

Demographic Change in Maasailand

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1. Introduction: The Demographic Transition

In early late 19th and early 20th century, the populations of Europe experienced what might be called a social revolution. This revolution consisted of the widespread adaptation of fertility regulation: the termination of childbearing in marriage before the woman's physiological capacity to reproduce was exhausted (Watkins, 1986). Once the decline had begun at certain areas, it continued without reverse and spread quickly: by the 1930s almost all European countries had changed their fertility regime, emphasizing individual control of reproductive decision making. The classic description for this demographic transition separates a pretransitional period with high fertility and high mortality, an intermediate period of falling mortality due to improved health and sanitary measures with remaining high fertility (and thus population growth), and a final decline of fertility as a reaction to lower child mortality.

The demographic transition can be seen as the product of the urban, industrial revolution. It motivated a fundamental change in social organization, morals and values at a speed unknown in history. The traditional peasant family came to be replaced by a nuclear one, emphasizing individual career advancement in a developing urban and technological world. New mobility and the anonymity of the city reduced the pressures toward traditional behavior, while mandatory child education and rationality became

increasingly important. The costs of childcare rose drastically: the value of children in agricultural labor declined due to mandatory schooling, the demand for education and female independence from household obligations rose, healthcare expenses increased, while at the at the same time falling death rates increased the size of the family to be supported. Fertility went down as a result.

The new fertility regime was fundamentally linked to European technological success in industry and warfare, and coincided largely with a new wave of world colonization in the African and Asian continents. Although international trade processes had been making headway into a global market many centuries earlier, the actual resource exploitation of the African continent--the geographic focus of this paper--became facilitated by an ideology of technological superiority (Iliffe, 1995) in canons & cars, capital, communication, and with it, as will be elaborated in this paper, ideology of conscious fertility control (Coale & Watkins, 1986; Lockwood, 1999). The rise of modernization theory in post-colonial days has maintained this ideology up to today's days of development aid and structural adjustment programs.

Linking fertility control to technological power and sequential colonization, it seems that an historical analysis of demographic ideology can be of value in understanding the context of current African population-environment processes. The demographic transition has become part of the modern justification of the cognitive distancing of those who are "less

underdeveloped" and those who are "modern" or "developed" (Fabian, 1983). Media "tribalization" of African affairs and the widespread belief in the evolutionary dominance of western technology are directly linked to this perception. The current rising concern surrounding global environmental change has not helped in shaping a counter discourse questioning this interpretation. Malthusian population apocalypses have become the evil of modern times and the finger is easily pointed to those whose fertility is highest. Africa is a special case in this respect. While a reproductive revolution took place in the entire developing world in the past four decades, this transition has mostly bypassed sub-Saharan Africa (Caldwell & Caldwell, 1993). Only as recent as 1994 have the first slow signs of a fertility reduction been evidenced by United Nations surveys and censuses (United Nations, 1996). Although the concern with population growth is not in question here, the linking of the theory of demographic transition to Eurocentric notions of evolutionary dominance facilitates suspicion with regard to the role of demographic discourse in the history of colonized Africa. The main issue in this paper therefore is to explore the role of demographic discourse in sustaining the colonization, ecological disruption, and massive economic restructuring of African colonies.

I believe anthropologically and historically informed political ecology needs to surface to provide feedback on the ways in which this question can be answered. The relatively recent recognition of an historical ecology focusing on

non-equilibrium ecological systems (Little and Leslie, 1999; Winterhalder, 1994), multiple temporal and spatial scales (Crumley, 1994), within the context of power relationships & discourse (Foucault, 1980; Leach & Mearns, 1996) provides a new analytic framework. The dialectical relationship between populations and their environments is complex and impacted by many factors: human interventionist policies, subsistence structures, exchange networks, ecological and climatic constraints, cultural institutions, land use practices, etc. This paper approaches this interaction by following demographic concepts and their role in the justification of repressive colonial state interventions, as well as more recent development schemes.

The focus in this paper will be on the case of the Maasai in the Ngorongoro Conservation Area, a nomadic-pastoralist ethnic group in northwest Tanzania. Reason for this is dual. First of all, the Maasai in general are a well studied ethnic minority in Africa, while the Ngorongoro Maasai due to their relationship with one of the most studied wildlife areas in the world have received attention in particular. Secondly, the traditional use of African rangelands is in the process of radical transformation since the 1950s. Maasai pastoralist have begun to adopt cultivation on a massive scale: 80% of households have begun to cultivate in the last 20 years (McCabe, 1992). Census data seem to indicate that this trend is largely driven by population increase in the area, while livestock fluctuates around a mean. When families become progressively poorer over time, diversification results in the adoption of

cultivation (Leslie, personal communication). Indeed, then, the most common explanation is that an increasing human population is driving the process of intensification in accordance with the Boserup model.

