

**DEVELOPMENT AID AND COMMUNITY PUBLIC GOODS PROVISION:
A STUDY OF PASTORALIST COMMUNITIES IN KENYA**

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Abstract

This study asks why levels of cooperation for public goods provision vary in similar, impoverished communities facing shared environmental and economic challenges. It argues that the structure of development aid that communities receive provides an answer. In communities where aid reduces residents' short-term economic risk by diminishing household income volatility, they neglect "horizontal" reciprocal relationships that traditionally mitigate economic risk and instead rely upon "vertical" relationships with aid donors. In contrast, in communities where aid funds projects that do not reduce income volatility, like education and infrastructure, residents continue to cultivate horizontal relationships. Maintenance of horizontal relationships correlates with community-wide cooperation and with pessimism about the future, while neglect of horizontal relationships correlates with an inability to cooperate and with optimism. I argue that residents' behavior and attitude patterns are both explained by the importance they place on short-term economic risk reduction. Where recipients perceive aid as risk-reducing, they see reciprocity and cooperation as less critical to survival and public goods provision suffers. Using the example of pastoralist Mukogodo Maasai communities in Kenya, this study demonstrates the preceding relationships with evidence from original, cross-community survey data about attitudes, about reciprocity, and about maintenance of social order, as well as with ethnographic and observational data. Data from an Ultimatum Game experiment reinforce the conclusions drawn via the other methods. The findings demonstrate that development aid can alter local social and economic relations in unintended ways.

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Chapter One – Introduction

This research project began with the question, “Why do communities experiencing resource shortages govern themselves differently?” I posed this question in the context of small pastoralist communities in a semi-arid environment in Kenya where property boundaries are fixed, population is growing, and climate change is increasing the rate of environmental change to which local residents must adapt. The communities’ shared political organization, history, ethnicity, and economic and environmental circumstances limited the number of possible causal factors, leading me to focus on examining development aid’s impact on community cooperation. My primary concern in this study is to explain why high levels of aid correlate with low levels of community cooperation, and why a moderate level of aid sometimes correlates with higher levels of cooperation. In addition to considering the relationship between aid and community cooperation, I also highlight the pressures pastoralists face as a result of political, economic, and environmental change.

I selected the five communities examined here for their similarity in many of the features scholars typically use to explain diversity in local institutions. The communities are all organized as “group ranches”, a form of land tenure under Kenyan law which requires a person to have historic ties to the community in order to register as a member and in order to participate in the communal ownership and governance of the land. In the five communities I consider, the terms of communal ownership and governance are laid out in nearly identical constitutions. The communities adjoin each other, so they share similar environmental conditions, including climate, remoteness from city centers, and access to roads. Moreover, the Maasai people who make up the selected communities

have a common ethnicity, language, culture, and recent history, so that norms of governance and right behavior are also shared. Until the last decade, the local economy depended almost entirely on livestock husbandry,¹ and as a result the communities share a similar scale of average wealth. Education levels are also similarly low and the populations and physical extent of the properties are similar in scale.

Ethnographic interviews suggest no systematic bias in the way group ranch boundary lines were drawn; a ranch resident reports that the recent ancestors of today's residents had migrated at will across the entire territory until the 1970s, when the Kenyan government drew the present property lines, at which point residents were registered to the group ranch within whose property lines they were living.² Though two different Maasai sub-ethnic groups dominate the different group ranches there is substantial mixing of the two sub-groups in all of them, maintained via frequent marriage across group ranch lines. Moreover, although it is possible for members to change their registration to a different group ranch community, this has not occurred on a substantial scale,³ suggesting that members rarely self-select into communities they see as more desirable or friendlier to their own ethnic subgroup. With all this evidence of similarity, what factors might explain the governance differences evident in the communities?

The aspect of governance that differs most across the communities is their cooperativeness, i.e. residents' ability to interact in ways that produce collectively beneficial outcomes. Evidence of this difference emerged during a first visit to three of

¹ Contrary to Maasai communities in southern Kenya, the communities in this study do not engage in agriculture.

