

From Forestry to Soil Conservation: British Tree Management in Lesotho's Grassland Ecosystem

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Abstract: *Unlike wooded savannas closer to the equator, Lesotho's grassland ecosystem supports few trees. Where topography provides protection from cold winds, or concentrations of ground water mitigate atmospheric drought, hardy species of trees grow. Basotho valued their wooded patches, as well as individual trees, as defenses against cold and for construction. Trees were protected vegetation, managed as common property by the chiefs for the benefit of all. Arriving Europeans did not know about, or understand, this system of protection. Nineteenth century missionaries cut down most of the riparian trees for construction and fuel. The twentieth century British Basutoland government implemented tree planting programmes, despite limited acceptance by the Basotho and high rates of mortality. An explanation for continued tree planting activities in the face of obvious failure can be found in an analysis of the importance of environmental narratives to government officials. A set of beliefs about trees' universal ecological benefits prevented officials from accepting evidence to the contrary.*

Keywords: colonial, forestry, indigenous, Africa, trees

INTRODUCTION

IT WAS French Protestant missionaries who first wrote descriptions of Lesotho's landscape¹. Unlike the British Protestant missionaries working in the semi-arid Northern Cape Province of South Africa, the French missionaries in the land of the Basotho (residents of Lesotho) encountered well-watered high plains, higher hills, and mountains covered by grass. The country was not

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completely treeless. Where sheltered from cold winds or near sources of water, trees grew singly or in groves or patches. The appreciation Basotho had for the significance of trees in such a landscape was reflected in their enforced system of controlled use. That Lesotho's ecosystem was thought to be abnormal by Europeans—particularly the British—has been discussed elsewhere (Showers 1989, 2005). The need to correct this perceived tree deficiency guided non-government and government approaches to the landscape, moving from ideas about afforestation to more utilitarian tree planting for specific purposes at particular locations.

Although there was no formally approved government forest policy in Lesotho until the late twentieth century (FAO 2001), trees in the Lesotho landscape experienced elements of both indigenous and international forestry management systems, each with different rights of access. Tree planting programmes were not designed to coincide with the interests of the Basotho or their traditions of tree protection and management. Rather, they were conceived by government officials for their own reasons and then imposed, with very different rules of access and use. Because these programmes persisted in the face of dramatic tree mortality, an explanation for the continued effort can, perhaps, be found in forestry narratives.

International forestry and afforestation narratives for landscape correction in nineteenth century Basutoland (British name for Lesotho, see note 1) gave way to crisis narratives about soil erosion and the need to plant trees for erosion control in the twentieth century. To understand why these narratives concerned with tree planting endured in the face of documented evidence of high tree mortality in the natural grassland, it is useful to consider Roe's (1991) discussion of the persistence and negative consequences of development narratives in late twentieth century Africa. Development narratives, defined as stories or arguments revolving around a sequence of events or positions in which something happens or from which something follows, are distinguished from ideology, myth and conventional wisdom by being predictive of what will happen and having the objective of making their hearers believe or do something. The truth or validity of these narratives is irrelevant; their power comes in the telling and believing.

In Africa, Roe (1995) argues, the narratives of imminent disaster, or crisis narratives, fuelled post-colonial government activities. In these narratives, conditions are bad and will only get worse if nothing is done. Facts to the contrary have no effect on official advocacy of a crisis narrative or the policy that develops from it; only a comprehensive 'counter-narrative', which has the same compelling ability to tell an alternative explanatory story, can dislodge a crisis narrative and alter the policy and programmes resulting from it. A growing literature demonstrates the fallacy of many colonial 'truths' that were the basis of these crisis narratives (e.g. Fairhead and Leach 1996; Leach and Mearns 1996; Fairhead and Leach 1998; Bassett and Crummey 2003; Moseley and Logan 2004; Davis 2005), as well as the heterogeneity of colonial opinion, local variation in the expression of global narratives, and the fact that

while dominant narratives provided an intellectual background or framework for perception, they were only one element of daily decision-making (Saberwal 1998; Tilley 2003; Wardell 2005). However, in an attempt to link this historical paper to modern policy, practice and practitioners, rather than reviewing the documented flaws of colonial truths, Roe's argument for post-colonial development agendas will be shown to be useful in understanding colonial era government activities, as well as those of independent nations. In Basutoland, the nineteenth century officials' embrace of forestry and afforestation narratives was replaced by the crisis narrative of catastrophic soil erosion, to be cured by tree planting. As these narratives took hold, new meanings of trees and ideas about rights to them were imposed on the indigenous common property system of value and management.

Trees in a Grassland

Pollen analysis has documented that Lesotho's landscape was dominated by grassland vegetation for at least the last 23,000 years (Scott 1984).² Unlike wooded savannas closer to the equator, Lesotho's grassland supports very few trees. As well as being located in the sub-tropical southern latitudes, Lesotho's lowlands are high at 1500 m. The mountainous eastern two-thirds of the country rising to almost 3400 m provide a barrier to moisture from the Indian Ocean that creates a rain shadow, or drier area, in the lowlands to the west. While there are trees capable of withstanding extended periods of drought, and others that tolerate severe cold, few can survive extremes of both. Lesotho has both hot, dry summers and cold winters with freezing temperatures. Snow is common, and can be deep. Lesotho, therefore, presents a generally difficult environment for tree growth. Where topography provided protection from cold winds, or concentrations of ground water mitigated atmospheric drought, hardy species of trees grew. Early missionaries noted that tree growth along streams (large and small) could be luxuriant, and that trees could also be found in mountain passes. Willow and wild olive were the most commonly mentioned species.³ As noted above, the Caledon River had lush riparian vegetation that included trees. The banks of the Phuthiatsana (Little Caledon) River to the north were similarly covered with willows (Kruger 1883 in Germond 1967). Trees also occurred on the slopes of Makhoarane Mountain, at whose base the first French Protestant Evangelical Missionary Society mission station, Morija, was built (Casalis 1889).

Sesotho Tree Protection

Unlike agricultural systems in other parts of the African continent, Sesotho (culture and language of the Basotho) agriculture did not involve fertility management through the cutting and burning of tree branches or whole trees (Germond 1967). Slow tree growth and their difficult survival meant that use

had to be balanced against extinction. Consequently, trees were part of the Basotho's clearly defined system of regulated land use based upon managing reserved or protected areas, called *maboella* (Germond in Staples and Hudson 1938). Strictly speaking, the term in Sesotho refers to reserved grazing lands, but it also means 'provisions kept for another occasion' (Mabille and Dieterlen 1974: 23). This broader meaning allows the term also to be applied to areas reserved for the growth of thatch grass, reeds, bushes and trees. In Sesotho, the verb *ho boella*—from which *maboella* is derived—can mean 'to return again and again' (Mabille and Dieterlen 1974: 23); the concept of *maboella*, thus, fundamentally contains the idea of sustainable use. Germond's description of the *maboella* system was included in the 1938 ecological survey of Lesotho's mountain areas (Staples and Hudson 1938).

'Bush' (the British English term for collections of uncultivated mixture of brush, bushes and trees) and places with trees were considered to be the highest form of *maboella*. Like all other reserved areas, those with trees were under the protection of the Chief. Although their most obvious use was for fuel in the cold winter months, a few trees produced edible fruits, and treed areas contained plants with medicinal properties (human and veterinary) and plants thought to be useful in the protection of houses, fields and crops (May 2000). Once a year—and for one day only—people were allowed to enter tree *maboella* to collect dry wood. Green trees could not usually be cut, and 'the uprooting of live stumps was considered to be wanton destruction' (Germond in Staples and Hudson 1938: 24). During the year, when someone needed wood or a green pole, he had to obtain special permission from the Chief, and was then escorted by a guardian called 'shepherd of the woods' to take what had been agreed upon. According to May (2000), except when needed in times of drought, edible fruits were harvested by children and herders in season without regulation. Similarly, useful medicinal plant parts could be harvested as needed by villagers or traditional healers without permission from the Chief.

Although *maboella* vegetation was understood to be common property held for the people by the Chief, the wild olive tree and *cheche* or *mosino* were considered to be largely reserved for the Chiefs. Wild olive was particularly desirable because it produced less smoke when burned (Germond in Staples and Hudson 1938). In contrast, the largest indigenous tree, the wild willow, with 'a diameter of 20–25 inches and a height of about 25 feet', was specially protected by the Chiefs for building, and was not burned (Heywood 1908). Under this system, trees in the landscape were not owned by individuals, but their use was controlled and carefully regulated by Chiefs on behalf of all individuals as a defense against cold and for construction.

As Sesotho society responded to the influences of the newly arriving Europeans and their increasingly cash-oriented cultures, trees and tree production undoubtedly gained new meanings. However, it was changes in tree management systems supporting tree use familiar to Europeans, and not changes in cultural meanings, that were documented in official reports. As discussed be-

low, while Basotho adopted the idea of privately planted and owned trees (particularly fruit trees) in the mid-nineteenth century, as late as the 1980s the traditional concept of wild or unplanted trees being common property governed by the traditional protection system was observed to be so strong and functional that an international consultant recommended that it should be the basis for government forestry policy and practice (Turner 1988).