2. The Maasai precolonial ecological and demographic situation

2.1 Maasai Regional Ecology in precolonial times

The history of the Maasai provides a case in to which to explore the indigenous fertility regime and its rootedness in regional ecology. The Maasai have a long known history (Galaty, 1988, 1993; Sutton, 1993; Summers & Vossen, 1993). A first wave of migrations into East Africa came from the adaptation of Southern Cushites from Ethiopia to the semi-arid Turkana region in Northern Kenya around 3000 BC during less arid climatic conditions. Subsequent emigration southward onto the Rift Valley grasslands where they coexisted with hunter-gatherer populations exploiting the savanna-forest margin. A second wave occurred around 1000 BC, when Southern Nilotes proceeded down the Rift valley, probably displacing others who in turn displaced the click-speaking hunter-gatherers of Northern Tanzania. The coming of Bantu speaking iron age farmers may have made possible the emergence of more specialized pastoralism in the Rift Valley by Southern Nilotes, who could engage in trade for grain and modified agro-pastoralism by Bantu communities (Galaty, 1988).

A third wave occurred during first millenium when Maa-speaking Eastern Nilotes stimulated southward movement of Southern Nilotes, probably associated with acquisition of early iron age technology, new breeds of heat resistant Zebu cattle, and novel forms of social organization. The Southern Nilotes were brought into contact with earlier agro-pastoral Southern Cushitic migrants. It is suggested that the origins of the Maasai traditions be placed around AD 1600 when they ascended the Kerio escarpment. Although comparative linguistic evidence (Summers & Vossen, 1993) and archeological estimates (Sutton, 1993) differ with regard to the exactness of this date, theories generally assume that several independent southward extensions occurred after this time. This brief overview suggests that today's societies represent a complex synthesis of past encounters and long periods of coexistence and social interaction among groups.

The regional dynamics in Maasailand have been based on exchanges of technology, trade, sociopolitical, cultural and linguistic heritages (Vail, 1977; Waller, 1985). According to Lamphear (1986), these regional dynamics have been increasing in diversity. The "old pastoralism"--before the Maasai origins--was more sedentary and less specialized than would later be the case, and involved less extensive pasture use and more varied mixes of animal and crop husbandry and foraging, as well as less sharply distinguishable ideological differences. Thus, it as Spear puts it (1993) "by the 17th century plains communities were more social phenomena than ethnic groups." However,

from the 16th to the 18th Century, a period known as the Little Ice Age caused wetter conditions in tropical margins of Africa, while East Africa experienced a relatively dry episode (Nicholson, 1979). As a result, the agro-pastoralist groups were forced to give up cultivation in the Rift Valley. The Maasai came to specialize in a life more appropriate for the dry conditions, leaving grain production to farmers in the fertile highland at either side of the valley (Spear, 1993). The Maasai were very successful in establishing hegemony over the Rift Valley for several reasons, mostly related to the adoption of iron weapons, humped Zebu and Sanga cattle better adapted to arid conditions, and renewed political-religious leadership. At the height of Maasai power around 1850, the Maasai controlled a vast area of land stretching from central Kenya down to Ugogo and Uhehe in central Tanzania (Arhem, 1985).

Thus, the "real pastoralist" as we have come to define it today appeared as a Little Ice Age-drought-specializing-offshoot of a more common agro-pastoral subsistence mix. Further, this version of nomadic-pastoralism never existed in a vacuum by itself, due to its dependence on others for diet supplements, crafts and ritual services, the maintenance of a balanced ratio of people and stock on the plains, and a refuge in time of natural disasters (Spear, 1993). Thus, a symbiotic mutual dependence of hunter-gatherers, pastoralists and cultivators developed, albeit under the hegemonic dominance of the Maasai warriors. The success of the Maasai may partly be due to its *murrān* age-set system, in which young boys from similar age groups left the

household for a long period of time to raid cattle and women. But, while the system became dominated by the ethnocentric and exclusive power of the *people of the cattle*, Maasai ideology remained open for anybody willing to embrace it. Entry was easy; one could obtain cattle, join a Maasai age set, speak Maa, affiliate with a Maa clan, or obtain an intermediate status through institutions spreading beyond Maasai boundaries. The ethnic boundaries between different subsistence groups--mainly Maa pastoralists, Bantu farmers, and Okiek hunter/gatherers was easily blurred. Thus, Spear argues (1993), the Maasai ideology was a hegemony based on cultural exclusion and access to resources within, while at the same time maintaining homogeneity through a social inclusion by access to resources outside.

The development of this drought resistant regional system with specialized but interdependent niches was the result of ecological dynamics, but not a steady "climax" state of affairs as has often been put forth in systems ecology (see Moran, 1993). This development can be seen as happening on all scales, ranging from large-scale climatic change to small-scale innovations and coincidences such as the import of iron weapons or drought resistant Zebu cattle. Indeed, recent longitudinal research on the historically similar Kenyan Turkana has suggested that the Rift system has to be seen as a non-equilibrium human ecological system (Little & Leslie, 1999). As such, not the stability, but the adaptive resistance or resilience has to be seen as the unit of analysis. Within this system, historical specific combination of population-environment

interactions are build up, giving the system its own "memory," as story to be told, based on the order of previous events and state of affairs (Winterhalder, 1994).