² Interview with resident of Ilmotiok Group Ranch, September 2008. The drawing of boundary lines was done in consultation with local elders.

³ Interviews.

the five group ranches in 2006, where I was introduced to the idea of a “conservation area”—essentially a nature preserve—which the three communities maintained with different levels of strictness. The conservation areas had been authorized by the community elders with help and encouragement from the regional office of an international conservation NGO. Conservation areas formalize a traditional Maasai land management practice whereby, following a rainy season, elders designate an expanse of local rangeland in which community residents must not graze their livestock until a future time, months ahead, when the elders again agree that the reserved area shall be “opened” for use. The current formal conservation areas differ from this tradition in that they designate a fixed area, rather than a shifting one, that is supposed to remain ungrazed throughout rainy and dry seasons without regard to the availability of livestock fodder.

A modern, formal conservation area is meant to foster a flora-rich, livestock-free environment that will attract wildlife with the ultimate purpose of creating and maintaining wildlife sanctuaries connected by continuous corridors for migration. The NGO mentioned above and local business and property owners coordinate development projects and offer payments in order to induce the local community group ranches to set up conservation areas, which diminish the amount of available pasture land. The goal of all these external organizations is to improve the health of the environment and the well-being of wildlife by making conservation profitable for local residents.

I noticed variations between the communities’ respect for the boundaries of the conservation areas, both in anecdotes and visible evidence. In a first community, a respected resident reported that the Chief, who is both a traditional elder and the national government’s appointed representative, was the first to violate the conservation zone by

entering it with his livestock, after which the rest of the community followed suit. In a second community, the conservation area's head watchman said there was little respect for the conservation area and many residents transgressed its borders frequently with their livestock. In contrast to these two examples, a third community not only refrained from using the conservation area but also expanded it.

In the community where residents reported refraining from using the conservation area, named Tiemamut Group Ranch, two fenced portions of the conservation area signaled their commitment and helped perpetuate it. The first fence is an electrified one constructed with residents' approval by the NGO described above to serve as a grass bank to generate profit for the community's women's groups.⁴ The grass bank's fence is secured with a lock whose key remains in the care of the head of the community grazing committee. Knee-high grass within the fence when the rest of the group ranch property is nearly denuded attests to the fact that the fence is indeed kept locked. Meanwhile, the neighboring community group ranches have dismantled fences surrounding different projects on their properties. In addition to keep the fence locked, Tiemamut residents have also extended the grass bank, erecting a second, handmade brush fence beyond the original electrified fence. Both fenced areas have remained unused over a period of years that includes the worst drought in recent memory which occurred in 2009. In a region that experiences seasonal hunger and where cyclical drought routinely kills large percentages of the livestock herds, the respect for these fenced portions of the conservation area stands out.

⁴ A grass bank is a reserved area of grass, suitable for livestock consumption, which can be mowed and sold for profit or used to feed one's own livestock in time of need.

The evidence from the conservation areas sparked my curiosity. Was the ability to stay out of the grass bank indicative of a community's ability to cooperate? Did other communities' less restrained use of their conservation areas indicate a wider inability to cooperate? Would the differing behaviors with regard to the conservation areas prove to be linked to other differences in community residents' mindsets, behaviors, or interactions with one another? This dissertation therefore set out to investigate what prompted the difference in this instance of cooperative behavior, whether it was indicative of substantive differences in communities' ability to provide public goods,⁵ and what other politically and socially important phenomena were associated with it.

Framing the Research Question

All five communities I consider face similar circumstances, yet one responds differently than the others. Why are there higher levels of cooperation in one community group ranch as compared to four of its neighbors? The divergence could conceivably be explained by an historic difference that has been amplified over time, but ethnographic interviews and historical secondary sources did not point toward any relevant historical difference. The next step in identifying a recent causal factor is to determine whether it is idiosyncratic (one-time) or systematic (ongoing), and whether it is internal or external to the communities. Some explanations that I considered were explanations related to natural resource endowment, climate, history, culture, and ethnic diversity, but these do not explain the variation in the cases considered here.

