Odessa centre | Pastoralism
Research, Policy and Practice

TYPE Original Research
PUBLISHED 12 December 2025
DOI 10.3389/past.2025.15617

OPEN ACCESS

EDITED BY
Rahma Hassan,
Tufts University, United States

*CORRESPONDENCE
Peter D. Little,
peter.little@emory.edu

RECEIVED 20 September 2025
REVISED 20 October 2025
ACCEPTED 20 November 2025
PUBLISHED 12 December 2025

CITATION
Little PD (2025) The complexities of interpreting climate change: the case of Il Chamus, Baringo County, Kenya. *Pastoralism* 15:15617.
doi: 10.3389/past.2025.15617

The complexities of interpreting climate change: the case of Il Chamus, Baringo County, Kenya

Peter D. Little[1,2]*

[1]Department of Anthropology, Emory University, Atlanta, GA, United States, [2]Emory University Emory College of Arts and Sciences, Atlanta, GA, United States

Colonial and post-colonial states subscribed to misplaced narratives about Africans, especially pastoralists, and their role in environmental degradation. Many of these narratives and 'scientific' ideas strongly impacted land use and environmental policies that constrained how pastoralists could respond to climate variability. This paper explores how perceptions of and responses to climate change are shaped by state interventions and politics among Maa-speaking Il Chamus of Baringo County, Kenya. It highlights the complexities of interpreting climate events across time, class, and politics and the difficulties of isolating climate change from other environmental events. By using a political ecology approach, the study argues (1) that politics often are disguised under environmental policies and interventions pursued by the state, including those centered on climate change mitigation; and (2) that local discussions of the impacts of climate and other environmental changes are shaped by power dynamics, class, and other differences. By drawing on the author's long-term research in the region, the paper traces over time how frequent but different types of "shocks" (environmental, political economic, and social), shape local experiences and perceptions of climate change. The paper concludes with a discussion of how a recent political victory by Il Chamus should improve their capacity to cope with climate change in the future.

KEYWORDS

political ecology, climate change, East Africa, environment changes, ethnography

Introduction

During the colonial period in Kenya, concerns about soil erosion, overgrazing, and deforestation empowered local officials to intervene in livelihoods and ecologies, often with draconian measures (Anderson, 2003). They subscribed to global narratives about Africans, especially pastoralists, and their role in environmental degradation (Stebbing, 1938). Many of these narratives and 'scientific' ideas have endured into the post-colonial era and strongly impact land use and environmental policies. This paper explores one of these powerful narratives, climate change, and how it is perceived by the Maa-speaking Il Chamus of Baringo County, Kenya. By examining local experiences of climate change across time, class, and politics, the paper shows the difficulties of isolating climate change from other events and issues that the Il Chamus community confront. It demonstrates: (1)

how politics often are disguised under environmental policies and interventions pursued by the state and (2) how political powerlessness has been at the forefront of local struggles for more than 50 years, including those related to environment.

By drawing on the author's long-term research in the region, the paper traces how frequent but different types of "shocks" (environmental, political economic, and social), coupled with an increasingly class and age-differentiated community, shape local experiences and perceptions of climate change. It will be shown that the dynamic interplay between environmental narratives and interventions, on the one hand, and local realities of elitism and social division, on the other, make it difficult to filter out climate change from other challenging issues. In fact, local discussions about environmental issues, such as those related to climate, frequently default to political concerns of insecurity and marginalization. By using the lens of political ecology, it will be argued that interpretations of and responses to environmental events, including droughts, floods, and rangeland destruction, often depend on whom you are asking—the better-off or poor, young or old, female or male individuals, or a combination of these. Political ecology also can contribute to understanding how ecological disasters and their aftermaths can both divide and unify communities.

Uncertainty is an important theme of the paper that deals both with climatic and political economic volatilities and local perceptions of an unknown future. It is a concept defined long ago simply as the inability to place a probability on an outcome (Knight, 1921). In the social sciences it has a long history of application which is increasingly advocated in studies of pastoralism (Scoones, 2023). The concept is key to understanding many aspects of Il Chamus life, including those related to politics, economy, and climate. The paper raises questions about both the physical environment related to rainfall and water, and the social world related to expressions of "waiting time[1]" and hope for an uncertain future.

Methods and theory

In terms of methods, the paper employs ethnographic, archival, and photographic/visual materials collected over more than 40 years. It draws on field research conducted during 1980–81; 1984; 1988; 1994; 1997–2005; 2016–19, and 2024 for a total of about 2.75 years. The most recent household-level research (2016–18) includes two periods of interviews with heads and/or principal members of 100 households in two Il Chamus locations, Salabani and Ngambo; structured and unstructured conversations with more than sixty non-rural interlocutors residing in or near Nairobi, Nakuru, and Marigat towns; discussions with sixteen small groups of community members (five to eight individuals) differentiated by gender and age; and participant observation. The 1980-81 research included an eighteen-month study of local markets and household economy based on a sample of 56 households in three locations of Il Chamus and interviews with more than fifteen traders and numerous government and development officials in Baringo; and the 1997–2005 field visits included follow-up interviews with more than 40 family members from the 1980–81 field research and intensive data collection on household livelihoods, trade, and responses to climatic events.

Longitudinal information allows important questions to be asked, such as: what does it mean socially and politically when a community continues to absorb multiple political and ecological shocks over a relatively long period of time; how do landscapes reflect both political and environmental events; and how does a researcher's understanding of and own biases about environmental events change over time? The time-series data demonstrates the broad regional and national political ramifications of environmental interventions that initially were conceived in technical and non-political terms, but over multiple visits and years were shown to be otherwise. The promotion of the invasive *prosopis juliflora* tree (hereafter referred to as prosopis) to combat perceived "desertification" in Baringo County is an example of a project treating an environmental problem as a technical challenge when over time Il Chamus (and the author) viewed it in political rather than technical terms. The relationship between politics and technology, on the one hand, and social and environmental changes, on the other, are more apparent when field research is conducted over decades rather than years.

