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## CATTLE, CLIMATE, AND CARAVANS

### The Dynamics of Pastoralism, Trade, and Migration in 19th-Century East Africa

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#### 1 Introduction

This chapter explores the expansion of pastoralism in East Africa from the 18th to the early 20th centuries in relation to the ivory trade, climate, and migrations. The main thesis is that the ivory trade amplified an economic field of exchange that funneled cattle from the north to central East Africa. The increasing number of cattle, in turn, accelerated migrations from agricultural areas into pastoralist societies and spaces, increasing the size and scope of the latter mode of production. All of these movements were influenced by a major and a minor drought that took place during this period.

Migrations were enmeshed in, and responsive to, ecological factors such as climate and disease, the dynamics of regional and global trade arrangements, and wealth accumulation. The historical and anthropological study of East African pastoralists has largely focused on local or regional adaptations to the natural environment only rather than on their dependence on trade and world-system relationships (e.g., Dyson-Hudson and Dyson-Hudson, 1980; Marshall, 1990; Spencer, 1998). For example, in an article addressing the long-term dynamics of pastoralism in prehistoric East Africa, Marshall (1990) claims that, unlike in the Near East where pastoralism was strongly dependent on trade and irrigated agriculture, pastoralists in East Africa were oriented toward subsistence production. However, recent historical and ethnographic studies of East Africa stress that, for as far back in time as we have evidence, pastoralist societies were part of changing and fluid regional economies, productive specializations, and long-distance trade (Håkansson 2008a; Waller 1985a). Furthermore, the reasons for migrations during the colonial period continued to be conditioned by the same goals of social reproduction through cattle accumulation, social networks, and family expansion.

Ivory was paid for in beads, metals, and cloth, all of which became currencies that were used to buy cattle from the Great Lakes region, and from what is today northern Kenya, southern Ethiopia, and Somalia. The increasing infusion of cattle through trade from these areas to central Kenya and northern Tanzania resulted in a long period of population transfer from cultivation and foraging into pastoralism. The demographic and spatial expansion

of pastoralism was based on two main forms of cattle accumulation: trade and raiding. Cultivators and foragers that were successful in obtaining large herds through trade merged with pastoralists, increasing both human and cattle populations. Established pastoralists used three strategies to increase their herds: they exchanged ivory either directly for cattle or for coastal goods that could be used to buy cattle and they raided cultivators or other pastoralists. Raiding thus contributed to the spread of cattle outside the trade routes.

An influential structural approach argues that migrations in Africa transitioned from traditional to modern migrations, from one of migrations of peoples in the pre-colonial period to a shift to migrations of labor (Amin 1995). This theory focuses on how the process of economic and political peripheralization of Africa in the global capitalist system induced modern migrations. I argue, in contrast, that far from being part of what is often dismissed as a single, uniform traditional, pre-colonial migration pattern, pastoral mobility in the 19th century was flexible and adapted to complex configurations of ecology and political economy (see also De Haas and Frankema, Chapter 1; Austin Chapter 2, this volume).

While colonialism and increasing incorporation into the capitalist world system significantly influenced the movement patterns and adaptations of pastoralists, I also argue that there was no clear break between pre-colonial and colonial patterns of migration (cf. Manchuelle 1998). Indeed, the effects of world-system changes on migrations were not uniform, but were conditioned by specific regional economic, ecological, and social contexts through which modes of exploitation and region-specific factors combined.

Environmental factors such as climate change and weather also played an important role in affecting migrations, shaping the trajectories of social institutions, exchange, and trade through time (Håkansson 2019). Because of the recent developments in paleo-ecological research on prior climate in East Africa it is possible to construct a tentative timeline for decades of long fluctuations in rainfall from the late 18th to the 20th centuries. Following Anderson (2016), I relate the catastrophic droughts during the early 19th century to a virtual cessation of viable pastoralism in central and northern Kenya and central Uganda. The new era of pastoralism, which started around 1830, was book-ended by the Rinderpest cattle epidemic at the beginning of the 1890s, which together with drought and smallpox in the human population led to a collapse of the pastoral economy again. The subsequent restoration of pastoralism took place in the context of a new colonial political economy.

The chapter begins with an overview of the interrelationships between productive specializations, ethnicities, and migrations. I then describe the principles of the expansive pastoralist political economy. After a brief outline of the history of pastoralism in the second millennium AD, I devote the next section to the effects of the long dry period in the 18th and early 19th centuries on pastoralists. I then outline my central argument about the influence of trade on the accumulation of cattle and migrations in East Africa followed by an analysis of the connection between the recursively related intensification of cultivation, pastoralism, and migration between communities engaged in different productive specializations.

## 2 Shifting livelihoods and ethnic identities

Pastoralism is not a fixed ethno-economic identity but rather a specialized livelihood strategy linked to social status, ethnic identification, and ecology, and one into which and out of which people can move. The way that long-term climate change as well as shorter drought

events affected the spatial movement of pastoralist people in East Africa was shaped by a triangular pattern of exchange and movement between three basic modes of production: agriculture, pastoralism, and gathering/hunting. These three productive specializations were not exclusive but represented the ends of a continuum along which members of different communities moved. Ethnicities were situational and based on productive specializations, and the shifting of ethnic identities was common (Galaty 1982). Finally, the wider networks of regional and long-distance trade facilitated local cattle accumulations and structured shifting ethnic relationships between foragers, cultivators, and pastoralists.

