

Turkana People's Resilience to Drought and Famine in Kenya: A Study of Social Networks as an Insurance System

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Abstract: *This paper draws on the experience of Turkana pastoralists living in the Turkana District in the arid zone of north-western Kenya, an area with a long history of drought and famine. Special attention is focused on understanding the types of social networks which were activated by the Turkana people during the 2005-2006 drought and famine which hence, over time have shaped the adaptation of the Turkana people's livelihood strategies. Information from documentary review, observation and informal interviews, key informant interviews, case histories and mapping have been analyzed. Qualitative and quantitative data used. The major findings are that Turkana people possess a repertoire of adaptive strategies which stand out in relief and draw on social networks as an insurance system. The dominant modes of networks identified during the 2005-2006 drought and famine consisted of trading, reciprocity, splitting families and the search for allies. For example, families were split with some members sent away to relatives, friends, and school in order to ease the consumption pressure on available household food resources. The process thus helped to slough off population from the pastoral sector. The allies sought out included traders, kinsmen, affine, bond friends, neighbours and school. The paper argues that Turkana people's networking behaviour is an attempt to create or strengthen social ties that can be used to mitigate environmentally stressful periods of time such as drought. These networks form pathways that determine access and rights to livelihood resources or 'capital' (natural, economic, physical, human and social), and are critical to the maintenance of different livelihood strategies and achievement of sustainable livelihoods.*

Keywords: Drought, famine, Pastoral, Social networks

1. Introduction

The function of social capital in mediating economic change effects on Turkana households by providing (or constraining) access to other resources, coping mechanisms, or adaptive strategies makes it a crucial but formerly neglected area of analysis. Its contribution to famine alleviation has also not been extensively documented. Most studies deal with generalities which mask coping and adaptive responses (Barton, J.Morton, and C. Hendy 2001; Gulliver 1951, 1955; Hogg 1986; Oba 2001). The need for a detailed study is overdue. Furthermore, contemporary economic analysis of coping mechanisms or livelihood strategies helps us understand the impact of crises only in terms of factors like wealth, mobility, education, life style, and gender. Though important, if the mediating role of social relations is neglected, these factors do not explain why one coping strategy is pursued over another. Moreover, these other factors provide little normative insight for purposes of formulating relevant livelihood policy for pastoral areas. In order to fill the gap, this paper focuses on those behavioral patterns which emerged in the process of adjustment to stem the negative effects of the 2005-2006 drought and famine in the Turkana District. It is assumed that such behaviours remain dormant in times of plenty, and become observable only in times of need. They emerge only in response to calamities: more specifically drought, and one of its consequences, famine. The critical question this paper sets to answer is how do social networks contribute or not to the challenge of maintaining sustainable livelihoods in Turkana during drought and famine?

However, how to identify these relationships is a real challenge. Nomadism presents several problems for a

standard network analysis approach (most network analysts have studied settled communities). It is not possible to delineate a herd owner's total network of social relations since it would take a lifetime to come into contact with all the people who are part or potentially apart, of a nomadic social network. For example, in Turkana, a person's residence frequently and irregularly changes. The qualities of an individual's social ties vary both in number and temporarily through the course of the year, and throughout a lifetime. To overcome this problem, the paper places more emphasis on the quality of specific relationships rather than the quantity, and focus only on those social relations that emerged during the 2005-2006 droughts and famine, and allowed the Turkana people to implement their livelihood strategies to good effect, and hence towards the sustainability of their livelihood.

It is argued that a new approach needs to be taken to understanding Turkana pastoralists livelihoods – one that recognizes the Turkana people's social networks as a fundamental component of crisis management with a view to conceptualizing how, in practice, effective adaptation measures can be built on indigenous social capital. This new perspective reflects a paradigm shift in livelihood intervention thinking followed in the 1980s which proposed externally imposed, often blueprint solutions, and marks a shift towards a more iterative approach between external donors' prescriptions and local people's own potential. It advocates acknowledgement and understanding of the ways in which Turkana people manage and change their own livelihood strategies in response to stress and uncertainties. Potentially, it implies a new dimension to rural development which builds on the Turkana people's own successes and enables them to avoid - or find alternatives to – some of the

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deleterious effects of unsustainable changes in their livelihood.