As noted earlier, the paper draws on insights from the field of political ecology to address how power-based relations shape environmental landscapes and the livelihoods that depend on them (Peet, Watts, and Robbins, 2011; Watts, 2003). It highlights access as a key element of political ecology by showing how Il Chamus pastoralism and ecology have been changed by problems of access to physical resources, political power and institutions, and meaningful program and policy solutions. Rather than treat political ecology as a well-defined theory, the paper borrows from Li (2007) and approaches it as an assemblage of institutions (including laws), ideas, events (including drought, flood, interventions, and conflict), human agents (government officials, pastoralists, farmers, politicians, and scientists), non-human agents (plants, rivers, and lakes), and different interests and objectives (authority, control, profit, and development). It is the intricate and overlapping relationships among these elements that influence questions of access and perceptions of and responses to environmental changes in Il Chamus, including those related to climate. I use the term entanglement to suggest how difficult it is to tease out ("untangle") the problems of an increasingly variable climate

1 See the important uses of time, including "waiting time", in the anthology by Masquelier and Durham (2024a).

FIGURE 1
Study area. Source: Odhiambo, 2015: 106).

from other challenges and environmental events that the Il Chamus have confronted over the past 50 years.

History of flexibility

Il Chamus are surrounded by mainly European ranches and private wildlife conservancies to the west, Kalenjin-speaking Pokot to the north, and Kalenjin-speaking Tugen to the west and south, and they always have been flexible in responding to opportunities and challenges despite their circumscribed territory (Little, 1992) (see Figure 1). They pursue multiple production strategies and forms of wealth measured initially in livestock, especially cattle, but increasingly in land and business investments. There always were pronounced inequalities dating back to the nineteenth century when several Samburu and Maasai families joined the original Il Chamus community, but these discrepancies have grown (Little, 2021; Spencer, 1998). The indigenous community initially focused on irrigated farming, fishing, and small stock (goats and sheep) production in the nineteenth century, but moved into pastoralism in the early 1900s as cattle accumulation grew after raids from larger groups declined (Anderson, 2003). The protection of the colonial state and above average rainfall over multiple years during the 1920s–1960s allowed for a rapid buildup of livestock, especially cattle (Little, 1992).

There has been a downward trend in pastoralism since the late 1970s, marked by massive droughts and livestock losses in 1979–80 and 1984-85, as well as losses of territory to neighboring groups. Damages to the livestock sector accelerated in the mid-to-late 1990s as more land was converted to agriculture and prosopis, a bushy harmful tree that was introduced in 1984 by a United Nations agency [Food and Agriculture Organization (FAO)] and the government forestry department (Little, 2019). The invasive and destructive plant and its seeds spread widely in Il Chamus[2] after the 1997-1998 *El Nino* floods, a highly abnormal disaster that also damaged infrastructure and livestock herds. Agriculture, in turn, also grew in the 1990s while changes in river and lake levels further altered the landscape. Moreover, zones of insecurity expanded with frequent raids and land encroachment by Pokot. Finally, the 2010s witnessed continued expansion of cultivation and the fencing of many common property areas--especially near rivers and critical grazing areas--the further onslaught of harmful Prosopis, and sustained violence and insecurity in the area.

As a community with a relatively small population of approximately 45,000, Il Chamus have always relied on government support—first in the colonial period and then the post-colonial era. In fact, a big boost to cattle holdings by the community were payments for assisting the British with a military campaign against the Turkana community in the early twentieth century. This numerically and militarily superior group was a constant threat to Il Chamus, which kept them from accumulating cattle because of raids. By locating an early district headquarters at the most northern Il Chamus settlement of Mukutan, the British colonial state provided protection and defense against Turkana's southward expansion, and a base for military campaigns in northern Kenya. During the colonial period, Il Chamus relied on state support and frequently visited colonial officials to complain of attacks and/or land encroachments by neighboring Pokot (Anderson, 2003; Little, 1992). Both Il Chamus and government viewed each other as convenient allies. It was a relationship that can be traced to nineteenth-century Europeans explorers and caravans who viewed Il Chamus as a source of agricultural supplies and a hospitable community (Thompson, 1887; von Hohnel, 1894).

As a small community with a growing livestock sector but surrounded by larger and often antagonistic groups, Il Chamus had little recourse but to seek government support. This alliance with and dependence on government was generally sustained into the post-colonial period until Il Chamus began to seriously face territorial losses and violent attacks in the 1990s. Their Member of Parliament (MP) at the time was the late President Daniel arap Moi, a member of the neighboring Tugen community. Although there were certain benefits from Moi's representation, especially in terms of infrastructure and educational opportunities, Il Chamus increasingly lost out to their Tugen neighbors over political appointments, jobs, and land.

By the early 2000s, government support for Il Chamus was in steep decline. Fractures in the alliance with the state, widened significantly when the community petitioned the courts for their own political constituency, which required dividing President Moi's Central Baringo constituency. Strategically, the legal case was brought forth after President Moi retired from politics and the Central Baringo MP post passed on to his son Gideon, who was elected unopposed in 2003. With the active promotion and legal support by an Il Chamus lawyer, the community felt unsupported by their Kalenjin-elected MP and brought the legal case in 2004 (Little, 2016). Many Il Chamus believe that the violence by Pokot against the community in the 2000s was political retaliation for bringing the lawsuit. A second lawsuit was brought in 2006 against the government and FAO for introducing prosopis, which by this time had expanded into valuable wetland grazing around Lake Baringo and the Pekerra river basin. Their arguments in both cases centered on the community's political marginalization. However, judicial rulings in both cases were in favor of Il Chamus, although the court's directives were never accepted and acted upon by the government and its technical ministries (Little, 2016). It has been almost 20 years since both lawsuits were filed but their contents are still frequently referenced by interlocutors when discussing the effects of different environmental and economic shocks (Field notes, March 2017 and June 2018; also see Musasia, 2020).

Unpacking climate from other challenges

When I first conducted research in Il Chamus in 1980–81, the rhythm of pastoralism followed a normal cycle of herd growth in good rainfall periods, with drought-induced livestock "die offs" occurring every 6–9 years. Droughts were followed by herd rebuilding as the cycle repeated itself. Sometimes the sequence was shorter than this while other times it was longer. However, drought was always a normal rather than an unusual event. Herders pursued herd accumulation and selling/buying and mobility strategies based on the realities of this pattern, relying on several different factors to help gauge their behavior, including customary weather forecasts (Lenachuru, 2016). The rest of this section highlights the chronology and impacts of different challenges that affected both the people and the ecology of the area, with climate change being just one of these.