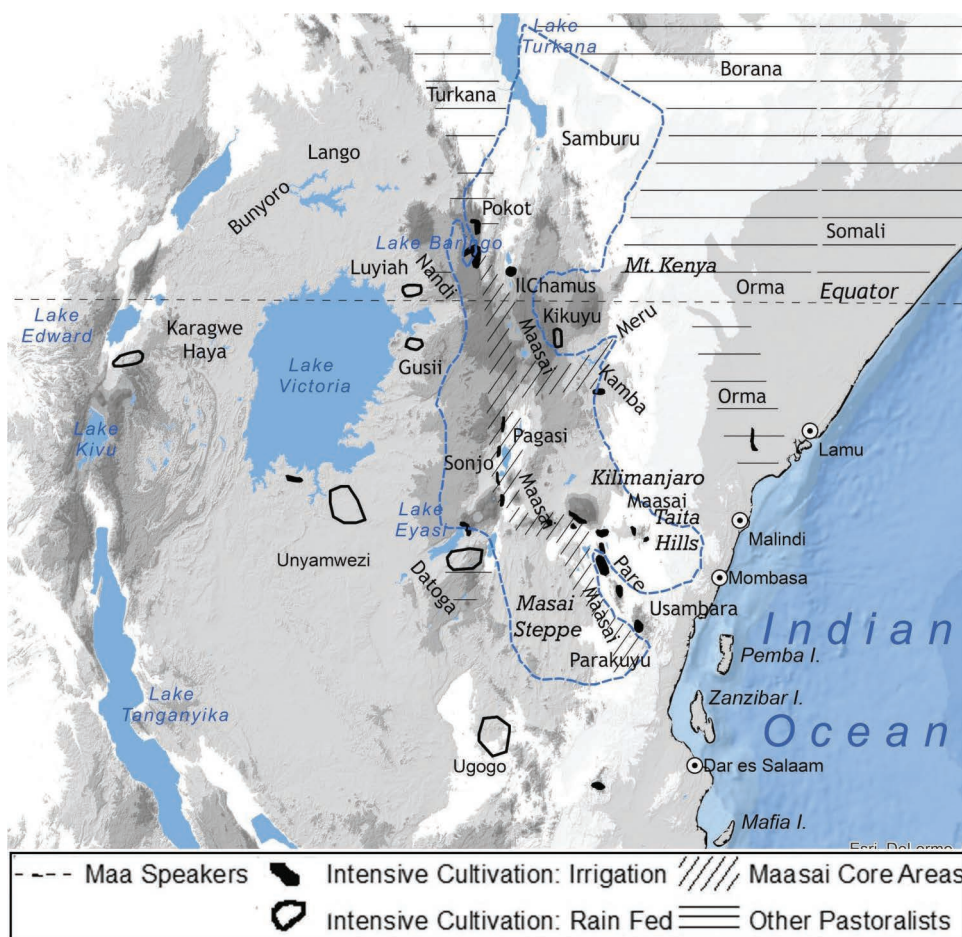
Specialized pastoralism is by necessity a regionally dependent mode of production. Because a purely pastoral economy cannot produce enough food to feed the population, specialized pastoralists had to exchange livestock for crops from cultivating neighbors (Bernsten 1976; Schneider 1979; Galvin, Coppock, and Leslie 1994). Thus, pastoral societies and economies were part of regional systems of interaction and their productive specialization depended on access to agricultural products and/or wild resources. Indeed, the expansion of pastoralism was recursively linked to the spread of “islands of intensive agriculture” in East Africa (Map 5.1).

Pastoralists in East Africa moved in seasonal patterns to pastures and water, resources that varied temporally and spatially. Often the settlements were divided into clusters of households where the married women and men and young children lived, and cattle camps where the young unmarried men followed the cattle to pastures and water sources. The movements of pastoralists over large distances included the seasonal encampments between dry and rainy seasons within territories that were divided between sections of the society. Pastoralists also expanded geographically and demographically, especially in the case of the Maasai and their related groups of Maa-speakers. Historical linguistics offer reconstructions of what seem like large-scale migrations of Maa-speakers from the area of Lake Turkana south through the Rift Valley to Kilimanjaro in Tanzania already in the 1600s and possibly earlier.

However, a closer examination of such movements reveals a more complex picture than simple movements of people outward from an original point. Among the reasons that pastoralist societies were inherently expansive was that cattle is a form of wealth that grows under suitable environmental conditions and husbandry. Thus, migrations tended to take place as a result of searches for more pasture. But the success of herd expansion was mutually related to, and dependent on, the expansion of labor to tend the herds. What on the surface looks like a steady migration was actually a continuous absorption of people from local agricultural and foraging groups in different geographical areas into the pastoral sphere. In addition, such expansion continued into new areas already occupied by pastoralists that were either pushed away or absorbed into a new ethnic umbrella of more powerful groups such as the Maasai.