2.3 Maasai fertility regime in precolonial times

One adaptive element contributing to this resilience is the human fertility regime. This regime is intertwined with other systems of reproduction regime, such as that of the land, labor, and culture (Lockwood, 1999). Within the dynamic forces of evolutionary ecology, all these reproductive regimes must have evolved ecologically specific, and as such "historically valid within their limits alone" (Woodlock, p. 13, 1999). Marxist ideas about the relationship between fertility and production systems thus seem to fall short, since it is within a regional and ecological specific system that fertility regimes develop (see also Mason, 1997).

Based on the argument of coevolution of fertility and ecology, it would be futile to compile a fertility regime specific to the Maasai regional system based on East African data in general. However, East African historical sources do not go back further than halfway the 19th century, and not much demographic history has been found for the Maasai in particular, even though this group is one of the best studied pastoralist tribes in the world. Some work is done by Arhem (1985) based on recent demographic data. Proximate sources

include contemporary work on the demographic aspects of the North-West Kenyan Turkana (Little & Leslie, 1999), a somewhat historical treaty on fertility and household labor of the agricultural Rufiji in Western Tanzania (Lockwood, 1999), and the macro-ecological treaty of Kjekshus (1977). Of the many of the demographic sources on Africa, most are rooted in cultural and economic analysis (see for example Bledsoe and Pison, 1994).

For the purpose of this paper, however, it seems important to suggest some general characteristics of the traditional East African pastoralist fertility regime as has been accounted for by the above sources. Obviously, the historicity of this account is illusive. The reason to explore it nevertheless is to suggest its role in the population-environment interactions as one based on historical ecological constraints. In general, as has been suggested by Leslie & Dyson Hudson (1999), nuptiality and fertility are central to the pastoralist subsistence strategy. The interdependence of livestock and human populations, cause differences in subsistence successes between families to reflect to some degree differences in family demography. To the Turkana of northern Kenya, the main problem is labor, since herd size never reaches carrying capacity. Reoccurring catastrophic losses of drought, disease and raiding always keep the herd size in check relative to the ecological system. The reproductive success of the herd therefore has to be balanced against the availability of labor, and as such family demography can constrain herd demography. A family that has too little labor, or too few of a particular species, may combine its herds

with those of another family and then travel with that family. When herds are plenty, cattle may be given away to shape networks of support with other families to be used in times of crisis. Marriages are directly related to this, since bridewealth is accounted for in terms of cattle. Thus, in times of plenty, the exchanges of cattle in support of survival network building is superseded by the use of cattle for bridewealth payments. The addition of extra wives to the family and as such reproduction is thus constrained by ecological factors. Furthermore, birth and marriage itself has to be seen as part of a networking process built up out of visits, transfers, of wealth and symbolic token, birth of children, etc. A birth may thus be a means to bolster a marriage, rather than vice versa (Bledsoe & Pison, 1994). Marriage is thus a social indicator under which families join and births occur. All of this facilitates the development of mutually beneficial social connections providing resiliency to the human-ecosystem as whole.

This brief and simplified sketch suggests a relationship between ecology and fertility. The extreme seasonality of the Turkana may be another indicator of this link. In fact, the Turkana pastoralists proved to be one of the most highly seasonal distributions of fertility yet found in a human population. It appeared that births track environmental change. Little and Leslie (1999) suggest that reasons for this might be found in human biology (suppressed ovarian function) as well as behavior (reduced coital frequency). As such, the relationship between population and environment is not only rooted in the

presence or non-presence of land and the top-down political forces acting upon it, but also on a historically shaped ecological fertility.

2.3. Maasai demographic situation in precolonial times

Until the 1970s, demographers assumed that precolonial fertility and mortality were both high due to famine and intertribal wars, bringing the low growth rates, which explained the relatively sparse populations. Kjekshus, (1977) attest that the early accounts of visitors to East Africa abounded in vivid descriptions of warfare among the Africans (10). Life in East Africa was "nasty, brutish, and short." The pastoralist Maasai in particular were believed to bring terror to the peaceful agriculturists surrounding them. Kjekshus quoted Krapf-- a German missionary--reporting that the vanquished could expect little mercy from the Maasai:

"The Masai do not make slaves of their prisoners, but kill men and women alike in cold blood, sparing only the very young girls."