2. Social Networks and Rural Livelihoods

The concept of social networking has been well described in both sociological and anthropological literature (Davern 1997; Putnam 1993). In order to understand how the concept works for Turkana households facing a crisis, this paper refers to writings of various authors: Davern (1997) defines a social network as a series of direct and indirect ties from one actor to a collection of others, regardless of whether the central actor is an individual or an aggregation of individuals (households); Moser (1998) defines it as reciprocal relationships which are based on kin and place of origin; Dasgupta (2000) describes it as the embodiment of social capital; Ellis (2000) focuses on social networks formed by personal or family relationships that typically consist of near or remote kin as well as close family. The families are spread out over a diverse range of areas and can respond when past favours need to be reciprocated; and for Johnson (1999), networks are links to the past, present, and future. Johnson argues that a network perspective allows one to cut across kin categories and focus on the links between active and inactive relationships and that it is a connection to people who can provide material assistance to those facing a crisis such as when there is food insecurity. For the purpose of this paper and as part of our understanding of how Turkana people make a living in an increasingly difficult, arid environment, the concept of reciprocity forms the most important part.

Empirical evidence from studies across Sub-Saharan Africa and other parts of the world suggests that social networking plays an integral (or critical) role in sustaining rural livelihoods. According to Collier (1998), social interaction can generate durable externalities that include knowledge about other agents, knowledge about the world, and benefits of collective action. Johnson (1997), in his study, found out that social networking can be used in acquiring economic capital (money and materials), human capital (labour and knowledge), and natural capital (land and water), and is hence important for livelihood sustainability. In central Mali, it was observed that social networks act to spread risk and enhance coping with crisis for member households. Both kinship and village-level associations were found to facilitate important non-market transfer of food and labour (Adams 1993). Derhem and Gzirishvili (1998), while studying the relationship between social networks and economic vulnerability of households in Georgia, found that those households with larger support networks define themselves as less vulnerable in contrast to less fortunate households with fewer social support networks. Jacoby and Skoufias (1998) provide evidence that poor households draw on inter-household transfers and informal credit markets to smooth seasonal fluctuations in income. Moser (1998) shows how declining extended family support systems are a major source of vulnerability for the poor. Agarwal (1991), while studying livelihood adaptation in India during drought years and other years of exceptional stress, pointed out that people utilize social networks and informal credit networks to overcome shortages. There is extensive literature on the critical role of social capital or networks of trust and

reciprocity, which need not be discussed here at length. Interested readers may be referred to the writings of the following: Adger (2000); Bigsten (1996); Cross and Mngadi (1998); Dershem and Gzirishvili (1998); Devereux and Naeraa (1996); Hussein and Nelson (1998); Kandiyoti (1998); and Werner (1998).

3. Social Networks and Pastoral Livelihoods

Despite the importance of social networks in pastoral livelihoods in Sub-Saharan African countries, it has not been given a high profile in recent literature (Danny de Vries, Leslie, and McCabe 2006; Johnson 1999). This extends to aid agencies. In fact Turkana people argue that their networking behavior was deliberately ignored in the formulation of relevant livelihood policies in their area. They claim that the cultivation and maintenance of social relations is a planned livelihood strategy and a way of dealing with livelihood shocks, and refers specifically to non-market transfers of goods and services between households.

In history, the role of social networking in pastoral livelihoods is well known. Earlier ethnographers studying African pastoralists acknowledged the central role played by social relations in pastoral livelihood sustainability (see Evan-Pritchard (1940) the Nuer; Gulliver (1951, 1955) in Turkana; Lewis (1961) among the Somalis; Jacobs (1965) in Maasailand; Spencer (1965, 1973) in Samburu; Dyson-Hudson (1966) in Karamoja). It has been documented that during the pre-colonial period, the groups worst affected by raids, diseases or droughts were forced to seek assistance from neighbouring tribes. In such occasions, Karamajong went to seek food from the Pokot (Dietz 1987b), while the Turkana went into the Dassenetch country (Sobania 1992), where the Dassenetch allowed the Turkana refugees to cultivate food on the Omo River delta and along the lake shore. These relationships were built over many generations.

