Journal of Anthropological Archaeology 51 (2018) 187–205

Contents lists available at ScienceDirect

Journal of Anthropological Archaeology

journal homepage: www.elsevier.com/locate/jaa

Cemeteries on a moving frontier: Mortuary practices and the spread of pastoralism from the Sahara into eastern Africa

Elizabeth A. Sawchuk[a,b,*], Steven T. Goldstein[b], Katherine M. Grillo[c], Elisabeth A. Hildebrand[a,d]

[a] Department of Anthropology, Stony Brook University, Stony Brook, NY 11794-4364, USA
[b] Department of Archaeology, Max Planck Institute for the Science of Human History, Kahlaische Strasse 10, 07745 Jena, Germany
[c] Department of Anthropology, University of Florida, Gainesville, FL 32611, USA
[d] Turkana Basin Institute, Nairobi, Kenya

ARTICLE INFO

Keywords:
Spread of food production
Burial grounds
Mortuary archaeology
Holocene
Sahara
Nile Valley
Turkana Basin
Central Rift Valley
Frontiers

ABSTRACT

Today, pastoral systems in eastern Africa are supported by elaborate social networks that minimize risk and facilitate the movement of people, animals, and resources across unpredictable, semi-arid landscapes. Although similar structures must have existed in the past, investigations into early herders' social lives remain underdeveloped. The African archaeological record is exceptional in that monumental burial grounds are a hallmark of early pastoral lifeways as they spread from the Sahara through eastern Africa ~8000–2000 BP. We review archaeological evidence for pastoralist cemeteries in these regions to ask what role(s) burial grounds played in the transmission of mobile food production. To do so, we invoke a 'moving frontier' framework in which social and economic strategies fluctuate during the initial spread of food production, then become more rigid after land use and relationships stabilize on a 'static frontier.' Ethnographically-documented mortuary practices among recent eastern African pastoralists provide a model for a static frontier, and reveal emic motivations that could not be drawn from archaeological data alone. Although cemeteries are rare in the ethnographic record, archaeological and ethnohistoric practices form a long gradient of mortuary behaviours that fluctuate in response to changing conditions, and help establish and reify social networks among herders facing instability.

1. Introduction

Africa's earliest food production—mobile pastoralism—coincided with the development of elaborate cemetery traditions that are a hallmark of herding as it spread from the Sahara into eastern Africa ~8000–2000 years ago (Marshall and Hildebrand, 2002). These ancient cemeteries are globally unusual in that they are associated with mobile herders rather than sedentary agricultural economies. Because the habitation sites of nomadic, small-scale herders can be hard to detect in the archaeological record (Lane, 2016; Smith, 2005), burial grounds represent a highly visible line of primary data for reconstructing the spread of food production. Individual cemeteries were constructed by different groups with distinct culture histories, yet the practice broadly seems to track the movement of livestock southward from the early to middle Holocene. In ethnographic accounts of eastern African pastoralists, however, cemetery creation appears to be rare. This raises the question of why pastoralists invested in communal burial grounds in the past, and what changes in this behaviour can reveal about the role of herder mortuary practices in the spread of food production.

For African pastoralists who rely on cattle, sheep, goats, and other livestock, social and ritual systems are deeply integrated within economic structures that ensure long term resilience (Barnard, 1988; Biagetti, 2014; Fratkin, 1986; Galaty, 1982; Gulliver, 1955; McCabe, 2004; Shanklin, 1985). However, compared to robust economic and material cultural studies, investigations into early herders' social lives remain under-developed. Discussion has focused on standing stones, cairns, and other megaliths but, apart from their co-occurrence with such monuments, burial practices are rarely examined (Clack and Brittain, 2011; Davies, 2013; Lane, 2016). As a result, there have been relatively few attempts to contextualize the construction and use of cemeteries into broader patterns of social interaction and land-use during the spread of food production. Viewing mortuary practices as active social strategies—as opposed to passive residues—is crucial to understanding how herding successfully spread over a large part of the African continent.

* Corresponding author at: Department of Anthropology, Circle Road, Social and Behavioral Sciences Building, 5th floor, Stony Brook University, NY 11794-4364 USA.
E-mail address: elizabeth.sawchuk@stonybrook.edu (E.A. Sawchuk).

https://doi.org/10.1016/j.jaa.2018.08.001
Received 25 July 2017; Received in revised form 31 July 2018

This paper seeks to bridge the gap between pastoralist and mortuary archaeologies by examining the role of cemeteries in the development, spread, and maintenance of early herder societies in Holocene Africa. We focus on one trajectory in particular: the development of herding practices in the Sahara and their spread along the Nile Valley and into eastern Africa. Archaeological studies of monumental burial grounds have largely focused on sedentary, agrarian contexts, creating implicit assumptions regarding what circumstances are needed for the emergence of cemeteries and monuments, and possible motivations for their creation. Early pastoralist cemeteries in Africa lack evidence for many of these factors, namely urban centres, farming, and/or incipient social hierarchies. Recently, other studies have highlighted examples of monumentality among nomadic pastoralists, particularly on the Eurasian steppe (Burentogokh, 2017; Wright, 2007). We aim to contribute an African example to this growing discourse.

Drawing on archaeological and ethnohistoric datasets, we ask what function or functions cemeteries may have fulfilled during the transmission of mobile food production from the Sahara to eastern Africa. In doing so, we invoke the theoretical concept of a "moving frontier" wherein social and economic strategies remain flexible and in flux during the initial phase of food production's spread to a new region. First described by Alexander (1977, 1978, 1984) for agriculturalists, and adapted to eastern African herders by Ambrose (1984b) and Lane (2004, 2013), moving frontier models offer a vocabulary for discussing variability in many facets of early pastoralism, and why that variability eventually gives way to more culturally rigid "static" frontiers. The concept of moving frontiers is more of an explanatory framework than a predictive model, but it remains the most recent and well-developed theoretical basis for investigating changing social and economic strategies as herding entered new environments.

