Of all the world’s regions today, sub-Saharan Africa is seen as most emblematic of ‘disaster’ and ‘tragedy’. All that can go wrong in the human condition seems to be concentrated with particular bleakness here, in an apparent combination of the effects of the worst of nature and the worst of society. The former is registered in images of overgrazing and the “desertification” of drylands, the widespread existence of a “woodfuel crisis”, the rapid and recent removal of once pristine forest, soil erosion, and the mining of natural resources caused by rapidly growing populations. These images connect with those of social disintegration and desperation: intensifying poverty and insecurity, the ravages of HIV/AIDS, endemic and vicious (‘tribal’) conflict with its displacements and other brutalizations of whole populations, political regimes and warlords predatory on an anonymous mass of victims.

This essay aims to probe some of the realities behind such widespread generalities which are uniformly negative, and frequently pejorative too, conveying the sense of a place where the miseries of the human condition are self-inflicted. We first sketch some issues of environmental change in Africa and perspectives in the debates they have generated. While the ‘new ecology’ of African environments, and how African farmers use them, has much to commend it, it is called on to support an eco-populism that ignores the dynamics and effects of ‘actually existing capitalism’ in Africa. This includes commodity relations in the countryside (and in urban areas, with which they are so closely bound up), and the class and other social inequalities they inevitably generate. In particular we focus here on petty production in savanna environments, for reasons explained below, after first sketching some global forces in environmental change in Africa.
GLOBAL FORCES

The major sources of today’s global environmental problems are concentrated in the advanced centres of capitalist production and consumption (and rapidly industrializing zones such as in China) with respect to both sides of the environmental equation: depletion of non-renewable resources and degradation of renewable resources, and dealing (or not dealing) with the massive pollution and waste generated, both of which have effects for other parts of the world. Given our focus on petty production by African farmers, here we only note briefly some of the ways in which global environmental dynamics – and their political economy and politics – ‘mark and constrain the lives of [Africa’s] inhabitants at every turn’.2

First is the continuing, or accelerated, large-scale extraction of Africa’s mineral resources, hardwoods, fisheries, and agricultural and horticultural commodities, for export. The global economy draws from Africa over half its supply of diamonds, platinum, cobalt and chromium, and more than a third of its requirements of many more minerals, including rare and strategic metals (e.g. Vanadium, Zirconium, Manganese).3 Extraction of other materials often has disastrous environmental effects. For example, in the rich east Atlantic fisheries off the coast of Senegal, the weight of fish caught per hour of fishing effort in the late 1990s had declined to less than half, and in the case of more valuable fish species to less than a tenth, of that achieved in the early 1980s.4 An example of environmental stress imposed by large-scale export horticulture is the lucrative trade in cut flowers from Kenya, air-freighted to supermarkets in northern Europe and worth over US$80 million by 1998. Production is dominated by three farms, two of which employ over 5,000 workers each, and their intense horticulture is depleting the water resources of Naivasha. Another East African agricultural example is a large company engaged in ‘sun coffee’ production (versus shade-grown) which clears new land for coffee planting every five to seven years, abandoning existing plantings exhausted by deforestation and the depletion of soil nutrients.5

Second are the effects for Africa of global ecological dynamics generated by concentrations of industrial production and of consumption elsewhere. While the science of global warming remains contested, its likely consequences include increasing variability in rainfall, hence the increasing incidence of drought, in certain parts of Africa and notably the South and East.

Third is carbon trading. Africa is a favoured location for ‘mitigation’ efforts, such as tree-planting on large areas – from which human populations and their needs to make other uses of the land are necessarily excluded – to ‘sequester’ carbon from the atmosphere to compensate for carbon emissions...
in Europe and North America. Such ‘carbon emission reductions’ are also commodities recognized under UN climate change treaties (e.g. the Kyoto Protocol), and may be sold by those investing in such projects. In effect, land used for forest designated for carbon sequestration becomes the property of ‘carbon traders’.

Fourth is ‘green imperialism’, including the exercise of what Joan Martinez-Alier calls ‘environmental conditionality’ applied by aid agencies. Low levels of industrialization and the small scale of most farming, coupled with its association in the ‘North’ with ‘charismatic megafauna’ (‘big game’), means that Africa provides an attractive global site for international efforts to conserve ‘pristine’ environments. At the close of the colonial period sub-Saharan Africa accounted for nearly half of the world’s formally conserved areas, with a further increase of 63 per cent (1.5 million square kilometres) in ‘protected areas’ in sub-Saharan Africa since 1970. Recent examples include trans-border wildlife parks extending the Kruger Park from South Africa into Mozambique and Zimbabwe, and even suggestions for a ‘Cape to Cairo green corridor’. In East and Southern Africa, the proportion of land classified as ‘protected’ now stands at over 16 per cent, a higher proportion than in North America, Europe, or Australia (15, 13, and 10 per cent respectively). The enclosure of such areas as necessary to global environmental well-being, with consequent displacement of local populations, is driven directly by major international conservation agencies. Moreover, the rate of expansion of ‘protected areas’ (e.g. nature reserves) has risen with the increasing dominance of neo-liberalism. This can be understood in terms of a perception of ‘protected nature’ as a commodity for a new set of purchasers: corporations wishing to create eye-catching environmental associations for PR purposes; governments seeking to expand assets available for commercial tourism concessions; international conservation organizations seeking to raise their profile and assets for fund-raising.