Protestant Missionaries in Nineteenth Century Grasslands

Since Paris Evangelical Society missionaries wrote the first accounts of Basutoland, it is interesting to note the very different assessments made by missionaries from the British London Missionary Society (LMS) in both the northern Cape Colony (modern South Africa's Northern Cape Province) and the territory that became the Bechuanaland Protectorate (modern Botswana). Grove (1989) first discussed, and Endfield and Nash (2002) later documented in detail, the powerful influence on nineteenth century debates about African desiccation of these British Protestant missionaries' responses to the semi-arid landscapes they encountered. LMS missionary Robert Moffat's arrival in Southern Africa coincided with the severe drought years of 1820–1823. Only through biblical and environmental interpretation could he understand his cultural discomfort with aspects of a decidedly non-western culture in a very dry environment: the Batswana were a punished people living in a destroyed Eden. This idea of indigenous people being the cause of southern African climate conditions, particularly linked to tree cutting, persisted, but was not the only explanation. The discussion following James Fox Wilson's presentation of a paper on the 'Desiccation of the Orange River Basin' at an 1865 meeting of the Royal Geographical Society reveals lines of reasoning based on religious/moral perspectives as well as on emerging ideas from the natural sciences. Wilson argued that the cause of southern Africa's dryness and apparent change since the arrival of Europeans was 'the reckless felling of timber and burning of pasture during many generations by the natives' (Wilson 1865:106). Others, citing Livingstone in particular, looked to geophysical and atmospheric explanations. In the late nineteenth and early twentieth centuries, both moral/religious and natural science based ideas were commonly held—and often blended.⁴ In the Cape, Moffat's biblical narrative was combined with desiccationist ideas to displace settlers as causative agents and identify first the Batswana, and then all Africans, as agents of environmental destruction whose moral improvement would lead to environmental restoration. With the acceptance of this shift in responsibility, the early Dutch Cape Colony land use regulations, as well as forms of conservation and forest regulation designed initially to control settler activities, were modified to restrict African access to land and woodlands instead (Grove 1989). Despite Moffat's influence at the Cape, his religious/moral interpretations were not embraced by different missionaries in a different landscape to the northeast.

French Protestant missionary Eugene Casalis, one of the first Europeans to enter and live in the land of the Basotho, equated a lack of trees with a lack of civilisation, but withheld judgement as to the cause of the landscape's condition. 'This fertile country... possesses scarcely any trees. While waiting till this obstacle to the development of civilisation finds its remedy in the plantation of artificial forests, we may be able to obtain [timber for building]... through establishing trade with Caffraria' (Casalis 1861: 109). Trees had utilitarian function, and a landscape lacking them was simply in need of improvement. Perhaps one reason Casalis made this observation, rather than a judgement, was because he arrived in an inherently wetter environment than that of Moffat's northern Cape Colony—and during a time of locally normal rainfall.⁵ Although exotically different from the familiar European landscapes, missionaries wrote of appealing natural scenes. In June 1833, en route to his first meeting with the Chief of the Basotho, Chief Moshoeshe, Casalis described his initial impression of the Mohokare or Caledon River (border of modern Lesotho):

'The two banks were shaded with willows the roots of which plunged into the water. These trees were all bespangled with scarlet finches and little ring-doves. Every now and then we heard the cries and the flutter of teal and duck as they flew off at our approach, while charming water fowl took cover in clusters of rush... At the spot which we had reached, the stream was about sixty metres wide by one and a half in depth. The bed, where it was not sandy, consisted of masses of basalt...' (Germond 1967: 24).

Three and a half years later, when François Daumas founded a mission station at Mekoatleng (outside of the boundaries of independent Lesotho) on the southern source of the Tikoe or Vet River, he noted both the beauty and the utility of the site in terms of access to scarce trees.

'About an hour later we reached a spot which we more especially noticed on account of the beauty of the situation. It has wood in abundance... There is plenty of firewood in the neighbourhood; as for timber, it is very easily obtainable from the Caledon which is only six to seven leagues away...' (Daumas 1836 in Germond 1967: 52).

When the Hermon mission station was founded in the drier western lowlands of Lesotho, near the present border town of Wepener, South Africa in April 1847, Thomas Arbousset described a sustaining landscape:

'There is abundant grazing everywhere; the rich slopes are watered by natural springs; there is low-lying arable land on every side, much of which is under cultivation; there are a few wild olives and other kind of firewood towards the mountain tops; lastly, the Caledon River which

passes nearby, has enough willows on its banks to satisfy the customary building requirements of this country' (Arbousset, April 1847 in Germond 1967: 47).

The infrequent occurrence of trees in Lesotho's landscape was a defining characteristic, but not initially linked to deficiencies in the character or land use activities of the Basotho.

Early Missionary Encounters with Scarce Trees in Lesotho

Despite their general rarity, indigenous trees were not highly regarded by the missionaries to Lesotho, who were apparently unaware of their protection as *maboella*. Wild trees were thought of in utilitarian rather than sentimental terms. Those who founded the Morija mission station noticed 'and not without anxiety' that the trees 'tend to develop the most fantastic embranchments and protuberances, rather than adopt the vertical habit' (Casalis 1889 in Germond 1967: 52). Their need to build houses, churches and schools resulted in the harvest of those trees with the potential of providing boards.

'I have often admired the wild olive tree, with its small dark leaves and its far-spreading branches. It is fond of growing in the crevasses of our mountains. Nowhere does it thrive better than on stony ground, in the chaotic confusion of mighty boulders thrown into disorder by the headlong rush of flooded waters and often piled up one on top of the other. The beauty of these trees fascinates and holds attention when one is all too familiar with the sight of semi-arid mountains with no other covering than a sprinkling of grass. And yet, after enjoying the cool shade of these groves and admiring their beauty, I have no choice but to apply the destructive axe to the tree trunk and to bring it down; for necessity converts this act into a duty. It must needs be dragged to the house in company with other trees which are suitable for my purpose and the names of which have not yet been registered in the forestry lists of the civilized world' (Maeder 1850 in Germond 1967: 55).

The missionaries assumed that trees should provide timber for construction and wood for cooking and heating houses; the role of trees in environmental function was largely unknown at that time.⁶ As a result, large numbers of trees were cut by the early missionaries. They harvested wagon loads from hillsides and river banks at increasingly distant locations for use in construction and as fuel. 'Five days were devoted to fetching timber down from the mountain; by no means an easy task as it is necessary to make a drift over the Little Caledon River, to enable the wagons to cross it' (Gosselin 1837 in Germond 1967: 52). Occasionally a day's work of trees stacked along a river bank was lost to an unexpected rise in stream flow during the night, requiring still more trees

to be cut (P. Germond in Germond 1967: 56). Such was the intensity of the harvest that by 1863 Dyke noted that ‘there is no timber whatsoever on the banks of the Caledon’ (Dyke 1863 in Germond 1967: 56); twenty years later Kruger noted that the Phutiatsana (Little Caledon) had suffered the same fate (Kruger 1883 in Germond 1967: 57). Although they did not initiate tree planting campaigns, the French missionaries did establish woodlots and orchards in their domesticated spaces. There is no record of any attempt at reforestation of the non-domesticated riverbanks, hillsides or ravines areas from which they had harvested trees.

That the missionaries did not share the Sesotho idea of a sustainable harvest of wild trees is suggested in a missionary account of tree cutting. Thomas Arbousset noted in 1883 that he had to ‘make’ an unspecified ‘them’ participate in the harvest: ‘Firewood and timber abound... We often climbed to the fountain [spring] and there, at the edge of the forest, I made them fell and trim the trees...’ (Germond 1967: 52). If those assisting Arbousset in tree removal had been Basotho, the harvest would have been a serious violation of the *maboella* tree protection system. Although Basotho and missionary approaches to wild trees differed, there seems to have been concordance about the cultivation of trees in domesticated spaces. Within forty years of their introduction by French missionaries, fruit trees were reportedly growing in village gardens (Maeder 1873 in Germond 1967: 321).

While both tree cutting by missionaries and tree protection by Basotho are documented, less has been written about the effects of settlers and traders on trees in Lesotho. Settlers did, indeed, confiscate the Basotho’s land, but this territory was excluded from Basutoland in treaty arrangements by the late 1860s. Although individual trees could have been cut during the years of war and skirmishes over land, and missionaries reportedly bought wood for fuel cut from the willows along the Caledon River from individual Basotho (Germond 1967: 52), missionary accounts—which dominate the pre-colonial written record—make no mention of traders or settlers occupying or using the Basotho’s land east of the Caledon River or cutting trees anywhere in that landscape. There were a few resident traders and their families in the late nineteenth century, but no accounts of wood sales. In the twentieth century, however, it is reported that traders established small woodlots on land allocated to them (Report of Review Mission 1980: 3). The primary consumers of trees in the land of the Basotho were the Europeans who resided there—the vast majority of whom were missionaries.

In the nineteenth century Lesotho landscape a clash between a system of rights to trees based upon principles of common property and that of individual ownership arose. To the Basotho, all trees were protected by the Chief for the entire population, while missionaries understood trees growing wild in a landscape to be unowned, and their use uncontrolled. It is quite possible that the missionaries were initially unaware of the Sesotho system, and that when they learned of it, did not respect it. For whatever reason, in those parts of the

landscape dominated by missionaries, the Sesotho system of rights and conservation was overwhelmed by an alien culture's assertions of need and rights, to the detriment of the tree population.

Afforestation and Denudation in Late Nineteenth Century Basutoland

Tree planting in Lesotho became a British government concern when, after years of wars with (largely Dutch) settlers who had encroached on the Basotho's territory, the Basotho signed a treaty with the British and entered a protective alliance in 1868. With defined boundaries, Lesotho became the Protectorate of Basutoland (see note 1 for clarification of names). There was a regional interest in tree planting—settlers, government officials and Africans living in the Cape Colony and Orange Free State had begun to plant trees, including imported exotics. The first British High Commissioner's agent was Col. Charles Duncan Griffith (1871–1881) (Haliburton 1977). Griffith was also concerned about a lack of trees for firewood and timber, a concern of the emerging profession of scientific forestry. Well liked by the Basotho (Haliburton 1977), he made annual addresses to the nation. In his 1876 address Griffith stressed the need for afforestation, and offered a prize to those who planted and took care of the largest number of trees. He thought the most desirable tree to propagate was *Eucalyptus globulus*, because it grew quickly and had many uses. Griffith also believed that prizes should be offered for 'plantations of oaks, acacias, poplars and willows, etc' (Preen 1876 in Germond 1967: 56). This interest in tree planting may have been prompted by queries from London, which were, in turn, prompted by awareness of concerns raised by European scientific foresters about the relationships between forests, moisture and climate change. John Croumbie Brown, the Cape Colony Colonial Botanist from 1862 to 1879, was well aware of these debates and, as a former missionary, was also familiar with Moffat's ideas and the desiccationist discourse that had developed earlier in the Cape Colony. As a result of pressure Brown applied to the officials in London, the British government began to question all colonial governments about their plans for and spending upon, afforestation (Grove 1989).

