Emergent prosperity, time and design: farming in Marakwet, Kenya

Matthew Davies, Samuel Lunn-Rockliffe, Timothy Kipkeu Kiprutto and Wilson Kipkore

8.1 Introduction

Since at least the 1930s, the Marakwet people of north-west Kenya (Moore, 1983, 1986) have been both lauded and criticised for their complex system of intensive agriculture. While many visitors have praised the ingenuity of the hundreds of kilometres of gravity-fed irrigation channels (or furrows) and a plethora of landrace crops and soil management techniques (Davies, Kiprutto & Moore, 2014; Davies & Moore, 2016), many observers have simultaneously assumed that such modes of production are inefficient and at imminent risk of failure and ecological collapse (Hennings, 1941; Huxley, 1959; Watson et al., 1998; Caretta & Börjeson, 2015; Kipkorir & Kareithi, 2013; cf. Davies & Moore, 2016). Outside observers have often been unable to see beyond periodic and localised patterns of soil erosion and crop failure, to consider how such systems actually work in time and space. This myopic thinking recursively builds on, and feeds into, a prejudicial inability to imagine African smallholder farmers as anything but a static relic of tradition in need of immediate modernisation (see also Chapter 7).

A more nuanced temporal and spatial understanding, however, provides a set of alternative narratives that suggest the Marakwet system of cultivation and the communities it has served have remained remarkably resilient in the face of multiple challenges (Davies, Kiprutto & Moore, 2014; Davies & Moore, 2016). While the Marakwet have faced recurrent food shortages and conflicts, local agricultural systems have proved highly adaptable over the last century, seeing the growth of
irrigation-based farming, the accommodation of a threefold population increase and the weathering of major climatic fluctuations.

So why have regular and repeated warnings of collapse from outside observers and ‘experts’ proved so pervasive? We argue that the continued portrayal of the Marakwet as highly sophisticated farmers who are nevertheless perpetually on the precipice of agricultural failure represents a particular condition of modernity built upon singular notions of teleological progress curated through Western economic and scientific norms. Such frameworks of linear development leave little room for alternative technologies, knowledges and ideas, even when they are clearly effective. As explored below with particular reference to a recent case, these assessments buttress the rationale to implement externally designed development initiatives aimed at improving local livelihoods, despite the fact that such schemes repeatedly fail (Derbyshire & Lowasa, 2022).

Conversely, we contend that the Marakwet improve their own lifeways through creative experimentation, improvisation and innovation in ways that allow them to thrive. Here people work towards prosperous livelihoods conceptualised not simply as the accumulation of wealth, although this is no doubt important, but rather with a more holistic understanding of maisha bora (Swahili) or tasampo tai (Marakwet), translated as ‘the good life’ (see also Woodcraft et al., 2020). Ongoing research in Marakwet identifies the need for quality education, human health, clean and healthy environments, inter-clan solidarity, secure housing and work and a voice in decision-making processes. But, more than this, we argue that good lives in Marakwet have to exist through time and across generations. As we attempt to show below, we see this evidenced by the maintenance of lifeways, including forms of farming and food production, the persistence of households, lineages and clans, and overall increases in population, the retention and evolution of local social institutions, and a wider maintenance of biodiversity. These features of Marakwet life have persisted under threat, whether that be from climatic change, deforestation or the interventions of the state or outside experts. We contend that this persistence can be viewed as a practical lived prosperity through time that is often overlooked or ignored by external agents.

In this chapter we therefore build on a long intellectual history that critiques the ‘received wisdoms’ of these external agents and the ‘anti-political’ historical reductionism of later twentieth-century development planning (Moore, 2015; Anderson, 1984; Ferguson, 1994; Leach &
EMERGENT PROSPERITY, TIME AND DESIGN: FARMING IN MARAKWET

However, we aim not simply to show how wrong these external assumptions have been, nor to explain why such interventions have failed. Rather we more fundamentally attempt to demonstrate how they begin from a deeper flawed assumption that prosperous lives can be generated through singular acts of design embedded in teleological visions of the past and the future. Taking a lead from thinkers such as Santos (2014) and Arturo Escobar (2017, 2018), we argue instead that the Marakwet have, through time, maintained their own ways and means of addressing and solving ecological, economic and engineering challenges so as to generate forms of lived prosperity. Such processes have often been enacted in antithesis to the design intentions of external actors which, in many ways, have been distractions from everyday life.