⁵ A public good is a non-rival, non-excludable resource. The classic example is national defense.

My research and analysis identified the onset of development aid as the single factor most likely to have caused the variation I observed in levels of community cooperation. “Aid” and “assistance” refer to outsiders’ efforts to help a recipient group increase development via money or in-kind contributions, advice, and conditions (Easterly 2007: 328).⁶ The aid to the communities I consider comes primarily from local donors and is directed toward small communities, but the discussion of the incentives it creates fits into the broader body of research about bilateral and multilateral international aid.

The aspects of aid I highlight in this study are the significance of its structure and conditionality. The purposes to which aid is directed, rather than its aggregate value, determine its impact on local community relations. Aid can either place a recipient community on a path toward maintenance of cooperation or on a path that diminishes cooperation. Multiple paths are possible because different forms of aid (cash, in-kind, employment, education, etc.) have different impacts on recipients’ perceptions of the level of economic risk they must manage, and aid is provided on the basis of community membership. When communities perceive the aid they receive as risk-reducing and likely to continue, recipients tend to neglect the networks of relationships that have historically facilitated cooperation and protected wealth. Aid is risk-reducing when it stabilizes household wealth, which it does in these communities when it provides wage income or augments livestock survival rates during the cyclical droughts that strike the region. Aid is likely to continue (i.e. unconditional) when it is provided by a donor who owns property near the community and fears land invasions by community residents’ livestock.

⁶ I henceforth drop the term “assistance” and use “aid” to encompass both terms.

Aid can thus prove to be counterproductive when it is risk-reducing and reliable, becoming a “resource curse” that leads recipients to neglect alternative forms of insurance against economic risk and rely on aid instead. In contrast, when communities do not perceive aid as reducing their short-term risk, they stay committed to the networks that traditionally promote cooperation. These two different reactions place the communities on different evolutionary paths, ultimately leading to different behaviors and norms. Of course, there are many influences besides aid that could cause variation in the provision of public goods, but all of the other factors I examined failed to explain the variations I observed in these communities. In addition to laying out evidence in support of aid as the causal factor, this chapter also demonstrates the shortcomings of other explanations.

Rival Explanations

One of the questions with which this project must grapple is whether pre-existing differences in the communities can explain the divergence in cooperation. The question is a thorny one because there is little data about governance for the communities concerned. The data that do exist are primarily on population (via the national census) and livestock (Mizutani et al. 2005, Herren 1990, personal communication with District Livestock Officers). A previous study collected some opinion data, but the study was limited to one group ranch and considers attitudes toward conservation (Gadd 2005). Participatory rural appraisals (PRAs) have been conducted in all the group ranches (see NAREDA 2004), but these and subsequent efforts primarily assess the state of natural resources and development goals. PRAs rely on rapid assessments, usually conducted through group meetings over the course of a few days, and thus fail to access a broad cross-section of

the population and tend not to produce hard data. PRAs are also not conducive to drawing distinctions between communities.

Careful studies of culture that include some discussion of governance have been conducted by Herren (1987) and Cronk (2004). However their direct applicability to this study is limited because of their research foci. Herren focuses on researching the historical formation of local sub-ethnic groups, and Cronk's study of the residents of Laikipia group ranches east of the ones in this study is premised on the claim that their culture differs. In short, with a few exceptions (NAREDA 2004, Herren 1987) the studies provide an informative background relevant to all the communities in this study rather than helping identify differences between them.

In the absence of reliable and comprehensive information about the level of cooperation that these five communities experienced before they began receiving aid, it is important to consider the relative probability of explanations for cross-community differences in levels of cooperation and reciprocity that rely on pre-existing conditions. Many of the possibilities come under the rubric of natural resource endowment or pre-existing history, culture, or ethnic heterogeneity. As outlined above, I controlled for such differences by selecting communities that share almost identical environmental, historical, cultural, and ethnic characteristics. It is also not the case that donors selected which community to sponsor based on its residents characteristics. Rather, donors selected them based on their geographic proximity to the donor, because proximity is strongly related to whether community residents choose to invade a neighboring property with large numbers of livestock. This section delves into how geography and history,

culture, and ethnicity might affect community cooperation, and how we know they are the same in the five communities.