In his study, Philip Salzmann (1981: 32-38) pointed out that pastoralists have never been single-minded people who know only one thing: livestock husbandry. Rather, they have always been multi-interest 'foxes' who pursue many ends in which social networks play an integral role. Dan Aronson supports this line of thought and argues that pastoralists operate multi-resource economies: "throughout their history pastoralists have engaged in a multiplicity of economic activities, making use of a wide diversity of resources within their reach and often modifying their animal production to the demands of other pursuits. Above all, they farm, trade, handcraft, involve in collection of firewood and charcoal burning, and they used to raid and make war on their own or others (Aronson 1980: 173-184)".

Another historian, William Ochieng, records that impoverished Maasai warriors fled their land and became paid mercenaries, and fought in the armies of the Kikuyu, the Kamba, and the Luhya (Ochieng 1985).

A study conducted by George Henriksen (1974) on the ecological problems in Turkana during 1971 drought indicates that the Turkana, who were themselves non-pastoralists like civil servants, teachers, politicians,

businessmen, etc took advantage of their privileged position to accumulate large herds. They did this because pastures were communally owned and free, thus making livestock keeping the most profitable form of capital investment. They used the patron-client relationship based on traditional kinship ties to recruit cheap labour. During drought and famine, they buy off the poor and thus perpetuate inequality. According to this line of thought, the rich who were themselves 'non-pastoralists' were the immediate cause of the overstocking and overgrazing problems in Turkana (Henriksen 1974).

In his study of the Gabbra pastoralists' adjustments to drought and the famine of the 1890s, Robinson (1980) records farming, long distance trade, hunting and gathering, reciprocal gifts, paid employment within the community, and, in extreme cases, the sale of female children in exchange for food. Farming and trade were of particular interest for this study as they were low cost but high-benefit adjustment choices for the famished Gabbra. Those who settled down to farming (temporarily) did so among the agricultural Konso of southern Ethiopia where they settled as migrants.

The Konso live in the well-watered highlands of southern Ethiopia. They grow sorghum, wheat, barley, maize, potatoes, vegetables, coffee and cotton. They also keep donkeys and a few cattle, sheep and goats at the lower altitudes. Theirs is a market-oriented economy (Kluckson 1962). The Konso and Gabbra had a friendly relationship which to survive, the Gabbra leaned on heavily for survival during the famine of the 1890s. The Gabbra settled among the Konso as immigrants and bought cattle, sheep, and goats. When the pastures were restored, they returned to Gabbra country and re-entered the mainstream of pastoral life (Robinson 1980).

Trade was the most interesting mode of adaptation. Traditionally the Gabbra held trade in low esteem, nearly as low as hunting or as the occupation of the poor (Robinson 1980). During the famine of the 1890s, the famished Gabbra were forced to stoop to both hunting and trading. They hunted elephants for ivory which they then sold to the Somali traders, and from this trade in ivory, they accumulated large herds. It is said that the trade was lucrative for one good pair of tusks fetched 30 head of cattle from the Somalis (Robinson 1980).

The lasting economic effect of the eco-stress in the Gabbra pastoral economy was the shift from a predominantly cattle-based economy to a camel-based economy. The rinderpest had killed nearly 90 per cent of their cattle and spared the camels. This, to the Gabbra, meant that cattle were weak and therefore less secure as a source of subsistence than hardy camels (Robinson 1980: 16-17).

Among the Wollo of Ethiopia, survival strategies included bartering animals. In times of drought and famine, the Wollo pawned female animals such as goats and sheep for grain. The grain owner would get collateral security, and was entitled to an offspring of the animal, if it calved in his custody. The owner of the animal got grain, and his animal would survive the drought situation. The pawning of animals

for grain among the Wollo took place between the pastoral Wollo and the Borana peasants. During the drought of 1975 and 1980 in Ethiopia, the Wollo in northeast, pawned animals for grain with the Borana peasants in the southeast (Rahmato, 1991).