Finally, but not least, is the long history of ‘rural development’ policies and projects aimed at boosting the productivity of African farming and, in the current discourses of ‘caring’ neo-liberalism exemplified by the World Bank, of ‘empowering the [rural] poor’ (through facilitating their greater participation in markets) as well as achieving environmental sustainability. Here we only note that such interventions impact on, and feed into, typically intricate and contested politics of control over land at local levels and beyond, with outcomes that confound the stated good intentions of their designers and funders.
capital relative to African governments today is evident in the distribution of the benefits from both large-scale exploitation of resources and the ‘environmental services’ sought from Africa: as a sink for industrial waste, as a site for mitigation of climate change, and as location for biodiversity conservation. In some instances the property rights of African states (however flimsy in any meaningful ‘public’ or ‘national’ sense) might depend on the capacity of international capital to defend particular mineral or forest resources or vast ‘conservation’ areas from those states’ own citizens seeking land to cultivate and to graze their livestock on. Similarly, the weaknesses of African governments – and lack of democratic pressure on them – means that aid donors, and the interventions by NGOs that they license, often have major (if unintended) impacts on local land arrangements and the conflicts increasingly associated with them, which we come back to.

THE SCIENCE OF SAVANNA ECOLOGY

International concern over environmental change in the ‘South’ is most readily identified with deforestation in the humid tropics. Due to high rainfall and temperatures, the underlying rocks and the soils that form over them in tropical forest zones are subject to high rates of release and loss of plant nutrients; in effect, the principal stocks of nutrients are in the trees themselves. Removing trees (deforestation) is thus an unambiguous, as well as visible, impoverishment of the environment, which can be partially mitigated by planting land with tree crops (cocoa, oil palm, banana/plantains) or by relatively long recovery (fallow) periods to enable forest re-growth.

While equatorial Africa has its share of these threatened forests, with some of the highest recorded deforestation rates in the world, we focus here on the ‘savanna’ environments that predominate to the north, south and east of the equatorial forest belt below the Sahara and cover some two-thirds of the African continent. Their wide extent is in part due to the broad definition of savannas as ‘tropical/subtropical ecosystems characterised by continuous… cover of… grasses that show seasonality related to water, and in which woody species are significant but do not form a closed canopy…’. This definition covers a great range of grassland types with widely differing densities of trees, reflecting the principal underlying influence of rainfall. Where rainfall is higher (800-1200 mm annually) ‘savanna woodlands’ are characteristic of ‘Sudanian’ vegetation north of the equator, while south of the equator they include the miombo systems in Tanzania, Zambia, Zimbabwe and northern Mozambique, and mopane woodlands in Namibia and the Limpopo basin (Botswana, Southern Zimbabwe, and South Africa). Where rainfall is less, trees tend to be more sparse and dominated by Acacia species, as in ‘savanna
parklands’ (e.g. the West African ‘Sudano-sahelian’ zone: 600-800 mm) or ‘low tree savanna’ (e.g., the ‘Sahelian’ zone: 400-600 mm). These broad classifications based on rainfall are heavily modified by underlying geology and its influence on soil fertility, and by the climatic effects of altitude. At a smaller scale still, variations in topography cause differential drainage and accumulation of water within the landscape, forming a mosaic of patches of different levels of productivity. The effects of greater water availability in low-lying patches of the landscape may vary, in some instances giving rise to dense ‘gallery’ forest along river banks, but in others creating waterlogged conditions resulting in grasslands in which tree growth is suppressed altogether.

Meteorological records, and evidence of climate change before such records (notably from the levels and sediments in Africa’s great lakes), show historic shifts and cycles, producing wetter or drier periods. Within these longer-term climatic changes, savanna ecosystems are subject to extreme annual variations in rainfall. This means, first, that overall biomass productivity varies greatly from one year to the next, so much so that ecologists have suggested these may be ecosystems which never reach ‘equilibrium’ but are naturally in a state of constant adjustment between drier and wetter conditions, with large and erratic shifts in local plant and animal populations consequent on periodic ‘extreme’ events (drought, floods, fire, storm damage, etc.). Second, variations in rainfall affect the relative productivity of different patches of the savanna. For example, higher parts of the landscape are more drought-prone in dry years, but lower-lying patches may experience flooding in wetter years. However, since water is the main factor limiting plant productivity in savannas, and rainfall is restricted to four or five months of the year, the potential biomass production over any given year tends to be higher in the wetter patches of the landscape.

All this signifies high levels of uncertainty for crop or livestock production dependent on rainfall in savanna environments; the positive contribution of the ‘new ecology’ is to problematize how environmental change, and degradation, in African farmed landscapes is defined, identified and measured. While scientific knowledge of African savanna environments and how and why they change over time is still very incomplete, and strongly contested, it has also been advanced by recent research that introduces human agency into the account, and within a historical perspective.

MANAGING SAVANNA ENVIRONMENTS

It is now evident that the balance of tree and grass species in savanna landscapes has been profoundly shaped by cultivators and herders, whose management has taken many forms, increasing tree cover in some circumstances
and reducing it in others. In the nineteenth century pastoralists’ herds were important in suppressing trees (and thus tsetse infestation) in East African savannas. Conversely, expansion of settlement and cultivation in parts of the West African savanna has been associated with an increase of tree cover. In drier savannas in southern and eastern Africa, heavy grazing is believed to encourage the replacement of grasses by woody shrubs or ‘thicket’.

Recent research has also illuminated how cultivators and herders on the African savannas managed environmental uncertainty by using risk-minimizing and ‘opportunistic’ management strategies. Rather than seeking to maintain a constant level of production at every site in every year, they recognized the need to modify planting or grazing patterns according to the variation in productive potential determined by rainfall. For herders of livestock on Africa’s savannas this meant accepting fluctuation of herd sizes following cycles of wetter and drier years. While conventional agronomic science argued that small-scale farming in Africa degrades soils, because fertilizer usage is too low to replace plant nutrients lost from the soil, advocates of ‘indigenous knowledge’ contest this. They argue that agronomic measurements are not made at the relevant scale, nor do they take account of the complexity of small farmers’ practices in Africa that adapt to, and spread risks between, precarious environmental conditions (not least those of rainfall) and the localized diversity of micro-environments in many African landscapes. Well-known examples include the intercropping of many plant species, and dividing cultivation between different sites (upland/lowland, localized wetlands/drylands, heavier/lighter soils, and so on) in ways that trade off the security of overall harvests, and hence household food supply, against the optimal yields of particular crops or fields.