Geography — Geography could impact community cooperation in a variety of ways. The presence of exploitable soils and minerals could lead to different economic bases of the local economies. Alternatively, geographic location, in terms of access to roads and thereby to markets and to greater circulation of ideas and people, could impact propensities for cooperation. None of these mechanisms is at work in these communities. As stated above, natural resources are minimal, consisting mainly of grasslands that are not suitable for rain-fed agriculture. The communities are all similarly distant from towns and markets at Dol Dol and Nanyuki. While there are necessarily some slight variations in distance, they are only a matter of tens of miles.

Climate and other aspects of the environment are very similar across communities as well (NAREDA 2004: 43-52) and bear discussion because they have direct impact on livelihoods. The communities receive similarly low levels of mean annual rainfall, all averaging less than 500mm per year.⁷ This classifies the land as semi-arid savanna, where water is the limiting constraint on plant growth (Franz 2007:36). The significance of the low rainfall is that the land is not reliably suitable for rain-fed agriculture. As a result, residents rely on livestock to convert the land's productive capacity into consumable and saleable form. The communities' relative wealth levels and impact on the land can therefore be estimated in terms of livestock holdings, which are the same order of magnitude across the communities.⁸

⁷ Franz (2007) derives the newest maps of rainfall bands.

⁸ Chapter Two addresses the extent to which livestock capture wealth levels.

In addition to low average levels of rainfall, the area is characterized by variability in the frequency and intensity of rainstorms, which occur in two rainy seasons: a long one in the spring and a short one in the fall. Droughts occur on a three to six year cycle, but this cycle is becoming shorter (Kaitho et al. 2006), and new data suggest climate change may be further altering rainfall patterns in a way that makes raising livestock increasingly difficult. Franz finds that over the last fifty years, rainstorms are becoming less frequent but more intense, though the aggregate amount of rain is unchanged (Franz 2007:14). Locals perceive this phenomenon as more frequent drought because there are longer dry periods between storms and more runoff when it does rain, meaning that less water is absorbed by the landscape.⁹ As a result, there is sufficient grass on the landscape for shorter periods of the year than in the past and an already unpredictable climate is increasingly hostile to livestock husbandry. Further complicating matters, local rivers have recently begun to run dry earlier in the season, due both to greater runoff after storms and to diversion of their flow by upstream users (interviews and Franz 2007: 65). The environment is a challenging one, and all five communities experience an equal paucity of environmental resources.

Attitudes Arising from History, Culture, or Ethnic Diversity — A long tradition of political studies attributes the political outcomes of countries or regions to the cumulative preferences of their citizens. Landmark studies show how the orientations of citizens toward their political system and toward one another explain difference in the stability and performance of the political system (Almond and Verba 1963) or political

⁹ Homewood (2008: 56) makes the same point, writing, “It is very often not the intensity of the drought that matters, in terms of the actual level of rainfall experienced. More important is whether the timing of any rain that does fall is such as to allow grass and crop growth.”

institutions (Putnam 1993). One explanation for this effect is that attitudes or preferences shape norms of right behavior independently of the current political structure, so that pre-existing cultural norms make it acceptable to behave towards others in ways that are not acceptable in another community with a similar political system. Data that support the tenacity of distinct norms—which scholars attribute to various causes, including history, culture, and diversity—can be found in cross-cultural analyses of normatively-associated behavior measured by experimental games (Henrich et al. 2004). Such data indeed show that norms vary across societies.

One example of the power of pre-existing norms to affect community outcomes is a community's attitude toward change. Pre-existing attitudes can shape cooperative outcomes by affecting the way communities react when new technologies make a previously-untapped resource endowment valuable. There are many new technologies that could lead to new sources of economic growth for the communities in this study. One is education, which has become more accessible due to the building of local schools and passage of a national law making primary education free. If educated children gain more lucrative employment, then variation in schooling rates will give communities different levels of access to resources associated with employment, such as wages. Other new technologies whose adoption could lead to lucrative resource flows relate to land use. For instance, adopting a “holistic management” method of grazing livestock might increase how many livestock the communities can accumulate without degrading their land, which would be equivalent to a resource boom. For each of these examples, adopting a new technology provides a potential source of economic growth, and pre-existing norms are likely to affect whether the community embrace the new technology.