Key to our argument, then, is the contention that the ability to generate prosperous lives principally resides with the people who live that prosperity. We illustrate how the capacity to generate prosperity does not exist in some atemporal space (as a timeless characteristic or potential of all moments) to be realised through the enactment of a singular ‘developmental’ design or blueprint. Rather, the generation of prosperity resides in a multitude of momentary experiences, actions and decisions that play out through time. As discussed in Chapter 1 of this volume, we might thus see the realisation of prosperity as a temporally contingent emergent phenomenon of complex socio-natural systems. While this ‘emergence’ of prosperity can be guided by forethought and planning, it can only be properly realised/generated through iterative processes of shaping by daily living. It cannot be realised in some abstracted future but is created in the here and now.

This chapter therefore draws on long-term archaeological, historical and ethnographic data to present the case of rural farmers in Marakwet as an example of such emergent prosperity. We first introduce the reader to the study area before juxtaposing failed developmental designs projected onto Marakwet farmers with alternative narratives of relatively successful community-led agricultural development. In so doing, we aim to show how prosperous forms of living are self-made in the contemporary moment through the ongoing shaping of emergence. While we firmly recognise that such forms of prosperity are not perfect, we conclude by arguing for forms of support for rural agricultural communities that harness and catalyse such generative capacities so as to accelerate and strengthen the emergence of prosperous lifeways.
8.2 Introduction to agriculture in Marakwet

The Marakwet are members of the Kalenjin group of southern Nilotic speakers and predominantly reside in Elgeyo-Marakwet County, northwest Kenya (Kipkorir & Welbourn, 2008; Moore, 1986). With a population of 119,969 (Kenya National Bureau of Statistics, 2019), their agropastoral farming activities extend from the semi-arid plains of the Kerio Valley (c. 1,000 metres above sea level [masl]), through to highland forests (c. 2,500 masl) and up to the ericaceous moors (c. 3,500 masl). These diverse ecological zones facilitate a dynamic regional food system; people exploit altitudinal variation to grow an array of foodstuffs throughout the year. Generally speaking, the cooler, wetter areas at higher altitudes are reserved for growing potatoes and a range of leafy greens. As elevation decreases, maize becomes the dominant cultivar, alongside beans, onions, spinach and avocado. In the Kerio Valley maize is intercropped with sorghum, and finger millet alongside cassava, tomatoes, pulses, bananas, mango trees and a variety of other fruits and vegetables.

We focus our attention on the lower slopes of the Elgeyo Escarpment and the village centre of Tot-Sibou (Figure 8.1), where agriculture has remained the primary livelihood for a majority of people since the migration of Marakwet populations into the region some 250 years ago (Moore, 1983, 1986; Dietz et al., 1987; Davies & Moore, 2016; Lunn-Rockliffe, 2019; Kay, 2021). Food is grown at the household level and with short fallow regimes in semi-permanent fields, and around homesteads and commercial centres at the foot of the escarpment. Larger tracts of uninhabited land on the flatter plains of the Kerio Valley allow for complementary shifting cultivation, with long fallow periods and management at the communal level. This patchwork has created a highly fluid agricultural landscape, where individuals and groups employ a variety of techniques, such as intercropping, cover cropping and fallowing, as they respond to changing ecological conditions (drought, erosion, fertility) and societal pressures (demographic change, conflict, residential mobility). Access to a range of resources is achieved across altitudinal and ecological zones, both through direct cultivation of plots at higher elevations, and through complex social and kin networks and regional markets (Pollard et al., 2015). As discussed in more detail below, the system is sustained by a sprawling network of irrigation furrows that channel water from the wetter highland forests to the drier ecology of the Kerio Valley floor. The lower reaches of furrows are intended to shift over time as farmers plant different crops, rotate fields or move to better soils (Davies, Kiprutto & Moore, 2014).
8.3 Development interventions and attempts to design agricultural prosperity in Marakwet

