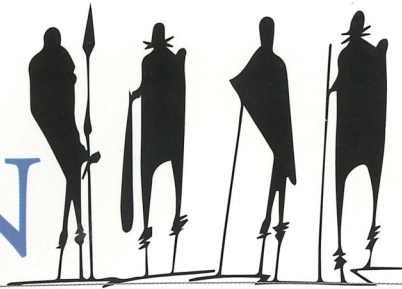


MODERN



FAMILY

By Susan Trulove

Age-old traditions are fading on the savannah. For the Maasai, the cell phone helps protect herds and villages, and, like national parks, is bringing about changes. But change isn't always for the better.

When you pay for a lunch or help a friend move, are you, in effect, buying insurance against a future need? Yes, if you are Maasai.

A semi-nomadic people who live in East Africa, the Maasai have customs and traditional values that have withstood the test of time — so far.

“We all form social networks, which serve various roles in our lives. The Maasai exemplify this,” said Tim Baird, an assistant professor of geography in the College of Natural Resources and Environment who has studied the African nomadic herders’ society for a decade. “They have endured a harsh environment for a long time by embracing each other and working as a group. In our own country, we often hear, ‘Do unto others as you’d have them do unto you.’ Maasai social networks often reflect these same values.”

For instance, if a household has a disaster and loses its livestock, members of the clan will each give an animal to restock that household. “It is a form of insurance,” said Baird.

In addition to restocking, Maasai traditionally help each other and ensure a measure of security for themselves through loans and gift giving.

Loans are private and only extended when the borrower is facing a particular problem. For Maasai, who traditionally store wealth on the hoof, raising cash to deal with problems such as medical care often requires the sale of animals.

Typically, animals of lesser value are loaned and those of greater value are repaid. For example, male animals are given as loans and female animals are used to repay the

loan. “This creates an incentive for the lender to take on the risk of lending and can also serve as a strategy for herd development,” said Baird.

Giving gifts extends and strengthens an individual’s social network, Baird said. “Giving a gift to another person formalizes your friendship with that person. And it’s friends who you turn to when you need a favor. In this way, gift giving and friendship extend the household’s safety net.”

Now, however, the advent of national parks and protected areas is changing use of traditional social networks by Maasai, who live adjacent to Tarangire National Park in northern Tanzania, according to studies by Baird and colleagues.

Traditions preserved the savannah

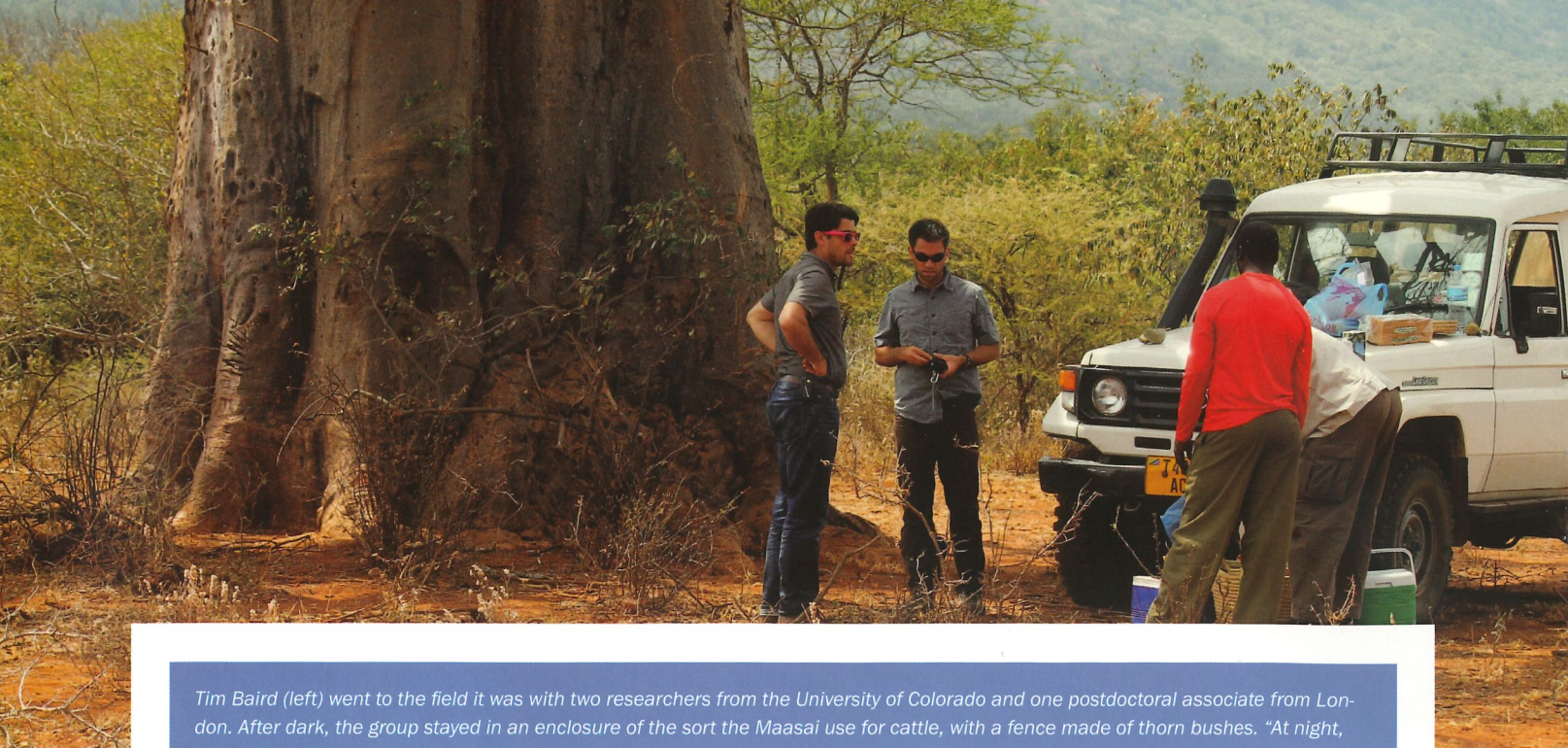
The Maasai’s livelihood has traditionally been based on seasonal movement of their livestock through collectively held rangelands, which are managed by extensive social networks. Collective decision-making about when and where to move and settle has preserved the savannah that supports their herds.