Although pre-existing norms can have a powerful effect on outcomes, there is no indication that the residents of the five communities in this study would have developed different attitudes or preferences. They belong to the same ethnic group and share a recent history. The vast majority of residents of the communities in this study identify themselves as belonging to a group they refer to variously as Maasai, Mukogodo Maasai, or Laikipia Maasai.¹⁰ Their history is described in greater detail in Chapter Two, but the salient fact is that their history is a shared one based on ethnic identification. Here, I consider whether sub-ethnic (clan) identification explains variation in the communities' cooperative outcomes. Herren (1987), the best-known historian of the Mukogodo Maasai, treats them as one group, but he does identify several clans within the group, and it is worth exploring whether these clan differences might work locally as a highly specific form of ethnic diversity that impedes cooperation. A variety of studies demonstrate that ethnic diversity can be a barrier to collective action, and thus public goods provision

¹⁰ Several dozen group ranch residents were asked whether they identify as Maasai or "something else." Their responses included the terms "Maasai", "Laikipia Maasai", "Mukogodo Maasai", "Mukogodo", and "Dorobo". Respondents agreed that these terms are used more or less interchangeably. Self-descriptive use of the term "Dorobo" is interesting because several scholars describe it as an insulting term. Herren (1987) indicates that the name "Mukogodo Maasai" derives from dwelling in an area known as Mukogodo and speaking the Maasai language (29). The same logic would apply to the term "Laikipia Maasai", which is distinct from "Lakipiak Maasai".

The incidence of marriage with people of other ethnic groups is fairly low and appears to occur most frequently with Samburus and Turkanas. No survey was undertaken, but interviewees were asked to describe their self-identification, their birth place, and the birth places of their parents. I also asked a number of informants about the presence of brides from outside the group ranches. Some local women are married to Maasai from Kajiado and Narok (southern Kenya) or to men from one of the other nine local group ranches. A small minority of men said in interviews that they moved to the present-day group ranches from nearby Samburu District between fifteen and forty years ago. An additional number of interviewees of both genders indicated at least one parent came from Samburu District, with the implication that his or her ethnic identity was likely also Samburu.

(Habyarimana et al. 2009, Miguel and Gugerty 2005 and 2004, Alesina et al. 1999). In the communities examined here, there is indeed a difference in clan dominance by group ranch, but it does not correlate to the patterns of public goods provision that exist, as shown in Table 1. The Leuaso and Digiri are the two clans or sub-ethnic groups that inhabit the communities in this study. Three communities—Koiya, Kijabe, and Musul—are heavily dominated by one group. One community, Ilmotiok, is split evenly between the two identities, while Tiemamut shows moderate numerical dominance by one group. There is no association between ethnic heterogeneity on the one hand and cooperation on the other.

Table 1: Ethnicity and Group Ranch Outcomes

Sub-ethnic group	Community: cooperation level
Leuaso	Koiya: low cooperation
Leuaso/Digiri mix	Ilmotiok: low cooperation
	Tiemamut: high cooperation
Digiri	Kijabe: low cooperation
	Musul: low cooperation

Stories about Aid

Many researchers have focused on understanding how development aid affects actors' incentives at the national level, including aid's effects on government spending, investment, and corruption. Less attention has been paid to the way such aid creates incentives and influences behavior at the local level. While it is tempting to assume that many of the effects visible at the national level repeat themselves at the local level, aid's effects may scale quite differently in small communities. In the pages that follow, I argue

that aid has a significant effect on communities' self-provisioning in public goods via cooperation when it alters the importance residents place on pre-existing ("traditional") relationships that guard against economic risk. I find aid alters residents' assessment of the importance of traditional relationships when the projects to which aid is directed reduce household income volatility. Aid that is directed toward services that diminish the severity of the financial "crashes" households experience, usually because their livestock perish during drought, express greater confidence in their future well-being, invest less in reciprocal relationships, and participate less in instances of cooperative restraint.