A proper understanding of ‘indigenous knowledge’ – as socially produced, developed and transmitted – connects with another topic of much current interest: how various kinds of customary regime regulated access to and the use of arable and grazing land, water, forest, and so on, as ‘common property resources’ (i.e. in the absence of private property rights). The notion of common property ‘regimes’, and the legitimacy and effectiveness of their authority over their areas of jurisdiction, often has affinities with notions of strongly cohesive African rural communities, bound together by ties of cooperation, reciprocity, interest – and identity, expressed in the idioms of common descent and shared locale.

Recent recognition of the technical and social knowledges and skills developed by African cultivators and pastoralists to deal with the environmental uncertainties they face was much needed, and indeed has helped (some) scientists to develop an understanding of the ‘non-equilibrium’ character
of savanna (and forest) environments. At the same time, how far the social conditions still exist in Africa which once made possible indigenous knowledge and innovation, effective (self-governing) common property regimes and cohesive rural communities, is a more tricky question, to which we will return.

DEBATING ENVIRONMENTAL CHANGE TODAY: THE SPECTRE OF MALTHUS

Until the 1990s environmental understanding of the impacts of natural resource use by small producers in Africa reflected the predominant ‘limits to growth’ perspective and focused largely on the aggregate impact of ‘population pressure’ on natural resources (land and its fertility, water, forest). This view, evident in much of the international commentary on African droughts and famines in the 1970s and 1980s, was informed by two basic assumptions: (a) that farming technologies were ‘primitive’ and farmers resistant to change; and (b) that social institutions were unable to control individually rational strategies of increasing family size and area cultivated, or numbers of livestock grazed, on land held as ‘common property’. A notorious and highly influential expression of this was Hardin’s ‘tragedy of the commons’; Hardin proposed that under ‘common’ or ‘communal’ property regimes it is in every individual’s interest, and in the interest of as many individuals as possible, to exploit as much as possible the resources made available as common property, leading inexorably to their depletion and degradation. In Hardin’s argument the possession of private property rights gives owners of land (and other resources) the incentive to manage them efficiently, so as to conserve or enhance their economic value, thereby bringing individual and social rationality into harmony – a familiar enough bourgeois dream. In mainstream policy agendas the solutions proposed to avoid the ‘tragedy of the commons’ were either centralized state regulation of natural resource use, or reform of social institutions to ensure that private property rights are allocated via market mechanisms to more ‘efficient’ resource users. The latter was increasingly advocated in the neo-liberal era from the 1980s onwards.

The Malthusian position that increasing population reduces capacities to maintain the productivity of natural resources (land, wildlife, forest, pasture, fisheries) has been countered by several lines of argument. One draws in part on Ester Boserup’s influential thesis that historically population growth was the driver of technological change which increased agricultural productivity. The logic of Boserup’s argument informs the most influential recent counter-Malthusian statement applied to African farming and environment, albeit cast in a ‘market-friendly’ mould (in contrast to Boserup) – the study
of Kenya’s densely-populated Machakos district by Tiffen, Mortimore and Gichuki, to which we return below.\(^\text{13}\)

Another line of argument, just noted, counterposes the sophistication and adaptability of indigenous technical knowledge to inherited assumptions of African farmers’ technical ‘backwardness’ and ‘conservatism’, which are rooted in very static conceptions of ‘tradition’, ‘traditional’ culture, and the like, reminiscent of the worst of colonial anthropology.

A third response is more ambiguous. Those in favour of ‘common property regimes’ argue that Hardin’s notion of ‘the commons’ misunderstands these regimes, so that their historic role in managing savanna environments has been devalued or simply denied. The evidently declining ability of such regimes to prevent degradation in contemporary conditions is attributed to the subversion of their control by states and markets, and especially by ‘urban’, ‘elite’, and ‘foreign’ business interests – all signifiers of what is alien and external to rural producers and their communities. On this view, environmental degradation by small-scale farmers, forest users and other petty producers registers a breakdown in local social institutions and a shift from a previously socially-regulated common property regime in arable, grazing or woodlands to an ‘open access’ free-for-all. This interpretation gives rise to a populist environmentalism which advocates reclaiming/re-establishing common property rights over resources on behalf of small-scale users and rural communities, viewed as the legitimate custodians of nature.

ENVIRONMENTAL CHANGE TODAY: PROBLEMS OF EVIDENCE

One reason why it can be so difficult to identify clear environmental effects or outcomes is that ideas about the environment are value-laden and open to contestation. For example, the conversion of wildlife habitat to farmland may be regarded as environmental degradation. For those less concerned with wildlife and its welfare, the criterion of environmental sustainability might be the continued productivity of land now cultivated and/or grazed by livestock. Many concerns expressed about environmental deterioration in Africa relate simply to reductions in wildlife numbers or habitats, and typically originate in the environmental agencies of the ‘international community’. This suggests the need for a firmer recognition that modern environmental arguments hinge on issues of the ‘ownership’ of nature, and therefore on the dynamics of commoditization in specific historical and social conditions.