### 3 Growth and expansion in pastoral economies

The expansionist tendencies were built into the social structures of these societies. Through natural reproduction and the application of labor, cattle are a form of capital, the expansion of which depends on an ever-increasing access to good grazing pastures during the dry season (Waller 1985b). There was an institutionalized tension between older men who controlled cattle necessary for bridewealth payments and their sons and wives who desired



**MAP 5.1** Pastoralism and intensive cultivation in East Africa.

*Notes:* Areas with intensive cultivation are shown for central Kenya to central Tanzania. The map is a work in progress.

*Sources:* Map drawn by Ryan Kelly, based on Börjeson (2004); Håkansson (1994, 2008a, 2008b); Höhnle (1894, 302); Kjekshus (1977, 36, 42–3); Petek and Lane (2017); Thomson (1885, 177, 284); Waller (1985a); Widgren and Sutton (2004). The pastoralists in northern Kenya were integrated into regional trade networks that encompassed southern Ethiopia and Somalia from where they obtained agricultural products and other goods (Robinson 1985, 342–4; Sobania 1991).

to accumulate their own cattle in order to establish households independent of their fathers and husbands. Thus, the mother-centered households had strong incentives to amplify cattle accumulation through raiding and trade, in order to provide livestock for the sons' early marriages independently of the husbands' cattle.

Social reproduction depended on the role of cattle as a key symbol and was central as a metaphor and a value that related numerous aspects of social structure and culture among East African societies (cf. Ortner 1973). Cattle are economic assets that symbolize and create social relationships and elaborate cosmological links between human and plant fertility. All economic activities were ultimately connected through cattle as the primary prestige good

and investment. Agricultural production, land use, and gathering–hunting can therefore be traced to political and economic strategies directed toward access to and control of cattle.

Pastoralist societies exhibit cyclical demographic characteristics of human and livestock populations that move up and down in a saw-tooth profile of steady growth offset at irregular intervals by a sharp and devastating loss (Spencer 1998, 41; Waller 1999). Repetitive pre-colonial disasters are documented in oral traditions (Spencer 1998, 208). For example, an earlier, historically known, widespread destruction of Maasai herds took place in the 1830s (Waller 1999). Droughts and stock disease periodically decimated cattle herds (Taylor, Robertshaw and Marchant 2000). Human epidemics also reduced labor availability, which in turn affected herd managements. Those who suffered large losses either migrated to agricultural areas where they took up cultivation or joined foraging bands, in order to survive and to build up new cattle herds through the exchange of foodstuffs or ivory for livestock with the remaining stock owners (Spear 1997; Waller 1985a). Once they had enough cattle for a pastoral existence, they would again move onto the plains and a new cycle of herd growth would ensue until environmental and social factors precipitated new declines in their herds. Such periodic and frequent herd reductions have also been documented in contemporary northern, semi-arid Kenya, where droughts are frequent (Fratkin 1997).

#### 4 The historical dynamics of pastoralism

The available evidence from historical linguistics suggests that very few communities in East Africa practiced specialized pastoralism at the end of the first millennium AD. The historical linguistic work of Ehret shows a prevalence of mixed economies where cattle-keeping groups practiced cultivation and foraging as well (Ehret 1971, 1984, 2002). The emergence of specialized pastoralism seems to be associated with Southern Nilotic speakers who, during the 12th and 13th centuries, spread south from northern Kenya and adjacent areas to northern Tanzania along the Rift Valley (Ehret 1971, 60–2; Sutton 1990, 41). This was a slow process that lasted c. 300 years and by 1500 AD they were settled as far south as the modern city of Dodoma in Tanzania. The western Rift Valley escarpment remained a barrier for the South Kalenjin and the Datoga-dominated crater highlands (Ehret 1984).

After the spread of the Southern Nilotes, the next phase of pastoral expansion derives from the Maa cluster northwest of Mount Kenya. The proto-Maasai began to make inroads into the lands of the South Nilotic Kalenjin along the Rift Valley in central Kenya as early as the early 16th century. In Kenya, Maa-speaking pastoralists dominated from north of Lake Baringo southward to the Rift Valley and surrounding plateaus (Galaty 1993). By the mid-1600s they had expanded as far as the northern edges of Tanzania and Kilimanjaro (Ehret 1984; Galaty 1993).

In Uganda specialized pastoralism may have emerged in the beginning of the second millennium (Schoenbrun 1998, 76). Until the mid-18th century pastoralism and agro-pastoralism dominated the plateaus of central Uganda from Lake Albert south to the Kagera River. This dry savanna region was utilized for cattle, millet, and sorghum cultivation, as well as iron and salt industries (Chretien 2003, 142).

Sometime during the second half of the 18th century, precipitation declined and much of modern Kenya, Uganda, and northern Tanzania became much dryer than it is today. Evidence from paleo-ecological data, oral traditions, and historical linguistics point to a period of increasingly dry climate, which culminated in a severe drought during the first decades of

the 19th century (Bessems et al. 2008). Several lakes in Kenya and Uganda completely dried out, indicating that the climatic anomaly of severe drought was widespread over equatorial East Africa (Bessems et al. 2008; De Cort et al., 2013). Authors such as Chretien have used oral traditions alone to date droughts and climate events in the Great Lakes region (Chretien 2003, 142). According to this view the regular droughts began at the beginning of the 18th century.