In the absence of aid, residents rely on individuals who live both within and beyond the community boundaries to create a network of relationships that serve economic and social purposes. Traditionally, pastoralist households draw upon networks in times of drought, hunger, illness, or accident. They also maintain these relationships ritually and preventively even when there is no crisis. Networks organize reciprocal and cooperative activities such as sharing food and livestock, accessing distant grasslands during drought, and enforcing social order by punishing violations of traditional law (described in Chapter Five). Such reciprocal and cooperative activity serves as insurance, generates social capital, and fosters habits of cooperative interaction. When the residents of a community stop maintaining networks of exchange, measured by the frequency with which they call upon them, it signals both that the relationships are less valuable to residents and that they are unlikely to value organizing other joint behavior such as regulating natural resource use. Aid that diminishes the significance of livestock death during drought (i.e. reduces shocks to wealth) speeds the attenuation of networks.

Studies of aid reveal multiple explanations of aid's relationship to growth, with growth used as a proxy for development and often treated as a public good.¹¹ The first story proposes that increased aid yields increased growth. The second claims that there is no relationship between the amount of aid and the level of growth. The third argues that, paradoxically, aid diminishes growth. I briefly review each type of explanation and then propose a variant on the third: aid may increase or decrease public goods provision depending on recipients' perception of the aid. The scholars I cite take countries as their unit of analysis, but their arguments apply to smaller units like communities as well.

Donors often provide aid in the belief it will help achieve growth and development.¹² A variety of scholars make theoretical and empirical arguments in favor of aid's positive impact on achieving development in general and economic growth and poverty reduction in particular. Jeffrey Sachs is a proponent of this idea, arguing that aid's failure to achieve many donor and recipient goals results from not enough having been given. The metaphor he uses is that of a ladder: "When countries get their foot on the ladder of development, they are generally able to continue the upward climb... [but] If a country is trapped below the ladder, with the first rung too high off the ground, the climb does not even get started. The main objective of economic development for the poorest countries is to help these countries gain a foothold on the ladder" (Sachs 2005: 73). Sachs does not claim that ever-increasing amounts of aid lead to ever-increasing amounts of growth. Instead, he thinks there is a threshold level of aid required to jump-start growth, which will become self-sustaining.

¹¹ In fact, growth can benefit a few rather than the whole population.

¹² An alternative is that aid is provided for strategic purposes such as maintaining a preferred government in power or pleasing a domestic constituency.

In contrast, William Easterly is an economist who takes the view that there is no relationship between aid and economic growth in poor countries. Citing multiple large, cross-country, statistical studies of the relationship between aid and growth, Easterly writes, “Evidence does not support an effect of aid on growth” (Easterly 2006: 51). The problem, he indicates, is that while economists know a great deal about many problems associated with underdevelopment, they do not know what specific combination of policies and procedures to recommend in any given situation in order to achieve the overall goal of development (Easterly 2007: 329). Easterly does not call for ending assistance, however, but for making its aims more realistic by directing aid toward targeted projects aimed at solving concrete problems (Easterly 2007: 331).

A third perspective on aid’s relationship to growth holds that aid causes reduced growth in recipient societies. This view is associated with the work of free-market economists such as Peter Bauer and Milton Friedman (see Collier 2006a and Dorn 2002). In this view, aid causes more problems than it solves. Proponents of this view advance many different mechanisms whereby aid interferes with growth (and public goods provision). The implicit analogy in this argument is to the resource curse—the phenomenon in which countries with large stocks of valuable commodities often experience worse social and economic outcomes than do countries that do not possess such resources.