Whether stimulated by the British colonial government in London prompted by international desiccationist concerns reformulated in South Africa, or by local observation and belief, tree planting for timber and fuel wood production, like other Basutoland government activities at this time, was not formulated into a coherent programme. Its implementation depended very much upon the interest and energy of a particular Assistant Commissioner⁷ and his budget. Colonial Annual Reports in the 1890s noted that in Quthing (on Basutoland's southern border with the Cape Province), Basotho planted trees made available by officials, with interest primarily being in poplars for building

poles and a few kinds of fruit trees (Colonial Annual Report 1894–1895; Acting Resident Commissioner 1889–1890).

A more formal effort to plan for afforestation was made by Basutoland's Resident Commissioner Sir Marshall James Clarke (1884–1894) in the early 1890s. Concerned about 'denudation', he asked the Cape Woods and Forests Department for advice. In reply he was sent 'a very interesting paper ... giving an account of some successful efforts which had been made in dealing with a similar destructive process in the valley of the Rhone and other places in the South of France' (Sloley 1902). These experiences underpinning European scientific forestry discourses were not useful for Lesotho's landscape, and the paper's recommendations were not followed. So, despite regional embrace of international denudation and desiccation narratives which posited afforestation for timber production as a universal panacea, when these ideas reached Basutoland, conditions made their application difficult.

From a tree's perspective, the nineteenth century closed—and the twentieth century opened—dramatically. The winters of 1897 and 1902 were very cold—some said the coldest on record, others that it was the coldest in living memory. Such heavy snow fell in 1902 that in Sesotho it was called the year of great snow (*lehloa le leholo*) (Germond 1967). Two feet of snow accumulated in the lower parts of the Quthing District, and to such depth in the mountains that herd boys and their livestock were buried and killed; on several successive nights temperatures as low as 9 F (-12.7 C) were recorded in the lowlands (Colonial Annual Report 1902–03). Entire groves of wild olive and other indigenous trees died. In southern Basutoland, where wild olive groves had grown on mountainsides and along the Orange River, tree mortality was particularly severe. The olive groves along the Orange River known as the Seapala Forest were 'buried forever under a deep mantle of snow' (Germond 1967). Imported trees, such as eucalyptus and orange, growing near mission stations and in government plantations and nurseries, were killed as well (Ehlenberger 1903 in Germond 1967).

The year 1897 was also the year that the rinderpest epizootic reached Basutoland, killing most of the cattle. Since dried manure was traditionally burned for heating and cooking, the sudden and extreme loss of cattle placed enormous pressure on scarce trees to provide fuel. Basotho became, out of necessity, 'burners of wood' until their livestock recovered (Germond 1967). Germond (1967) notes that the winter of 1902 was distinct from that of 1897 because, this time round, the missionaries reported, people dug up the roots as well as cutting trunks and branches of trees and bushes. Some missionaries protested, but ultimately bought the roots and stumps for fuel because of the severity of the cold (Germond 1967). Thus, the *maboella* system apparently collapsed temporarily under the extreme climatic conditions. Large quantities of burnable vegetation were consumed and many wild olive groves disappeared, but some trees and shrubs did survive to carry on the memory, at least, of a landscape that once had specific wooded locations.

Professional Forestry and Expert Advice

In late nineteenth century Europe, Britain and the United States of America, there was great concern about the interaction between trees and climate, stream flow and soil erosion (Grove 1989, 1995; Saberwal 1998, 1999).⁸ This was also the time when the natural sciences became professionalised, and the concept of scientific expert opinion was invented (Robin 1997, Tilley 2003). In the Cape Colony, a colonial botanist had been appointed in 1862, the position of Superintendent of Plantations at Cape Town was created in 1875, and the Superintendent of Woods and Forests in 1880.⁹ The former post was awarded to J. Storr Lister of the Indian Forest Service, and Count Vasselot de Regné, a French forester, was appointed to the latter (Grove 1989). Lister and the Count brought with them scientific forestry's interest in afforestation for the production of timber and wood products. The appointment of these two gentlemen further illustrates the argument made in Showers (2005) that as well as having developed an analysis from local events, the Cape Colony was connected to international ideas and concerns, which arrived in Basutoland with government officers and, increasingly, experts. Yet, the account which follows of the Basutoland government's twentieth century approach to trees is a demonstration of Saberwal's observation that however a dominant discourse has been constructed internationally, upon its arrival in a new location, it is modified by local conditions (Saberwal 1998, 1999). Internationally the usually undefined term denudation¹⁰ was linked to ills associated with an absence of trees, and its threat was used to underscore the urgency of implementing a range of policies and projects advocated by experts. In Basutoland, the 1890s concern about 'denudation' and a lack of trees for timber and fuelwood supplies continued in the twentieth century, variously referring to loss of vegetation and loss of soil, and invariably linked to predictions of catastrophic soil erosion.

William Willcocks, Managing Director of the Daira Sania Company of Egypt, included Basutoland as part of his 1901 mission to advise on the potential for irrigation in South Africa.¹¹ His report identified a physical, rather than social, reason for Lesotho's relative lack of trees: the predominance of porous sandstone rock underlying fairly shallow soils allowed soil water to drain away (Willcocks 1901). This was also why he felt that reservoirs essential for large-scale irrigation could not be constructed successfully in Basutoland. He also noted that trees and shrubs occurred in the landscape where non-porous dolerite intrusions caused subsoil water to collect. His report identified ravines derived from roads, paths and cattle tracks—not the lack of trees—as the cause of 'denudation', and recommended the immediate construction of physical barriers across these ravines to trap soil. Trees were to be planted in the trapped soil—willows and poplars in the damp ravines, and aloes and wattles in the dry ones. Willcocks additionally recommended that the sides of the

ravines be similarly planted, and that the areas worked on be fenced. Despite his geological explanation for the distribution of vegetation, Willcocks' brief discussion of Basutoland ended with a warning:

'The denudation of centuries has swept its steep hill sides clear of deposit, and the bare hills to-day are capable of doing little in the way of supporting life. Large parts of Greece may have suffered the same denudation. A corresponding fate undoubtedly awaits Basutoland unless immediate steps are taken to arrest the denudation which is everywhere apparent' (Willcocks 1901: 31).

The reference to the imagined fate of classical Greece links Willcocks' analysis to the larger European denudation discourse, but his recommendations for very specific, rather than general, tree planting, as well as the types of trees (and non-trees) suggested, reflect both modification caused by local environmental reality and a turning away from scientific forestry's concept of afforestation.¹²

Willcock's report was published in November 1901. In January 1902, the High Commissioner's office in Johannesburg arranged to send 250 copies of the report to the Resident Commissioner in Maseru (Perry 1902c). High Commissioner Alfred Milner's response to the report was a classic example of reactions inside an environmental degradation discourse and of the belief in the curative powers of scientific forestry. Milner assumed that an irrigation specialist based in North Africa could provide reliable, and expert, advice about 'denudation' in Basutoland after a brief visit. Perhaps persuaded by the allusion to ancient Greece, he accepted the urgency of Willcocks' observations, and responded by strongly advising the Resident Commissioner in Lesotho to seek scientific guidance for immediate implementation of the irrigation specialist's anti-erosion advice.

The picture he (Willcocks) draws of the future of Basutoland if something is not done to check the denudation of the country is a gloomy one, and, I fear it is not exaggerated. And the danger is of such magnitude that it can only be averted by extensive action. Under these circumstances it is a matter of serious consideration whether Basutoland ought not at once to obtain an expert in forestry to advise as to the best places and methods for commencing that system of extensive tree planting which ought not to be any longer deferred (Milner 1902).

The recommended anti-erosion measures were taken up by officials in the Basutoland government. The officer in charge at Quthing reported having begun experiments 'on the lines suggested by Mr Willcocks', and that although it was too soon to see results in 1902, he had no doubt that the approach would be successful in stopping gully growth because of the success of earlier plantings of American aloes and poplars in gullies (Colonial Annual Report 1901–1902: 38).¹³ Just north of the capital of Maseru, at Teyateyaneng, Assis-

tant Commissioner Boxwell had enthusiastically applied Willcocks' ideas of fencing and tree planting to a gully whose head lay on the government reserve (Perry 1902a). It was recommended that he travel to Thaba Nchu in the Orange Free State to learn from their experiences in gully control and to obtain trees (Perry 1902b). Willcocks himself had noted 'successful examples of the value of poplars and willows in stopping denudation' near the Assistant Commissioner's residency at Mohalie's Hoek, as well as at Ficksburg, in the Orange Free State (Willcocks 1901: 31).

Resident Commissioner Herbert C. Sloley (1902–1915) was less than convinced that all of Willcocks' afforestation ideas were appropriate. He argued that establishing woodlots on pastureland in a landscape with finite grazing areas would certainly be opposed, and that without individual ownership of land, people would be unlikely to be interested in personally planting trees. He further argued that while Basotho acknowledged the dangers of the denudation process, they were unlikely to work to stop it because they had enough grazing and agricultural land. Rather than a large-scale project, Sloley proposed a 'first practicable step' of 'attending to some of the ravines in the neighbourhood of various magistracies' (Sloley 1902). To that end, he requested £ 1000 for a forestry project that included tree planting, fencing and making barriers.