In comparing archaeological and ethnohistorical datasets, we ask why cemeteries were more prominent during early phases of pastoral spread than in recent times. Although few herders in ethnographic memory collectively bury their dead, emic motivations for recent burial practices illuminate social dynamics that could not be drawn from archaeological data alone. We distinguish between separate motivational issues: factors catalyzing the genesis of cemetery traditions during the initial phase of herding's spread, and factors affecting their maintenance, change, or dissolution after pastoralism became regionally entrenched. We examine the degree to which mortuary practices at these different stages match expectations generated from the "moving frontier" model, both to evaluate the effectiveness of the concept to explain burial practices, and to begin integrating social and ritual behaviours into economically-focused models for the spread of food production.

2. Background

2.1. Key concepts: pastoralism and cemeteries

Research on pastoralist cemeteries must surmount several challenges. The first is agreeing on fundamental concepts: both 'pastoralism' and 'cemetery' have been subject to varied definitions in different research contexts. Contextualizing burial practices also requires some background on the interconnected economic and social strategies of contemporary eastern African pastoralists.

Mobile pastoralism is a way of life for populations specializing in herding domestic animals, in which people must bring livestock to pasture, water, and salt (Crawford and Leonard, 2002; Gray et al., 2002; Little, 2002; Smith, 2005). This is opposed to more sedentary animal husbandry systems based on foddering. Definitions for 'mobile' or 'nomadic' pastoralism in the African literature emphasize that economic strategies prioritize the needs of livestock, even while people may also engage in cultivation, agriculture, or trade (Dyson-Hudson and Dyson-Hudson, 1980). Ethnographic and archaeological data attest to substantial variation in the frequency and magnitude of logistical and residential pastoralist mobility, intensity of pastoral production, and proportion of the population involved in herding (Crawford and Leonard, 2002; Dahl and Hjort, 1976; McCabe, 2004; McDonald, 1998; Sadr, 1998; Smith, 2005). For definitional purposes, distance and frequency of movements matter less than people's *ability* to move to accommodate changing economic, social, or political conditions, and the key trait is pastoralists' primary dedication to livestock management. This dedication manifests in the intensive cultural value herders place on owning livestock.

Managing herds of cattle, sheep, goats, camels, and/or donkeys in eastern African environments requires a more flexible approach to mobility than the vertical or seasonal transhumance practiced by pastoralists in many other parts of the world. Ecologically speaking, this is best understood as a system that is not in equilibrium but rather governed by single and multi-year droughts (Ellis and Swift, 1988; Gray et al., 2002). Unlike populations in balance that fluctuate around the normal carrying capacity of the environment, disequilibrial populations hover below this point in boom-bust cycles of loss and recovery. In favourable conditions, both pastoral human and livestock numbers increase; during droughts, animals die and are eaten, fewer babies are born, and groups move around more to survive (Gray et al., 2002; Leslie and Frye, 1989; Little, 2002). Herders in eastern Africa understand these cycles, and structure their herd management strategies around expectations for catastrophic loss (McCabe, 1990). Patterns and timing of residential mobility, logistical herding circuits, and larger-scale regional movements depend heavily on environmental conditions that fluctuate on seasonal, annual, inter-annual, and decadal scales (Dahl and Hjort, 1976; Dyson-Hudson and Dyson-Hudson, 1980). Herding strategies are often organized on the family and community levels, especially in times of drought or conflict (Turton, 1979). Mobility through these landscapes is determined by social and political factors like the limits of sectional or ethnic boundaries and the location of friends and family (Fratkin, 2001; Galaty, 2013, pp. 477; McCabe, 2004).

African herders are well known for their elaborate social exchange and alliance networks. These relations are built on individual stock-exchange partners, lineage or clan systems, and membership in age-grades (Gulliver, 1971; McCabe, 1994). Complex webs of reciprocity on local and regional scales ensure herders have access to distant grazing land and can recover their herds after droughts, livestock epidemics, or raids (Bernsten, 1976; Gulliver, 1971; McCabe, 2004; Spencer, 1973; Turton, 1979). Ethnohistorically, movement through socially-interconnected landscapes has been critical for the long-term resilience of herding communities in environments where resources are heterogeneous—and unpredictable—across time and space. Systems of clan and age-set organization are the basis for the political order that allows for inter- and intra-community negotiations over land-tenure disputes (Bollig and Osterle, 2013; Galaty, 2013; McCabe, 1994). It is not clear when in the history of African pastoralism these social systems developed, or what alternative social systems may have filled this role in the past.

Many attributes of contemporary pastoralism are difficult to identify archaeologically—high mobility can limit the visibility of pastoral sites, and many aspects of social lives leave no permanent trace (Smith, 2005; Lane, 2016; but see Grillo et al., 2018). Linking sites to pastoralists depends on various indicators that signify herding, e.g., domestic fauna, architectural or geoarchaeological evidence of corrals or livestock enclosures, and use of environments unsuitable for cultivation (Lane, 2016; McDonald, 1998; Mitchell and Whitelaw, 2005; Sadr, 1988; Shahack-Gross et al., 2003; Smith et al., 1991). However, such signatures are regionally specific, and usually require comparison with nearby hunter-gatherer and/or agricultural settlements and may not translate well for ceremonial sites. Because mobility, percentage of overall subsistence related to domesticates, and labour all vary according to seasonal, climatic, and social parameters, economically-determined 'herder' and 'forager' sites may even represent the same group