The weather problem

Even now older Il Chamus refer to the short 1979–84 drought-recovery-drought cycle as the worst drought

2 Il Chamus refers both to the people and their territory.

sequence in living memory, probably because cattle numbers were very large and potential losses so high prior to this period. Massive cattle die-offs of around 60–70 percent, therefore, occurred during these years. Within five to 6 years after the 1984 drought, herds of the wealthiest families were equivalent to those of pre-1979 levels. However, there were significant numbers of families who dropped out of pastoralism during these years, often pursuing contract labor work either locally on the nearby state-sponsored Pekerra irrigation scheme, or migrating to work on commercial ranches and farms in Laikipia or Nakuru counties. Until this time migration to work as laborers was usually temporary, but it became increasingly permanent in the mid-to-late 1980s.

A moderate drought occurred in 1992 and generally rainfall was below average during 1990–1994. At the time Lake Baringo's surface and depth receded significantly from previous levels (Odada, Onyando, and Obudho, 2006; Okech, Kitaka, Omondi, and Verschuren, 2019). My interlocutors noted how it was almost possible to walk from the shore to one or more of the lake's islands in 1993–1994. Conversations about climate change were frequently heard among residents during these years, as well as comments about droughts becoming worse and temperatures increasing. The receding lake and the drying up of local rivers and streams were visible signs of climate change, and herders pointed to an uncertain climate as the main challenge to pastoralism. One male elder Lesayan[3] even mentioned that for the first time hippopotamuses were stuck in the thick mud of the drying lake and dying because they were unable to graze the shoreline vegetation (Field notes, June 1998). Based on the low lake levels in the 1990s, some ecologists were predicting that Lake Baringo and its rich delta of perennial grasses would continue to deteriorate and that the lake itself would shrink to 50 percent of its 1976 level by 2025 (Odada et al., 2006: 289).

The level of Lake Baringo recovered partially because of the unprecedented 1997-1998 *El Nino* event described earlier. That disaster not only dispersed prosopis seeds widely, but it also flooded human settlements, killed large numbers of livestock, changed the course of a key river, and badly damaged infrastructure, including three bridges and the sole tarmac road that connected the area to the provincial capital of Nakuru. There was significant flooding again in 2003 with losses of human life and livestock, while the main branch of the area's largest river, Pekerra, changed its course and now traverses very near the largest Il Chamus settlement, Ngambo. The rains of 2007-08 also were especially heavy and areas with prolonged standing water created ideal conditions for mosquitoes and the deadly hemorrhagic Rift Valley Fever (RVF).

According to elders, an outbreak of RVF had never occurred in the area until 2008, a fact that is confirmed by available government records and archives. Because it is transmitted to humans through consumption and handling of milk and meat from infected animals, livestock markets were closed for almost 1 year and the community was advised not to consume meat that had not been thoroughly cooked nor milk that had not been boiled. Officially eight Il Chamus died from the disease and several others became seriously ill. Most residents indicated that deaths were higher and many still talk of the international and national health workers who arrived in the area with head-to-toe protective gear resembling astronaut suits. Prosopis was blamed for the flooding by clogging up rivers and drainage areas that not only damaged the landscape but also resulted in the RVF outbreak. Local blame for the conditions did not highlight the intense rainfalls that have become more frequent as the climate changes but, instead, it focused on prosopis and the community's political marginalization. If "we had our own MP, these kinds of problems would not happen," a common statement that was and still is voiced.

The prosopis problem

The effects of prosopis began to be felt in the 2000s by many herders who witnessed reduced pastures and threats to the health of their animals from the thorny tree and its sugary pods. Although the impacts of the plant clustered around settlements and homesteads when first planted, it began to aggressively spread into prime grazing areas. By 2006 the senior chief and other Il Chamus leaders who less than 10 years earlier believed there were potential benefits from prosopis, took action by suing the government. Yet, as noted earlier, the state failed to accept responsibility even after losing in the courts.

Unsurprisingly, the expansion of prosopis, with its serious environmental impacts, is inscribed in local discussions about climate change. By the mid-2010s it was calculated that many of the most productive Il Chamus grazing areas of central and western Il Chamus had been reduced by more than 40–50 percent (Mbaabu et al., 2020: 5). Although residents often admit that dust storms have disappeared—which were common during droughts and dry seasons in the 1980s and 1990s--prosopis is not only blamed for loss of pastures and increased flooding, but also for problems of insecurity and violence. It follows that because of prosopis, Il Chamus have less territory to graze their animals and, thus, often are forced to use areas of endemic insecurity north and east of Lake Baringo.

As noted earlier, the Il Chamus had two favorable court rulings related to their lack of political representation and the prosopis problem. In terms of the latter outcome, some international and government funding was made available to support different uses of prosopis. For example, charcoal and

3 Pseudonyms are used for personal names of individuals.

processed animal feeds from tree pods were supported, but the court ruling for the elimination of prosopis and monetary payments, were never pursued (Little, 2019; Odhiambo, 2015). One elder who owned a relatively large number of cattle (approximately 20) at the time complained:

> We have seen the bushes grow very fast and only the mature trees can be used for charcoal. The government says it is too expensive [to eradicate]so we must learn to manage it. That is not possible—we need total eradication. (Field notes, September 2008) (Little, 2019:149).

The state agency for monitoring and informing environmental policies in the country, the National Environmental Management Agency [NEMA], argued that prosopis increased vegetation cover as a measure to mitigate climate change and halt desertification in the area. For this reason and economic cost factors, the government never attempted to effectively control the plant's spread. One of my interlocutors responded to this position by exclaiming that "we would rather live with sand, then to have our livestock die from this problem—even the thorns are poisonous to people (Field Notes, September 2008)."

Intermittent field research during 2000–2009 revealed other important changes, some of which are perceived by interlocutors to be related to prosopis. These include noticeable declines in average livestock herds, especially of cattle, and significant growth in formal education, waged and informal work, and crop cultivation. Additional research during 2010–2011, 2016-2019, found that these trends away from full or near-full time pastoralism continued. In terms of livestock holdings, average household and *per capita* numbers measured in Tropical Livestock Units (TLUs)[4] declined more than 75 per cent during 1980-81 to 2017-2018 (Little, 2021). Moreover, households with less than three TLUs grew almost three-fold while households with more than 50 TLU (the equivalent of 50 cattle or 250 goats and sheep) contracted about five-fold during the period. Many factors are responsible for this decline, including cattle raids, loss of territory to other groups, extended droughts, and even the cost of formal schooling that required increased sales of animals. However, the issues that are held most responsible for the decline of pastoralism is the expansion of prosopis and the interrelated issue of insecurity, both of which affect the community's capacity to respond to climate events, such as drought and floods. With the difficulties of maintaining a pastoral economy based on flexibility and mobility, investments in education are increasingly perceived as the best means for attaining a major livelihood goal, salaried employment.[5]

4 1 TLU = 1 head of cattle or 5 goats or sheep.