(Kjekshus, 1977,p. 10)

Similarly, Reichard wrote about the Maasai murrans:

His only thought concerns killing and murder; he wants his weapon baptized in blood. The Masai are dreaded beyond belief; fear and panic ensues wherever they appear" (Kjekshus, 1977,p. 11)

European perception of African population trends thus initially concluded that population had declined from a previously higher level because the population in the mid-19th century was not that large (Kuczynski, 1949). However, Lockwood (1999) argues that East African fertility rates were at first, by early 19th century travelers, seen as relatively low in comparison to British pre-transitional rates. According to him, it was only after the late 19th century colonial officers became accustomed to falling marital fertility in western Europe that they began to emphasize the high-fertility societies they came across in Africa as a serious problem. Criticism regarding the perceived precolonial demographic situation comes from Helge Kjekshus (1977). According to him, pre-colonial Tanzania was a relatively stable and safe environment that was ravaged by disease, war and social disruption in the course of conquest and pacification. Mortality rose sharply and did not fall considerably until well into this century. Kjekshus introduces a "minimum population disruption theory," arguing that localized famines and skirmishes reported by early travelers do not constitute evidence for a serious population crisis in precolonial Africa. Against the depopulation argument that the Maasai always had had war, and were heavily disrupted by slave raiding, he argued

that it seemed more likely that population had been growing slow, but steadily, in Tanzania.

The idea of a steady grow seems plausible when taking into account Rift Valley regional dynamics. The indigenous system in place had developed in balance with ecology, even though the idea that a "merry Africa", which as also suggested by Vail (1977), resembles a climax idea of ecosystem dynamics, and as such seems to be a child of its own time. Indeed, McCracken voiced criticism in line with the current non-equilibrium ecosystem perspective in 1987.

Although it would be extreme to go as far as to say that competition for land was not an issue, labor has mostly been the constraining issue in Africa history, not land (Ilfie, 1995). Population pressure could be resolved by outmigration, which in the case of the Maasai--and their Nilotic forbears--occurred southwards. This is not to say that many groups were not displaced or assimilated by the Maasai warriors (see Waller, 1985), but a dynamic balance must have been attained at periods of time. Research on outmigration among the Kenyan Turkana suggests indeed that the entire pastoral system is reliant on outside relieve mechanisms (Dyson-Hudson & Meekers, 1999).

3. The influence of modernization on Ngorongoro Maasai demography

The 1880s-1890s break in regional continuity is very well know (Kjekshus, 1977; Spear, 1993; Lockwood, 1999). An assault of droughts, diseases and civil disorders devastated pastoralist herds, ravaged human populations,

and caused internal competition between different pastoralist groups struggling to survive. The entire early colonial period from 1890 - 1920 saw a steady decline of population due to rinderpest, locus plagues, trypanosomiasis and sleeping sickness, sand fleas, famine, influenza epidemics, and two major wars broke down the man controlled ecological system (Kjekshus, 1977; Dawson, 1977; Waller, 1988). The ecosystemic resources were stretched beyond their limits and many refugees fled to the adjacent cultivating highlands (Ambler, 1988; Spear, 1997). Soon after, German and British troops entered the scene, causing bloody conquest and further impacting the population levels.

The demographic results of their regime were large. The first resettlement schemes separating healthy from diseased people were started by the Germans in response to the crisis, leading to permanent concentrated settlements not congruent with indigenous settlement patterns and resulting in erosion. The Germans tried to confine the Maasai in a reserve on the arid Maasai-steppe south of the Arusha-Moshi road (Arhem, 1985). This move meant to increase population control, but also freed up the best lands for German settlers. These attempts failed however, because not enough white settlers arrived while the German administration was not strong enough to enforce the plan. However, land use for the Maasai did become restricted due to the piecemeal land alienation for agricultural development. White settlers and indigenous farmers took much of the rich lands around Mount Kilimanjaro and Mount Meru.

Furthermore, colonial warfare, labor recruitment and Hut-tax for the railroad increasingly cut the men from interior Tanzania off from the home economy, forcing the rise of a proletarian existence on the coast. The countryside completely deteriorated, and the lack of males ruined the indigenous economy, while sustaining the myth of African depopulation. According to Kjekshus (1999), not even one in three men came back to the rural village, and those who did often brought back Kaswende-vernal disease. Appalling health conditions in the early labor camp caused a 50% mortality under plantation workers. This all was followed by bush and tsetse expansion and sleeping sickness resulting in a imbalance of man-cattle-wildlife interaction. Kjekshus' loss of ecological control thesis attests to this.

After World War I, the Tanganyika became a Mandated Territory administered by Britain. After the 1920s, the population in the Ngorongoro-Serengeti Conservation Area fluctuated according to climatic variation. With the transition from German to British colonial authority an increased concern with hunting and wildlife preservation came to be translated in conservation policies (Vail, 1977; Arhem, 1985). The British passed the first comprehensive Game Preservation Ordinance legislation in 1921 for the Serengeti-Ngorongoro Area as a whole. The Maasai district was created in 1926 to impose order, and to defend Maasai interest against agricultural encroachment. This attitude of the benevolent British administration lasted until the 1930s. The colonial officers regarded the Maasai nomadic-pastoralists as being in an ideal

condition, and while they acknowledged the eating of agricultural produce by the Maasai, they saw this as a temporary result of the 1890s famines (McCabe, J.T., Perkin, S. Schofield, C., 1992). As such, the Maasai were the past itself and perceived by the British as heroic and warrior like.