“Traditionally, the Maasai claimed land but didn’t ‘improve’ it in ways that were obvious to foreigners,” said Baird. “They decided as a group how to graze the land to best preserve it. Generally, this approach is now thought to have had a benign effect on biodiversity.”

With their land seized for conservation, and worried about the further prospect of park expansion, many Maasai have adopted agriculture to protect their land and supplement their income.

The Maasai have customs and traditions that have withstood the test of time. But technology may have something to say about it.





Tim Baird (left) went to the field it was with two researchers from the University of Colorado and one postdoctoral associate from London. After dark, the group stayed in an enclosure of the sort the Maasai use for cattle, with a fence made of thorn bushes. "At night, we heard lions and hyenas, which is reassuring. It means that there's still wildlife out there," Baird said.

However, in the semi-arid region of east Africa, which is one of the most diverse grassland ecosystems on the planet, rain-fed agriculture is risky.

"It is unfortunate that parks, formed to protect wildlife and plant diversity, can encourage practices that fragment habitats, encroach on migration corridors of animals, such as zebra, and reduce biodiversity," said Baird.

"But parks also create opportunities," he added.

Veterans of risk management, the Maasai have also adopted other livelihood activities in addition to agriculture, such as migrating to urban centers to work, buying goods in cities and selling them rurally, and tourism services.

Supported by a Fulbright Hays Fellowship and the National Science Foundation, Baird's research focus has been on sustainability and resilience amid shifting social and economic networks. An important measure is how the use of restocking, loans, and gifts compare with such activities in the past.

A major change is that restocking and loans are no longer strictly reserved solely for problems or crises, but are now being used to help households capture opportunities — especially educational opportunities, Baird said.

Students who have passed primary school exams and are eligible for secondary school face stiff fees. To cover school related expenses, households may be forced to sell many animals. Many students forgo secondary education for lack of funds.

"In some cases, however, friends, clan members, and others have supported the family through these traditional

mechanisms of restocking and gift giving, so that the student could continue his or her education," Baird said. "This is a relatively new phenomenon and seems to be more common in communities near Tarangire National Park."

Education, in turn, has had an impact on one use of restocking.

"In some cases, restocking was used to provide animals to households with unmarried sons who were seeking wives but lacked sufficient resources to pay the intended bride's family," said Baird. "Not having a wife is considered a problem and restocking is therefore appropriate — though only for the first wife."