The evidence in the literature suggests that the outright gifting of food to famished families plays an important role in sustaining households, but is never enough to weather a prolonged food crisis. Neville Dyson-Hudson, for instance, reports that among the Karamajong, the poor could be fed only if they were few in number: when their numbers swelled, they had to fend for themselves or perish (Dyson-Hudson 1966).

Campbell (1984), while studying responses to drought in Maasailand in Kenya, argued that the mutual claims to ownership of livestock made it possible to keep some cattle outside the area under threat of famine and ensured their survival. Following recovery, livestock were redistributed among (semi) destitute clan members giving them the opportunity to re-establish their herds. Campbell points out that fallback activities have also been common among pastoralists living in areas periodically affected by famine. For pastoralists, this means economic activities outside the pastoral sector such as agriculture, fishing, and hunting. Other actions are aimed to directly reduce pressure on household resources such as sending children to other relatives for schooling, purely to benefit from special feeding programs.

Ellis, Gavin, McCabe, and Swift (1987) discuss the adjustment strategies of Turkana pastoralists during the 1979-1980 droughts. From the literature they review, responses tend to correspond with the worsening conditions of the ground. Oba (2001) has recently advanced a similar hypothesis following his literature review on how seven major pastoral groups in the northern part of Kenya cope with difficulties.

When a pre-disaster 'drought threat' period is anticipated or detected at an early stage, nomads begin to move herds to dry season pastures earlier than usual and the livestock remain there as long as the drought lasts. This involves selective access to cross sub-sections and cross border rangelands. In the second phase, family herds are divided into smaller but specialized units. Those with long watering intervals are moved further away from the wells than those requiring more frequent watering. Young men scatter in every direction with these small units in search of fresh pastures and water. Thus, mobility is intensified. Young herders go to kinsmen and friends to beg for access to grazing land. According to Ellis, Gavin, McCabe, and Swift (1987), due to relatively good relationships between the various Turkana sub-sections, access to rangelands belonging to neighbouring sub-sections is much more easily achieved than the access to areas belonging to neighbouring and often rival groups. However, in some cases, peace pacts are negotiated through the mediation of clan elders to ensure safe passage and utilization of rangelands across district or national boundaries (Lamphear 1992).

During a 'drought stress' threat period a herd owner may have to reduce the number of people dependent on the livestock for food. The women, children and the elderly are moved out of their homesteads and sent away to live with kinsmen and allies in towns and the farming villages. This enables herders to migrate further away from home in search of forage and water. It also helps to slough off the number of people dependent on pastoral production, and thus saves milk for calves. This helped to improve the survival rate of calves. Systematic culling and sale of livestock also helped keep livestock numbers down as well as generating a cash income they could use to buy food (Gulliver 1951).

Apart from relying on kinsmen for food, the nomads would trade, farm and take up wage employment temporarily as they waited for rains to restore the pastures and allow them to return to full-time pastoralism. These strategic responses have also been documented in recent research carried out by Barton, Morton and Hendy (2001).

Goldschmidt (1969, 1976) observed that among the Sebei pastoralists in Uganda (called Sabao in Kenya), close reading of a man's animals is a record of the major social interaction of his life. Among the Pokot, Turkana's neighbours and 'enemies' to the south, the gift exchange starts at the age-set initiation, establishing a lifelong link between a young man and an influential elder who continue to exchange animals (Schneider 1957).