Beginning in the 1930s and lasting until the 1940s a series of large scale land alienations took place (Arhem, 1985). The British had become under increasing economic pressure leading to an emphasis on higher productivity and bigger land returns. The need for mechanized wheat and maize production expelled the Maasai from many important areas, such as the Ardai plains east of Arusha, Monduli Juu, Makuyuni, the Ol Molog , Sanya corridor, Lolioro, etc. In late 1950 the borders of the Maasai district were changed to allow the growing numbers of WaArusha cultivators to take over pastoral lands. At the same time international conservationist pressures had led to the establishment of Ngorongoro Crater as a Closed Reserve in 1928, and in 1930 the same happened in the Serengeti-Ngorongoro. All hunting and agriculture in the reserve was forbidden by law. Consistent concerns with hunting led to the beginning of total wildlife protection in the Serengeti-Ngorongoro area in 1950, while in 1954 all cultivation was prohibited in the park. Protest and conflict with Maasai pastoralists and cultivators led to a "compromise" in 1959, in which the Maasai agreed to leave the Serengeti to move into the multiple land use Ngorongoro Conservation Area on the condition that they would have permanent rights to these lands together with cultivators, archaeologists, and

tourists. These affairs suggest that Maasai land use had become increasingly restricted.

For the British however, the European claims to land seemed unconnected to the apparent "population crisis." The depopulation thesis had provided them with an ideology supporting that population growth was the result of better European health facilities and not a consequence of a tightening squeeze on African lands, nor a phenomenon inherent to the regional system itself. Instead, the population boom was inevitably the result of fertility lagging behind falls in mortality. The demographic problem of the African area became confirmed by the many perceptions officials brought with them from Britain. Pastoralist were stereotyped by colonial as aggressive, living on a diet of milk, blood and meat, and little else, and many of the reports on the Maasai written by colonial anthropologists in the 1960s supported the stereotype of a ultra-conservative, isolated pastoral community. Exacerbating this was the lack of preciseness in the available demographic data, leaving the actual situation up for speculation indeed. The attitude resulting from the combination of ideology and lack of data can be evidenced in a 1949 demographic report quoting a 1929 census concerning the impossibility of using native translators gaining census records:

"To a man who cannot reckon higher than the number of fingers on his hands, who is apt to confuse colors in strings and the purpose if each,

who is clumsy at tying knots, who is absent minded and inattentive at his work, and further distracted by being drawn into conversation with friends and acquaintances during it, who is incapable of organizing a procession of his people in a single file according to sex and age, who dimly comprehends the objects in view and misinterprets at will, who has little or no interest in the proceedings, who is unsupervised, but who, mindful of instructions, is determined to supply the material required in however defective a form, to a man, in short, with all these handicaps in knowledge and inclination, the work is distasteful. The results are, moreover inaccurate. No legal compulsion attends the taking of the census, and the minimum of inconvenience to the people is the aim" (United Nations Department of Social Affairs Report on the population of Tanzania, 1949, p.98)

Indeed, the problem of land was not one of exploitative land use planning and conservationist concerns, but one of indigenous, pastoral overstocking and inefficient market habits. Mr. P.E. Mitchell, British Governor of Kenya, writes to the Secretary of State for the Colonies Mr. Oliver Lyttelton in 1952:

"Most of the pastoral areas are heavily and dangerously overstocked, and although cattle sales have greatly increased of recent years, they are generally still insufficient to dispose of the general increase. In general,

the problems remains that of persuading owners of excessive stock to sell, and of devising adequate means, in spite of the obstacles of distance and disease, to get the surplus stock to the potential markets, especially among the Africans themselves whose diet urgently needs improvement" (p3, par. 7)

This rhetoric, although not fully displaying the quite denigrating tone in the rest of Mr. Mitchell's exchange concerning the African peasant, portrays the pastoralists as not commercially apt, not capable of organizing their own markets, and enjoying a lousy diet. Today, the assumption that the indigenous system of livestock management as practiced by pastoral people is environmentally destructive has been proven incorrect by much anthropological work (Arhem, 1985; McCabe, Perkin & Schofield, 1992).

Despite accurate data however, the rapid growth of the peasants came to be matters of urgent state intervention. According to Kenya's Governor Mr. Mitchell, inadequate farming techniques of this expanding population were an important reason to intervene:

"The failure of tribal agriculture to meet the needs of an expanding population is indeed the general experience. The cause of the failure lies in the inability of traditional African peasant agriculture to do more than maintain the population at an unsatisfactory subsistence level, and

then only if shifting cultivation can be practiced, new clearings made when old are exhausted, and whole regions thereby laid waste by desiccation and erosion." (Mitchell, p. 5, par. 14)

Population growth thus came increasingly to be seen as the major force driving soil erosion problems. This perceptions might have been unfortunate. The colonial administration underestimated peasants ecological innovativeness, assuming both peasant and pastoralist ignorance of ecology. Desertification rhetoric based on bad science (Swift, 1996), the unsustainable practices of naive, incoming European colonists, and international pressure resulting from for example the 1920s Dust Bowl experiences in the USA, dazzled the colonialist minds: soil conservation issues became priority number one. However, interventions in African agriculture remained inefficient due to indigenous resistance on forced resettlement schemes, the lack of expertise on African ecology, the lack of expert guidance, and the total ignorance and often destruction of the indigenous methods already in place (Beinart, 1984; Showers, 1989). As a result, the need for larger scale planning intervention in indigenous agriculture was called for finally leading to radical agricultural restructuring measures after World War II.

