cemetery and settlement locality at Jebel Moya in the south-central Sudan which was excavated by Sir Henry Wellcome in the early 20th century. The primary repository of the excavation records is the Duckworth Laboratory, Cambridge, and I am in the process of digesting them. The locality stretches over 104 hectares and provides a unique opportunity to re-evaluate the nature of social evolution in the southern Geriza plain, dating from the 5th to late 1st millennium BC. This follows on from my previous research which evaluated the development of social complexity in early Saharan pastoral societies through examining settlement patterns, monument/mortuary distributions and grave assemblages, particularly regarding the presence and point of origin of valued items/prestige goods. What is presented today is a preliminary introduction to Jebel Moya and an outline of what can be done with the materials still surviving and under curation.

Background

The Jebel Moya massif lies in the southern part of the great Geriza plain between the Blue and White Niles about 250 kilometres south-southeast of Khartoum. The massif has a perimeter of about 11 kilometres. The excavated area, known as Site 100, lies in a basin-like valley above the plain near the edge of the massif to the north-east.

The excavations were initiated and overseen by Sir Henry Wellcome, the founder of the Wellcome Trust, and encompassed four seasons between 1911 and 1914. Around a fifth of the estimated 104 hectares was excavated. It still stands as one of the largest British excavations ever undertaken in Africa and is currently the largest cemetery yet excavated in North-East Africa. Overall, an amazing 2792 graves were excavated and recorded.

Previous investigations

Subsequent to Sir Henry Wellcome's death in 1937, the Wellcome Trust appointed Frank Addison to author the final archaeological report which was published in 1949. Mukherjee, Rao and Trevor wrote the second volume on the physical anthropological remains, published in 1955.

Addison initially dated Jebel Moya from 1000 – 400 BC, which corresponded to much of the then known Napatan period of Upper Nubia. This was based primarily on the presence of Napatan amulets, beads, faience and metal objects within select graves and on his reconstruction of the rate of deposition. He modified his dating in a 1956 publication to 500 BC – 400 AD on the basis of Meriotic objects such as eggshell, as well as painted, stamped and wheel-made pottery also being present in some of the graves.

Subsequent to Addison's publications, Rudolf Gerharz revisited the issue of chronology in his doctoral dissertation and subsequent 1994 published monograph. Whereas Addison's determination of chronology was based on the vertical sequence of graves, Gerharz determined it was their horizontal distribution which provided a more reliable chronology. Based on re-seriation of the graves and radiocarbon dates from the basal layers and nearby sites with a similar artefact repertoire, Gerharz hypothesised three phases: Phase I, about 5000 - 3000 BC, is characterised by diagnostic dotted wavy-line pottery, identified by Isabella Caneva in a prior study of a pottery sample curated at the British Museum. This original settlement horizon is regarded as having been largely disturbed by subsequent agro-pastoral burial activities. Phase II is dated between 3000 and 800 BC, and is regarded as the classical Jebel Moya culture encompassing the surviving site features and nearly all the graves. Phase III is bracketed between 800 - 100 BC and has the first appearance of imported items encompassing, amongst others, faience, glass and semi-precious stones. His work provides a chronological framework into which the grave and surface materials I am re-examining can be placed.

Mukherjee's report employed advanced statistical analyses to understand the population make-up and affiliations, among which was the now common Mahalanobis D² distance technique applied to craniometric data for the first time. This approach was directed away from typology and towards the concept of population affinity; it would not become common practice amongst physical anthropologists until the early 1970s. The report demonstrated that all age groups and sexes were represented with no evident pattern of disposal or depositional bias. To this can be added Addison's findings of diversity in mortuary practice: tomb types differed in appearance, and body positions and grave orientations were variable. Also, almost half of the individuals were buried without grave goods.

Material evidence of cultural diversity was found in the range of lipstuds, ornaments, potsherds and other objects' design and manufacture. However, Addison's resulting hypothesis of the population of Jebel Moya being biologically diverse was not upheld by Mukherjee's subsequent report. Neither did it find any support in a recent 2007 study by Joel Irish of the dental characteristics which instead reinforce the conclusions reached by Mukherjee of an population heterogeneity from Phase 2 onwards. Also, Gerharz and J. Desmond Clark have more recently asserted cultural similarities between Jebel Moya and nearby sites and emphasised their collective distinctiveness from surrounding regions. Gerharz dates the appearance of this Jebel Moya Complex to Phase 2 and hypotheses that Jebel Moya was "an annual meeting place of widely distributed segmentary family units, the common identity of which was maintained by their periodical co-habitation there" (1994: 330).