The Kerio Valley has been subjected to a plethora of development initiatives aiming to improve food security and livelihoods (Kipkorir, 1983; Moore, 1983; Dietz et al., 1987; Davies & Moore, 2016). One of the more recent of these was the establishment of a new 500-acre irrigation scheme funded by the Canadian Red Cross near the village of Sibou and the neighbouring commercial centre of Tot (Figure 8.2). Established in 2012 and operational for the first time in 2014, the scheme channelled water through a major pipeline across the floor of the Kerio Valley to irrigate 250 acres of arable land for the Marakwet, and 250 acres for the neighbouring Pokot communities living in Baringo County to the east of the River Kerio. The scheme was designed to encourage cash
cropping through the establishment of reliable irrigation pipes and the distribution of hybrid seed, inorganic fertilisers and pesticides.

While implemented with honest intentions, the scheme was planned around a set of assumptions that framed local practices as inefficient and in need of modernisation. The project thus failed to recognise the creative capacity of farmers and the multiple responses that would ensue. Indeed, many farmers realised that the largest potential from the scheme lay not in the cash cropping of maize, but in the selective planting of diverse horticultural products with high market value. Maize seed was stowed, sold or planted elsewhere, depending on individual needs. Similarly, chemical fertilisers intended for intensifying maize cultivation were saved for future use or sold to release immediate capital.

More problematically, the newly implemented system of fixed-pipe irrigation stood in stark contrast to the fluid and flexible existing system of shifting irrigation and cultivation. Many farmers complained that the plastic fixtures of the irrigation pipes were repeatedly broken by wandering livestock, that water pressures were low, and that the concentrated influx of new foodstuffs attracted wildlife that destroyed produce. Furthermore, the allocation of land for the project disrupted delicate pre-existing land tenure and management systems, fuelling existing tensions between Marakwet communities. Ultimately, the Red Cross withdrew

Figure 8.2  Noah Kiplagat, PROCOL Kenya citizen scientist, helps to dig a trench for the piping of the irrigation scheme.
Source: Davies, 2014
operational activities and, with broken equipment and increasing levels of insecurity, the project was largely abandoned by community members after only two seasons of use.

The Red Cross project is part of a much longer history of development schemes that have attempted to reshape agricultural practice in Marakwet. The first half of the twentieth century saw a range of colonial interventions to establish demonstration farms to modernise farming techniques through the introduction of cash crops such as tobacco, cotton, sisal, pineapples, chillies, castor, mangoes, pawpaw, sugar cane and varieties of banana (Davies & Moore, 2016; Kipkorir, 1983). These activities were scaled up in the mid-twentieth century with the establishment of the African Land Development Program (ALDP), when development officers were put in place to encourage additional cash-cropping regimes and systems of ridge and furrow to improve soil quality and water retention. The ALDP also ‘up-graded’ indigenous irrigation systems with new concrete structures and plastic piping, much of which was ineffective, broke or became clogged with foliage and was consequently replaced by locally designed structures over the following decade. Similar attempts to introduce tractor ploughing stood at odds with deeper understandings of land tenure and divisions of labour at household and communal levels (Kipkorir, 1983).

Throughout the 1980s and 1990s the parastatal Kerio Valley Development Agency (KVDA) and a number of other institutions (notably World Vision and the Catholic Church) continued to engage in agricultural development activities. These included regular donations, continued attempts at renovating irrigation channels and yet more cash-cropping schemes, including cotton, rice, grain-seed and sugar cane. Of particular note was a feasibility study for an irrigation scheme at the confluence of the rivers Embobut and Kerio. These plans continued to view local agriculture as retrogressive (Kipkorir, 1983), and while the scheme was not formally established at the time, it provided the rationale and blueprint for the implementation (and inevitable failure) of the Red Cross project some 30 years later.