5 Salaried employment is considered relatively stable work usually with a monthly salary and benefits, which distinguishes it from poorly paid and volatile casual or contract labor.

The security problem

The decades of the 2000s and 2010s clearly were not good ones for Il Chamus. As noted earlier, the period began with a devastating drought. This disaster was shortly followed by a prolonged period of violence and insecurity that began in 2005 with a massive attack by neighboring Pokot and the loss of 12 Il Chamus lives and about 2,000 cattle. After the attack, some Il Chamus for the first time began to arm themselves with AK-47s (Kalashnikovs) (Little, 2019). Conflicts with Pokot were not uncommon over the past 130 years, but the recent scale and impacts of armed events were unprecedented. In 2017 a chief from the Il Chamus settlement of Mukutan was forced to move into a refugee camp near Marigat town, while another resigned to live with Maasai relatives in a county more than 200 km south of Baringo. Indeed, whole Il Chamus neighborhoods have been uprooted and schools and health clinics closed for months, even years at a time. With prosopis spreading into central and western Il Chamus, the highly insecure eastern and northeastern parts of their territory are the best grazing zones relatively free of prosopis. From 2005–2024 they had been used infrequently and often only under the protection of the Kenyan army or when seasonally vacated by Pokot.

The Mukutan community's concerns about violence and land encroachment from their neighbors resulted in an agreement with the government in 2018 to gazette their forest as a government forest. The Foresty Department is concerned with deforestation and drying up of key rivers in an era of climate change, so it was glad that the community would allow the forest to be protected and restrict its use. However, the community was more interested that the Mukutan Forest reserve would serve as a government-protected buffer between them and Pokot, than its potential effects on climate mitigation and water conservation. In a national newspaper, Koech (2024) reports that although Il Chamus would give up rights to the use of the forest, "the community believes the conversion of their land into public forest will enhance peace and security in the region and beyond." Note that 10 years earlier the Il Chamus community allowed another environmental program to be initiated and use their land, but this time it was focused on wildlife conservation. The protected area was established along another borderland that they share with Pokot, with a similar goal of establishing a protected buffer area--in this case with armed rangers--against Pokot expansion and raids (Little, 2013).

The Lake Baringo problem

A final challenge that adds to existing uncertainties, as well as the difficulties of divorcing politics from environmental events, is the extreme flooding of Lake Baringo. Recall that in the 1990s there was concern that the lake was receding and might be reduced by half within a few decades. The locally perceived

culprit was climate change. However, since 2019 the extreme flooding rather than the drying of Lake Baringo, has emerged as a major concern for Il Chamus. Indeed, most areas near the lake are now under water as of 2024 and it is noted that the land coverage of Lake Baringo in 1 year alone increased 18 percent (Victor, Eric, and Kyeba, 2023). Residents of two of the area's largest settlements—Salabani and Ngambo—have been displaced and several schools have been destroyed since 2021. Many families of the Ngambo area, for example, have been forced to abandon their homes at least once and for many residents twice during the past 20 years. Analyses of Google Earth photos show that the shoreline had greatly expanded between 2018-2023, with key dry sites in 2018, such as Ngambo Primary School, covered by the lake in 2023. Comparisons of these photos also show how many farms and grazing areas along the southern lake shore were covered with water during this period.

Once again, political marginalization and the prosopis issue are highlighted by the community as culprits for the lake's flooding and its impacts. The state's inaction about the floods resulted in the community once again initiating a legal case against the government. This 2019 lawsuit highlights the failure of the state to build flood control infrastructures and to effectively respond to the humanitarian crisis caused by the lake's flooding (Wangui, 2020). Political marginalization and problems of prosopis are highlighted both for the flooding and the lack of a government response in the post-flood period. The same Il Chamus lawyer who led other legal challenges initiated the action, demonstrating the strong political relationship to earlier legal challenges.

What adds to the uncertainty of this environmental shock is that some lake flooding, including at other Rift Valley lakes (e.g., Nakuru and Naivasha), is occurring in normal and near normal rainfall years. Since Lake Baringo has no visible outlets for its water and nearby mountains are heavily deforested, the lack of environmental controls in the highlands, along with concentrated amounts of rainfall and the rising of the lake's floor due to excessive siltation, are mainly blamed for lake flooding. However, the possibility that sub-surface tectonic plate movements might be responsible for lake flooding in the Rift Valley is receiving some consideration in recent studies (Baraka, 2022; Victor, Eric, and Kyeba, 2023). Without a surface outlet for its water and with one permanent (Pekerra) and three small seasonal rivers (Tarajani, Mukutan, and Molo) draining into or near Lake Baringo, could oscillating tectonic plates that block sub-surface outlets be responsible for excessive lake flooding? While still a minority opinion, the possibility is enough of a concern that specialists are advocating for additional research on the topic and at least a few residents have raised the possibility (Kimtai, Makokha, and Sichangi, 2024). Once again, this disaster and the possibility of sub-surface seismic activity as a causal factor only adds to the uncertainty and precarity that local Il Chamus communities face.

In sum, problems of prosopis, insecurity, territorial loss, and lake flooding continue to impact Il Chamus regardless of climate change. For the current generation of *il murran* (young males around 15–27 years of age), they have grown up with these challenges and, in the case of prosopis, it is a "normalized" problem which they seem relegated to live with. In terms of violent relations with Pokot neighbors, what initially started as cattle raids evolved into a land grab that displaced hundreds of Il Chamus families and the burning of schools and houses. A Red Cross-supported refugee camp for displaced families was established in 2017–2018 after Pokot had taken over parts of eastern and northeastern Il Chamus. Details of insecurity are outlined in Odhiambo (2015); Little (2016); Little (2019) and are summarized in this article only to highlight the difficulties of ethnographic research on climate change when other pressing problems, with relatively short time horizons, dominate local discussions.