In Johannesburg, Lord Milner agreed to fund the project, but felt that more should be done. Whether or not he had understood the physical limitations suggested by Willcocks and socio-economic constraints expressed by Lesotho—based Sloley (or that the proposed project was a departure from scientific forestry's emphasis on timber production), Milner embraced the dominant international belief in the importance of forests and the need for professional supervision of tree planting.

'I still feel that pretty soon a somewhat larger and bolder policy in this matter would be desirable. I quite recognise that afforestation is never popular because it promises no quick return. But what is the good of being a paternal Government if we cannot go in for improvements essential to the welfare of the country, which the people are too shortsighted to undertake. I think we want something more than individual sporadic efforts to plant trees here and there, although even these are by no means to be despised. At the same time, I admit that I cannot give practical effect to these ideas at the moment, as I am still looking out for Foresters for the two new Colonies, and have not got a man for Basutoland. I should be disposed, however, to engage one as soon as a man of proved capacity could be found, although in the first instance only as a temporary measure. I do not wish to burden the revenues of Basutoland with a permanent Forester, unless a definite policy of afforestation is decided upon in certain districts' (Milner 1902).

Forestry in a Grassland

Whether Milner made a distinction between ‘afforestation’ meaning the creation of forest cover, and ‘afforestation’ meaning planting individual trees, is unclear. But Basutoland officials did not embrace his internationalist concern, and proceeded slowly. Experiments in gully control allowed different species of trees to be evaluated for hardiness. Except for *Eucalyptus pauciflora*, trees imported from Australia had proven unable to withstand the severe cold in Quthing District, but various species of pine, cypress, poplar and willow had survived (Colonial Annual Report 1902–03). As the scale of tree planting increased in the following years, nurseries were required. In 1903–04 an experimental nursery garden for growing young trees and trying various seeds was established at Mafeteng, where a ‘large number’ of young trees were planted; in the Maseru District 5000 trees were reportedly planted (Colonial Annual Report 1903–04: 37, 31). The experimental work in gully control begun in Quthing was deemed a success; continued activity would require more funds. The following reporting year lack of fencing on the Maseru Reserve (government land, see note 1 for explanation) resulted in stock damage, but tree planting activities continued, and young trees were given away for free to encourage individuals to plant trees. In Mafeteng, thousands of trees were planted on the Reserve and elsewhere, and the tree nursery continued to do well (Colonial Annual Report 1904–05).

Consistent with the moral and aesthetic ideas associated with trees in a landscape, Resident Commissioner Sloley’s opening address to the Council of the Basotho Nation in 1903 mentioned that ‘tree planting would improve the country’ (Resident Commissioner 1903) and the 1904–05 Annual Report described ‘the pleasant work of tree planting’. A contrast to Willcocks’ alarmed description of a collapsing landscape, but confirmation of the importance of trees, can be found in Thomas Owen’s observation in 1904 that ‘the landscape might be described as beautiful were it not for its barrenness. Whether the wood has been destroyed, or not, I do not know, but there is scarcely a tree to be seen, although (except on cultivated land) the surface is covered with scrubby bush’ (Thomas 1904: 233–234).

Tree planting was needed to achieve a European notion of a proper landscape, rather than because of an absence of vegetation. Desiccationist and degradation narratives gave superiority to trees over other forms of vegetation, and scientific forestry advocated large-scale afforestation for timber production. In Basutoland tree planting activities increased each year, tree nurseries were established in several districts, and trees were issued to individuals free of charge. There are reports of thousands of trees being planted in the first decade of the twentieth century (see Colonial Annual Reports, especially after 1907–1908). Yet, this activity was not connected to international concerns about wood production, as it was in Gold Coast (modern Ghana) or India. ‘Basutoland is not greatly concerned at present with questions con-

nected with the world's timber supply and the policy necessary to augment it. It has, however, very special interest in supplying itself with a different fuel from that now generally used [dried dung]' (Heywood 1908: 8).

Basutoland authorities sought expert advice before taking up Lord Milner's earlier suggestion of engaging a forester. For, along with enthusiastic accounts of tree expansion, there began to be notes of tree mortality and the failure, after heavy rains, of the structures that Willcocks had suggested be built in gullies (Colonial Annual Report 1906–07). In 1908 the Conservator of Forests for the Eastern Conservancy of Cape of Good Hope Government, A.W. Heywood, was asked to travel to Basutoland and report on (1) the best available sites for tree planting; (2) the best trees to plant throughout the country; (3) the necessary steps to be taken to establish a small forestry department (Heywood 1908). In his report, Heywood observed that tree planting had been embraced by both officials and the Basotho; police camps and magistracies were well-planted, and the Basotho 'to a very large extent ... supply themselves with timber and wattles for building their houses by growing white poplar in all kinds of situations and they seem to have discovered that rocky ravines and steep stony slopes are very excellent planting places. Many villages perch on rocky spurs jutting from the mountains have pines, gums, silver wattles and poplars, whilst the yellow peach is very common' (Heywood 1908: 11). Peaches were also often planted in fields.

Yet, after discussing factors limiting tree growth and the extreme competition for land between agriculture and livestock, Heywood concluded that 'regular plantations' would have to be on a 'somewhat restricted scale' (Heywood 1908: 31). The best locations for tree planting would be in the kinds of locations that Basotho had reportedly planted trees on their own: 'rocky, stone strewn slopes... below the sandstone ledges and down to the level of cultivation' (Heywood 1908: 31–32). He thought hillsides were more suitable locations than more level areas, and trees planted there would not interfere with cultivation. Heywood also stated that research should be implemented to study the initiation and growth of gullies and measures for their control, since there was little regional practical experience and a paucity of literature on the subject. To accomplish this task, as well as to develop tree nurseries and tree planting programmes and advise Assistant Commissioners, a Forestry Officer should be appointed (Heywood 1908: 54).

Heywood's recommendations were well received (Sloley 1908), since the Basutoland administration's interest in tree planting was increasingly stimulated by concerns about soil erosion.¹⁴

'The erosion of the soil, which has been gradually getting worse and worse, is a serious feature in the agricultural development of the country, and the fact that Basutoland is practically devoid of trees and undergrowth renders the soil an easy prey to the torrents of water that pour

over its surface in the rainy seasons' (Colonial Annual Report 1911–1912: 6).

Individual trees and forests especially were believed to have the ability to limit (if not stop), as well as prevent, soil erosion. Forestry narratives related to scientific forestry and timber production first coincided with and then were replaced by crisis narratives of soil loss, with tree planting as mitigation.

The High Commissioner in Johannesburg subscribed to international beliefs about the importance of forest cover, but had to align his advice with the interests of Basutoland officials. The increasingly popular narrative of overpopulation provided an opportunity to adjust his recommendations. Although afforestation was important, he concluded that it would be difficult to attempt on a large scale because of 'overpopulation' and 'the enormous number of stock required by such a population' (High Commissioner 1911). In a letter to his superior at the Colonial Office in London, the High Commissioner combined his desire for afforestation with Basutoland officials' concerns about erosion:

'I am convinced that shelter plantations would effect a great improvement and at the same time would reclaim a great deal of land now devastated by dongas [gullies]. I am making inquiries with the object of securing the services of an officer with a combined knowledge of agriculture and of forestry, in order at once to promote the introduction of improved methods of farming, and advise, with due regard to agricultural necessities, on the possibility of some general plan of afforestation, which would have the effect as well of obviating the scarcity of fuel and consequently of increasing the supply of manure, as of regulating the flow of storm water into the lowlands' (High Commissioner 1911).

Government Trees

In a modification of Heywood's recommendations, the Basutoland government appointed L. F. Wachter as the first Agricultural Officer in October 1911, with responsibilities for gully prevention and the establishment of tree nurseries in each district, as well as for agriculture (Colonial Annual Report 1911–1912; Wachter 1913, 1934). Until the creation of this position, all erosion control and agricultural work had been done either by the Principal Veterinary Officer or the Assistant Commissioners (see note 7 on Assistant Commissioners). The new Agricultural Officer's staff consisted of two white foremen: the caretaker of the government tree nursery in Mafeteng and the man in charge of a Basotho work gang employed on tree planting and donga prevention work (Wachter 1934; Pim 1935). From 1911 to 1915, with the help of paid Basotho work gangs and prison labour, Wachter implemented examples of gully prevention work. He also established tree nurseries in districts that did not already have them, so that trees could be provided to area residents and for

planting in erosion-control projects on government reserves. Lack of funds prevented expansion of his projects, but Wachter took 'every opportunity to tour the country and lecture' Basotho about the importance of tree planting for erosion control (Wacher 1934). Articles on tree planting, ploughing and other subjects were also published in the 'native newspapers' and in pamphlet form (Resident Commissioner 1914).¹⁵ Wachter's service, which continued until 1934 (broken only by war leave from 1915 to 1920), provided a continuity of belief and practice.

The use of trees in gully prevention and stabilization was at an experimental stage when the Agricultural Officer began work. Attention was first directed towards government reserves, or camps (land that had been allocated by the Basotho to the British for government structures). The approach to soil protection was to fence severely eroded areas, construct small walls or dams in gully bottoms to trap silt, and plant trees on the sides of the gullies 'to prevent lateral denudation' (Pim 1935) and in gully bottoms once silt had accumulated—essentially Willcocks' 1901 recommendations.

Initial work was reported on the Maseru Reserve and at Teyateyaneng. In Maseru, two gullies were fenced and structures were built (or existing ones repaired) in the bottoms to trap silt for future tree planting. The fenced area was then planted with poplar, willow, wild cherry and robinia, and the banks were planted with American aloe and prickly pear. Approximately 3000 pine trees were planted along the sides of the gullies in the hopes of slowing flowing water (Colonial Annual Report 1912–1913). In Teyateyaneng a badly gullied piece of land was fenced 'for experimental purposes' and planted with 30,000 poplar trees (Colonial Annual Report 1912–1913: 7). The Inspecting Officer Richard Beresford reported great success, with thousands of trees planted around fenced gullies in northern Basutoland (Beresford 1913).