During the famine of the 1880s and 1890s, which was caused by series of calamities including rinderpest, drought, small pox, malaria, and cholera, nomads had to develop coping strategies to survive the crisis. At this time, there were famines everywhere except among the Turkana who escaped unscathed. This apparently was because the Turkana traded with their neighbours, such as the Samburu, and Swahili traders from the coast. They traded cattle, goats, sheep, and leather skins, and bought millet, maize, maize-meal, tobacco, cloth, iron work (spears and knives), cooking pots, and articles for ornamentation (beads, ostrich eggs and feathers). Most of their material culture was indigenous, made from wood and leather (Fedders and Salvadori 1977). However, Dyson Hudson and McCabe (1985), and Lamphear (1988, 1992) document that during this time, the Turkana people herded their cattle on isolated mountain massifs, while the goats and camels, not susceptible to rinderpest, were herded on the surrounding plains. But not all nomads in Kenya were so lucky. Writing about the pastoral Maasai, the historian Godfrey Muriuki tells us: "The various disasters that overtook the Maasai pastoralists e.g. the cattle epidemic, smallpox, and wars culminated in a large scale influx of refugees into Kikuyuland. In fact, these phenomena were not confined to the Kikuyuland alone; throughout the century, Maasai refugees are known to have settled among the Taveta, the Chagga, the Arusha and Luhya. Moreover, an arrangement whereby women and children could be pawned in times of misfortune existed, as it did among the Ashanti and the Dahomey of West Africa. Desperate Maasai families left their children and women in the hands of the Kikuyu in exchange for foodstuffs hoping to ransom them in better times. No stigma was attached to the pawning as the system was commonly practiced by the Akamba, the Kikuyu and other Mount Kenya peoples during

famine times. In any case, it fulfilled an important function by ensuring that a family did not starve. Pawnship was certainly not regarded as slavery, indeed it was a stage toward full adoption (Muriuki 1974: 85)".

According to Turkana oral traditions, the non-pastoral pursuits gained prominence in times of hardship when pastoral yields declined to below subsistence level. For instance, during hardship, Turkana people in northern territories would engage more actively in trade with the people of lower Omo, Southern Sudan and Northern Eastern Uganda. From this trade, they procured an assortment of goods including maize meals, sorghum, beans and tobacco. The lower Omo, however was their principal source of sorghum. Turkana oral traditions record that in this trade: "Sometimes the Turkana would drive cattle up there and sometimes the Melire would bring bags of sorghum down here. In either case, people would go to the Kraals of the people they know. If their daughters had been married by men of other tribe, they would go to the kraals of their sons-in law (Lamphear 1982: 18)".

Gulliver (1951, 1955) also points out that, in the past, each individual Turkana herder had a network of associates who served as a type of insurance policy. Gulliver estimated that an average herder had about 30 associates, but did not estimate the average number of bond-friends, giving only one example of a man who had three (Gulliver 1951: 104-105). It is these kinds of human relationships, and their impacts on Turkana livelihood strategies during the 2005-2006 drought and famine that form the centre of the discussion in this paper.

4. Social networks as insurance system in Turkana during 2005 – 2006 drought and famine

In the Turkana District, intra-regional exchanges of livestock, food, and gifts have flourished since time immemorial, basically in times of local drought, disease or raids. In the past, when crisis looms, one could go to his associates to beg for animals or food or to share pastures. It is custom for the Turkana people to constantly "beg" (*akilip*) or ask for things from each other, and asking for assistance is not only a way of getting livelihood support during crisis, but also to initiate friendship which they could depend on in the future. Although true 'loans' of stock are not common, if one friend is in a time of hardship, he may 'borrow' a goat to slaughter and then the next year he will repay with another goat.

4.1 Trade ties and symbiosis

During the 2005-2006 drought and famine, previous ties with the traders and businessmen in the district, and symbiotic relations with the Merille of Ethiopia were revitalized and exploited to the full as survival strategies adopted by the famished pastoralists. However, without these two allies (the traders and Merille); it would have been much more difficult for the Turkana to cope with the hardships. The Turkana traded with the Merille and sometimes settled among them during such periods of

hardship. The data reveal that such symbiotic relationships still exist between the two communities (Turkana and Merille) and were useful during the 2005-2006 drought and famine.

Many famished Turkana households went across river Omo into Ethiopia either to trade or beg food from affines. Those who went to trade used skins, ornaments or cash to buy food. They bought sorghum, and maize meal.