The concept of a resource curse arises from the observation that communities or countries with high-value natural resources like precious minerals and oil often have lower growth and development than countries without such resources. Hypothesized explanations range from the economic (e.g. effects on the exchange rate) to the

institutional (e.g. the rentier state, incentives for corruption). A major concern in political science has been the relationship between possession of such resources and civil war (e.g. Ross 2004 and 2003, Collier and Hoeffler 2004 and 1998). While there is no evidence of violence in the communities examined here, diminished ability to cooperate is also a public “bad”. The mechanisms by which high value natural resource flows and aid cause problems should be similar because the onset of development aid similarly changes the relative value of various economic pursuits and relationships in which community members were previously engaged, while introducing new opportunities.¹³ The resource curse literature thus serves as an apt analogy.

How does aid, which is an unearned resource, harm communities I examine? What are the mechanisms by which higher amounts of aid lead to lower cooperation? One possibility is that higher aid promotes corruption by creating access to, and competition for a, a new “pot” of money. Corruption—the abuse of public power for private benefit (Tanzi 1998:564)—is associated with both foreign aid flows and natural resource rents (Acemoglu, Robinson, and Verdier 2004: 165). In this hypothesis, corruption would scale with aid, so that more aid would cause greater decline in horizontal relationships (and thus community-wide cooperation) as a result of corruption-generated mistrust between individuals or households.

Data from the communities rule out this hypothesis. There is no evidence that scaling—more aid yielding more corruption—occurs in the communities. Comparable theft of community funds has been convincingly reported in one community receiving large amounts of aid and one receiving moderate amounts. In another example, elected

¹³ Note, however, that Collier (2006b) makes this comparison and finds that flows of aid are analogous to, but not as harmful as, flows of resource revenue.

leaders have attempted to expel group ranch residents in an effort to decrease competition for natural and aid resources, but they have done so in communities that receive moderate and low amounts of aid rather than high amounts. There simply is no evidence that devious leadership is worse where aid resources are greater. All the community group ranches experience political infighting, but some manage to retain a network of horizontal relationships in spite of it, while others do not.

Corruption does not seem to explain where horizontal relationships are neglected, but another possible explanation for how aid might undermine networks is if aid reduces the community's reliance on the resource that necessitates the network. In this case, the resource is livestock. They are the main currency of exchange and networks develop in large part as a way of ensuring livestock survival. Aid could reduce the importance of livestock at least two ways. The first way is by reducing the number of livestock people own in favor of other forms of wealth, which might make them less able or willing to assist one another with livestock and milk.¹⁴ If livestock ownership has declined due to increased aid (as opposed to impoverishment), then aid makes the networks poorer in their resource of exchange and insurance, and therefore less valuable, causing households to abandon them. A second way aid may diminish the utility of networks is if aid cushions a community from risk by diversifying its economy away from livestock dependence or by directly supporting livestock survival. In turn, when community members expect to have less need to call on one another in times of crisis, they will see less need to cooperate and cooperation levels will decline. There may also be an indirect

¹⁴ This assumes pastoralists are less likely to aid each other with cash, a common claim among scholars of pastoralism.

effect on cooperation if losing the habit of reciprocal relations with neighbors leads to less trust.

Cross-community data best support the argument that some forms of aid lead to decreased dependence on livestock and increased livestock survival. Four of five donors to the community group ranches provide alternative sources of income in the form of wage employment for community residents, cash transfers to community funds, or direct support for livestock during drought by hosting community residents' cattle on their private property.

In addition to aid's impact on networks and cooperation, I show aid also affects recipients' attitude (i.e. "happiness" or optimism). The change in attitude and the change in networks and levels of cooperation are both explained by residents' perception of certain forms of aid as risk-reducing. I argue community residents value having a crisis "safety net", and when they feel they have one, they respond with both a more optimistic attitude and by placing less value on investing in cooperation. Critically, the total cash value of aid may not convey the extent to which it is risk-reducing. Residents' perception of aid affects their response to it because they care more about minimizing income volatility in the short term than about the long-term value of the aid they receive. As a result, they undervalue services such as education.