Different interpretations and impacts

How different environmental events are interpreted and responded to varies by socio-economic status. This includes perceptions of the economic and social costs and benefits of these occurrences. Prior to the 2000s, it was possible to look at inequality among Il Chamus mainly in terms of livestock ownership and social indicators, such as polygyny (see Little, 1992). With increased diversification, new forms of wealth (assets), such as land holdings, secondary and post-secondary education, and improved housing, can be used to distinguish the better-off households from others. Different patterns of pastoralist diversification, such as waged employment/labor migration, cultivation, and investments in education, retail businesses, and housing, are not unique to Il Chamus. They are increasingly common among other pastoralist groups in Africa and elsewhere (Coppock, Bailey, Ibrahim, and Tezera, 2018; Dyer, 2006; Garbole, Dima, and Kanchora, 2025; McCabe, Leslie, and DeLuca, 2010; Scoones, 2021).

Currently those in the poorest quartile of Il Chamus households, especially female-headed units, have annual incomes and assets that are estimated to be less than 1-2 per cent of those in the wealthiest quartile (Little 2023). With these significant levels of inequality, is it surprising that perceptions of events, including droughts and floods, differ by household category? Thus, what is perceived as a catastrophe by one group may be viewed differently by others depending on wealth and/or livelihood. For example, for families with very little or no cattle, problems of drought-induced pasture shortages are perceived very differently than for those with significant numbers of animals. Moreover, if one does not own a house or a farm in a flood-prone area, increased intensity of rainfall events or lake flooding may be perceived differently than those living in a location prone to flooding. Even discussions with interlocutors

about the benefits/costs of prosopis reveal a more nuanced interpretation than generally assumed. For many male and female youth groups and others, who own few cattle and are unlikely to ever depend on pastoralism, prosopis is increasingly perceived as the basis for a livelihood based on charcoal making and sales. However, for older males and females who recall prosopis-free rangelands of large cattle herds and who probably do not want to (or cannot) engage in the hard work of tree cutting and charcoal making, they often look down on charcoal making as a culturally inferior activity. For them, prosopis is the "devil" vegetation that has disrupted their lives and destroyed the environment. Many elders, especially those with some livestock, still hold out hope that the landscape can be rehabilitated. They have different interpretations of the plant's harm than stockless or near stockless families.

The extensive flooding of Lake Baringo also has been experienced differently by better-off and poor residents. Because of floods, many displaced, often poor families moved to Marigat town, which is within the original Il Chamus "native reserve" that was demarcated during the colonial period. In the mid-1970s when Marigat was a very small settlement, its area was surveyed by the independent Kenyan government with the goal of forming a Group Ranch (GR). GR is a land reform tactic pursued by the government in pastoral areas, especially the Maasai areas in the south, to commercialize livestock production on communal lands that are generally unsuitable for private ownership. Although government surveys and discussions were held, the Marigat area was never formally adjudicated as a GR. Land ownership, therefore, was not much of a concern until land values began to rise as the town grew. Marigat currently is a key commercial town in Baringo at the intersection of important tarmac roads to Nakuru and highland Kabarnet, the capital of Baringo County. As of 2020, the town had more than 300 businesses, several multi-story commercial buildings, and a population of about 12,500 or fourfold that of 1980 (City-Facts, 2018).[6]

Not surprisingly, Marigat currently is the source of multiple land disputes, with many elite Il Chamus and Tugen taking advantage of the ambiguous tenure situation by claiming and fencing private plots often to build small rental units. Tugen residents in town initiated their own legal case based on the GR surveys conducted more than 45 years ago, which they argue confirm their historical rights to the area (Republic of Kenya, 2023). Although the court case was not successful, both Tugen and Il Chamus elites continue to claim private plots and build small rental units in town. Many of these rudimentary houses are rented to flood-displaced residents, allowing better-off, politically-connected individuals to benefit from recent flooding events.

Thus, for a relatively small community, Il Chamus have endured many major shocks. These often "man-made" shocks have resulted in significant social and economic changes. For instance, the importance of migrant remittances and non-pastoral work has grown substantially while—as noted previously--dependence on pastoralism has declined. At household and individual levels, the contribution of non-pastoral revenues relative to pastoralism grew considerably during 1980-81 to 2017-18. For example, in 1980-81, livestock accounted for 64 percent, crop production 14 percent (mainly irrigated farming), fishing 3 percent, and non-pastoral/farm income (i.e., casual waged labor and livestock trade) 17 percent of total household income. By contrast, during 2017-18 livestock comprised 20 percent, crop production 35 percent, non-pastoral/non-farm income 40 percent, and government pensions/social payments 6 percent of total household income among a sample of 100 households. The non-pastoral/non-farm component in the 2017–18 study comprised in order of importance: charcoal production and sales, casual and salaried waged employment, petty trade, shop keeping, and livestock trading. Clearly pastoralism has declined, as well as numerous social and cultural characteristics that are commonly associated with it. For example, Christianity is the overwhelmingly dominant religion among Il Chamus, which was not the case in the 1980s, and polygynous households are less than 10 percent of units when they exceeded 30 percent in 1980–81. Moreover, contemporary housing comprised of thick walls and metal roofs with small wire fenced livestock kraals (holding pens) are common now, which was not the case in the 1980s when housing structures were less permanent, cattle kraals were larger and fenced with thorned bush, and metal roofing was very rare. These changes indicate a more sedentary lifestyle with less dependence on pastoralism in 2017–2018 than during 1980–81.

Prosopis is increasingly a major problem for wealthy livestock owners and political leaders, although. As noted above, the poor earn incomes from it by making and selling charcoal. By 2008–2009 several low-income families were in the charcoal business, but most elite community members continued to view it as a dirty and culturally inferior livelihood. Moreover, in the words of one better-off Il Chamus male, "the money you get from charcoal is not good (Field notes, July 2018)." Despite the negative attitudes toward prosopis, the charcoal business grew considerably in the 2010s and 2020s. One favorable outcome of the earlier court case is that the government did not enforce its national ban on charcoal exports from counties, such as Baringo and Turkana, where prosopis is a special problem. By 2018 almost 40 percent of the 100 individuals (male/female, young/old) who were interviewed, especially those in the lowest two quartiles of wealth, earned some income from charcoal making and were ambivalent about

6 Population statistics for Marigat town are only available through 2015. The 2020 population is estimated by adding the 5-year average increase between 2000-2015 to the 2015 figure.

whether it should be totally eradicated or not. This reality is very different from the widespread rejection of the plant by Il Chamus just 10 years earlier. Ironically, even some elite Il Chamus who were interviewed in 2018 and 2024 and who have significant business interests and relatively sizeable herds of livestock (e.g., 15-20 cattle and 40–50 goats and sheep) began to view opportunities in the *Prosopis* business. One male pastoralist whom I have worked with since the 1980s, now has a business which hires youth to make charcoal for sale in Nakuru. Other relatively wealthy individuals also are arranging shipments of local charcoal to Nairobi where its price is considerably higher than other towns. Even a university-educated Il Chamus male leader like Letembo, who was a key advocate of the prosopis legal case against the government, has invested in a commercial charcoal-making venture. Although Letembo and other prominent individuals lament the introduction of prosopis and its destructive effects, often pointing out how it has made security and climate events worse, they admit to learning to live with and reap benefits from prosopis.