Much of the data that is used for such reconstructions derive from sediments that reflect water levels in lakes over time. However, problems with the dating of lake sediments still make detailed chronologies impossible (Bessems et al. 2008). In their sediment study of four lakes in Kenya and Uganda, Bessems et al. (2008) find that dried-out lakes began being filled with water again around 1830, signaling the beginning of a wetter climate. According to Verschuren, Laird, and Cumming, the second half of the 19th century was a period of increasing precipitation and presumably more favorable conditions for cultivation (Verschuren, Laird, and Cumming 2000; see also Petek and Lane 2017). This trend was interrupted by a regionally significant drought during the 1870s (Anderson 2016). These dates and qualitative assessments must be understood with the caveat that the spatial distribution of the severity and durations of dry conditions varied within East Africa during the time period under consideration.

Indeed, oral traditions from many different societies confirm that a long catastrophic drought occurred at the time the paleo-ecological data indicate. We do not know exactly how this dry period affected the pastoralists, only what happened after it ended. According to Anderson (2016), prior communities and social formations broke down, instigating a wholesale remaking of identities and cultures, and probably caused starvation and migrations to places where food could be obtained by foraging and cultivation.

The dry period ended quite abruptly around 1830 followed by a wetter climate after which many communities reconstituted and either built new social institutions or reinvigorated old forms. The return to pastoralism by the Maa-speakers seems to have been rapid because soon they were involved in internecine wars between different sections called the “Iliokop Wars.” The speed with which this reconstitution took place indicates that there must have been refugia where sizable numbers of former pastoralists survived. The conflict can be divided into three phases that lasted between the 1830s and 1870s (Anderson 2016). The first phase of conflict between Maa-speaking pastoralists began at the end of the 1830s and probably ended by 1850 and coincided with a speedy environmental recovery after the great catastrophe. A second phase began at the end of 1840s and was partly caused by pressures from Turkana and Pokot who expanded into Maasai areas from the south and the east. The final phase, in the 1860s and 1870s, saw the decline in the dominance and final dissolution of Laikipiak Maasai by attacks from the southern Maasai sections. Anderson (2016) attributes the cause of this long-lasting conflict to competition between sections for new pastures during the improved environmental conditions.

## 5 Trade and expansion of pastoralism

The reconstruction of the history of pastoralism during the second millennium is mainly based on historical linguistics and to some extent oral traditions and chronologies provided by their age-set systems. The archaeology of the Pastoral Iron Age is still spotty and has yet to provide a more complete understanding. Hence, it is not until the 19th century that a



more detailed picture emerges that delineates expansion of pastoralism set within a context of regional and extra-regional economic and political processes. Between the 1830s and 1850s economic interactions with the coast experienced fundamental and unprecedented transformations. Beginning at the end of the 18th century markets for ivory expanded in Western Europe and the US where it was used for a variety of consumer goods such as combs, piano keys, and billiard balls. From having been largely an enterprise controlled by interior communities, in the mid-19th century there was a shift to coastal control that led to the expansion of markets and trading settlements in the interior of East Africa. During the second half of that century slave trade became an important component of trade, adding additional social upheaval and suffering (Pallaver, Chapter 4, this volume). The pastoralists in East Africa were directly involved in the ivory trade (see below), which affected their economic strategies and relationships with other populations that practiced agriculture or foraging, and such specialized production as iron or salt (Håkansson 2004).

The vast and steady accumulation of cattle in the region between northwestern Kenya east to southern Somalia and then south and west to northern Tanzania and the Rift Valley was based on exchange advantages that emerged from the networks of trade. In addition to trade, local accumulation of cattle by cultivators also stimulated cattle raiding by pastoralists, thus further distributing cattle into areas outside the main trade circuits. Fischer and Baumann reported that the Maasai regularly raided cattle near Mombasa on the Kenyan coast, south of Lake Victoria, and what is now Western Kenya (Fischer 1882–83, 57, 70, 89; Baumann 1891, 148–9).

With a few exceptions, our knowledge of the complex trade and exchange networks crisscrossing East Africa is fragmentary but obviously more detailed toward the end of the 19th century (cf. Pallaver, Chapter 4, this volume). Nevertheless, I believe it is possible to formulate a basic model for the value chains in the indirect regional trade that interfaced with the coastal trade (cf. Schneider 1979, 98). Communities in the interior were strongly engaged in trade and profited by exploiting price differences of cattle and other goods in different localities. Traders based on the coast paid for the ivory, brought to them by caravans originating in the hinterland, in imported goods such as cloth, beads, and metals. Later on, by the mid-19th century, the coastal emporia themselves sent large caravans into the interior. They comprised several thousand members who carried imported goods and provisions. The regional traders who exchanged directly with these caravans in turn exchanged such goods for cattle even further inland. Parallel to engaging in the ivory trade, many communities conducted a thriving business in selling food to caravans in exchange for coastal goods, which were also bartered for livestock in other areas outside the caravan routes (Farler 1882; Fischer 1882–83, 68, 75; Reichard 1892, 259; Volkens 1897, 240). Finally, those members of inland communities who had access to beads and cloth used these to exchange for food during shortages caused by drought instead of using livestock in such transactions, thereby avoiding dispensing of livestock and preserving their herds.