In support of this effort, the High Commissioner in Johannesburg, Viscount Gladstone, recommended that funds be allocated for three or four work parties to fill incipient gullies and construct stone-lined channels that would direct flowing water. He argued that if each work party cost £ 2000 per year, then an allocation of £ 10,000 per year for gully prevention would mean that ten or twenty gullies could be attended to each year. He thought that gully heads should be fenced and planted with trees, shrubs and grasses to 'arrest' 'soil wastage'. The fence materials could be taken up after four years and used again at a new location (Gladstone 1912).

Tree production and planting increased as the tree nurseries developed and Wachter stimulated the Assistant Commissioners, but the budget allocation of £ 1200 for agriculture and tree planting and £ 500 for gully prevention limited the scope of activities (Wacher 1934). The total number of young trees said to have been in the nurseries rose from 136,000 in the 1920–21 reporting year to 357,650 at the end of 1927 (Colonial Annual Report 1920–1921, 1927). Forty to fifty thousand trees were reported to have been given to individuals (Europeans as well as Basotho) each year, and between four and six thousand trees

per year were planted out in connection with gully control on government land (Colonial Annual Report 1920–1921–1927).

Tree planting was formalised and moved to a much larger scale with the initiation of three different programmes: the National Soil Conservation Programme (1936–1955), the Vegetable Garden and Fruit Tree Programme (1935–1951) and the Village Tree Planting Campaign (1942–1955). Table 1 summarises these programmes in which thousands of trees were planted in gullies, gardens, and fields—trees for fuel and trees for fruit, but, above all, trees for soil protection. Tree planting was ‘one of the principal anti-erosion measures’ carried out on severely eroded land (Department of Agriculture Annual Report 1936–37: 78) because trees were believed to hasten the silting of gullies as well as protect eroded land (Department of Agriculture Annual Report 1938). In the first year of the National Soil Conservation Programme, 31,226 trees (pines, poplars, gums, robinias, acacias and deodars) were planted, including more than 6500 in two fenced areas below the Paramount Chief’s compound at Matsieng and 16,500 poplars in Teyateyaneng District gullies (Department of Agriculture Annual Report 1936–37: 78, 79). Initially, newly constructed conservation terraces also had trees planted on them to emphasise their demarcation—9736 peach trees in 1938 and 1939 (Department of Agriculture Annual Report 1938; Showers 1982). By 1955, 969,188 trees had been planted in connection with the soil conservation programme (for annual data see Bureau of Statistics 1965).

Tree planting was also central to the Vegetable Garden and Fruit Tree Programme, which coincided with the advent of the national soil conservation scheme. The promotion of home gardens was seen not only as a mechanism for increasing food supplies and cash crops, but also as a way to teach princi

Table 1
Government narratives and tree planting in Basutoland, 1935–1966

| Government Narratives: soil erosion crisis, fuelwood shortage | | | | |
|---|-----------|-------------------------------------|-----------------------|---------------|
| Programme Name | Dates | Reason for planting | # Trees planted | Tree survival |
| National Soil Conservation | 1935–1955 | Anti-erosion | 969, 188 | n.d. |
| Vegetable Garden and Fruit Tree | 1936–1951 | Protect soil fruit production | 60,141 (mostly peach) | n.d. |
| Village Tree Planting Campaign | 1942–1955 | Alternative fuel end manure burning | > 18,000,000 | Low |
| General Tree Planting | 1960s | Protect soil, provide fuel | 1,500,000 | 70% |

By 1968, Total Trees Planted (estimate, all programmes): 50 million; Survival rate: 10%

ples of crop husbandry, soil protection and land reclamation. Agricultural officers and demonstrators showed gardeners how to construct terraces in order to transform 'apparently worthless' land into productive use (see Showers 2005 for photographs). A key feature was the distribution of vegetable seed and fruit trees, at first for free, and then for sale. Peach, apricot, fig and quince seedlings were given out as rewards to those who made gardens with terraces, dams and compost pits. Officials reported astonishment at the programme's success—by 1938 more than a thousand gardens were estimated to have been established independent of any government help (for garden programme details, see Department of Agriculture Annual Report 1935–1951; Showers 2005). Between 1936 and 1951, 275 quince, 500 apricot, 950 fig, 3340 peach and apricot, 54,876 peach trees, and 9830 grape vines were distributed to gardeners (Department of Agriculture Annual Report 1936–1951; Showers 1982). The fruits of this scheme can be eaten in Lesotho today.

A village tree planting campaign was part of the effort to encourage Basotho to put manure on their fields, rather than a direct attempt at erosion control or afforestation. If trees provided an alternative source of fuel, it was thought, Basotho could abandon their tradition of burning dried manure and put it on their fields instead. The campaign began in November 1942 (the beginning of the 1942–43 growing season), when chiefs and headmen were asked to 'beacon off' (demarcate) suitable land for tree planting, assigning one acre to each family. Seven months later, 6,798,339 trees had been planted, primarily in the north of the country, and a 'large number' had become established (Department of Agriculture Annual Report 1943). Planting was to continue for a further seven years. Species varied over time, but included white poplar, willow, silver wattle, pine, locust, *Eucalyptus sideroxylon* and deodars.¹⁶ Officials planted Osier willow cuttings in moist locations to provide material for basket making (Department of Agriculture Annual Report 1944, 1945). By the end of 1945, more than 18 million trees were reported to have been planted in this programme alone (See Department of Agriculture Annual Report 1942–1955; Showers 2005).¹⁷

Tree Survival

Trees planted by the government in various programmes had difficulty surviving in Lesotho's climate, and livestock were a constant threat. Frequent dry spells and years with low rainfall, as well as cold winters, took their toll. Annual Reports from the first half of the twentieth century note that cold spells, droughts and floods killed trees or damaged anti-erosion works. In 1912/13 trees experimentally planted in Maseru gullies succumbed to drought, and 'upwards of 500 well grown trees' died in Maseru in the dry year of 1913/14 (Colonial Annual Report 1912–13, 1913–14: 7). A difference in tree species survival was noted after the great drought of 1932/33: *Pinus insignis* and *pinaster* continued to die in large quantities, while *Cedrus deodara*, *Pinus*

halipensis and *Eucalyptus sideroxylon* survived (Colonial Annual Report 1933). Sir Alan Pim noted in his economic survey report that the large majority of seedlings in existing nurseries belonged to species with limited survival rates, and had to be discarded (Pim 1935). The 1951 drought in November and December killed young trees, and in the mountain areas where soils are shallow (limited ability to store water), ‘heavy mortality’ occurred in plantations that had been established for eighteen years (Department of Agriculture Annual Report 1951).

By 1957, in addition to problems of soil moisture, officials expressed an awareness of the limits cold placed on afforestation efforts. Autumn-planted poplars had been found to have low survival rates, so planting dates would be shifted to the spring (Department of Agriculture Annual Report 1957), and a technology for mulching conifers to protect them from the cold was devised that helped with tree survival (Department of Agriculture Annual Report 1958). The problem of livestock killing young trees by browsing was recognised early on. Turn of the century gully reclamation experiments on government reserves were fenced, as were initial reclamation areas in the first years of the national soil conservation programme. The provision of fenced land was used in the 1950s as an incentive to induce participation in the village tree-planting scheme (Colonial Annual Report 1955).

Documented constraints to tree establishment and growth did not inhibit the implementation and continuation of government tree-planting programmes. A census of trees planted in the first four years of the Village Tree Planting Campaign was attempted in 1946, but the spreading growth habit of the most commonly planted tree (poplar) and a lack of staff made tree counting impossible. Although unquantified, mortality was found to be high due to drought (particularly in 1945) and, to a lesser extent, livestock (Colonial Annual Report 1946: 7; Showers 2005). The programme continued for a further ten years. Subsequent assertions of tree survival and mortality rates are difficult to interpret, since numbers provided are often estimates reflecting many biases. For example, the 1960 Economic Survey Mission reported that approximately 1,500,000 trees were planted each year, with a survival rate of 70% (Economic Survey Mission 1960). But in 1968, Bawden and Carroll (1968) estimated that about 50 million trees had been planted in a range of programmes, but only about 10% had survived.

Basotho Ambivalence towards Tree Planting

Just how many trees Basotho planted—and where—is difficult to determine. There has never been a comprehensive survey of private tree planting or ownership (FAO 2001), and statistics in colonial annual reports are too aggregated for interpretation. Cape Colony Forester Heywood described the Basotho’s tree planting in gardens for fruit and on stony land for fuel, and noted that a ‘poplar bush is highly prized property and ownership frequently forms the ob-

ject of litigation' (Heywood 1908). Basotho with larger plantings sold poles. Colonial annual reports in the first quarter of the twentieth century recorded the distribution of trees to Basotho in each district. Poplar trees for fuel were particularly desired in the cold, mountainous southern Quthing district. So consistent was this tree planting that the 1933 annual report noted 'white poplar and weeping willow have been planted by the Basotho to a considerable extent and are most useful in the prevention of soil erosion. They are also used as fuel and as timber for hut-building' (Colonial Annual Report 1933: 10). The Basotho's interest in fruit trees, demonstrated in the garden programme, continued through the 1960s. The demand for fruit trees—particularly peaches—was so great in the mountain village of Mashai's newly established nursery in 1953 that officials recommended the development of more mountain nurseries exclusively for peach trees (Department of Agriculture Annual Report 1953). Officials also reported being unable to supply enough fruit trees for sale at a nominal price in the lowlands. In 1960, demand again exceeded supply: around 21,000 fruit trees imported from the Orange Free State sold out at the price of one shilling per tree, and more could have been sold had there been more trees (Department of Agriculture Annual Report 1953; Colonial Annual Report 1960). A 1989 survey found that 86% of all rural households had planted at least one tree, 68% of which were fruit trees. Most of these (87%) had been planted in domestic space near the house (Hall and Green 1989). Rights to personally planted trees could become contested when the planter died, as the land on which the trees grew could be reallocated (Turner 1988).