The practice in Turkana has been for the household heads to send their sons or wives to look for food. However, in one instance during the 2005-2006 drought and famine, there was mass emigration of famished Turkana pastoralists who wanted to settle temporarily in Merilleland to take advantage of a better food situation across the border. The Ethiopian government was reportedly airlifting food from Addis Ababa into her border with Kenya twice a week. However, the Kenya's security at the Numurupus border post refused to allow such mass emigration. Movement in small groups for the purpose of trade was, however, permitted. And through this would be seen that the Ethiopian government, by default rather than design, helped to feed the drought and famine stricken Turkana pastoralists.

There was also increased dependence on the Somali (oria) traders who travelled with their merchandise in large trucks to the countryside and bartered them for goats, hides and skins. Similarly, the Turkana pastoralists forged greater ties with the various market and rural centres where they sold their hides and skins to traders for cash. The cash income was then used for procuring essential commodities from the local commercial stores. From these transactions, the Turkana people were able to maintain a fairly steady supply of maize meal, salt, tobacco, and other essential commodities.

4.2 Splitting herds and families

In pastoral communities, the practice of splitting herds and families is a dominant feature of life. This is done in relation to spatial and temporal variability of the rangeland vegetation. Turkana people believe that splitting herds conserve and safeguard range resources from being degraded and overgrazed in an irreversible way. During the 2005-2006 droughts, local people had an elaborated herd splitting strategy, and herds and flocks were split in base camps and satellite camps. Milking and young animals were tended as base herds closer to the village by young girls and boys. Immature flocks before the age of puberty were tended by older boys at a relatively far distance from the settlement, and less productive but strong herds were sent as satellite herds to remote areas and managed by adults.

It should be noted that base camp and satellite herd sizes are dynamic, and are determined by factors such as availability of feed, water, and labour. For instance, due to the lack of enough water and pasture around the villages during the 2005-2006 droughts, there was a shift of part of the base camp herd to a satellite herd leading to an increase in satellite herd size. The reverse started to happen by February 2007 when the rainy season had begun, and the condition of pasture improved. It is argued in this paper that such

movements could be harnessed in future as an early indicator of emerging intensity of drought crisis for timely drought contingency planning and intervention in the Turkana district.

However, the kind of splitting families which emerged with the 2005-2006 drought and famine among the famished Turkana pastoralists was entirely new. It was done specifically to prevent depletion of existing household food resources. The data were particularly rich in cases of children who had been sent off either to kinsmen, friends, or school as a survival mechanism for sloughing off population from the pastoral sector.

4.3 Pooling resources

There was evidence which suggested that during and after the 2005-2006 drought and famine, herders joined together in corporate groups and pooled their surviving stock in order to exploit economies of scale. Once the livestock had been pooled, they were left in the hands of a few selected men or families in the pasturelands as the rest moved in search of food. Migrants had similarly left their families and livestock with kinsmen and neighbours or friends as they went out in search of employment and other income generating activities.

The mechanism of pooling resources during and after drought or loss of livestock from catastrophes is customary. Historically, the able bodied but dispossessed pastoralists' would leave behind whatever had remained of their stock and "disappear" into distant lands to settle and work there temporarily. Most of them would emigrate to Merilleland in Ethiopia. Written evidence exists to this effect (Turkana Political Records. Miscellaneous: 1971-1943 File No.TURK/59, DC/TURK 3/1).

The dispossessed would live among the Merille for as long as the economic hardships lasted, which would be upto two years. When more prosperous times returned, they would collect their 'pay' and gifts in livestock and return to Turkanaland to re-enter the mainstream of pastoral life. This was quite similar to what other nomads such as the Gabra and the Maasai do in response to drought and famine.

A study by Laughlin and Brady (1978) illustrates how, when ecological or political stress increases for a population, the initial response is for its people to pull together, set aside hostilities and grievances, and pool resources. After a peak of cooperation, if the stress continues in the extreme, concern for family and, ultimately, concern for oneself overtakes concern for group survival. Group cohesion therefore weakens and can even fall apart. The idea does not exactly fit the Turkana: although their condition during the 2005-2006 drought and famine was full of stress, their social structure reflected more independence and flexible small units than group solidarity.