To take an example: imagine a first aid project that provides \$10,000 to build a schoolhouse and offices in a community, compared to a second project that provides \$10,000 to purchase grazing rights for 100 of the residents' cattle on a nearby, private property. The different projects, though equal in cash value, will have substantially different impact on the livelihoods of beneficiaries. The second intervention will trigger a

substantial change in recipients’ financial calculations, and is likely to change their planning and behavior in a way the infrastructure project will not.

Table 2 describes the outcomes I observed with respect to cooperation for maintaining the conservation zone, as well as additional measures such as food and livestock sharing and the imposition of fines I report in Chapter Five. The communities that experience low levels of cooperation receive levels of aid that range from low to high. In contrast, one community receiving moderate levels of aid (Tiemamut) achieved a higher level of cooperation. At first glance this distribution seems to argue that level of aid is unrelated to level of cooperation. However, by instead considering residents’ perception of the aid’s value, the correlation between aid perceived as risk-reducing and non-cooperation is apparent.

Table 2: Cooperation and associated per capita levels of aid

Total cash value of aid:

	Low aid	Medium aid	High aid
High cooperation		Tiemamut	
Low cooperation	Musul	Ilmotiok	Koija, Kijabe

Perceived value of aid:

	Low aid	Medium aid	High aid
High cooperation	Tiemamut		
Low cooperation		Ilmotiok, Musul	Koija, Kijabe

When recipients perceive aid as risk-reducing (i.e. lessening reliance upon livestock for survival), they are more likely to believe their economic situation is tenable. This belief in turn explains both their optimism and their disengagement from relationships of mutual reliance, harming their ability to cooperate at the community level. In contrast, aid directed toward projects such as infrastructure and education does not trigger disengagement. Even though such projects may improve the community residents' quality of life or pave the way for longer-term wealth stability, such aid does not help residents cope with economic emergencies in the short term. As a result, residents feel insecure about the future and continue to rely upon the interpersonal relationships that are a traditional means of risk management. Interestingly, residents of communities that receive low or moderate but non-risk-reducing aid accumulate assets and jobs at levels similar to communities receiving high levels of risk-reducing aid. What differs is the residents' belief that they lack outside guarantees of support if crisis strikes.

Table 3 summarizes the outcomes demonstrated by my data with respect to community members' attitude, behavior, and livestock accumulation, which is a proxy for wealth.¹⁵ I find that aid perceived as risk-reducing by its recipients makes them more confident in their future, less likely to engage in reciprocal and cooperative activity, and that residents change their behavior based upon whether they feel "optimistic" rather than upon whether they are financially stable in the number of livestock they own

Local details illustrate the relationship among variables I have described. All the community group ranches except Tiemamut have a principal donor who owns property

¹⁵ Prominent studies such as the World Values Survey also find associations between attitude and behavior Inglehart and Welzel (2010) argue these attitudes are stable over time, whereas the present study deals with a moment of change.

adjacent to the community. These donors provide employment, cash transfers, and pasture for community residents' cattle during drought. In contrast to its neighbor communities, Tiemamut Group Ranch receives cash aid from a geographically distant non-governmental organization that does not provide assistance such as jobs or alternative livestock habitat. Since the NGO is located several hours away, Tiemamut's residents are unable to negotiate more aid by threatening to invade their donor's property with livestock, as the neighboring group ranches do. There are thus credible limits on the NGO's aid. My claim is that Tiemamut's residents respond by maintaining interpersonal relations within and beyond the community. In this way, Tiemamut's internal and external relations signal continuity with the principles of traditional pastoralism by increasing the number of people and places to which residents can turn in case of emergency.

In summary, employment and pro-livestock aid change the perceived importance of "horizontal" reciprocal relations through which pastoralist households have traditionally accessed insurance against difficult times. Residents of a community receiving employment and livestock support substitute a "vertical" relationship with a donor for horizontal ties to other people. Horizontal relationships take a great deal of time and financial resources to cultivate. Where people believe they can diminish these costly investments and achieve more reliable means to survive crises via donor aid, they do so. However, neglecting networks may be a poor strategy because development aid comes from a single source, while networks provide access to multiple sources of assistance, making them more robust to withdrawal by any single partner.