This clear eagerness to plant trees for fruit or fuel in domesticated spaces and on land not allocated for other purposes was not extended to tree planting explicitly for erosion control or establishing plantations. Tree planting in these locations was complicated by questions of purpose, land shortage, and rights. The official record contains little recognition of the underlying indigenous system of land use allocation and rights to trees as coherent and possibly beneficial. A major exception is the 1938 report by R.R. Staples and W.K. Hudson, which stated that 'it is customary for these patches of bush to receive a large measure of protection by chiefs and headmen, many of whom only allow cutting for fuel during the winter months on a rotational basis. It would be an advantage if this use custom were made universal. It is already against Basuto custom to uproot trees' (Staples and Hudson 1938:14–15). This recommendation was neither acknowledged nor followed in subsequent years when tree planting campaigns were mounted. Instead, annual reports were full of statements such as 'the great difficulty that has to be coped with is the apathy and indifference of the natives to the evils of soil erosion and to the question of afforestation generally, the great commercial importance of the latter being not realised by them at present' (Colonial Annual Report 1912–13: 7). Cultural miscommunication, rather than ill intent or revenue generation, was the context of tree planting.

Officials of the Agriculture Department worked tirelessly to persuade Basotho about the relationship between soil erosion and the lack of trees. 'They are shown the value of planting suitable trees where dongas have already formed, and the dangers of careless ploughing and having many needless cattle paths on land that is yet free from erosion. In spite of all of this, however, there is no definite improvement to be reported, and fresh dongas are continually being formed and allowed to grow, without any effort on the part of the natives to combat their progress' (Colonial Annual Report 1929: 9). The Basotho's lack of agreement with colonial beliefs about the causes of soil erosion or the best approaches to prevention and reclamation have been discussed elsewhere (Showers 2005), but the Basotho's opinion about tree planting as an approach to erosion control was not considered. That one component of their reluctance to planting trees for this purpose could have been based upon observations of tree survival rates and of tree-soil interactions should be investigated in future. It is worth noting here Bawden and Carroll's (1968) observation that 'exotic trees such as eucalypts and Australian wattles used to be planted, but the practice has been discontinued as these trees are demanding on the soil and provide such a sparse litter that erosion continues even under their cover.'¹⁸ Green (1991) stated that *Eucalyptus sideroxylon*, widely planted in the 1950s, was not used by the forestry department in the late twentieth century because of its great allelopathic potential. If these problems were obvious to Basutoland and Lesotho officials, they certainly would also have been to Basotho who lived and worked in the landscape. No explanation seems to have been sought as to why there was so little enthusiasm on the part of the Basotho for anti-erosion tree-planting activities. Neither the washing out of conservation structures nor the extremely high rate of tree mortality caused officials to reevaluate their programme. So strong was the narrative about trees and soil protection that structure building in gullies continued, and tree planting was a fundamental component of soil conservation activities.¹⁹

More obvious, and better documented, is the Basotho's reluctance due to the conflict for scarce land among other land uses, such as agriculture, grazing, or thatching grass production, and tree planting. The Agricultural Officer complained to the Basutoland National Council that when he suggested that people plant trees, they replied 'we have got no place to plant trees, we have no grass for our oxen even to make them fit to pull the plow' (Agricultural Officer 1931). Nevertheless, the Village Tree Planting Campaign called for one acre of land to be allocated to each household for tree planting—not simply eroded, unproductive land. No attention was paid to the fact that there had been at least fifty years of direct competition between agriculture and livestock for land (see Showers 2005). Large acreages for woodlots could only come out of the areas near villages used for grazing, which were reported to have been insufficient by the early 1930s. The 1939 observation that the 'anti-tree planting spirit' was in decline because 'in most areas it is not the case of the Department begging for permission to plant trees in very badly eroded ar-

eas, but of the Natives offering these areas for tree planting' referred to Basotho agreeing to plant trees on land that could no longer support crop or livestock production (Department of Agriculture Annual Report 1939).

Another dimension of the disinterest in cooperating with various official tree planting activities was linked to confusion about rights to both the newly planted trees and the land on which they were planted. In a discussion at the Basutoland National Council's twenty-sixth session in October 1931, Chief Masupha remembered that in the days of Paramount Chief Letsie II (ruled 1905–1913), the Chiefs in the Council had been asked to cooperate with the Resident Commissioner and allocate land for tree planting to prevent gully development. Promises were made that the allocated land would not be taken away from the Chiefs. With this assurance, Chief Masupha had supplied land on the eastern side of the government reserve at Teyateyaneng, and trees were planted. After the trees had grown, the original agreement was forgotten, even denied. Chief Masupha was told that the land was no longer his, and he had no rights to the trees: his land had become a park. This, he declared, is why people were reluctant to participate in government tree planting schemes (Masupha 1931). Government officials did not seem to appreciate Chief Masupha's point. Instead, they concluded that it was the allocation of rights to trees under common property traditions that inhibited individual Basotho. 'Every facility is given to Basuto agriculturalists to encourage them to undertake tree planting on a bigger scale, and it is gratifying to note that the number of trees issued yearly shows a steady increase. Communal land tenure and the consequent inability of the individual to fence his tree plantation, thus leaving it open to the attack of herds of cattle, sheep and goats, account to a great extent for the apathy displayed by Basuto towards this department of agriculture' (Colonial Annual Report 1931: 8). The lack of response to Masupha's charge that the result of government tree planting was a loss of access both to promised trees and land, resulted in an observation that Basotho 'resent any sort of enclosure of the land', were suspicious of fencing, and suspected that tree planting was an assertion of ownership (Milligan in Pim 1935: 136).

Participation in the 1942–1955 Village Tree Planting Campaign was compulsory (FAO 2001). Cautious cooperation soon became refusal to participate. Once again ignoring the common property argument put forward by Masupha, the Administration, noting 'a certain amount of passive opposition from some quarters', and changed the system of tree ownership from communal to individual in 1949 (Department of Agriculture Annual Report 1947: 12). The officials' hope that this would lead to greater interest being taken in the trees' survival was proven unfounded; the tree planting campaign dwindled due to lack of interest (Department of Agriculture Annual Report 1949). By 1953 government officials acknowledged that the Basotho had little interest in timber production. The collapse of this programme is in sharp contrast to the success, during the same time period, of fruit tree planting discussed above. The 'forestry problem' was not a lack of interest in trees.

Forestry in Basutoland and Lesotho

The idea of what constituted forestry changed over the years. There were advocates of massive tree planting, but the reasons for attempting such projects shifted. Initial hopes of plantations for commercial exploitation gave way first to ideas about local fuel production and then the establishment of large areas of forests for protective purposes. Despite plans and projects, efforts to promote conventional ideas of forest development failed. Instead, forestry became tree planting, and tree planting was an activity largely connected to soil conservation. As Independence approached, tree planting in Lesotho continued to be primarily associated with government-sponsored soil conservation projects; tree plantations with the purpose of 'supplying forest produce' locally were relatively few (Poynton 1966). It is significant that organized tree planting was largely associated with land allocated to the Basutoland government, or under its control through project implementation.

The Basutoland Protectorate was unique in having two governmental structures functioning in parallel. The British administration only had the authority to advise and persuade, rather than compel, Basotho chiefly structures to act (Pim 1935; Showers 2005). When their formal relationship began, the Basotho allocated land for the British government's functions, allowing it to do as it wished on that land (see note 1). But intervention in the larger landscape meant entering into the Sesotho system of governance, which required negotiation and consultation. From the written record it is clear that the British had little appreciation of the way a non-authoritarian chieftancy could function. As the Basutoland administration's interest in tree planting deviated from afforestation and controlling erosion on their reserves, and providing trees to individual Basotho to do as they wished, cultural conflict became a component of tree planting. The European concept of applying ideas of scientific forestry to increase the amounts of 'forest products' and planting trees in plantations and woodlots was not only inconsistent with Lesotho's ecosystems, but also with Sesotho notions of tree use and protection, ownership and control. The result of these fundamental differences in perception, together with the persistence of European narratives about the importance of trees and tree planting, was summed up in an FAO country report at the beginning of the twenty-first century: 'Government has always assumed the lead role in the development and maintenance of forest resources since 1878. This continues to be the case, with very little planting being done outside of government and internationally supported initiatives' (FAO 2001).

As long as Basutoland administrators set up demonstration projects on their land, and allowed Basotho to select those elements that interested them for use in their landscape, there was frustration, but not conflict. 'Although every facility is given the Basuto to encourage him to undertake tree planting on a bigger scale, the response is not yet all that might be wished for. There are, however, a number of small plantations all over the territory that have been

planted since the war and are now beginning to show up well' (Colonial Annual Report 1929: 9–10). That there were profound misunderstandings is evidenced in the description of the role of chiefs in two consecutive annual reports, where general statements were copied from one year's annual report to the next. In 1930 it was stated that 'Poplar groves and willow lined streams are common in some areas and are closely guarded by the local chief who *derives an income* from their sale as roofing beams for huts' (Colonial Annual Report 1930). But in 1931 this became '... closely guarded by the local chief *for the purpose of providing* roofing beams for huts and stables, etc' (Colonial Annual Report 1931: 8) (Italics inserted by the author). Although there may well have been chiefs who abused their traditional role and expected payment for wood, the annual report demonstrates a confusion between the expected role of chiefs in general, and the individual actions of a chief (or chiefs). Misunderstanding of the chief's role in traditional tree management helps to explain Sir Allan Pim's 1935 observation that ownership of the small village plantations that had been established '[had] been the subject of many disputes' (Pim 1935). This chiefly based system of managing trees as community property was observed to have been strong and functional in the late 1980s (Turner 1988).