This applies equally to considering the contemporary impact of petty production on the environment, for which there is a range of fragmentary evidence (from indisputably negative to highly contentious). The most un-
ambiguous impacts, for example, mercury contamination of rivers by artisanal
gold miners, are arguably worse than those of their large-scale equivalents,
due to lower investment levels. There may also be bigger problems in regulat-
ing the polluting impact of large numbers of small-scale industrial units than
those of fewer large-scale enterprises (e.g. tanning in India and coal mining
in China, and gold mining in Latin America as well as Africa). Set against this
is the notion that artisanal (indigenous) knowledge/technology allows petty
producers in extractive or processing activities to achieve lower environmen-
tal costs for each unit of output – analogous to the ‘poor but efficient’ model
of small-scale farmers’ use of land.

Beyond the above instances, defining and measuring the effects of a wide
range of petty production in diverse and unstable savanna environments,
and assessing whether (and for whom) those effects represent environmental
‘degradation’, is unavoidably contentious. Routine assertions by UN agen-
cies that ‘over 45 per cent of Africa is affected by desertification’ are simply
not supported by a framework of evidence or analysis that addresses the di-
versity of African savannas outlined above. While the lack of clear evidence
of any general trends of environmental degradation, and notably of soil ero-
sion, may seem frustrating, we provide some examples (and indicate some
explanations) of more localized instances below. Moreover the problem of
adequate and reliable knowledge is hardly unique to knowledge of patterns
of environmental change. Another example, relevant to this discussion, is the
extreme variation of statistical evidence (guesstimates) of food production in
Africa at any significant level of aggregation. Such extreme variations of data
on food production (and their subsequent ‘corrections’) are rarely accidental
or innocent. In some cases they conceal marked gender biases. In addition,
sensationalist ‘crisis narratives’ concerning food availability often serve the
interventionist interests of aid agencies and of NGOs that compete for aid
funding, as well as the appetite of African state classes and accumulators for
foreign aid. There is a further aspect to the difficulties of environmental
accounting, as there is in accounting for food production (and many other
important measures), which is that Africa’s fluid and contradictory social re-
alities continuously elude the kinds of (ostensibly) clear categories through
which scientific evidence is constructed and organized. What both sides of
the ‘Malthusian’ debate tend to neglect is that different outcomes (say, soil
degradation or soil conservation) can and do occur simultaneously and in
related ways, in part due to social differentiation among petty commodity
producers. Next we address the challenge of analyzing those fluid and con-
tradictory social dynamics that both eco-populists, who take the side of (un-
differentiated) farmers and ‘communities’, and environmental scientists, who
see ‘population pressure’ in aggregate quantitative terms, are poorly equipped to take on.\textsuperscript{16}

**SOCIAL DYNAMICS: THE SPECTRE OF MARX**

For some, then, the source of the problem is the assault on an indigenous Africa by capitalism (or simply modernity?) as the great ‘other’, registered in a trajectory of alien intervention from colonial conquest through the statist developmentalism of late colonialism and political independence to the current agendas of global neo-liberalism. The ambiguities of social relations in sub-Saharan Africa today include commoditization without (complete) dispossession of small farmers, and the way notions of ‘community’ based in descent and/or locale permeate political discourse. Such ambiguities provide ideological spaces in which thrive varieties of ecological populism that celebrate either or both (a) the small scale of farming and its generally ‘low-input’ character, and (b) the ties, wisdoms and capacities of (rural) ‘community’ to protect and manage natural resources constituted as ‘common property’. The latter typically embodies, more or less explicitly, views of the virtues of indigenous African society and culture, including environmental values and knowledges deemed to have resisted and, in varying degrees, survived the depredations of colonialism, capitalism, and developmentalism.

For others, across a wide range of ideological positions, underlying the images of Africa’s current problems are notions that the continent’s failures of development are the effect of a lack of ‘enough’, ‘full’ or ‘proper’ capitalism. For example, in something of an echo of Marx’s dictum about regions that ‘suffer not only from the development of capitalist production, but also from the incompleteness of that development’, two veteran progressive scholars of Africa propose that ‘predominant social relations (in Africa) are still not capitalist, nor is the prevailing logic of production. Africa south of the Sahara exists in a capitalist world, which marks and constrains the lives of its inhabitants at every turn, but is not of it…’.\textsuperscript{17}

At the same time, John Saul and Colin Leys would be the first to acknowledge that the vulnerability of Africa makes it a kind of ideological free-fire zone in which discursive insult is piled upon, and helps to reproduce, the injuries of material existence. Africa is the region of the ‘South’ most exposed, as laboratory or playground, to the latest fashions in neo-liberal experiment with structural adjustment, market-led ‘poverty reduction’, state reform, and indeed tropical environmental management. If the agendas of the World Bank and others to ‘develop’ and ‘democratize’ Africa on liberal capitalist lines, and to ‘sustain’ its environments, manifest an ideological fan-
tasy, the responses to them of nationalism and populism are hardly adequate. Nationalism can generate its own fantasies in defence of African sovereignty as represented by its current political regimes, and populism tends to idealize peasantry, including notions of their intrinsic, and egalitarian, ‘community-ness’ and folk wisdom.

Our principal interest here in understanding petty commodity production, and its role in the social reproduction of Africa’s classes of labour, is how it might contribute to analyzing and assessing patterns of environmental change. For most Africans some form and degree of petty (commodity) production involving direct appropriation of nature – predominantly through farming but also, for example, fishing, artisanal mining and logging – is a key element of the bundles of activities (including wage labour) that they pursue to secure their reproduction (‘livelihoods’). Moreover, and pace Leys and Saul, we contend that contemporary Africa is characterized by its own forms of ‘actually existing capitalism’, in which commodity relations are generalized and internalized in the circuits of social reproduction – even though this has not generated accumulation and development of the productive forces on the scale implied by their reference to the ‘logic’ of capitalist production (at the level of national economy?). Even if ‘actually existing capitalism’ is experienced by most Africans as ‘relentless micro-capitalism’, in Mike Davis’s term, it is still capitalism. And it is still capitalism when commodity relations, not least in the countryside, are often mediated by ostensibly ‘traditional’ cultural forms and claims to ‘customary’ authority through which land is allocated and labour mobilized (and exploited).