However, close to the main caravan routes there were signs in the 1840s of a growing disinterest in trading for coastal goods, which continued until the end of the century. More and more Kamba traders refused to sell ivory for cloth and beads and demanded cattle instead (Krapf, *Journal*, 11–28–1849; Ambler, 1988, 103). Similar trends of devaluation of cloth and beads are reported in other parts of East Africa. According to Moore, Chagga chiefs had to pay elephant hunters in cattle. Likewise, in Karagwe, ivory could only be bought with cattle (Beachey, 1967; Moore, 1986, 28).

I have identified three tributaries along which cattle moved through complex networks of transactions to this region: (1) from cattle-rich areas in Uganda/Rwanda (Wissman 1889, 235–40), (2) from northern Kenya/southern Ethiopia (Robinson 1985, 307–9), and (3) from southern Somalia (Fischer 1878–79). The increasing infusion of cattle through trade from these areas to central Kenya and northern Tanzania resulted in a long period of population transfer from cultivation and foraging into pastoralism.

### **5.1 *Uganda/Rwanda***

Explorers in the mid-19th century reported that the kingdoms of Nyoro and Karagwe possessed large herds of cattle, which they obtained through trade with northern neighbors such as Lango and Teso (Uzoigwe 1970). In the mid-1800s, King Kamrasi of Nyoro was frequently visited by traders who bought ivory, cattle, and slaves (Grant 1864, 289). According to Burton, cattle were sold for 500 to 1,000 cowries that were brought from the coast by Nyamwezi caravans (Burton 1860, 185 and 198). South of Nyoro, the kingdom of Karagwe had emerged as a center of trade during the 19th century and was reported to have more cattle than other kingdoms (Stanley 1878, 459). Grant reported that the king, Rumanika, was part of an established trade network and acted as a supplier of coastal goods to the societies further north from which he received cattle, ivory, or slaves in exchange for, e.g., ornaments in brass or copper or porcelain cups (Grant 1864, 144).

Through trade, large numbers of cattle ended up in Unyamwezi, the chiefdoms of which had been involved in the ivory trade since the end of the 18th century. During the 19th century they invested their gains from the ivory trade in cattle obtained from Karagwe but also the BuHa chiefdoms to the south of Karagwe (Rockel 2019). Passing through Unyamwezi, Speke (1864, 286) commented on the enormous herds of cattle that he observed and the large numbers of them that were sold at cattle markets in Unyamwezi near Lake Eyasi (Speke 1864, 268), close to Maasai territory (see Map 5.2). From these markets cattle were further traded northward along the eastern coast and hinterland of Lake Victoria (Hartwig 1976, 110). While the main route of the cattle trade was directed to the south, another path toward Western Kenya seems to have existed during the 19th century (Hobley 1898; Cohen 1988; Cohen and Atieno Odhiambo 1989, 69).

### **5.2 *Northern Kenya/southern Ethiopia***

Several pastoralist groups, such as Turkana, Samburu, and Borana, that were integrated into coastal trade networks prior to the 19th century, including southern Ethiopia, the Benadir coast, and central Kenya, inhabited this region (Robinson 1985, 300). The dry savannas, rivers, and highlands formed ecological zones that offered varying resources supporting both pastoralism and cultivation. Communities were connected through a regional network of exchange, which in turn interfaced with the coastal trade. From this area a trade route connected pastoralists with the Mount Kenya communities of Kikuyu, Embu, and Meru. The details of this trade are sketchy and do not provide a complete picture of what was exchanged and with whom. Samburu traded hides and skins, and brought cattle for sale at Meru on Mount Kenya (Kerven 1992, 19). The Boran traveled to a marketplace east of Naivasha where they exchanged cattle for other goods and valuables (Robinson 1985, 308). This is probably the same market mentioned by Joseph Thomson as a place where Dorobo





**MAP 5.2** Trade routes for the dispersal of cattle from northern East Africa to central Kenya and northern Tanzania in the 19th century.

Source: Author's own, drawn by Ryan Kelly.

villagers “subsist entirely by buying vegetable food from the Wa-kikuyu and sell it again to the Masai” (Thomson 1885, 262).

### 5.3 Northeastern Kenya/southern Somalia

During the 19th century Somali traders were conspicuously active in the region, connecting and cooperating with communities in Somalia and northern Kenya such as the Borana, Samburu, Gabbra, and Rendille. Somali caravans traded for many goods but especially cattle and ivory for which the Somali exchanged such items as clothing, tobacco, coffee, and metal implements (Robinson 1985, 308).