Other examples demonstrate different local perceptions of the benefits/costs of environmental events. For example, the expansion of irrigated farming in the Lake Baringo basin was also initially viewed as a problem by livestock owners even though many of them also had irrigation plots. Yet, this has changed in recent times. The recent flooding of Lake Baringo created opportunities for the better-off (male and females) who have been able to purchase pumps and grow watermelons and other lucrative crops along the shores of the lake. As bad as the flooding has been, some wealthy individuals have been able to earn considerable income by irrigating commercial crops. And, as noted earlier, they also have been able to rent houses in Marigat town to families displaced by floods. In short, the perceptions and costs of different environmental events, including climate-related outcomes, are emmeshed with class differences, as well as politically-induced disasters, such as the prosopis and conflict problems.

The complex entanglement and overlapping of different environmental problems and perceptions are especially apparent in coverage by the media. When interviewed by national and international news outlets, Il Chamus male and female elites often point to political marginalization for the harmful effects of climate and other environmental changes. Reference frequently is made to the long-standing legal petition for Il Chamus political representation at the national level. As this article has shown, the initiation of lawsuits or what Comaroff and Comaroff (2009) call "lawfare" is an increasingly common tactic pursued by Il Chamus, even when the strategy results in minimal positive actions by the government. The insecurity problem and continued violence in the area that have aggravated the negative impacts of climate change—i.e., increased drought and floods—receive considerable attention in the Kenya media. They also provide opportunities for elite Il Chamus to point to the content of and reasons for their legal cases by arguing that environmental problems in the area are aggravated by political marginalization.

Hopeful waiting

The amount of social, economic, and environmental changes in Il Chamus within a relatively short period of time contrasts sharply with local conceptions of time that can span multiple generations and soften the reality of the contemporary context. The idea that outcomes take time and the future will be better is reflected in words and phrases, such as "waiting for something (*aanyu*)," "almost (*peno*)," "not yet (*eton engor*)", and "sometime in the future (*okenya*)." These terms frequently arise in local interviews about critical environmental and livelihood problems and what can be done about them. Even the prosopis case where there has been so little meaningful action by the government, conversations almost never close off the possibility of an eventual solution. When one interlocutor was asked about the prosopis case more than 10 years after it was closed, the individual remarked: "the case is not yet finalized and settling on the compensation. It has not been decided (Field notes, December 2017)."

Despite a multitude of challenges, including those related to climate, Il Chamus still get on with their lives and many remain hopeful for a better future. The reliance on low-paid casual work is now a reality for many Il Chamus, an option that is increasingly treated as normal rather than a temporary exception as it was in the 1980s. In fact, many interlocutors in the bottom quartile of wealth point to the growth in casual labor opportunities in Marigat town or on nearby irrigated farms as a positive recent change. For example, this means they no longer need to migrate outside the county for contract work, because there are now local opportunities in Baringo. Rather than commiserate about their increased dependence on unstable and poorly remunerated work, Il Chamus mention how they can work nearby rather than leave their families and homes. In a Gramscian sense, does this reflect a hegemonic relationship where existing power structures make the poor believe they can attain a better life and environment when the odds are so heavily stacked against them? Perhaps so. Has this stopped the Il Chamus from being hopeful and showing agency by getting on with their lives? Probably not.

Casual or contract work often means working for a better-off individual who may have an irrigated farm or a business. Hostility toward employers is not usually openly expressed except by some Il Chamus youth, especially the educated unemployed. Indeed, one finds a better sense of class antagonism and resentment among younger university educated Il Chamus who engage in multiple "hustle" work, such as motorcycle taxi driving (*boda boda*) or part-time work for an NGO. One educated woman who works different hustle jobs, including part-time NGO work and raising chickens

to sell eggs in town, notes sarcastically that "one needs a Masters degree in Kenya now to acquire a permanent job (Field notes, May 2024)." Other educated youth, especially so called "Gen Zs", are more vocal about the unfairness of the labor market. One young male interlocutor bitterly explained how despite being better educated and qualified for a government position than another applicant, the person "with less qualifications but with political connections, was hired (Field notes, June 2018)."

Despite a very difficult labor market even for those with university degrees, investment in education remains a popular strategy among parents. As noted earlier, the goal often is to qualify for a salaried position, which is seen as the most secure type of work, and these almost always require secondary and usually post-secondary education. Joshua, who is a university graduate with a good government position and considerable wealth, remarked in an interview that "we have no choice now but only education. The prosopis has taken our grass and the Pokot have taken our livestock (Field notes, March 2017)." Although formal education is a costly investment, it reflects an optimism for the future since its potential benefits require waiting for several years before they are realized. Borrowing from Masquelier's and Durham's (2024b) notion of "waiting time," education involves a relatively long waiting period from initiation to the stage where the individual completes schooling and hopefully attains a job. It is an investment that implies hope by linking actions in the present to an anticipated positive future outcome. As Mains (2011):1 argues, "hope is necessarily temporal in the sense that it is always fulfilled in the future. Progress is the process of moving toward hope with the passage of time." In temporal terms, Il Chamus continue to get on with their lives by acting in the present as if the future will be better.

As the article has shown, time and space reinforce each other in punctual rather than linear fashion. Prosopis's present spatial extent is unlikely to be its future boundary. It will ebb and flow over time dependent on floods, rainfall, charcoal making and burning. Marigat town and its jobs, in turn, will grow and recede during cycles of economic (and demographic) booms and busts, and the shoreline of Lake Baringo will expand and recede as it has for centuries. Even the footprint of insecurity and accumulation of cattle will fluctuate largely contingent on successful political outcomes and defensive actions by the Kenyan army and Il Chamus community.