Each of these periodic planned development initiatives, from the colonial period to the Red Cross in 2014, has largely been predicated on the assumption that local forms of agriculture in Marakwet were inefficient and facing impending collapse, yet these initiatives have broadly proved fragile. Local agriculture has at best been seen as a barrier to more modern forms of agricultural livelihoods and at worst as symptomatic of a state of crisis. Yet, as we explore below, agricultural history in Marakwet can be read very differently.
8.4 An alternative narrative: agriculture in Marakwet as a form of long-term emergent prosperity

Contemporary farming in Marakwet is not an ahistorical and static system passively waiting to be modernised by external interventions, but a constantly changing temporal construct that has emerged out of centuries of intergenerational experimentation and adaptation. Such change is in part underpinned by patrilocal clan-based systems of land tenure that have resulted in a constantly shifting kaleidoscope of settlement (Davies & Moore, 2016; Lunn-Rockliffe, 2019; Kay, 2021; Moore, 1986). Within these patrilocal systems, clans have finite territories that become increasingly subdivided over generations. Consequently, as populations increase, so does localised pressure on land and resources. Farmers respond to this challenge by exploiting the dynamics of an agricultural landscape that operates at multiple scales, including horticultural plots at the household level, semi-permanent fields located at different elevations, and communally farmed fields in the largely uninhabited plains of the Kerio Valley. Across this landscape, farmers creatively experiment with agronomic intensification through soil conservation measures (for example, terracing, fallowing, manuring, mulching, afforestation) and diverse cropping practices (for example, intercropping landrace crops with cash crops).

The system as a whole relies upon an intricate network of irrigation furrows, totalling some 315 km in length, that distributes water from the highlands into the Kerio Valley for both agricultural and domestic purposes (Davies, Kiprutto & Moore, 2014; Figure 8.3). These furrows are highly flexible, being opened, closed and temporarily diverted at various locations on the escarpment and valley floor to replenish soils and irrigate crops. This fluidity of the irrigation system is intimately tied to shifting agricultural practice over multiple generations. Indeed, mapping by the IGP local citizen science teams reveals that, since 1980, 30 new main irrigation channels totalling over 60 km have been established (Soper, 1983; Davies, Kiprutto & Moore, 2014). Such fluctuations may occur as individuals and family units gradually relocate household compounds within their clan territory to different elevations on the escarpment on temporary, semi-permanent and permanent bases as they move farmland to the fringes of available water sources, manage erosion and soil fertility, and maintain access to a range of resources across ecological zones. The ramification of this process is that, when viewed diachronically, agricultural settlement may move spatially over several generations along with concomitant furrows and fields (Davies, 2013).
These emergent changes are evident over broad temporal cycles as crops, vegetation, field boundaries, terraces and irrigation channels become altered, reused or abandoned to meet the needs of gradually shifting livelihoods (Davies, 2014; Davies, Kiprutto & Moore, 2014).

The ongoing reorganisation of irrigation and land use stems from, and feeds into, a deeper need and ability of farmers to accommodate ever-shifting socio-ecological conditions. Regional climatic records reveal major fluctuations over the course of the last three centuries (Anderson, 2016; Davies, 2012), including major dry episodes during the periods 1760–90, 1820–40, 1890–1940 and 1970–85 interspersed with more humid conditions in the early eighteenth century, the mid- to late nineteenth century, and much of the second half of the twentieth century. Similarly, demographic surveys attest to considerable increases in population (Dietz et al., 1987), with national census data demonstrating that the population of Elgeyo-Marakwet County has more than tripled in the past 40 years, increasing from 148,868 in 1979 to 454,480 in 2019 (Davies & Moore, 2016; Kenya Bureau of National Statistics, 2019).

Data outlined here, and reported in more detail elsewhere, therefore attests to vibrant systems of cultivation which have been largely able to accommodate population changes and major climatic events over the twentieth century and beyond without large-scale environmental collapse.

Figure 8.3  Digital elevation model of the Elgeyo Escarpment displaying the distribution of irrigation furrows. For more detailed diagrams see Davies, Kiprutto & Moore, 2014.
(Davies, Kiprutto & Moore, 2014; Davies & Moore, 2016). Looked at from a historical perspective, these systems work because they allow for certain degrees of flexible movement around the landscape. At any one time, part of the system may appear to be in decline (the abandonment of settlements, fields and irrigation channels, erosion, soil depletion) but other parts will be experiencing new (or renewed) settlement, the construction or shifting of irrigation features, and the planting of new fields. Such changes at generational scales and across wide landscapes may be partially imperceptible to those engaged within the system, but they are often especially overlooked by outside analysts, policy makers and developers who spend only short periods conducting the research on which they base their interventions; this may in part explain why such interventions are often largely ineffective.