Traders capitalized on differences in exchange rates between different locations in the interior and the coast. The Somali traders were the first stage in a chain of exchanges that moved cattle to the Kenyan coast. In northeastern Kenya, the Orma, culturally and linguistically related to the Borana, were the dominant pastoralists. They used cloth and money obtained from their sale of ivory and cattle on the coast to buy both cattle and ivory further inland at favorable exchange rates. First, the Somali obtained cattle from the Borana, and sold these to Orma for Maria Theresa dollars, which Orma had obtained from the sale of cattle on the coast where prices were the highest (Fischer 1878–79). Near the Sabaki River,

in the hinterland of Malindi, the pastoralist Orma traded cattle to the Swahili and Mijikenda on the southern coast of Kenya for cloth (Krapf, June 24, 1845), which was probably among the goods they used in their trade with Samburu pastoralists undertaken at the upper reaches of the Tana River (Fischer 1878–79).

In the Kenyan coastal hinterland, many agricultural communities converted their gains from the coastal trade into cattle. During the first half of the 19th century, the Giriama north of Mombasa and the Digo to the south were expanding their cattle herds and moved further inland in search of grazing (Baumann 1891, 148–9). The Giriama were practically an agro-pastoral group by the middle of the 19th century (Parkin 1991, 22). South of the Digo, on the Tanzanian coast, the Zigua communities also accumulated cattle through ivory trade and the sale of grain to the coast and expanded their villages westward toward the Pangani (Giblin 1992, 26 and 33).

## 6 Pastoralism, intensive cultivation, and population movements

The Rift Valley and the surrounding highlands were lined with agricultural communities practicing intensive cultivation, which served as sources of agricultural products and as refuges for pastoralists during severe stock losses (see Map 5.1). Eastern Africa's Rift Valley stretches from Kenya's Lake Turkana area, running southward through the Kenya Highlands into Tanzania. Near Lake Turkana, the valley floor tapers down to less than 500 meters above sea level, but southward it rises steadily to nearly 2,000 meters near Lake Naivasha from which it drops to approximately 660 meters in Tanzania (Morgan 1973). Escarpments and highlands that provide variations in rainfall, temperature, surface water, and vegetation surround the valley. The valley floor and the foothills are interspersed with grass savanna and excellent pastures, while at the higher elevations, with higher levels of precipitation, and streams, irrigated agriculture was practiced. The Rift Valley and surrounding highlands were the incubators of specialized pastoralism in East Africa during the last millennium.

These agricultural systems were capable of producing sizable surpluses that were used for the exchange of crops for livestock, which, in turn enabled cultivators to build cattle herds that allowed them to move into pastoralism (Berntsen 1976; Håkansson 2008a; Petek and Lane 2017). Some authors have incorrectly suggested that I view the provisioning of caravans as a major cause of agricultural intensification in East Africa (Biginagwa 2012, 70; Petek and Lane 2017). I do not. As I have explained in several publications, I view the emergence and maintenance of intensive cultivation as based on regional exchange of surplus crops before the expansion of the caravan trade (e.g., Håkansson 2004, 2008a, 2009; see also Waller 1985b).

The 19th-century AD saw the peak of a Maa-language expansion, at which point it was spoken widely between southern Ethiopia and central Tanzania, a territory of some 60,000 square miles (Galaty 1991), encompassing an array of geographical, ecological, and economic zones, as well as self-identified non-Maasai populations (Sommer and Vossen 1993). On the periphery of Maasailand were several groups of agro-pastoralists, including the Pokot, Nandi, Arusha, and Il Chamus, in various stages of advance toward, or retreat from, pastoralism.

One example of how such smaller agro-pastoral groups developed into specialized sections of cultivators and pastoralists is the Pokot in the Kerio Valley who pursued a generalized agro-pastoral livelihood in the 18th century. Possibly as a response to the drying

conditions the population moved up into the Cherangani and Seker Hills on the west side of the valley. There, at the turn of the 19th century, they developed large-scale irrigated cultivation, which was followed by the emergence of a section of Pokot practicing specialized pastoralism. Thus, agricultural intensification and pastoral specialization developed through mutually reinforcing exchange of crops and livestock. The pastoralist wing expanded throughout the century absorbing immigrants from neighboring groups (Davies 2012; Bollig 2016).

On the surface, this expansion of specialized pastoralism and its concomitant socio-cultural attributes could be interpreted as the result of a large-scale population movement of bounded ethnic groups. However, this was not the case. Rather, the spread of the Maasai and allied groups was the result of the assimilation of successful cattle accumulators from neighboring cultivators and foragers into a cultural package of language, social organization, and ritual (Sutton 1990, 54; see also Ehret 2002, 394; Homewood 2008, 38). Manning (2013) classifies this form of population movement over relatively short distances *cross-community migration*, which refers to the selective movement of individuals or sub-groups between communities. As pastoral and cattle populations increased, they moved into previously uninhabited areas or absorbed extant inhabitants into their communities. This type of migration corresponds to Manning's notion of a movement that involves the replication of a community into new areas. The combined forms of migrations were made possible by the existence of agricultural communities all along the Maasai core territory (see Map 5.1) where the pastoralists and cultivators constituted mutually dependent parts of a spatially wider socio-ecological system. For example, around Mount Kenya along the Maasai borderland, semi-pastoral Kikuyu and Meru populations developed through the movement of successful cattle accumulators into the areas where cultivation and forest merged into pastures (Lawren 1968; Waller 1985; Fadiman 1993, 91).