The problem of peasant population growth was greatly exacerbated by the problem of population density. As already mentioned, resettlement schemes centralized previously dispersed people. At the same time, the British

had taken much of the best native agricultural lands for themselves. Fear for an African uprising seemed present in Mitchell's writing. Referring to the "irrational" claim of Africans to their lands, the "Africa belongs to the Africans" slogan was strongly rejected by Mitchell:

"From time immemorial, indeed down to the present generation, Africans have been accustomed to meeting such a situation by moving on and felling more bush and forest. ... But the only expansion which is within their understanding and capacity is a joint move to another area, preferably adjoining, where by communal effort a new block of bush can be felled, which will, when cultivated, still yield no more than a bare living because of the low standard of husbandry and the limited area. This being so, it is no surprising that Africans in congested districts should look with covetous eyes upon neighboring land owned by European farmers, and should regard such land, plainly not suffering from congestion, as the solution to their problem." (p5-6. par15-16)

However, arguments related to native inability to farm and resulting congestion were used to counter the demands. The solution for Kenya, Mitchell proposes, was one of using "unutilized land"

"Despite these areas of local congestion, whether of people or livestock or both together, the greater part of the region is under-populated and underdeveloped. Some of the empty land it may never be possible to use (although before any land is labeled unusable it is wise to pause and consider the achievements of Jewish settlements in Palestine): some of the empty land may be usable until it is reclaimed from infestation with tsetse and other pests, or supplied with communications: or it may be that a particular pest or disease will keep the land from use until such time as science provides a remedy. Nevertheless, very large areas of empty or thinly populated land could be brought into fuller use to relieve congestion elsewhere" (p4, par9)

Much of this empty land had previously belonged to the Maasai, or was still used by the Maasai as seasonal pasture. The use of these lands further influenced the resettlement policy. The British Commonwealth had promoted these schemes as "key to development." Here centers for education, health, water and conversion "will make easier the task of changing a disease ridden and backward horde of savages into as disciplined and prosperous community" (Kjekshus, 1977. The spread of the tsetse fly was used as another justification for the resettlement. However, as Vail (1977) has demonstrated in the case of Zambia, the main motivation behind these schemes was the collection of tax, and to accommodate the short staffed colonial administration.

In these villages, a centralized settlement pattern was forced upon the normally decentralized native peoples. The absence of cattle forced people to rely on shifting cultivation and caused frequent soil exhaustion and erosion. This in result led to further conservationist's measures during the 1940s and 1950s, and the further spread of the tsetse fly. Looking at the answer to the latter problem as defined in 1949 by The United Nations Department of Social Affairs it seem as if the fly came in handy:

"... against an extending or stationary human population dense enough to keep down the harboring vegetation the fly has no chance of surviving. ... one of the principal measures taken by the Government to combat the fly has been to move the dispersed population of heavily infested areas into concentrated settlements where enough clearings could be maintained to keep out the fly. These concentrations represent a step toward the development of a settled agricultural population"
(UN, 1949, p35)

Furthermore, economic arguments based on bad population distribution were used as another argument to settle down an anarchic mobile and self-sufficient population into a stable and social structure ready for capitalistic marginalization:

"Evidence of [problems of population distribution] appears in the difficulty of producing adequate subsistence under the system of shifting habitation and cultivation that prevails in large parts of the Territory. It appears also in the economic inefficiency and demographic imbalance that results from large scale, temporary migration for employment. Now, as in the German colonial period, roughly two-thirds of the area of Tanganyika is uninhabited, and the development of commercial agriculture and industry has done little to alleviate the difficulties of excessive population in relation to developed resources in the areas of habitation. The European economy of plantations and mines has grown up besides the native economy of subsistence agriculture, and the two have been but poorly integrated so far as their demographic bases are concerned" (UN, 1949, p42)

The demographic situation of the Ngorongoro Maasai during colonial policy seems thus to have been one influenced strongly by external events. Most importantly, colonial policy increasingly emphasized population growth and the need to modernize agriculturally to cope with this. Furthermore, conservation policies increasingly excluded the Maasai from their homelands as unwanted guests, leading to an explosion of Wildebeest population further competing with Maasai land demands. Finally, a drastic increase in population in the Ngorongoro area itself started around 1929 and has been increasing until

today (Arhem, 1985). To this growing population of pastoralist Maasai, land began to supplant cattle as the critical resource factor. This would certainly not have been as disastrous for the Ngorongoro Maasai as it seems if they had been able to balance this loss with cultivation, as had been common to their ancestors before the pastoralist revolution. But population pressure in the agricultural highland had grown (Spear, 1997), while in 1975 the Ngorongoro Conservation Area Ordinance prohibited all cultivation within the Conservation Area. Although this development in some way protected the Maasai from Arusha Maasai agricultural encroachment, it also forced them in a ideal-type pastoralist colonial stereotype, which had in the past only managed to exist within a well-established and developed regional ecology. However, in the 1970s, the symbiotic relationship between hunter-gatherers, cultivators and pastoralists had ceased to exist in an environment where all groups struggled to preserve their subsistence identity in the face of state pressured commercialization and industrialization, while land had become increasingly scarce. The result was a serious nutritional decline among the Ngorongoro Maasai (McCabe, 1992).