More broadly, however, this ‘untidy’ mix of spatial and temporal activities (often mistaken for decline or collapse) constitutes what we would consider a good example of the shaping of emergent phenomena in which well-understood ecological parameters are managed through a series of established yet diverse mechanisms which allow for fluid forms of response and adaptation.

8.5 Shaped emergence

The historical narrative of resilient flexible agriculture presented above might be seen as evidence of a broader shaping of emergent prosperity enacted through several important social mechanisms and practices. To unpack these dynamics further, we identify four key parameters with corresponding institutions.

8.5.1 Networked knowledge and pooled resources

Multiple social mechanisms have been widely retained in Marakwet which ensure the sharing of knowledge, ideas, practices and materials (such as seeds, fertilisers and tools) across wide landscapes and diverse ecologies. Strong patrilines link core family members, creating adjacent farms with familial ties and concomitant agricultural activities. At the same time, valued matrilineral (kamamaa) relations extend knowledge-sharing networks more widely and across broader ecological and altitudinal zones, from the Kerio Valley to the highland forests, and may even be used to allow families access to land in other parts of the region.
Strong knowledge-sharing relationships also exist beyond that of kin networks, the most evident of which are defined by individuals who share the same age-set. Age relationships operate for both men and women and are often drawn upon in the establishment of more formal male and female ‘friendships’ known as tilia (Pollard et al., 2015). Tilia relations in particular involve the exchange of seed, grain and livestock; they not only operate within the Marakwet but can extend into neighbouring pastoralist communities, linking people across ethnic identities and providing access to a wider pool of resources. Work with female entrepreneurs in markets and commercial centres across the region has shown how tilia relations often act as a support network for partners in difficulty, as well as underpinning more formal business relations and the wider exchange of goods across the region (Pollard et al., 2015).

Broadly, then, these networks cut across diverse social and ecological landscapes, allowing members to gather knowledge and ideas from multiple sources to share and exchange practices. This amplifies access to diverse resources, spreads risk and buffers families in times of difficulty (Bollig, 1998). More generally, these networks enable the widespread sharing of ideas and materials, which farmers are able to experiment with to enhance best practice and more readily respond to ecological and climate-related challenges. At a more fundamental level, these dynamics provide an integral foundation for farmers to thrive within a spatially and temporally unpredictable world.

8.5.2 Distributed decision making

The pooling of networked knowledge across ecological zones ties in with more formal mechanisms for communal decision making beyond the individual household. Perhaps most significant of these is the institution of the kokwo, a meeting of circumcised men (women attend kokwo but are not permitted to stand and speak) which functions in part to collate networked knowledge and then to discuss and decide on multiple issues, including those of landscape and water management (Adams et al., 1997; Davies, 2009; Ssennyonga, 1983). Within the kokwo respected elders are endowed with authority, and explicit and implicit rules of etiquette govern who can talk, in what order and on what authority. The membership of a kowko is flexible and contingent on the matter at hand, so that a kokwo discussing land tenure and ruling on a land dispute may have a different constituent membership to one addressing an issue of irrigation water rights. Indeed, claims to land and resources are in themselves flexible,
being based both on ideas of history and inheritance, and on contemporary use. Therefore members of a kokwo might claim the right to attend and to speak on the matter at hand. Kokwo might be called upon to decide who should have access to land and who should not, to reprimand those who fail to look after the land or who engage in problematic practices (for example, cutting down riverine trees without discussion), to decide on allocations of water, and to decide what should be grown where, and when. The workings of the kokwo include the mobilisation of communal labour to undertake tasks, including repairing irrigation furrows, addressing erosion and clearing ground for communal shifting cultivation.

Kokwo are not just discussion forums but have effective powers to impose fines (the penalty may be, for example, the payment of a goat, or restricted access to irrigation water) and support those in need (for example by allocating irrigation water out of turn). While male charisma is often dominant at kokwo, women do attend and their needs and concerns can be heard (Moore, 1986; Adams et al., 1997). Thus, while the diversity of knowledge represented at kokwo may be biased towards male knowledge, it is not exclusively so and it does serve as an effective mechanism for pooling knowledge across generations as well as for centralising information from the wider networks discussed above. We have explained some of the mechanisms of kokwo in more detail elsewhere (Davies, 2009; see also Kipkorir & Welbourn, 2008; Moore, 1986), and have argued there that it is a highly formulised political process well adapted to rapid and efficient communal decision making. To extend that definition here, we would argue that the pooling of knowledge and responsiveness to change that kokwo allows is a key formal mechanism through which farmers in Marakwet are able to collectively shape their world and respond to the unexpected challenges it throws up.