African societies and savanna environments are much too diverse to allow any simple generalizations, and we have no ambition to propose an encompassing ‘model’ of degradation or conservation, of environmental vice or virtue, as eco-populist approaches do. Moreover, as suggested above the evidence concerning processes of environmental change is simply too incomplete, inconclusive and debatable to allow such conclusions. At the same time, the fragmentation of labour, pressures on its reproduction, (intensified) commoditization, social inequality, and competition for land in conditions of contested property rights, are key dynamics in any satisfactory account and understanding of environmental change in sub-Saharan Africa today.

**SOCIAL DYNAMICS: ‘ACTUALLY EXISTING CAPITALISM’ IN CONTEMPORARY AFRICA**

We prefer the term ‘classes of labour’ to the vocabulary of proletarianization/proletariat (and semi-proletarianization/semi-proletariat), as it is less encumbered with problematic assumptions and associations, both historical
and ideological. Classes of labour comprise ‘the growing numbers…who now depend – directly and indirectly – on the sale of their labour power for their own daily reproduction’. The emphasis we have added links to our notion of the ‘fragmentation of labour’. We use this term to encapsulate the effects of how classes of labour in global capitalism, and especially in the ‘South’, pursue their reproduction. That is typically through insecure and oppressive – and in many places increasingly scarce – wage employment, often combined with a range of likewise precarious small-scale farming and insecure ‘informal sector’ (‘survival’) activity. In turn, such activity is subject to its own forms of differentiation and oppression along intersecting lines of class, gender, generation, caste and ethnicity. In short, most people have to pursue their means of livelihood/reproduction across different sites of the social division of labour: urban and rural, agricultural and non-agricultural, wage employment and self-employment.

This has implications for understanding the dynamics, forms and effects of class relations. First, petty commodity production in farming and other (‘informal sector’) activities always contains the possibility of social differentiation because the social basis of petty commodity production within capitalism is a contradictory combination of the class places of capital and labour. Petty producers are only able to employ themselves (labour) because they have access to means of production (capital), and hence have to reproduce themselves as both labour and capital. A strategic way in which they try to do this is by combining petty production with selling their labour power, in an important sense a further index of ‘fragmentation’ as relative success or failure in labour markets and salaried employment is typically key to the viability (reproduction) of petty commodity production in farming, as in other activities. In short, both petty production and wage labour have their own, intersecting, circuits (and disciplines) of reproduction.

Second, the fragmentation of labour – and its deepening impoverishment, for the vast majority of people in sub-Saharan Africa today – suggests that relatively few are successful in surmounting the pressures on their reproduction as labour by accumulating sufficient capital to secure a viable base of livelihood principally in farming and/or other petty production.

Third, commoditization can generate relatively stable petty commodity production in farming (the idealized ‘middle peasant’ or ‘yeoman’ model) in particular places at particular times, as exemplified by some cash cropping areas of Africa, especially from the 1920s to the 1970s: cocoa and oil palm in the forest zones of West Africa; groundnuts, cotton and tobacco in savanna regions across the continent; coffee in suitable upland environments; as well as the specialized commodity production of such food staples as rice,
plantains and, pre-eminently, maize. However, what is typically overlooked is that relatively stable forms of commodity production in African farming, as elsewhere, reflect and/or generate processes of social differentiation. Their entry and reproduction costs can be met by mobilizing land and labour by ‘customary’ means (not least by chiefs and ‘big men’), and by the remittances and savings of (better paid) migrant workers. The development of cash cropping was also often promoted and supported by the agricultural development schemes of late colonialism and the early years of independence.

Fourth, an effect of the very precarious material and social conditions in which labour pursues means of livelihood in Africa is that, in addition to structural constraints, quite idiosyncratic or fortuitous factors can rapidly and radically change the individual fortunes in farming and/or labour markets of those whose reproduction combines ‘hoe and wage’. Life is highly unpredictable.

None of these processes is novel in recent African history, but the resulting pressures have undoubtedly intensified in the last 30 years or so, with the interconnected onset of contemporary globalization and the implosion of the statist development project. In particular, the neo-liberal onslaught of structural adjustment has undermined the fiscal and institutional basis on which many branches of petty commodity production in agriculture rested, notably for export crops.

In addition to the cumulative and overwhelming evidence of increased poverty and insecurity, and of how globalization weakens African economies, the pressures on the reproduction of classes of labour have some paradoxical effects. These are partly explicable by the desperate pursuit of any means of livelihood, and partly by how they are experienced by different categories of people (women and men, ‘natives’ and ‘strangers’, old and young) in different circumstances and different places. First, there is a marked trend of what Deborah Bryceson terms ‘de-peasantization’ or ‘de-agrarianization’, registered in the growing dependence of rural household on sources of income outside their own farming. This also links to the scale of urbanization (or more precisely, urban migration). The pursuit of survival by many Africans involves a high degree of mobility between countryside and towns, between different rural zones, and across borders between African countries and beyond (for example as migrant workers to the horticultural zones of southern Europe).

Second, there is a kind of scissors effect at work here, as the difficulties of securing a livelihood from farming push rural people increasingly towards wage work and ‘informal sector’ activity, although formal wage employment in cities has declined drastically, as have real wages, while the informal sector
is ‘over-crowded’, immensely competitive, and provides only highly precarious and meagre sources of livelihood for the great majority.  