Recognition both of historical and social time have always had a place in anthropology from the era of Evans-Prichard and Turner to the more recent scholarship of Masquelier and Durham (2024b) who theorize how complex events and issues often tie the future with the past through concepts, such as "waiting time" and "meantime." There are a multiplicity of temporalities occurring simultaneously in Il Chamus from the progression of the age set system and oral histories to the recurrence of climatic events. Over time many promises have been made to the community and only now does it look like perseverance and patience may be rewarded. At the annual Maa Cultural Festival in nearby Samburu County held on November 8, 2024, the President of Kenya William Ruto proclaimed that a separate Mukutani Sub-County will be created for Il Chamus (Ondieki and Koech, 2024). It is viewed as a first step toward the possible creation of their own political constituency, a goal that Il Chamus have fought for in the courts for more than 20 years and has been an aim of the community since Kenya's independence in 1963. In the words of one male leader who attended the event: "we have been marginalized and discriminated against for a very long time and we are now seeing the light at the end of the tunnel. As a community, we are now getting the fruits of independence (ibid)." Despite protests from neighboring Pokot, the creation of their own administrative sub-county will improve government services, including security for Il Chamus. Already more than 500 displaced families with small herds of livestock moved back to Mukutan in 2025 (Baringo News, 2025).

Conclusion

Evidence of climate change, including more frequent droughts, greater intensity of rainfall and floods, is reflected in the landscape and livelihood struggles of Il Chamus. When members of the community are questioned about these problems, however, explanations often center on their political marginalization. As the article has shown, local interpretations of climate change and their negative consequences are entangled with mainly political ecological processes. It is shown that a political ecology framework helps to understand how devastations caused by an increasingly volatile climate are strongly influenced by political factors. Insecurity and violence, loss of territory, and the expansion of harmful vegetation (prosopis) result from political processes that aggravate the very destructive effects of climate events.

The physical and social landscapes of Il Chamus are littered with the consequences of externally-imposed interventions, such as the one that advocated prosopis planting. These actions constrain pastoralist mobility and herder access to grazing, which aggravate livestock losses and overgraze pastures during extreme climate events, such as drought. Their outcomes often are locally blamed on unnatural (political) not natural disasters.

As the article shows, power and wealth are not only unequally distributed nationally, but also within the community itself. It is argued that local interpretations of climate and other environmental events depend on the positionality of the interlocutor (s); for instance, whether s/he is materially poor or better off and the livelihood strategies that are pursued. Gender, age, and class dynamics are reflected in local responses about climate events and the benefits and costs associated with them. The one concern that best unites the Il Chamus community across wealth and other differences has been the quest for a political constituency. As the article suggests, their long wait may be over since they recently were awarded their own

sub-county unit, which may be a "steppingstone" for establishing an autonomous Il Chamus political unit. If awarded, the community is hopeful that they will be better able to cope with climate change and other environmental events.

Data availability statement

The data analyzed in this study is subject to the following licenses/restrictions: The ethnographic and qualitative data used in the article are not available to the public. Requests to access these datasets should be directed to peter.little@emory.edu.

Ethics statement

The studies involving humans were approved by University of Kentucky Institutional Review Board and Emory University Institutional Review Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written and/or verbal informed consent to participate in this study.

Author contributions

PL wrote this paper and conducted the research for it with the assistance of Eunice Lepariyo.

Funding

The authors declare that financial support was received for the research and/or publication of this article. Over the years this research has received financial support from the Social Science Research Council (SSRC), John Templeton Foundation (Grant# FE_57313), Emory University, Pastoral Risk Management in East Africa Program (PARIMA) (Grant # PCE-G-00-98-00036-00), University of Shizuoko (Grant #18HO3606), and the Livestock Systems and Climate Change Program (Grant # EEM-A-00-10-00001).

Acknowledgements

This paper has benefited from the warm support of the Il Chamus community and by conversations and encouragement from many colleagues over the years, including Abdillahi Aboud, David Anderson, Christopher Barrett, Lempaysan Keis, Eunice Lepariyo, Clement Lenachuru, Hussein A. Mahmoud, Nickson Lolgisoi, Calvin Longeshele, John McPeak, Samuel Sekeu, and Danielle Veal.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The authors declare that no Generative AI was used in the creation of this manuscript.

Any alternative text (alt text) provided alongside figures in this article has been generated by Frontiers with the support of artificial intelligence and reasonable efforts have been made to ensure accuracy, including review by the authors wherever possible. If you identify any issues, please contact us.

References

Anderson, D. M. (2003). *Eroding the common: the politics of ecology in Baringo, Kenya, 1890s–1963*. Athens: Ohio University Press.

Baraka, C. (2022). A drowning world: kenya's quiet slide underwater. *Guard*. Available online at: https://www.theguardian.com/world/2022/mar/17/kenya-quiet-slide-underwater-great-rift-valley-lakes-east-africa-flooding (Accessed September 7, 2025).

Baringo News (2025). UPDATE: PEACE RETURNS to mukutani as residents resettle: MP kamuren leads support efforts. Baringo News, *May* 10. Available online at: https://www.facebook.com/BaringoNews/posts/update-peace-returns-to-mukutani-as-residents-resettle-mp-kamuren-leads-support-/1129342389237711/ (Accessed September 15, 2025).

City-Facts (2018). Marigat, Baringo, Kenya. Available online at: https://www.city-facts.com/marigat/population (Accessed October 20, 2025).

Comaroff, J., and Comaroff, J. (2009). *Ethnicity, Inc*. Chicago: University of Chicago Press.

Coppock, D. L., Bailey, D., Ibrahim, M., and Tezera, S. (2018). Diversified investments of wealthy Ethiopian pastoralists include livestock and urban assets that better manage risk. *Rangel. Ecol. and Manag.* 71 (1), 138–148. doi:10.1016/j.rama.2017.05.004

Dyer, C. (2006). *The education of nomadic peoples: current issues, future perspectives* (Oxford, UK: Berghahn).