8.5.3 The maintenance of diversity

Pooled knowledge and distributed decision making both enhance the ways in which Marakwet farmers maintain diversity. At one level, the networks that cut across ecological zones provide families with direct access to land in other ecologies and climates as well as indirect access to the resources of those locations. We see in these networks both a valuing of diversity and a direct way of reciprocally sharing interest in its maintenance. Farmers also prize access to diverse forms of land and cultivation in their immediate environs. In Tot-Sibou, for example, there is a continuity of types of farmland, from highland finger millet fields, to smaller semi-permanent household
fields around the foot of the escarpment and forms of communal shifting cultivation and riverine cultivation on the valley floor (Davies & Moore, 2016; Davies, Kiprutto & Moore, 2014). Most families hold access to land of each of these types and may variably choose to use, experiment upon and enhance each of these classes of land. Land of different types offers distinct microclimatic, hydrological (irrigation- versus rain-fed) and soil qualities, each suited to different combinations of species and landraces of crops with varying levels of resilience to water, soils and pests. Different types of land are given differing forms and degrees of management, with more fixed fields around homesteads and at the base of the escarpment organised around household decision making and needs, while shifting cultivation on the valley floor is organised communally in terms of shared labour, fencing, pest management, crop choice and irrigation.

Land or fields may be accessed through a diversity of forms of tenure, with at least 11 main types and several sub-variations, including forms of paternally and maternally inherited land as well as land loaned, rented, exchanged, bought, held in custodianship or gifted, women’s land and community land. A fuller examination of each type is not possible here, but we note that these variable forms of claiming and accessing land provide farmers with a great flexibility that allows them to shape their responses further to emergent socio-ecological phenomena.

Across this landscape there is thus a great diversity of possible combinations of production by elevation, soil, hydrology, crop and land tenure (see Chapter 7). The management of water for farming exemplifies the ways in which these diverse subsystems of production are fluidly integrated. For example, as farmers shift the focus of production spatially to address soil type, depletion or erosion, so the lower secondary and tertiary branches of major irrigation furrows can be diverted with relative ease, allowing farmers to exploit new areas or switch between rain-fed and irrigated cultivation and between different crops with variable water needs (Davies, 2014). In several places fields might be amenable to watering from multiple secondary branches, which provides farmers with multiple options over the timing of water and in their negotiations at kokwo. Thus, at the same time that farmers exploit diverse forms of access to land, they are also able to exploit a diverse range of sources of water and to combine and recombine these as required.

Diversity in systems of access to land and water is complemented by diversity of crop types. A fuller examination of the ethnobotany of food crops is not possible here beyond the fact that there is a complex history of successive crop introductions with diversity broadly added through time.
Preliminary data from Tot-Sibou published in Davies and Moore (2016) outlines some 40 food plants, of which nine are wild and 22 are regularly recurring cultivars with African, Asian and American origins. Of these 22, of particular note are the cereal crops sorghum, finger millet and maize. Though maize dominates, varieties of sorghum and finger millet remain widely grown and, importantly, retain some seven landraces of sorghum and 15 of finger millet alongside older and more modern varieties and hybrids. The landraces of both sorghum and millet are especially significant, in that they suggest the active curation of older varieties and their retention due to diverse ecological characteristics that can be experimentally matched with diverse combinations of soil and water. A wide variety of legumes are regularly intercropped with the cereals to enhance the potential of this diversity, while soil conservation and fertility enhancement techniques abound, including terracing, mulching and manuring. Again we argue that Marakwet farmers combine knowledge pooling and distributed decision making with the maintenance of diverse and flexible physical subsystems that relate to water, land/soils, crops and other techniques. This allows experimental combinations to constantly emerge in response to complex opportunities and challenges.