In an editorial comment in the Daily News--the official party organ--of January 21 1982, the long term objective of livestock policy was defined as bringing the traditional livestock keepers into the cash economy. The means to achieve this included "educating our livestock keepers to abandon traditional beliefs associated with livestock," because "most cattle keepers associate wealth

with sizes of herds owned by individuals and families having "little if any awareness that such wealth is deceptive since the larger the herds, the more the danger of overgrazing." The policy of self-sufficiency as envisioned by Nyerere's socialist regime emphasized development, and could only be achieved "if traditional pastoralists settle down and adopt modern techniques of livestock keeping and learn to integrate livestock keeping with farming." Arhem (1985), studying the impact of development policies on the Maasai, criticizes this editorial:

"The editorial comment reveals an appalling ignorance about livestock-based peasant economies in Tanzania and a total lack of awareness about the results of more than 30 years of sociological and ecological research on pastoral and agro-pastoral land use systems in East Africa. It is as if nothing had really happened since the early colonial days" (31)

He points out that livestock development trends over the past 20 years have shown channeling of resources away from the pastoral and agro-pastoral producers and increasingly concentrated on the development of state-controlled, large scale beef ranches.

As Maasai land had been alienated to white and African commercial farmers, game parks, and individual Maasai ranchers, the Maasai community as a whole has increasingly come to lose access to sufficient pastures and water

to maintain a viable pastoral economy. Wealthy Maasai who once invested their cattle in wives, stock alliances, and other social relations now converted cattle and land as a private exploitable resource at the expense of their less wealthy neighbors. Differentiation between rich and the poor, landed and landless, employers and workers, grows, and struggle over what it means to be Maasai intensified (Waller, 1993).

4. Discussion: demography today and the self-fulfilling prophecy

Having sketched a simple history of both precolonial and colonial demographic situations, it would now like to turn to modern perceptions of demographic discourse. Caldwell, Orubuloye and Caldwell (1992) in a famous and recent demographic paper concluded that:

"Sub-Saharan Africa [is the] only major world region still not participating in what was otherwise a global fertility transition"
(211)

According to them, the failure of sub-Saharan fertility to decline until now is due to a lack of (female) education, economic growth, as well as the unavailability of contraception. From their article, it almost seems like as if the Africans themselves are waging a battle against the western rationality of low

fertility. The "resistances to be overcome in any African fertility transition" included many aspects rooted in indigenous culture and the collapse of the traditional system seems the only way out. Four notions of African traditional fertility practices are pointed at as especially harmful (214).

In the first place, they argue, African traditional society and religion stress the importance of ancestry and descent. As such, younger generations assisted the older generations to such an extent that, for males at least, high fertility ultimately brought substantial economic returns. In posttransitional situation the flow of wealth would be reversed. High fertility was morally correct and childlessness or rearing few children was evil and aversion of such irresponsibility led to hostility to both abortion and contraception. As second argument made by the authors' claims that polygyny in West and Middle Africa led to separate spouse budgets, with the basic childrearing economic unit being the mother and her dependent children.

"The father was spared much of the cost of rearing children while still receiving material returns from his children... Thus, reproductive decision making and the cost of childbearing were separated"

In relationship to child fostering

"Even the biological bearing of children and the cost of childraising were separated by a high incidence of child fostering. The usual economic of the family and fertility did not apply"

A third argument made by the authors is that Africans believe in strength and safety by numbers. Communal land tenure, in conditions of shifting cultivation, meant that large families could demand a larger share in the land.

"Investment in labor--in wives and children--meant greater production; in fact in most sub-Saharan Africa no other investment was possible"

(215)

Finally, the authors claim that family planning programs were nonexistent and weak, because of politicians and bureaucrats who believed that there was little demand for fertility control and did not want to be weakened by association with failure and with the promotion of institutions regarded as foreign or as incompatible with African culture.