Third, a paradoxical outcome of this scissors effect is that ‘de-agrarianization’ is accompanied by an intensification of struggles and conflicts over land rights, and access to land, across much of Africa. These struggles encompass a wide range, and mix, of social actors, who confront each other in a range of circumstances. Those circumstances include the officially sanctioned appropriation of land for development and conservation schemes on behalf of international capital and aid agencies; other forms of appropriation and enclosure by individual members of the state class and their clients; attempts to acquire land by retrenched industrial workers and miners and by an urban-based middle class, many of whom also experience severe pressures on their reproduction in the conditions of Africa’s generalized economic crisis; the desire for land by migrant (ethnic) ‘strangers’, who are often refugees from civil wars and drought, by adjacent rural communities, by neighbours within the same locales, and indeed by kinsfolk; and the increasing distribution of land (and especially good land) through growing transactions in ‘vernacular land markets’. A striking aspect of the complex dynamics of competition and conflict in some rural areas is the reassertion by ‘traditional authorities’ (chiefs) of their rights to allocate land. In the forest zones of Ghana, resistance to chiefs and the local state is offered by those whom Kojo Amanor calls ‘night harvesters, forest hoods and saboteurs’. In Namibia and South Africa, recent and highly contentious legislation has given ‘traditional leaders’ a central statutory role in the administration and allocation of ‘communal’ lands.

Underlying these observations are, first, the fluid and contradictory social categories that those who labour for their living inhabit, combine and move between, and that defy the inherited assumptions and conventions of fixed (and uniform) notions of ‘worker’, ‘peasant’, ‘pastoralist’, ‘trader’, ‘artisan’, ‘rural’, ‘urban’, and the like. Second, while this very fluidity of social categories and activities, as well as mobility between them, hinders any evident appearance of clear-cut social classes, social reproduction is shaped by the effects of class dynamics inherent in commoditization. For example, livelihood ‘diversification’, another concept currently fashionable in development discourse, is in practice strongly patterned along class lines. For the labouring poor, it means seeking out and seizing, or inventing and improvising, various sources and combinations of means of livelihood, including dangerous and badly-paid wage work, for example, in mining and construction. For those in the countryside with greater resources (i.e. capital, and hence the ability to command labour), accumulation is often based not on improved farm-
ing but on investment in crop processing, trading and transport, and other mercantile enterprises, as well as in (urban) housing and education of their sons and, increasingly, their daughters too. In populist views of Africa there is a fashionable notion that vibrant ‘social networks’ rooted in kinship or community support their poorer members. But such ‘social networks’ are continuously created and recreated in ways that are as likely (or more likely) to manifest pervasive inequalities: they are hierarchical and often amount to patron-client relations; they are means of accumulation and mobilization of labour, land and political support by the powerful; money is required to maintain (or ‘buy into’) authority and to command followers; they operate on the ability of their powerful members to exclude others, and so on – all of which is represented in (typically) patriarchal idioms of common descent and identity.29

Third, intensified commoditization does not affect everyone in the same way. For example, the rapid growth of urban populations means growing demand for staple foods, presenting opportunities to farmers who are well located and with sufficient command of resources to produce for urban markets. Indeed, declines in export crop production can reflect a switch by farmers to growing ‘fast crops’ for domestic food markets, which provides a more regular and timely source of cash income.30 Finally, in conditions of intensified commoditization and its class and other social inequalities, the desperation of most people presents opportunities to some, neatly expressed by a local (village) capitalist in northern Uganda in the early 1980s: ‘what helped us [to accumulate] was the famine of 1980. People were hungry and they sold us things cheaply [including land and cattle]. That is when we really started buying’.31

The dynamics of social reproduction, commoditization and social differentiation, and their connections with land and farming, that we have briefly and selectively sketched, have important implications for the issues of environmental change, of degradation/conservation and ecological management, that we presented earlier.

A remarkable theoretical essay by Mahmood Mamdani on the ‘extreme but not exceptional’ nature of the agrarian question in Uganda, informed by village fieldwork in the early 1980s, deployed a very different take on the motif of individual rationality and social irrationality to that of Hardin (above).32 Instead of seeing the problem as caused by the form of property rights (the ‘tragedy of the commons’), Mamdani proposed a kind of Malthusian effect in class terms: the rural poor, confronted with crises of reproduction, respond by [over-]exploiting the only assets at their disposal, namely such land as they are able to access, hence leading to its degradation, and their ability to
produce children, leading to relative surplus population (over-population). Mamdani located this in the class structure established by and inherited from colonialism, and subsequent social dynamics and state aggrandisement after independence. He pointed to processes, both overt and hidden, of enclosure of ‘common’ lands and sources of water, especially by the state class (and its local allies), as an aspect of ‘accumulation from above’ through extra-economic coercion, as distinct from ‘accumulation from below’ arising from the (‘normal’) capitalist economic process of class differentiation of the peasantry. We would suggest that enclosure has increased in the current period, and partly explains the growth and intensity of conflicts over land noted above. Mamdani also found that poor peasants with access to areas of land of comparable size to those farmed by middle and rich peasants cultivated much less of it because they lacked adequate implements (instruments of labour, in Marx’s term) to do so. This ties in with his argument that poor peasants exploit their procreative powers, since having more ‘hands’ to do the work in a sense substitutes for other means of cultivation (i.e. it substitutes labour for capital); and the use of child labour in household farming ‘releases’ men for migration to find paid work.