Garbole, J., Dima, G., and Kanchora, D. (2025). Livelihood diversification strategies and its impact on pastoral food security in dubluk district, borana zone, southern Ethiopia. *Environ. Sustain. Indic.* 28 (2025), 100894. doi:10.1016/j.indic.2025.100894

Kimtai, D. J., Makokha, G. O., and Sichangi, A. W. (2024). Modeling of water level trends and characterizing potential influencing factors in Lake Baringo in Kenya. *Discov. Water* 4 (2024), 55. doi:10.1007/s43832-024-00105-w

Knight, F. H. (1921). *Risk, uncertainty, and profit*. Boston: Houghton Mifflin.

Koech, G. (2024). Why the ilchamus converted their land into public forest: they believed it would tame recurring conflicts displacing them since 2005. Available online at: https://www.the-star.co.ke/news/big-read/2024-11-13-why-the-ilchamus-converted-their-land-into-public-forest (Accessed July 2, 2025).

Lenachuru, C. (2016). *Ilchamus pastoralists' Indigenous knowledge and its use in coping with and adapting to climate change in marigat, Kenya*. PhD Dissertation, Ft. Collins, Colorado: Department of Forest and Rangeland Stewardship, Colorado State University.

Little, P. D. (1992). *The elusive granary: herder, farmer, and state in northern Kenya*. Cambridge, UK: Cambridge University Press.

Little, P. D. (2013). *Economic and political reform in Africa: anthropological perspectives*. Bloomington, IN: Indiana University Press.

Little, P. D. (2016). A victory in theory, loss in practice: struggles for political representation in the Lake baringo-bogoria basin, Kenya. *J. East. Afr. Stud.* 10 (1), 189–207. doi:10.1080/17531055.2016.1138665

Little, P. D. (2019). When green equals thorny and mean: the politics and costs of an environmental experiment in East Africa. *Afr. Stud. Rev.* 62 (3), 132–163. doi:10.1017/asr.2019.41

Little, P. D. (2021). Does livelihood and asset diversification contribute to pastoralist resilience? The case of Il Chamus, Baringo county, Kenya, 1980–2018. *Nomadic Peoples* 25 (2), 181–205. doi:10.3197/np.2021.250202

Mains, D. (2011). *Hope is cut: youth, unemployment, and the future in urban Ethiopia*. Philadelphia, PA: Temple University Press.

Masquelier, A., and Durham, D. *In the meantime: toward an anthropology of the possible*. (2024a). (Oxford: Berghahn Books).

Masquelier, A., and Durham, D. (2024b). "Minding the gap' in the meantime," in *In the meantime: toward an anthropology of the possible*. Editors A. Masquelier and D. Durham (Oxford: Berghahn Books), 1–25.

Mbaabu, P. R., Olago, D., Gichaba, M., Eckert, S., Eschen, R., Oriaso, S., et al. (2020). Restoration of degraded grasslands, but not invasion by Prosopis juliflora, avoids trade-offs between climate change mitigation and other ecosystem services. *Sci. Rep.* 10 (1), 20391. doi:10.1038/s41598-020-77126-7

McCabe, J. T., Leslie, P. W., and DeLuca, L. (2010). Adopting cultivation to remain pastoralists: the diversification of Maasai livelihoods in northern Tanzania. *Hum. Ecol.* 38 (3), 321–334. doi:10.1007/s10745-010-9312-8

Murray Li, T. (2007). Practices of assemblage and community forest management. *Econ. Soc.* 36 (2), 263–293. doi:10.1080/03085140701254308

Musasia, P. (2020). Kenya: ilchamus appeal for special constituency through BBI. Available online at: https://allafrica-com.proxy.library.emory.edu/stories/202012110048.html (Accessed July 25, 2025).

Odada, E. O., Onyando, J. O., and Obudho, P. A. (2006). Lake Baringo: addressing threatened biodiversity and livelihoods. *Lakes and Reservoirs Sci. Policy Manag. Sustain. Use* 11, 287–299. doi:10.1111/j.1440-1770.2006.00309.x

Odhiambo, M. R. (2015). *Il chamus verses the state: vulnerability, litigation and resilience building in the Baringo lowlands of Kenya. PhD dissertation, department of anthropology*. Germany: University of Cologne.

Okech, E., Kitaka, N., Omondi, S., and Verschuren, D. (2019). Water level fluctuations in Lake Baringo, Kenya, during the 19th and 20th centuries: evidence from lake sediments. *Afr. J. Aquatic Sci.* 44 (1), 25–33. doi:10.2989/16085914.2019.1583087

Ondieki, G., and Koech, F. (2024). New sub-county for Ilchamus in baringo—ruto. Available online at: https://nation.africa/kenya/counties/baringo/new-sub-county-for-ilchamus-in-baringo-ruto-4819718 (Accessed September 11, 2025).

Peet, R., Watts, M. J., and Robbins, P. (2011). *Global political ecology* (London: Routledge).

Republic of Kenya (2023). Marigat group ranch v kessei (environment and land Appeal E007 of 2023). Available online at: https://new.kenyalaw.org/akn/ke/judgment/keelc/2023/20060/eng@2023-09-19 (Accessed September 2, 2025).

Scoones, I. (2021). Pastoralists and peasants: perspectives on agrarian change. *J. Peasant Stud.* 48 (1), 1–47. doi:10.1080/03066150.2020.1802249

Scoones, I. (2023). *Navigating uncertainty: radical rethinking for a turbulent world*. London: Pluto Press.

Spencer, P. (1998). *The pastoral continuum: the marginalization of tradition in East Africa*. London: Clarendon Press.

Stebbing, E. P. (1938). The man-made desert in Africa: erosion and drought. *J. R. Afr. Soc.* (Suppl. 17), 3–40.

Thompson, J. (1887). *Through masailand*. London: Cass.

Victor, N., Eric, P., and Kyeba, K. (2023). The risk of flooding to architecture and infrastructure amidst a changing climate in Lake Baringo, Kenya. *Am. J. Clim. Change* 12, 80–99. doi:10.4236/ajcc.2023.121005

Von Hohnel, L. (1894). *Discovery by count teleki of Lakes rudolf and stephanie*. London: Frank Cass.

Wangui, J. (2020). Ilchamus elders seek compensation for loss caused by flooding Lake Baringo. Dly. Nation. Available online at: https://nation.africa/kenya/counties/baringo/ilchamus-elders-seek-compensation-for-loss-caused-by-flooding-lake-baringo-2455214 (Accessed July 23, 2025).

Watts, M. J. (2003). "Political ecology," in *A companion to economic geography*. Editors E. Sheppard and T. J. Barnes (Oxford: Blackwell), 257–274.