8.5.4 Lived innovation and experimentation

Finally we argue that innovation and experimentation are central aspects of what it means to live as a farmer in Marakwet. It is the coalescence of the factors above into a process of experimental living which shapes unpredictable emergent phenomena into manageable responses and opportunities. For example, multiple repeat interviews, participant farm mapping and citizen-collected smartphone data (Davies, Moore, Kiprutto et al., 2022) from Tot-Sibou and around the larger town of Iten in Elgeyo-Marakwet County have shown how farmers maintain highly diverse fields with multiple combinations of crops and cropping practices. These tend to mix not only cereals and legumes but also fruit trees, root and leafy vegetables, fodder crops and trees grown for wood fuel or timber. Moreover, the combinations of these are constantly changing from year to year as farmers experiment with rotating and intercropping different cultivars. Intricate cropping regimes involving both landrace and hybrid plants are complemented by equally complex uses of organic and synthetic inputs that defy simple characterisations as either ‘traditional’ or ‘modern’. The combinations are often innovative in that farmers regularly try new things, both derived from their own experience and imagination and also (as noted above) taking inspiration from neighbours, kin and
age-mates, as well as things heard on the radio, seen on TV, or shared on social media. Our interviews suggest that farmers are adept at learning from such experiments and drawing on such learning, both to enhance their practice and to respond to unpredictable events such as drought and pests, the latter in particular being exemplified in recent responses to plagues of locusts in 2021 (Davies, Moore, Kiprutto et al., 2022).

This living experimentation forms the nexus of how farmers navigate and shape ever-emergent socio-ecological phenomena through time. In particular, knowledge and materials flow from diverse wider networks (kinship links, age-sets and tilia) into distributed forms of decision making (e.g. kokwo), influencing the development of diverse biophysical subsystems (land tenure, irrigation, soil maintenance, crops) and allowing for regular daily experimentation. The outcomes of this experimentation recursively feed back into these dynamics, influencing decisions at kokwo, shaping the collective management of the biophysical and redistributing knowledge and practice through wider networks of kin, age and friendship. In short, we argue that these are integrated social, technical and ecological landscapes that are themselves constituted by a continual recursive shaping of emergent phenomena.

8.6 Temporalities of ‘progress’ and change in complex systems

In the introduction to this chapter we suggested that many external development designs were out of touch with the lived realities of agrarian life in Marakwet (see also Chapter 7). In fact, rather than improving livelihood security, agricultural interventions have often disrupted the gradual and iterative shaping of complex and emergent social and ecological systems. External technical experts struggle to comprehend how Marakwet farmers subtly navigate this complexity because it plays out across multiple spatial and temporal dimensions – between people, plants and animals, across homesteads, villages, clans and landscapes and across seasons, years and generations. From individual on-farm innovation, to intergenerational landscape management and knowledge sharing, to community-based negotiation such as the kokwo, the most effective methods for shaping the Marakwet world are produced by the very people who encounter the emergent complexities of daily living. In short, the Marakwet people and the world in which they live are not separate but mutually constituted and thus the key nexus for generating prosperity are the people who live that prosperity.
Understandings of temporality and progress are critical here in the unpicking of the failures of external design to generate prosperity. Much Western technical and development practice tends to conceptually dislodge people from the spatiotemporal context within which they are situated and suspend them as ahistorical communities conditioned by a timeless past and aspiring to a developed future. To improve such people’s livelihoods, development planning attempts to deploy a singular act of change to relocate people from the static past into the static modern future. It is assumed in such acts that there are clear start and end destinations, a singular path or trajectory between them, and a broadly singular process (even if punctuated by distinct phases and operations) of change from one to the other. This has multiple effects – in particular it reduces the contemporary moment from being a period of ‘living’, to being a necessary transition to be endured prior to a better form of modern ‘living’. In such thinking ‘to live’ is about temporal stasis, equilibrium and stability. In contrast, progress is the process of non-equilibrial change from one static state of ‘living’ to another. This gives rise to the notion that people undergoing change (those who are ‘developing’) are not ‘living’, let alone thriving, and that their current state is inadequate or inauspicious. Consequently, by focusing only on future states to be realised through punctuated processes of change, we become blind to how prosperity and aspects of good lives are being forged in the here and now.