This also has a wider relevance in relation to the often neglected syndrome of being ‘too poor to farm’ – or to farm more, or farm better, whether due to lack of enough (good quality) land, or of adequate implements and inputs, or enough labour. Of these conditions, Mamdani identified the second – lack of inputs – as the key factor for poor villagers in the areas of Uganda he studied at that time. In many circumstances and places in Africa today, any or all of these three factors commonly applies to those who try to satisfy part of their reproduction needs through farming: access to land is often limited by processes of enclosure and commoditization through ‘vernacular land markets’; access to instruments of labour is limited by the available cash to buy them; access to labour is often constrained by the absence of adult men seeking work elsewhere, by the ‘flight’ from the countryside of many young people, and by the gender barriers to women commanding the labour of others.

Our own studies, of highly-prized ‘wetlands in drylands’ in Mali, Botswana, South Africa and Kenya, highlight the importance of water management as a defining constraint to unlocking productive potential in the African savannas. They also inform our view that combinations of (i) increasing population pressure on land, (ii) intensified commoditization of scarce resources of (good quality) arable and grazing land, water and forest, and (iii) social inequality, generate tendencies to environmental degradation in some cases. And this includes the degradation of the energies and health of the rural poor, who leave for the urban slums or have to intensify their toil on small,
less fertile, plots of land, typically with inadequate ‘instruments of labour’ (both implements and biochemical inputs), for uncertain harvests. Nor is it enough to safeguard against (irresponsible) ‘crisis narratives’ simply by invoking (geographical) diversity, as in the observation that ‘problems take different forms for different people in different places’. Rather social differentiation and the dynamics of inequality mean that problems take different forms for different people in the same places.

This is the logic of Mamdani’s social analysis, of which we provide a final illustration in relation to the influential counter-Malthusian study by Tiffen, Mortimore and Gichuki, mentioned earlier. They suggest that in Machakos, a semi-arid environment with a prior history of degradation, population growth from 250 thousand people in 1930 to 1.5 million in 1990 was associated with an improvement in soil conservation and farm productivity, registered in an aggregate four-fold increase in agricultural output per head of population and an eleven-fold increase in yield per hectare cultivated over the period. They demonstrate the capacity of African farmers to increase productivity, in this case through constructing terraces on sloping land to increase rainfall capture and cultivating higher value crops (coffee and horticultural commodities) on those terraced fields. They also demonstrate the key role of non-farm income – earnings from urban employment in Nairobi, 50km to the north – in funding this investment. Did the increasingly numerous residents of Machakos benefit equally? John Murton’s subsequent study in the same area investigated the distribution of non-farm income, of investment in conservation and farming, and of land, which revealed aspects of social differentiation missed (or ignored) by Tiffen, Mortimore and Gichuki. Murton found that 57 per cent of households lacked the means to invest in cash crop production; that 20 per cent of households with the highest non-farm incomes had purchased more land than they had inherited; and that in the previous 30 years the 20 per cent of households with the largest holdings had increased their share of total land from 40 to 55 per cent, at the expense of the 40 per cent of households with the smallest holdings whose share had declined from 21 to 11 per cent. We thus have a snapshot of a Boserup-type increase in investment and productivity by the locally wealthy, together with a Malthus-type crisis of the poor, who experience ‘a detrimental and involutionary cycle of declining yields, declining soil fertility and diminishing returns to labour, as first phase [historic] conservation and productivity gains are overtaken by population growth’.
AFRICA’S CRISSES OF REPRODUCTION CONFRONT
GREEN POPULISM

As in so much else concerning Africa, the diagnosis of its environmental ills, and prescriptions for their treatment, are often dominated by interests and priorities originating elsewhere. Recent re-assessments of the understanding of African ecologies have begun to question arguments from environmental science that underpin some of these prescriptions, and claims for the control of Africa’s landscapes in the name of a greater ‘global’ environmental good. In particular, the diagnosis of degradation in the savanna ecologies that predominate in Africa needs to give less priority to the conservation of notionally ‘pristine’ environments. More attention needs to be paid to the question of how any activity based on the appropriation of nature can sustain its productivity in the longer term, without any ecologically-mediated negative effects on other people (for example, depletion and/or pollution of water sources, or lack of wood for fuel).

While we share green populism’s distaste for ‘green imperialism’, we have already suggested the inadequacy of any alternative that puts its faith in ‘traditional’ (egalitarian) African institutions as a means to achieve environmental salvation. Whatever the ecological skills developed by African farmers over their long history, there is little convincing evidence that pre-colonial land regimes were concerned with conservation of forest, pasture or water, as distinct from ensuring that ‘outsiders’ did not gain access to them without approval by the controlling authority. Processes and patterns of social differentiation and inequality generated by commoditization pervade the everyday conditions of life in Africa today, albeit in the absence of more familiar forms of ‘capitalist relations of production’, such as self-evident classes of capital and labour. It follows that we are sceptical about any scheme to reclaim (or re-create) customary systems of property rights and common resource management, which fails to confront the fact that the ‘customary’ (and the rural ‘community’) are permeated by the class dynamics of commodity relations.

We are also sceptical about the assumptions and plausibility of the common populist panacea for the problems of small farmers and the rural poor of ‘withdrawal from the market’. One of the more accessible reviews of land productivity in Africa identified a number of areas – for example, in parts of the Ethiopian highlands, Rwanda, and Malawi – with good rainfall and soil fertility that favour agricultural productivity and population growth, but which lack access to agricultural and labour markets. In the absence of access to markets or alternative employment opportunities for existing agricultural labour, the review concludes that ‘these farming systems will continue to
provide low levels of income and livelihood for their populations, continuing vulnerability to food deficit, and exposure of soils to increasing levels of exhaustion’.35

In environmental terms, only investment will stabilize productivity in Africa. For much of the savanna, that means managing the supply of water, which typically requires collective action beyond the scale of most individual land holdings. However, to achieve anything like this in ways that benefit more than a few, the hierarchies and unequal power relations of customary institutions, and their submerged class dynamics and purposes, have to be more effectively challenged than has mostly been the case in local conflicts over land and chiefly authority. This leaves us with a sequence of questions.