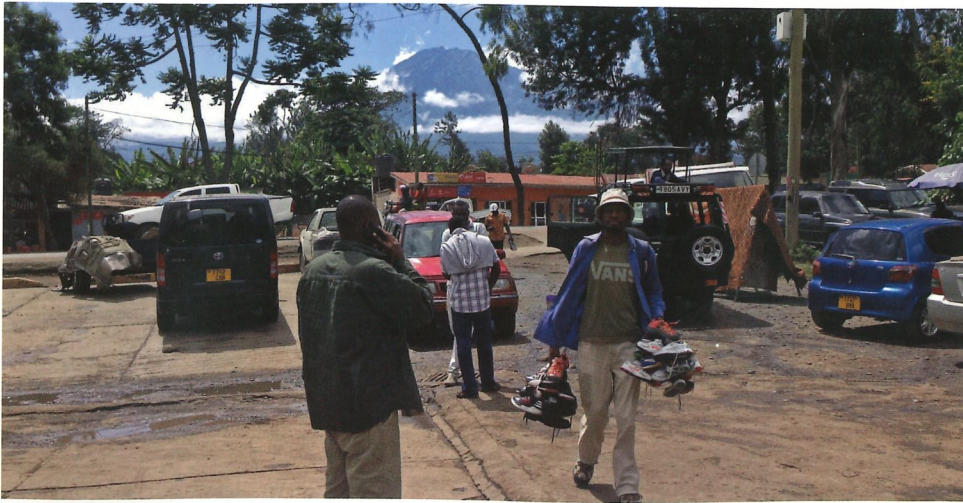
Now, young women, many of whom are enrolled in school and are embracing aspects of the developed world, do not want their fathers to decide who they will marry, Baird said. The daughters want to decide.

Restocking is also used less often because people have more options, Baird was told. A household that has lost many animals might have farm proceeds to support themselves — so there is no need for restocking.

Loans are also more rare. In group interviews, people noted an increase in the incidence of loans that are not repaid.

"There are some cheaters now," one person said. In the past, respondents claimed, you didn't need to know people well to lend to them. Now, friendship, marked by gift exchange, is often a necessary prerequisite for lending.

"Lower levels of exchanges between households may represent a new normal," Baird said. "The trend may be that as households diversify, they change the ways they



Maasai located near Tarangire National Park are incorporating new economic activities, such as buying goods in cities and reselling them in rural areas, into their customary livestock herding livelihood.

Old meets new in a Maasai village, with a solar panel delivering electricity to a traditional hut.



use social networks, and ultimately reduce their engagement with traditional networks altogether.”

Cell phones a catalyst

Following up on an observation in 2010 about the numbers of households and individuals among Maasai that were using cell phones, Baird returned in 2014 with funding from the National Geographic Committee for Research and Exploration to determine the impact of cell phones on social networks.

“I had this idea that phones are an important piece of what was going on, which is a transition from one type of network to another,” he said. “The new networks are less homogenous and seize on new opportunities to build bridges with different groups and access different types of information.”

Baird grew up in a small town where people knew and cared for each other. The close connections

were helpful, but there was little access to people outside of the community.

“When I went to college, I met people from all over the world,” Baird said. “Those connections afforded me access to new ideas, new information, and new ambitions. I wondered if the people I am studying are going through this type of transformation. And if they are, I suspected that the phone is this incredible tool they are using to help with this transition.”

Baird surveyed households and interviewed groups of people in multiple communities that vary in terms of distance from the park boundary. In 2010, he observed that groups closer to the park were more economically diversified than distant groups.

In addition, he observed that phones were common, but not universal, in each community and that households with phones had higher incomes than those without.

By 2014, the cell phone had become a critical tool, like the short sword, worn together on a Maasai man’s belt.

“Even in 2010, the Maasai used their phones to support traditional herding,” said Baird. “For example, they call friends and relatives in other areas to locate forage and surface water.”

Now the Maasai use phones to warn of dangerous animals that may attack people, livestock, or farms. Phones also speed commerce. Men take photos of livestock and take the pictures to market, which saves having to move the animal. And the phone is used to gather information from more people.

Independence vs. tradition

However, new bridges to information are weakening the more traditional network, with mixed outcomes.

“One result of the transition from tightly bonded networks to more weakly bridged networks may be that households are getting better at managing small problems individually, but groups of households are getting worse at managing big problems that require collective action,” said Baird. “Their internal bonds with other Maasai may be becoming weaker as they build bridges with others, especially non-Maasai. Nowadays, households don’t need to rely on their neighbors. They’re able to independently manage problems such as illness in the household or poor maize yields because they have multiple sources of income. And I think cell phones are speeding this process of individualization.”

As a result, the Maasai’s ability — or, perhaps, their will — to respond to community problems, like managing communal grazing lands and protecting open areas, is being undermined, Baird said.

Community leaders told Baird it is difficult to get anyone to come to group meetings.

“It used to be the leader would send a boy to announce the meeting and people would walk to the gathering site,” Baird said. “If someone didn’t come, the next meeting would be at that person’s home and one of the family’s animals would be slaughtered to feed everyone. Now if you did that, the family would sue you.”

With cell phones, it is easier to announce a meeting, and it is easier to get to meetings with the dramatic increase of motorcycles in the area, but people often still don’t come, Baird was told. Or when they do, it is difficult to reach consensus.

“The leaders would discuss whatever the topic was and then they would make a decision,” Baird said. “And everyone would fall in line behind the decision. Today, there is much more debate and it’s much more difficult to agree on things.”