4.4 Reciprocity and exchange

In Turkana society, there is a difference between 'asking' (*akilip*) for an animal and 'exchanging' (*akilokony*) an animal. When a man 'asks' for an animal, "he simply asks

for it". For example, he might say, "my children are hungry and I need a milking cow". In such cases, "you do not tell the man you will give him something later". To exchange (*akilokony*), one goes to a man who is known to have a surplus of the wanted or needed animals; if both parties are willing, an exchange is made. "Exchanging is like buying something" and both parties are mutual beneficiaries. *Akilokony* is a way to increase or diversify the herds.

The concept of reciprocity is an important and often overlooked aspect of Turkana survival, but it is an essential aspect of their ability to survive their environment. To fully appreciate reciprocity in Turkana society, one must abandon western notions of the concept. Although westerners may value the concept, they do not practice it to the extent that the Turkana do during a crisis. The western/agrarian ideal of saving seems contradictory to the practice of reciprocity in the Turkana District. Reciprocity is an intimate part of the social fabric of nomadic Turkana culture. It is altruistic behaviour and its benefits outweigh the costs. In Turkana, the cost, or risk, of not reciprocating is social ostracism. Generally, the act of reciprocity is uniformly adhered to in Turkana culture, and a herd owner can be confident that a gift (cost) today will probably yield a greater needed gift-in-return (benefit) at some point in the future. In effect, the more one gives, the more (social) security one can accumulate for the future.

This Turkana behaviour of reciprocity is quite similar to what has been observed among other communities in Sub-Saharan Africa. For instance, Mauss (1967) pointed out that in a number of civilisations, exchanges and contracts take place in the form of presents; in theory these are voluntary, but in reality they are given and reciprocated obligatorily.

On reciprocity, a number of gifts were exchanged during the 2005-2006 drought and famine as shown in Table 1. Turkana society is organized around the allocation of resources through gifts: gifts are mostly distributed within the family and kin group and among friends and individuals when each other is in need and must be acknowledged for it. Gift exchanges are very common during crises and help in making and nurturing social ties.

Table 1: Gifts exchanges by Turkana households during 2005-2006 drought and famine

Gifts exchanged
1. Animals (Goats and sheep, cow, donkey, camel)
2. Food (slaughtered animal upon friends visit, or other prepared food, sorghum, and maize-meal)
3. Containers (for water, milk, oil) and tools e.g. shovel and spear
4. Tobacco and maize meal
5. Jewellery
6. Money

Therefore, analysis of the mode of reciprocity and exchange during the 2005-2006 drought and famine in Turkana brought to the foreground the following observations:

- i) In history, Turkana pastoralists have traditionally operated with a minimal involvement in the monetary economy. The preferred means of acquiring food has been through trade or begging rather than direct

purchase, thus avoiding the use of money. However, during the 2005-2006 drought and famine, money was one of the gifts to their bondfriends. It is argued in this paper that this is an indicator of the increasing gradual incorporation of the Turkana people into the Kenyan national economy. If this trend continues, as in other parts of the World, exchanges among pastoralists may become more and more depersonalised.

- ii) Gift exchanges in Turkana during crises are voluntary and between two individuals. The exchanges do oscillate: in several cases during 2005-2006 drought and famine, most Turkana people were still waiting for the rains to go visit and beg from or exchange gifts with their friends. Because of long distances between friends and a scattered population in Turkana, exchanges are not as frequent as other communities with denser populations. Animals are also larger gifts during crises than a plate of food passed to friendly neighbours.
- iii) Gift exchanges in Turkana during crises are mostly asymmetrical and reciprocal, but leaders and rich people are expected to give more to others. It is possible that more people consider wealthy Turkana to be their friends than vice versa. These relations could be considered asymmetrical.

4.5 Geographical dispersal of bond-friends

Turkana possess an intimate knowledge of their physical environment, for their survival has depended on skilful management and movement. They also have very detailed social maps (mental maps) of geographical areas through which they have travelled on foot. All topographical features (e.g. hills, rocky outcrops, and stream beds, plain) and areas have place names. The Turkana adults possess this knowledge, as they spend most of their lives herding nomadically. Dyson Hudson (1982) documented that the Turkana people have accurate ways of communicating information about space.