Tree planting and afforestation remained a province of agriculture after independence in 1966, and the contestation between common and private property approaches continued as ideas of scientific forestry were resurrected. On 1 April 1973 the Government of Lesotho, the Overseas Development Administration (ODA) of the United Kingdom and the Board of Directors of the Anglo DeBeers Forest Services (Lesotho) Ltd (ABFOL) signed an agreement to create and fund the Lesotho Woodlots Project. The project was to last for thirteen years (until 31 March 1985) and culminate in the creation of a Forestry Division within the Ministry of Agriculture. This would be facilitated by the fact that the Project Manager was also the General Manager of ABFOL. The World Food Programme agreed to provide 'casual labour' to manage the woodlots through its food-for-work programme. Operating within the framework of the Ministry of Agriculture, but in 'close liason' with the Soil Conservation Division, the purpose of the project was to establish self-sufficient woodlots to produce and sell timber for poles and fuelwood (Report of Review Mission 1980:4). The woodlots actually had a dual purpose: supplying fuel wood and the creation of forests. As in the past, it was imagined that a local supply of fuelwood would result in villagers putting manure on their fields instead of burning it. Woodlots would create the mass of trees needed to justify a Forestry Division, for once established the woodlots were called Forest Reserves. Richardson (1983) noted that doing so was reasonable since the modern forest conservator 'is often responsible for establishing forest where none has grown before. Such is the case in Lesotho, where no natural forest exists'.

Woodlots were established where villages allocated land for them. Consistent with historical ideas about where trees should be planted, land allocated for woodlots was unfit for agriculture. Most of the woodlots established by 1983 were located in the lowlands on 'plateau tops, debris slopes below sandstone cliffs and on old arable land dissected by dongas' (Richardson 1983: 46).

Units of land greater than ten hectares were accepted as woodlots unless they were so eroded that conservation engineering was required. By the end of 1979/80, 2599 hectares had been planted in 148 separate woodlots ranging in size from less than ten hectares to more than one hundred (Report of Review Mission 1980), and by the beginning of 1989, 9000 hectares of trees were reported to have been planted (Bennett 1989). This apparent enthusiasm for woodlots must be moderated by the fact that the primary reason for agreeing to allocate (otherwise useless) land for a woodlot was the food-for-work programme that 'employed' villagers (mostly women) to plant and maintain them.

To ensure economic viability, trees were selected for woodlot planting based upon their growth rate and ability to survive pests and drought, but no attempt was made to find out what kind of trees Basotho might like (Report of Review Mission 1980). The project planted primarily seven species of *Eucalyptus*: *E. rubida*, *E. viminalis*, *E. bridgesiana*, *E. macarthurii*, *E. globulus* spp. *maidenii*, *E. camaldulensis* and *E. tereticornis*. On a much smaller scale, often on a trial basis, *Pinus radiata*, *Pinus pinaster* and *Populus detoides* were also planted (Tenei 1981). Under the Lesotho Woodlot Project the responsibility for tree protection after planting was changed from that of the colonial era. Before 1973, trees were 'handed over' to villagers a few years after planting, and it was up to them to 'manage the crop'. However, 'uncontrolled cutting, browsing and burning quickly destroyed most trees' (Richardson 1983: 45). From the outset of the Project, planted trees were fenced and there was 'close liaison with village leaders' (Richardson 1983: 45). Despite this intended goodwill, plantations were often set on fire by livestock owners angered by their loss of grazing rights and villagers who believed they should have access to the wood that was being produced on their land (Mokuku 1997; Report of Review Mission 1989).

In 1987 the plantation-based Lesotho Woodlots Project was absorbed into the Lesotho (Fuelwood and Poles) Forestry Project (LFP). LWP staff was required to work for both the project and the newly established Forestry Division (Bennett 1989), which had been created from the infrastructure established by the Lesotho Woodlands Project (FAO 2001). Although there was a 1988 mandate to implement a Social Forestry/Community Forestry rather than plantation management approach, the donors insisted that the ownership and control of the land allocated to woodlots be removed from local Chiefs and placed under the Ministry of Agriculture (Turner 1988). Legislation was also passed to protect government-planted trees: in 1978 the

Forestry Act, and in 1980 Forest Regulations (Richardson 1983). The 1978 Forestry Act gave absolute authority over the Forest Reserves to the Forestry Division—Chief Masupha’s 1930s experience was repeated. Government control was slightly relaxed under the 1998 Forestry Act, which placed ownership of trees in the hands of those who planted them, and allowed the transfer of ownership of trees, forest plantations or indigenous forest/woodland to groups or individuals for specified amounts of time under certain conditions. However, those who obtained this conditional ownership were required to manage the trees according to government specifications; failure to do so would enable government to cancel the ownership agreement and repossess the trees (FAO 2001). The momentum for government tree planting increased in the early twenty-first century as the importance of trees and tree planting appeared in policy documents such as the Poverty Reduction Strategy and Vision 2020; the updated and revised National Forestry Programme received support through FAO’s National Forest Project facility; and the Ministry of Forestry and Land Reclamation (created in 2003) set a target for planting 1.5 million trees annually, with a goal of increasing national tree cover from less than 1% to 5% by the year 2020. This, despite the continuance of another historical theme: of the 6131 hectares of woodlot established between 1973 and 1992, 4231 hectares required re-planting in 2004 (Kingdom of Lesotho 2004).

Discourse, Trees and Rights in Lesotho and Basutoland

Europeans and Basotho had very different ideas about rights to, and management of, elements of a landscape and an ecosystem as a whole. This difference was not clearly understood—or even acknowledged—by most of the people involved. Assumptions were made from one culture to another about ‘the way things are done’ and what is correct and incorrect. Without recognition of their existence, the two systems of perception, valuation and management persisted—clashing when activities or programmes were imposed, finding accommodation when adaptation was possible. Forestry narratives appear to have prevented individuals in both the Basutoland and Lesotho governments from understanding the responses of rural Basotho to afforestation initiatives, and forestry narratives prevented analysis of data suggesting programme failure. So strong were these narratives that as environmental reality modified practice, the narrative of trees as superior vegetation persisted.

These narratives were not of local origin. Officials of the Basutoland government were fully connected to early twentieth century international discourse about the importance of trees in storing water in soil as well as restricting its overland flow, thereby preventing erosion.²⁰ The 1908 report by Cape Forester Heywood devoted a section to the devastation in southern France that resulted from deforestation between 1852 and 1862 as an example of the role of forests in ‘checking torrents’, thus protecting mountain slopes (Heywood 1908: 48). In comparison, he stated that although Basutoland had

problems with gullies, it could not be 'reproached', since it never had had high timber forests. Official regional contact and discussion about vegetation and water movement came in the December 1921 visit of the South African Drought Investigation Commission to observe the gully prevention work (Colonial Annual Report 1921–22). Concern about the condition of the Lesotho landscape was great in South Africa because Lesotho contained the headwaters of rivers flowing into the Cape Province, Orange Free State and Natal. J. C. Smuts worried that 'Basutoland is being washed away at a colossal and irreparable scale, and that in a short number of years the sources of our rivers will dry up' (Smuts 1934). The first Agricultural Officer believed that 'tree planting is absolutely interwoven with agriculture' because it would prevent the gully erosion that drained the subsoil (Wacher 1931).

During the first half of the twentieth century, Basutoland government tree planting became closely associated with the agricultural activity of soil conservation, and less related to scientific forestry's primary concern—the provision of 'forest products'. Concern about denudation, degradation and soil erosion (particularly gully development) increased steadily. Trees were a common subject of discussion, for they were not only seen as a mechanism of gully control, but tree plantations were thought to have the power to prevent their initiation. Finally, it was imagined that with a supply of fuelwood, Basotho would put manure on their fields to improve soil fertility rather than burning it. However, Basotho carried on planting fruit and fuelwood trees near their residences, burned manure for fuel, and participated minimally in woodlot creation.

In the last half of the twentieth century, after Independence (1966), the idea of afforestation re-emerged as a fusion between scientific forestry's plantation approach and the locally well-established ideas about the benefits of tree planting. The government sought to establish woodlots for fuel production and soil conservation, and villagers agreed to their establishment on land they could not use as long as the woodlots provided food-for-work opportunities. The villagers carried on drying and burning manure, and resisted the woodlots when grazing was interfered with or wood was not made available. The impetus for Lesotho's late twentieth century tree planting continued to be international in origin, despite official independence. The Government of Lesotho had two sources of revenue: mine labour and foreign aid, and foreign aid was by far the largest. With international aid came international experts and their ideas about trees and forests, programmes, policies and legislation. The Americans, less interested in tree planting, provided the primary funding for soil conservation. But the British government, working in partnership with the Anglo-American Corporation, created the Forestry Division and influenced the writing of forestry and land tenure laws to support it. Woodlots became Forest Reserves, and their management shifted from that of plantations to Community Forestry. However they were managed, Lesotho remained a grassland, forests being an alien concept. That early twenty-first century Lesotho has Forest Reserves, Foresters and a Depart-

ment of Forestry and Land Reclamation is a statement of both the power of international narratives about the value of trees, and the power of international aid to enforce them, however socially or environmentally inappropriate.