Maasai are gaining a sense of individual rights, which may be undermining their obligations to each other, Baird said

“Like groups everywhere, including our own communities, the Maasai are adjusting to and in some ways shaping the modern world,” Baird said. “Some individuals long for the past while others pine for the future. I believe that this tension is strongly affecting the ways they relate to each other, the ways they solve problems, and the environment in which they live. Their struggles and innovations reflect our own — and we have much to learn from their resilient and adaptive spirit.”

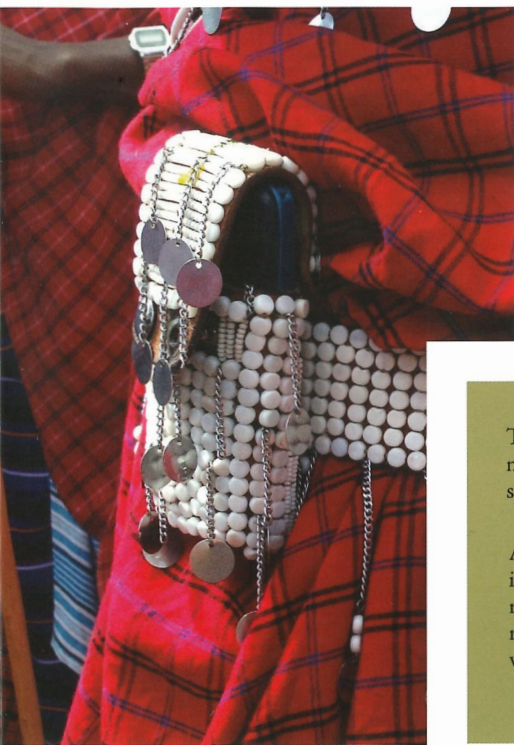
Additional information

In the *Global Environmental Change* article, *Conservation as disturbance: Upheaval and livelihood diversification near Tarangire National Park, Northern Tanzania*, Baird and Paul W. Leslie, a professor of biological anthropology at the University of North Carolina, Chapel Hill, report continued disturbances from national parks include new land-use restrictions and the threat of expanding park boundaries.

The *World Development* article, *Livelihood Diversification and Shifting Social Networks of Exchange: A Social Network Transition?*, by Baird and Clark Gray, an assistant professor of geography at the University of North Carolina, reports on the extent of the Maasai’s transition away from traditional strategies for managing risk.

Let the handhelds do the walking

By Susan Trulove



The phone has gained a place on many Maasai belts, next to the sword.

Ashley Lewis, a master's student in geography at Virginia Tech, is researching the implications of mobile phones for humans and wildlife in Africa.



For the Maasai, the cell phone helps protect herds and villages, and, like national parks, is an agent of change.

"In one village, we heard how people use phones to call big groups together to drive out baboons, which can destroy crops," said Ashley Lewis, a master of science student in geography at Virginia Tech, who studies the implications of mobile phones for human and wildlife conflict in Africa.

"The phone is how they deal with animal predation and attacks," Lewis said. "They exchange information ahead of time, like if they see lion tracks. But more often, they use it to deal with problems when they happen — for example, to call warriors to drive off lions that have killed a cow so the household is able to recover the meat themselves."

Older women use phones more than older men. They call their sons who are herding to make sure they are safe. They call around the homestead if they need milk, for instance.

Younger women use phones to facilitate infidelity, according to group interviews conducted by Tim Baird, assistant professor of geography. A girl is often promised while they are young, with no say in the matter. A marriage may even be arranged before a girl is born.

"The girls don't like that. They use the phone to communicate with a boyfriend when their husband is away," Baird was told.

Young people use phones to play games, text about trivial stuff, and flirt. Like children almost everywhere, Maasai toddlers pick up square objects and pretend they are talking on a phone.

Having phone skills is a way to earn respect. Baird was surprised to hear a man with advanced phone skills described as the "phone laibon," since laibons are spiritual authorities and central to the religious system of the Maasai.

"I thought, Wow," Baird said. "They've endowed this individual with a type of traditional authority."

As part of their research project funded by the National Geographic Society Committee for Research and Excellence, Baird and Lewis talked to the phone laibon and learned he has a smartphone that he uses to look at meteorology maps.

"He gets calls from all over — from other countries in Africa — for advice on when to plant," Baird said.

But the phone laibon's moment will pass as others gain phone skills.

"Phones are increasing people's desire to be educated, because being able to read will make using the phone easier and cheaper," said Baird. Now, because many older Maasai cannot read or write, people call rather than text or email, even though calling is more expensive.

But even if they have to ask youngsters to look up numbers for them, older Maasai use their phones as frequently as teenagers. One man told Baird, "You can finish your problems in a short time. Before, you would wake up in the morning, have 10 things to do, and you would need to start walking."