8.7 Design and contemporary experience

The problem outlined above has been neatly distilled by Santos (2014), who argues that such understandings of development or progress constitute a ‘winnowing’ of contemporary experience. This is because it is assumed that people living outside of the ‘already modern’ global North are in a transitional phase, being consigned to an atemporal past, and that their futures are already mapped out by the dimensions of universal, directional and globalised modernity. This winnowing not only hampers our ability to draw on non-Western knowledges and practices in processes of future building, but even more problematically generates a failed model for ‘change’ (see Chapter 7). Such a model deploys design and planning in the abstract as a controlled process for moving communities from a static state of perpetual underdevelopment to a future state of modernity and progress. Singular acts of atemporal design, however, are highly underdetermined by the knowledge and information of recipient peoples and struggle to accurately shape the lives they wish to influence,
not least because of the complex nature of human agency and the unpredictability of interconnected socio-natural systems.

At best such abstracted acts of design are worked upon, selected, rejected and made real by actors who problem-solve in the moment and who draw on varieties of lived social and natural resources to do so. Whether applied to the construction of a building, the founding of a business or the management of a farm, it is these acts of intuitive, imaginative and improvised problem solving that operationalise design. In some instances, where conditions are controlled and designs comprehensive, the need for such improvisation may be minimal. But in the design of entire socio-natural systems we would argue that a majority of development designs, particularly those from global North to global South, have been lamentably inadequate and are often founded on weak starting principles, especially so in comparison to the knowledge of the actors who live and make do in such worlds.

Where planned acts of development design work, we contend that this is due in part to the abilities of the recipient communities to shape and integrate such plans into daily living through ongoing processes of autonomous design (Escobar, 2018). This kind of design philosophy allows for the ‘creation of conditions for the community’s ongoing self-creation and successful structural coupling with their “increasingly globalized” environments’ (Escobar, 2017: 45). In such instances, communities are able to forge their own worlds, which are not on a simple journey from past to present or from tradition to modernity, but are lives lived in the here and now.

8.8 Conclusions: emergent prosperity

In conclusion, prosperity is not something that can be designed as a singular act; rather it must be brought into being through the process of living in the world through time. It must be realised not in an abstract (and unpredictable) future but in contemporary moments. Borrowing from complex systems theory, we can view this process of bringing into being as a process of ‘emergence’, where we might say that prosperity is an ‘emergent’ contemporary experience rather than a singularly designed future phenomenon (see Chapters 1 and 2). We argue then that in contrast to the failed singular designs of modernity, Marakwet farmers act intuitively through a range of distributed actions across multiple temporal and spatial scales to shape the emergence of certain forms of socio-natural prosperity. They do so in multiple holistic daily acts of decision.
making, constantly weighing up a host of factors based on deep-seated historical, experiential and experimental knowledge, often balancing the longer-term sustainability of soils, the propagation of plants and fluctuations of climate with the demands of the market and the needs of households. Sometimes they choose to deplete soils to meet social demands, at others they choose to maintain the health of their land to enhance sustainability and resilience. Sometimes they choose to use modern chemical and hybrid inputs, at other times they choose to use organics and to maintain landrace varieties. Sometimes they invest in communal acts of labour to reshape their landscape while at other times they allow infrastructure and land to fall into disuse.

This is a creative curation of a varied assemblage from which a flexible prosperity can and does emerge in contemporary moments. This is not to say that people in Marakwet do not need forms of external support. Increasing the opportunities open to Marakwet farmers and families, allowing them to choose how to thrive autonomously, should be a priority. Marakwet is not a romantic garden of Eden; challenges of many kinds persist, but, as we hope we have shown here and elsewhere (Lunn-Rockliffe et al., 2020), it is those communities who live prosperity who must be the ones who shape its emergence. This means strengthening rather than eroding the many local values, customs, practices and institutions that have continued to sustain communities across the challenges of the last century. It requires a shift away from singular designs to distributed lived experimentation, in short, empowering people to do better what they already do best.

Note

1. Originally this was intended to be 500 acres and the community expended much energy to clear this amount of land, only to have the scheme scaled back by the Red Cross afterwards.

Bibliography