State of the evidence

There are no recordings or satisfactory photographs of Jebel Moya as first seen by Wellcome and his initial crew in mid-January 1911. However, photographs taken soon afterwards show the valley floor littered with stones and boulders. The excavations, halted by the onset of World War 1, were undertaken to a detailed standard for the time,

although different methods of excavation and recording were adopted by the different field directors in charge over the duration of the expedition. No detailed archaeological contextual records exist from season 1; the only records from season 1 are a manuscript diary from John Holmes which gives little archaeological information and Wellcome's 1912 brief paper presented to the British Association. Despite these problems, the anatomical, grave and tomb cards from the 2nd to 4th sessions represent a major resource which has been under-exploited. The materials, including grave goods and human remains, are currently distributed amongst the Duckworth Laboratory (Cambridge), the British Museum and the Petrie Museum (London), and the Pitt-Rivers Museum (Oxford). The excavation cards and written materials are kept with the primary collection in the Duckworth Laboratory.

Unfortunately, many of the materials from the site were poorly stored once reaching England and were frequently moved over the succeeding four decades. Many of the artifacts and skeletal remains were lost or damaged in the process. The final physical anthropology report was particularly affected by the degradation which had occurred to the anatomical remains over the intervening decades. In addition to the 3137 individuals originally recorded were field cards for 2903 skeletons. However, only 98 crania, 139 mandibles and a few hundred post-cranial elements survived. Additionally, the measurements and conclusions stated on the anatomical cards from the last two seasons proved to be inaccurate with regards to sexing and aging.

So, what can be done with the data?

Views of society and social evolution have undergone several changes in the decades since Addison's 1949 publication. Essentially, investigations of continuity and change are no longer in opposition. Inequalities have now become widely recognised in all societies, from hunter-gatherers to states, although the forms taken differ as do the socio-economic, ideological and material manifestations. These practices are negotiated, contested and resisted within the context of inter-personal and everyday activities. The presence of one inequality (e.g. wealth) does not necessarily imply the existence of others (e.g. political).

Mortuary data is no longer used to just speculate about systems of belief and societal divisions. Instead, it provides focus for studying social differentiation, cultural complexity, cultural changes and demography. Burials, the archaeological manifestation of mortuary practices and behaviours which represent one link in a chain of practices, provide information on precedent and subsequent behaviours. At the same time, however, because of the way in which cultures dispose of their dead, such mortuary studies must account for the structure and organisation of the mortuary system.

There are regularities which link a society and how it disposes of its dead, interweaving a complex web of socio-economic and ideological variables. At the same time, there are no set rules concerning the degree of mortuary differentiation within any given society. The community at Jebel Moya has previously been hypothesised to have permitted a wide range of variation. Indeed, the spatial dimensions and organisation of mortuary systems can be a sensitive indicator of social variability, including providing information on

social variables other than status.

One of the challenges I face is to trace changes in the form of social inequalities and the extent to which the inequalities manifested themselves spatially and temporally at Jebel Moya, while at the same time remaining cognisant of transformations in social structures. The value inherent in the subsequent publications by Caneva, Gerharz and Irish is that important information can still be gleaned from the available materials for descriptive, comparative and analytical purposes. As mentioned earlier, Caneva re-examined a sample of the pottery in the British Museum's collection; Gerharz analysed the composition and distribution of pottery in graves to arrive at a revised chronology. Irish tested the hypothesis of population heterogeneity using dental samples for the first time. However, the archaeological materials, including the grave and tomb cards, have never been re-examined as a whole for social data. Furthermore, none of the studies to date have considered the social aspects of the individual burial assemblages and the distribution of the graves in terms of how the spatial and temporal distributions reflect and inform social organisation at the site.

The problems of re-assembling the data from the differing expedition records are not insurmountable. The records in the Duckworth Laboratory range from the anatomical, grave and tomb cards to archaeological and physical anthropological remains, and copies of relevant documents and correspondences by prior researchers. Therefore, in conjunction with drawing upon already published works and unpublished correspondence, I am currently digitising the Duckworth Laboratory archives into an Access database. To date, I have around 1650 scans which encompass all the available grave cards as well as select anatomical and tomb cards. Ultimately, all the records, which I currently estimate to exceed 10 000 cards, will be digitised and the resulting database plugged into a MySQL backend to employ ArcGIS.

The resulting structural and spatial analysis of the nature of burial distributions, both human and animal, placed into temporal context by utilising Gerharz's updated chronology, will be matched with the distribution of grave goods. As part of this process it is necessary to also re-examine the published physical anthropology results (ageing and sexing) which consist of the published analyses of the cranial and post-cranial skeletal elements mentioned earlier, and which are accompanied by reliable field measurements on the anatomical cards from the second session.

Ultimately, these analyses will assist in developing a framework through which to test existing hypotheses of cultural variability as well as to ultimately evaluate the nature of social complexity at Jebel Moya and in the wider southern Geriza plain. I am thus confident that, by SAfA 2010, I will be able to present preliminary results which will place this framework and the most fruitful avenues of investigation before the wider Africanist community for debate.