The process of removing people from the agricultural to the pastoral sector may seem to contradict the expansion of labor-intensive cultivation. The demographic and economic effects of the two opposite migration patterns must be further investigated. However, there are several possible solutions to this apparent contradiction. First, the territorial expansion of successful pastoralists led to warfare against other pastoralists whose cattle were appropriated, forcing destitute former pastoralists to join agricultural communities (cf. Waller 1985; Spear 1997). Second, the spatial spread of population movement into pastoralism is much greater than the reverse change of land use to cultivation. That is, the labor requirements for herd growth are much less than for intensive cultivation. Hence, a relatively small number of people moving into pastoralism with thousands of cattle would produce a significant territorial bumper car effect. Third, there was a regional slave trade to the interior, mainly in women from the coast and the Maasai whose offspring were assimilated into the agricultural communities (Ambler 1988, 70–2).

The process of assimilation was different for women and men. Women from cultivating societies such as the Kikuyu often married Maasai men, thereby also creating networks of kinship relationships between the two groups. Frequent intermarriage between pastoralist and cultivating communities created enduring kinship networks that enabled flexibility in group membership and economic activities. For men, assimilation into the pastoral community depended on the ability to accumulate enough cattle to transfer into a fully pastoral existence. Young men from the Kikuyu and Meru in Kenya and from the Pare Mountains in Tanzania dressed like Maasai warriors and could join

Maasai initiation rituals and age sets (Kenyatta 1938, 209–10; Lawren 1968; Berntsen 1976; Håkansson 2008b).

Further south in the Rift Valley, in southern Kenya and northern Tanzania, the Pagasi and Sonjo irrigation communities were, as the inhabitants expressed it, “a school for Maasai” where cultivators became Maasai through the accumulation of herds. During periods of significant cattle losses, Maasai pastoralists also utilized the system. Large numbers of them lived in Pagasi between 1850 and 1870, and again in the 1890s after the Rinderpest epidemic. The farming population contracted as climate conditions improved and allowed people to return to pastoralism (Berntsen 1976).

The extensive networks of friendship, marriage, and kinship between cultivators and pastoralists that was conducive for recruiting new members into the herding economy also enabled pastoralists to seek refuge during times of loss of cattle. The relationship between Maa-speaking pastoralists and cultivators was complex and entailed both peaceful exchange and raiding. The warrior age sets subsisted mainly on livestock products – milk, blood, and meat. These young men frequently conducted raids on the cultivators’ cattle in order to build up their own herds and ability to marry. The older married generations of men and women maintained peaceful relationships and were dependent on the cultivators for plant food. The trade between the Maasai and cultivators was completely in the hands of women who were allowed safe passage even if the men were fighting (Thomson 1885, 178; Lawren 1968).

The Arusha on Mount Meru in the Pangani Valley provide an example of how such population interchange could function. In the early 19th century the slopes of Mount Meru were settled by Maa-speakers who practiced irrigated agriculture, intermarried with the Maasai, and maintained a flourishing exchange of pastoral and agricultural products.

A common form of migration was a result of droughts and other events that reduced the herds, making a pastoral life style untenable. The destitute pastoralists could move either to friends and relatives in neighboring agricultural areas or to local Dorobo foragers, where they could accumulate cattle through trade. These were usually short-distance movements rather than long treks. Dorobo was a collective term used by pastoralists and cultivators for gatherer-hunter groups that inhabited forested and wooded areas of East Africa (Van Zwanenberg 1976). They were central actors in the regional and extra-regional trade systems exchanging natural products, including ivory, for livestock, beads, iron implements, and cultivated plant food. For example, Dorobo hunters sold ivory to their Maasai patrons who in turn traded with coastal caravans.

Spear (1997, 52) describes the processes of changing from a pastoral existence to cultivation in a host community, cattle accumulation, and return to the livestock economy among the agricultural Arusha and pastoral Maasai in northern Tanzania. The agricultural Arusha were (and are) linguistically and culturally closely related to the Maasai and occupied the highlands of Mt. Meru where rainfall was ample and streams provided water for irrigation. Hence, the Arusha almost never experienced the effects of droughts, or the spread of cattle disease, because their cattle were kept on isolated highland pastures. When the Maasai experienced a period of relative prosperity they often had a surplus of cattle relative to available labor. During periods of prosperity among the Maasai, Arusha women married Maasai men in exchange for cattle as bridewealth. Such transactions were mutually beneficial to both groups in that the Maasai gained women and children while ridding themselves of surplus cattle to the gain of the Arusha who were almost always in need of cattle for marriages. Through marriage the Maasai also gained Arusha affines who could provide herdboys,

access to agricultural products, and potential refuge in times of need. The Arusha, who had a shortage of pasture land on the mountain, could gain access to pasture on the plain through affinal connections with the ultimate goal of establishing themselves as pastoralists on the plains when they wished to do so.