From the case histories compiled during the survey interviews, Turkana special friends live in a wide geographical area, and these special friends are sought during hardship. For instance, during the 2005-2006 drought and famine, there were mass movements in search of special friends. These migrations were determined by the individual's environmental perception, and most important, the existence of friends, kinsmen or affines at the receiving end. Those who so migrated said that it was not just a plunge into the unknown wilderness. They knew where they were going and they believed before setting off that they would find friends to welcome and give them hospitality. Because many of these places were rural and remote, we can assume that many of these bond-friends are still mobile pastoralists.

5. Taxonomy of Turkana Social Ties during Crises

As mentioned earlier, it was beyond the scope of this paper to discuss the formation, or how various relationships were formed during the 2005-2006 droughts. A few comments however, are necessary. For practical analysis of livelihood resilience in Turkana, only social relations that emerged during the 2005-2006 drought and famine to provide access

to productive resources, coping mechanisms and livelihood opportunities were mapped.

Studies by Woolcock (1998) and Cross, and Mngadi (1998) have much relevance to the type of human relationships observed in Turkana during the 2005-2006 droughts. Woolcock (1998) refers to human relationships that exist within a community as integrated ties, and linking ties, which refers to those between different communities. Cross and Mngadi (1998), also identified two distinct types of networks which rural people rely upon for aid during a

crisis: bound networks which includes relations with close relatives that begin at birth and are connected by obligations based on kinship roles, and achieved networks which includes a person's or household's list of personal contacts that are gained through experience and not inheritance.

This paper integrates the ideas of Woolcock (1998), and Cross and Mngadi (1998) and formulates a Turkana social network taxonomy observed during the 2005-2006 droughts as presented in Table 2.

Table 2: Turkana social network tie taxonomy during crises

	<i>Integrated</i>	<i>Linking</i>
Bound	- Extended family - Immediate family (awi)	- Clan (emachar) links outside the village - Migrated family member
Achieved	- Stock associates/bond - Other friends e.g. traders etc.	- Migrated friends/other - External schooling ties

The observation in Table 2 concurs with Gulliver's (1951) earlier finding which grouped Turkana social relationships into five categories: kin, affines, friends, neighbours, and passers-by (including those well-known or even unknown). It was noted that the Turkana people diversified their relationships during the 2005-2006 drought and famine. Apart from the immediate family and clan members, relationships were also formed with the local schools to ease pressure on the existing food resources.

6. Conclusion

The fundamental question in this paper is: Does social network influence one's success during drought and famine in Turkana? The answer is yes. The paper argues that one's network is part of a risk strategy which provides a person with both physical and psychological security. It promotes a form of social stability that allows the Turkana to implement their pastoral strategies to good effect in the arid environment they occupy, in order to bridge environmentally stressful periods of time. For instance, during the 2005-2006 drought, the famished Turkana pastoralists sought out allies as a way of coping with the stress. The various livelihood strategies which sprung up during this period, for example trade ties and symbiosis, splitting herds and families, pooling resources, and reciprocity and exchange, were all as a result of networking with bond-friends, local relatives, and friends. It is observed that if one is hungry, a person can go to a member of his or her network or relative and ask for a gift in terms of food or animals. People can also take management risks such as moving into unfamiliar areas knowing that he or she will always have the support of friends.

Social networks among Turkana pastoralists are also links to the past, present, and potentially future friendly relations. It has been observed that these links are very strong during drought and famine, and that they seem to be based on mutual need and caring. During the 2005-2006 droughts, social networks were chosen as a type of investment and risk dispersal over a wide geographical area. This evidence supports the hypothesis that drought and famine stimulate the search for potential allies among the Turkana people. It concurs with Wienpahl (1984:237) assertion that "redistribution through exchanges contracts the Turkana

norms of individual autonomy and thus lends a cohesive force to an otherwise atomistic society, and also agrees with an earlier observation by Gulliver's (1955) that in the pre-colonial period, social relations among Turkana pastoralists were a critical part of the production system.

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