Given the commitments contained in most African constitutions, including those concerning stewardship of national resources, what might induce governments to exercise that responsibility, and notably what kinds of pressure might come from movements from below? What forms of democratic collective action are there, potentially or actually, to contain the environmental degradation that results from over-exploitation of land and other resources, whether through the extractive activities of international capital, the activities of (would-be) African accumulators or the strongly constrained petty production of those who populate the classes of labour? Are there inherited ideas, institutions, and forms of practice, that can be adapted and/or invented, that advance collective and democratic action to resist the individualization of ‘survival’, in this context in relation to access to the means of livelihood and environmental regulation?36 What are the prospects for alternative ways of farming, and managing the environment, that could address the socio-ecological contradictions of commoditization in African countrysides?

John Iliffe has recently suggested that the mobilization of people with HIV/AIDS in Africa ‘not only introduced patient power into medical systems but was a major step towards the repoliticization of Africa after the long stagnation of one-party rule’.37 Struggles over access to land may similarly give rise to a ‘politics of the commons’ that connects with other struggles around the wider social conditions of their reproduction waged by Africa’s classes of labour.38

NOTES

We are grateful to comrades at the Socialist Register workshop in Oxford, organized by Barbara Harriss-White, for their comments on an early draft. In order not to (over-) burden this short essay with endnotes, we refer interested readers to the following work for bibliographies of the many empirical studies we draw on, both historical and contemporary, as well as expositions of the theoretical reasoning we simply state here

1. Melissa Leach and Robin Mearns, ‘Challenging Received Wisdom in Africa’, in Leach and Mearns, eds., *The Lie of the Land*, Oxford: James Currey, 1996, p. 1. Their list does not mention water as a critical resource, nor is it addressed by any of the contributors to their influential collection.


7. We are indebted to Daniel Brockington for his estimates drawn from the World Database on Protected Areas, 2005 edition, and for advice on current trends in Africa’s protected areas.


For example, notions of semi-proletarianization – not least in the historical context of migratory labour systems in Southern Africa and elsewhere in Africa – are often (if not inevitably) deployed in functionalist reasoning about ‘peripheral capitalism’.

As more nuanced work on systems of labour migration in Southern Africa has long shown, in contrast to views of ‘semi-proletarianization’ as generating a homogeneous mass of the labouring poor.

Outside the historical settler colonies where capitalist landed property emerged from dispossession, processes of the commoditization and social differentiation of farming in most of sub-Saharan Africa have only rarely been registered in the formation of evident classes of (large) landed property, although labour markets permeate the zones of specialized petty commodity (petty capitalist) production, supplying the farms of middle and rich ‘peasants’.

For example, state-provided credit, subsidized inputs, technical assistance, and marketing. The delivery of these services as public goods often left much to be desired but their removal has left many farmers worse off. One of the clearest indicators of the effects of market ‘liberalization’, of particular salience in agricultural productivity, is the drastic reduction of fertilizer use by small farmers.


On which see Mike Davis’s Planet of Slums, published as we were completing this essay. Although its subject area is very different from ours (as is the vitality of his prose) we are struck by many parallels between his analysis of what he calls the ‘informal working class’ and ‘relentless micro-capitalism’ and a number of our themes and ideas concerning the fragmentation of labour (including some of its axes of differentiation), classes of labour, and their crises of reproduction.


Two examples are ostensibly ‘traditional’ forms of cooperation in the activities of cultivation (clearing land, planting, weeding, harvesting) and ostensibly ‘traditional’ practices of ‘lending’ land and livestock, both of which often conceal the appropriation of the labour of the rural poor by their richer neighbours.

inability to compete in today’s global market’ is a fundamental cause of ‘de-agrarianization’ ('African Rural Labour', p. 185) needs more nuance on agrarian trends in African and a more critical stance on how ‘competition’ in world markets for agricultural commodities is structured.


32 Ibid.

33 Leach and Mearns, ‘Challenging Received Wisdom’, p. 3.

34 John Murton, ‘Population Growth and Poverty in Machakos District, Kenya’, *Geographical Journal*, 165(1), 1999, p. 44. Before Murton, Dianne Rocheleau had questioned aspects of Tiffen and Mortimore’s historical and spatial-environmental account, as well as its lack of attention to processes and patterns of inequality. Their reply suggested that there is ‘simply not enough information to make definitive statements’ about social differentiation (but then their research did not even pose the question) and also that ‘there always have been, and always will be, individuals and families who do better than others’ – a view of inequality as inherent in the human condition, hence not peculiar to colonial capitalism and commoditization more generally. This exchange was published as ‘More on Machakos’, *Environment*, 37(7), 1995.


36 For an elucidation of this question more broadly, see Mahmood Mamdani’s seminal *Citizen and Subject. Contemporary Africa and the Legacy of Late Colonialism*, Cape Town: David Philip, 1996. In his earlier article that we have drawn on, ‘Extreme but not Exceptional’, p. 419, Mamdani commented that ‘the politics of patronage has a disintegrating effect …The poor are atomised as each seeks a personal advantage against another, as each looks for a private solution to a social problem’.


38 Hughes, *From Enslavement to Environmentalism*, p. 172, suggests that the ‘studied parochialism’ of the pervasive discourses of rural community, including ‘community-based conservation’, among governments, aid donors and NGOs, helps ‘to frustrate the possibility of wide-scale rural mobilization’.