Notes

1. The word Lesotho refers to the land of the Basotho. In 1868 the Basotho and the British entered a strategic and protective alliance, resulting in boundaries being drawn and the creation of the Protectorate of Basutoland. At independence in 1966, Basutoland was renamed Lesotho. In this paper, the name Basutoland will be used when referring to the period of British protectorate status. Lesotho will be used to refer to the land in pre- and post-British affiliation. This distinction is important, since Basutoland was never administered by the Colonial Office and the British had no authority over most of the territory. By treaty, the British were given specific plots of land for the establishment of administrative offices and residences, called Government Reserves, along the Protectorate's western border, and over which they had complete authority. However, Basutoland officials had no control over the rest of the Protectorate. They could only advise Basotho chiefs, not dictate to them. This allocation of land to the British government for its needs was similar to the allocation of specific pieces of land to various religious groups for the establishment of mission stations. It is, therefore, understandable that Pim (1935) would write that the British Administration 'commenced practically as a border administration semi-military in character, and for many years the police practically were the administration. A definite policy was laid down of non-interference in the internal affairs of the country.... [in 1934] the Government and Native organization still work practically independent of each other, and no attempt has been made to combine them into a real system of Government, or to make such modifications in the Native system as would render it capable of dealing with the changing conditions of modern times and with the effects of the introduction of a money economy and of contact with European institutions' (Pim 1935: 75–76). Lesotho, thus, never had a colonial government, so one cannot properly refer to a colonial era; the distinction between Lesotho and Basutoland is important.
2. For arguments about whether Lesotho is a grassland, and whether it could be or could have ever been forested see May (2000).
3. Tree names are confusing, since historical documents have a mix of common and scientific names, various authors correlate different scientific, common and Sesotho names, and common names are not always comparable. Sorting out scientific names is complicated by the multiple revisions by plant taxonomists, and some authors' use of generic terms like 'oak', 'cypress', or 'conifer'. Tree names have, therefore, been used as they appeared in the source material. Most of the government-planted trees were exotic, alien or introduced species from Australia, Europe/Mediterranean, and Central America. Sesotho and common names for some trees are provided in May (2000), Schmitz-Ruch (1984) and Tenei (1981). Mabile and Dieterlen's (1974) *Southern Sotho English Dictionary* translates Sesotho plant names into English and Afrikaans common names and gives scientific nomenclature. In an effort to provide some clarification, the following table was constructed using *Trees of Southern Africa* (Palgrave 1983, 1977), *Tropical Crops Dicotyledons* (Purseglove 1968) and *IUCN Directory of Afrotropical Protected Areas* (IUCN 1989).

| Common name | Scientific name | Sesotho name |
|----------------------------|-----------------------------|---------------|
| Conifer * | (see note below) | |
| Cheche, oldwood and ouhout | <i>Leucosidea sericea</i> | <i>Mosino</i> |
| Cyprus | <i>Cupressocyparis</i> spp. | |
| Deodar | <i>Cedrus deodora</i> | |

| | | |
|----------------------------|---|----------|
| Gum | <i>Eucalyptus</i> spp. | |
| Tasmanian blue gum | <i>E. globulus</i> | |
| Snow gum | <i>E. paucifolia</i> (also <i>E. pauciflora</i>) | |
| Red ironbark | <i>E. sideroxylon</i> | |
| Locust ** | <i>Robinia pseudoacacia</i> | |
| Oak | Not known | |
| Pines | <i>Pinus</i> spp. | |
| Cluster pine | <i>P. pinaster</i> | |
| Radiata pine | <i>P. insignis</i> | |
| Aleppo pine | <i>P. halepensis</i> | |
| Poplar | <i>Populus</i> spp. | |
| Grey poplar | <i>P. canescens</i> | |
| White poplar | <i>P. alba</i> | |
| Wattle | <i>Acacia</i> spp. | |
| Black wattle | <i>A. mearnsii</i> | |
| Silver wattle | <i>A. dealbata</i> | |
| Wild cherry | <i>Prunus sarotina</i> or <i>P. avium</i> | |
| Wild olive | <i>Olea europaea</i> subsp. <i>africana</i> | Mohloare |
| Willow | <i>Salix</i> spp. | |
| Osier willow | <i>S. viminalis</i> | |
| Cape willow | <i>S. mucronata</i> | |
| Weeping willow | <i>S. babylonica</i> | |
| Wild willow, Safsaf willow | <i>S. capensis</i> | Moluoane |

Non-tree plants:

| | | |
|-----------------|----------------------------|----------|
| Reeds | <i>Phragmites communis</i> | Lehlaka. |
| Thatching grass | <i>Hyparrhenia hirta</i> | Mohlomo |

*Conifer refers generally to cone-bearing evergreens with linear, needle-like or scale-like leaves, and includes cedar, fir, hemlock, juniper, pine, spruce and yew.

**Not to be confused with either the locust bean tree (*Parkia biglobosa*) or the locust tree, the chief source of South American copal (*Hymenaea courbaril*).

- For discussion of 'environmental nostalgia' and religious frames of reference among British Protestant missionaries see Endfield and Nash (2002).
- Consideration of theological differences between English and French Protestant missionaries, or psychological assessments of Moffat and Casalis, must await another authors' attention.
- For example, the relationship between trees and stream flow was only discussed in the last half of the nineteenth century. The earliest papers with possible intercontinental circulation were probably by Cleghorn et al. (1852) and Wilson (1865).
- Basutoland was divided into seven districts—Maseru, Leribe, Berea, Mafeteng, Mohalie's Hoek, Quthing and Qacaha's Nek. Each was headed by an Assistant Commissioner, who was responsible to the Resident Commissioner. District activities were funded through the Assistant Commissioner's budget. Although central to the British Basutoland Administration, Assistant Commissioners did not tour and had 'little more direct contact with the people than Political Officers on the border of India in their dealings with the independent tribes outside the frontier' (Pim 1935: 76). Assistant Commissioners' tree planting activities were, therefore, confined to the land allocated to each government 'camp' or Reserve. Administrative Officers had usually risen through the ranks of the police before joining the civil service, and were not generally well versed in agriculture or forestry matters (see also note 1).

8. For critical discussion of desiccationist discourse see Saberwal (1998).
9. For discussion of the arrival of colonial forestry bureaucracy, laws and reserves in the Cape Colony's Transkei region along Lesotho's southern border, where indigenous forests existed, see Tropp (2003). Cape Colony's Forestry Department, established in 1881, was the first forestry department in Africa. See Brown (2003) for discussion of the development of African forestry departments and the role of colonial science and scientific forestry in the establishment of forests and tree plantations. Because the British government did not create a forestry department in Basutoland, no direct comparisons can be made between regional forestry departments or policy development and tree planting or management in Basutoland.
10. Geomorphologists use the term denudation to mean 'the destruction of the landscape by the work of weathering, mass wasting, and erosion' Buckle (1978: 1).
11. It had long been assumed that one day Basutoland would be incorporated into South Africa's territory. See Showers (2005) for discussion and references.
12. European beliefs about the fate of the Greek landscape are discussed by Grove and Rackham (2001).
13. American Aloe probably refers to the plant also commonly called the American Agave, or Century Plant, that is indigenous to Mexico but can be found in the arid regions of southern North America and northern South America.
14. For discussion of colonial concerns about soil erosion and responses to it, see Showers (2005).
15. The many missionary groups in Basutoland emphasised education and literacy to read the *Bible*; by the turn of the nineteenth century Sesotho society had an active and literary elite. Willet and Ambrose (1980) provide a history of publishing in Lesotho. Printing presses were established by the Wesleyan Methodist (1834), Paris Evangelical Mission Society (PEMS) (1841) and the Roman Catholics (1872) to print both religious and secular books. A Sesotho translation of John Bunyan's *Pilgrim's Progress* from the Lovedale Institute was a best seller in 1873, with 367 copies sold. By 1894 the PEMS press sold 24,000 copies of 10 religious and school books. The first Basotho-owned printing works was established in 1904. Not all books published were by foreigners; the Golden Age of the Sesotho novel was from the 1890s through the 1920s.
The first African language newspaper in Africa, *Leselinyane la Lesotho*, was published in 1863 (and continues today). In 1904 *Naledi ea Lesotho* was published with both English and Sesotho articles; in 1911 *Mochochonono* began the English language *Basutoland News* started in 1927 and in 1933 *Moeletsi ea Basotho* was first published. By the mid-1930s there were five different newspapers in English and Sesotho, representing government, missionary and independent Basotho opinions.
16. It is interesting to note that Forester Heywood reported in 1908 that white poplar was generally considered to be a homely tree and was regarded by the Basotho as a pest in cultivated land and in gardens (Heywood 1908).
17. In 1981 remnants of the tree-planting campaign were found in Qacha's Nek, Quthing, Mochale's Hoek, Maseru, Leribe and Butha Buthe (Tenei 1981), proof that it was the programme, not the trees, that were disliked.
18. The 1960 Report of an Economic Survey Mission contested the 'doctrine of soil conservationists that tree cover helped to hold moisture in the ground, and to hold the ground under the trees' when it came to eucalyptus and wattle trees. 'Runoff from the frequently bare ground under such exotic species is high..... Basutoland is not a forest country and it would be a mistake to try and make it so. Trees would not only be less effective conservers of the soil than grass but would also have less economic value, for they would grow slowly and poorly (if at all) in the higher mountain areas' (Economic Survey Mission 1960). The role of litter in preventing erosion, and the erosive potential of raindrops falling from tree branches on bare ground, was demonstrated in New Zealand, where similar stands of trees

- were simply raked or not raked and erosion measured (Mosley 1982). The controversy over the utility of planting eucalyptus continued in the late twentieth century, see Green (1991).
19. Planting grasses was also a component of the national soil conservation programme. Examples of failure and success are documented in Department of Agriculture Annual Reports and Showers (1982, 2005).
 20. For presentation of these ideas as related to soil erosion in the early twentieth century, see two American publications that circulated widely nationally and internationally. W. J. McGee's (1911) influential bulletin 'Soil Erosion' addresses the need for maintaining soil cover, and Ramser's (1917) 'Prevention of erosion of farmlands by terracing' discusses the importance of a thick layer of forest litter to the protection of the soil's surface, and the binding power of tree roots. Showers (2005) discusses the influence of American government publications on the British colonial world in general and southern Africa in particular.

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