Conversely, during periods of drought or cattle diseases, cattle herds were reduced, making it impossible for the Maasai on the plains to maintain their diet based on livestock as the major food source. Women and children sought refuge among Arusha affines and age mates during famines while the men remained on the plains to care for the remaining cattle and to rebuild herds with stock from Arusha and elsewhere.

## 7 Uganda

The development of pastoralism in the Great Lakes area differed radically from the rest of East Africa. Instead of a geographical division of labor into different socio-ecological niches, pastoralists, cultivators, and foragers became parts of stratified social formations. Access to and control over cattle were in the hands of pastoral elites who dominated the farmers and foragers in various kingdoms. In Rwanda, the pastoral Tutsi constituted the ruling group and in other kingdoms the pastoral Hima formed the ruling groups. Thus, while wealth and prestige was distributed horizontally in Kenya and Tanzania between politically independent groups, in Uganda foragers, cultivators, and pastoralists were arranged in political hierarchies within societies.

Several authors ascribe the growth of hierarchy based on control over cattle to climate change and migrations during the 18th and 19th centuries (Steinhart 1981; Chretien 2003, 145). As the climate became drier and droughts became more common in southeastern Uganda, cultivators moved westward to higher rainfall areas. By the mid-19th century all the cultivating communities had moved to the west of the 1200 mm isohyet, abandoning the drier eastern side to the pastoralists (Spinage 2012, 135). These authors argue that more than half a century of declining precipitation had differential effects on cultivators and pastoralists. While the latter preserved their herds by moving cattle to wetter areas, the decline in agricultural production forced the cultivators to obtain food and protection from pastoralists. The new social relationship favored the pastoralists who established political domination over the farmers. The periodic drought cycles that occurred throughout the western lacustrine zone may also have led to direct competition with pastoralists for water and land (Steinhart 1981). However, this explanation is not tenable because it ignores the fact that pastoralists cannot survive without access to plant food. Hence, giving cattle to starving farmers would not help them very much and food shortage among the cultivators meant that the pastoralists would also experience famine. We are therefore still at a loss to explain the difference in the political economy of pastoralism in the Great Lakes region and the rest of East Africa.

## 8 Conclusions

Compared to earlier centuries (as far as we know), there was a formidable expansion of pastoralism in terms of people and livestock during the 19th century, which was driven by the growth of the international ivory trade. This growth may have reached a plateau around the 1880s, only to collapse during the catastrophes of massive cattle disease, human disease, and droughts during the end of the 1880s and the beginning of the 1890s.

The overall effect of the Maasai expansion both into and within present-day Tanzania seems to have included a transfer of people from the northern part of Maasailand and the absorption of successful cattle accumulators from other agro-pastoral and agricultural populations from northern Kenya to the Pangani Valley in Tanzania. As the pastoralist population expanded, so did the concomitant cultivation and the building of landesque capital in the form of irrigation systems and semi-permanent fields in the highlands, as well as in enclaves on the plains (Waller 1985; Widgren and Sutton 2004; Håkansson 2008a).

At the end of the 19th century, the wider economic and political contexts for pastoralism changed. The immediate effect of colonialism on pastoralism was the establishment of tribal reserves and the suppression of armed conflict and raiding. Pastoralist movements were curtailed but smaller groups experienced relief from the depredation by larger neighbors.

The colonial states of Kenya and German East Africa were established after the severe epidemics that reduced both human and cattle populations across East Africa. Colonial administrators failed to see that this decline was temporary and that the pastoralists were still on the move. Administrative boundaries froze the pastoralist populations within tribal ethnic boundaries. Boundaries and territories cut across the ecological resources necessary for successful pastoralism, denying them access to dry and wet season pastures and watering holes. In addition, the Maasai saw themselves cut into two halves by the international border between Kenya and German East Africa (Homewood 1996). A part of the latter became the British protectorate of Tanganyika after 1918. Despite being governed by the same colonial power, the two colonies pursued different policies that affected pastoralists. This was especially problematic in Kenya where large swaths of prime grazing land were alienated to European ranches (Waller 2012, 55).

The creation of administrative boundaries and ethnic categories by the colonial authorities contributed to a decline in the old system of relief for impoverished pastoralists through migration to agricultural enclaves. By 1940, the pre-colonial flexible social networks between communities that had enabled pastoralists to move between cultivation and cattle keeping had declined. Notwithstanding these colonial changes, the cross-community migrations of successful cattle accumulators to pastoralist groups from cultivators and foragers continued (Cronk 2002; Håkansson 2008b). However, in Kenya the establishment of large European ranches and farms provided the colonial equivalent for such refuge settlements. Squatting in the White Highlands made it possible for households with livestock to accumulate cattle in more favorable environments than existed in the reserves. In addition, pastoralist men were sought after as herders and paid twice as much as other farm laborers, usually in stock, which allowed them to rebuild their herds (Waller 1999). Thus, pastoralists have exhibited a remarkable resilience in trying to maintain their way of life despite the restrictive policies enacted by colonial and post-colonial governments alike.

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