Although these arguments are certainly valuable, the authors' claims seem to lack any sense of the historical ecology and power relations underlying the current pattern of population growth. No reference is made to land alienation, market economies, colonial perceptions, conservationist

movements, resettlement policies, large-scale agricultural reform, ecological variability, or forms of indigenous fertility regulation. The past only serves as a function of the present, and it is from today's perspective that the indigenous population growth is judged. Worse, the indigenous system itself is blamed for the problems at hand:

"Nearly all the supports for high fertility listed above have been slowly eroding as the old rural system collapses." (215)

Of course there is no reason to suggest that lowering fertility is an evil attitude in today's crowded world. But that the decline of the old rural system is seen as a victory goes straight against the sense gained from the lengthy discussion above that pre-colonial and colonial/post-colonial demographic circumstances differed dramatically from each other. Caldwell et al. go as far as to solicit their preference regarding the religious course humanity should follow to be demographically safe

"Christianity, Islam, and Western education have undermined much of traditional society, even the reverence for ancestors. The importance of lineage and, with it, the practice of fosterage are weakening." (215)

Indeed, Africa simply needs to become modern, like all the rest of the world is doing as well. Surprisingly then, the same old Eurocentric and colonialist ethos which qualifies western science as superior over ancient, accumulated indigenous knowledge is still putting ecological and historical blinder over the eyes of the well meaning demographers today. When it is the health and ecological sustainability which makes demographers fight against overpopulation, it is rather ironic that that which has provided resilience in the face over ecological uncertainty for centuries has been overlooked entirely: tradition

How can one morally justify this continuity? One central element that has remained present seems to be the moral imposition of a demographic transition as a form of evolutionary progress. This idea was first challenged in the sixties. Some demographers resisted the persistent idea that the demographic transition was the outcome of rational decision making process, and as such an implicit rejection of high fertility on the basis of an irrational hangover from earlier type of society. Related to this, the implicit notion of a single evolutionary path common to all societies was rejected as well (Woodlock, 1998). Since then however, not much progression seems to have been made to provide alternatives approaches avoiding these limitations. On the contrary, the highly influential Princeton European Fertility Project lead by Ansley Coale (Coale & Watkins, 1986) has substantiated the ideological claim of moral superiority for the European fertility on the basis of a very simple and

seductive ideology: conscious control. Most students of population characterize African reproductive regimes as those governed by a "natural fertility": because the demand for children is high and few people appear to be interested in reducing numbers of children, women do not alter their fertility behavior appreciably from one birth to the next. Fertility is under constraint of social institutions and control, and not under an individual, conscious choice. The idea of the "natural fertility regime" is thus based on the assumption that there is a fundamental difference between a pretransitional and posttransitional demographic population. Here then we find the core of the modern version of evolutionary superiority disguised in the form of scientific psychology.

The breakdown of community into isolated and individual pieces of identity in the wake of a globalized capitalism is perhaps one of the most the most significant transitions in the history of human kind. It is exactly this moral philosophy which has sustained the cognitive distancing of the African continent back to its "tribalized" past. Mason (1997) in her recent presidential address to the American population Association rightfully attacked this ideology, pointing out that accepting the idea that unconscious control has and is a reality of pretransitional societies is based on an outdated view of culture. Lacking unconscious control, so the story goes, the poor are swept of their feet by forces of culture and social norms, lacking agency to fight against this. Since the 1980s anthropologist have sharply criticized this monolithic idea of culture and instead embraced the power of agency within an interpretative framework

of culture (Bourdieu, 1977). Evidence from ethnographic, historical and demographic studies show that individuals in pretransitional societies indeed do think, plan, and strategize about the configuration of their offspring. People plan their families sequentially, after learning important facts about their reproductive history and their fecundity. Most of their action however are taken postnatally rather than before birth. The response given that it is "Up to God" by many African women should thus not be misinterpreted as evidence for a natural fertility regime, but rather shows that women do not think like demographers.

Unfortunately, the current transitional situation of Maasai pastoralism does not help much in the rejection of these kind of evolutionary discourses. The Maasai are perceived as "underdeveloped" by the State, by farmers, as well as by the Tanzanian and Kenyan urban populations (Mark Soccer, personal communication). This observation sustains the logic inherent in the unconscious control hypothesis. This chain of events have been noticed before by many authors (Beinart, 1984; Showers, 1989; Leach and Mearns, 1996) and hints to a certain self-fulfilling prophecy underlying perceptual ideologies. Expecting a fertility transition, it seems indeed suspicious that western forces continued to uproot the African indigenous systems to the extend that the first signs of this transition finally arrived in the 1994 census (United Nations,1996).

Having gained some insight in the discursive processes and power relations which played a role in the history of Maasai pastoralist decline, one

needs to conclude that the western world is one which resembles the Maasai warriors in a fundamental way: Globalized capitalism is an assimilative force which thrives on an hegemony based on cultural exclusion and access to resources within for the select view, while at the same time maintaining homogeneity through a social inclusion by access to ideological discourse outside. One can conclude thus that the evolutionary processes that appear to be at play are no more than illusions of time and scale. As the critical Geographer Harvey (1990) has argued, the postmodern, globalized world is one in which time and space have ceased to exist, and one in which history itself will ultimately become obsolete. The irony of it all is that while ecological decline and increased spread of famines are a legacy of western interventionism in Africa, the concern for the "highest levels of fertility in the world" has become an excuse for Western interventionist programs aimed at continuation of what was set in motion hundred years ago.



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