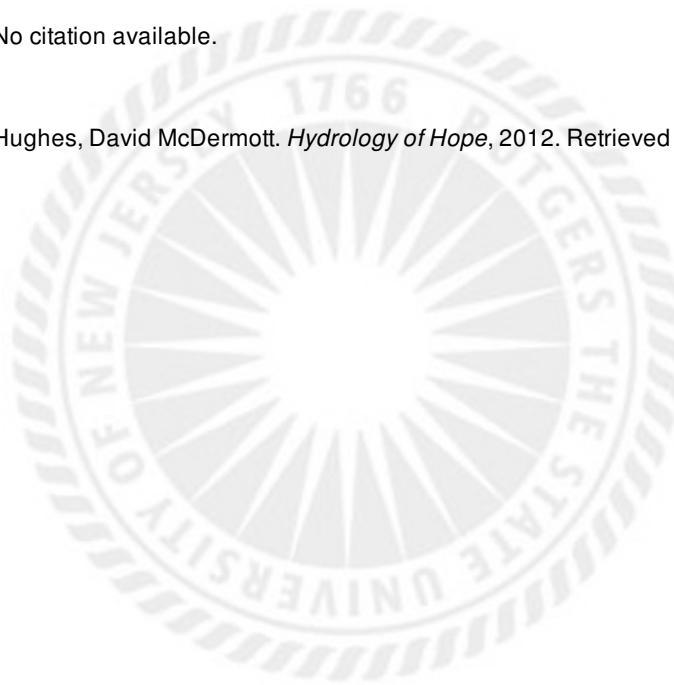


Hydrology of Hope

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Chapter 4

Hydrology of Hope

The process of appropriation moves from diffidence to entitlement – and sometimes back again. At first, settlers and colonizers ask themselves “Do we belong here?” Over time, such malaise may dissipate – as it did in the United States. That country occupies an extreme position among territories colonized from overseas. Whites achieved demographic, political, and economic dominance, securing the US as a “neo-Europe” (Crosby 1986:2). Zimbabwe lies at the other extreme – among what one might call failed neo-Europes. Having conquered the territory in the 1890s and alienated the fertile highveld in ensuing decades, whites never approached numerical superiority, vis-à-vis native peoples. Stuck in this “demographic conjuncture,” whites’ population never exceeded 5 percent of the national total.¹ In agriculture, at the end of the 20th century, almost 4500 white commercial farmers controlled roughly 33 percent of Zimbabwe’s surface area – in a nation of 12 million (Figure 4.1). Whites then had reason to feel what Wagner (1994:171) describes, in South Africa, as an “emotional and moral unease with the fruits of conquest.” Still, white farmers, who mostly survived an incomplete land reform in the early 1980s, displayed an almost Euro-American degree of confidence – one totally unwarranted by political trends.² In the 1990s, whites ignored warnings of a more thorough land reform. In 2000, when paramilitary bands occupied their land, farm-owners reacted with shock and disbelief. Unprotected by the police and frequently barricaded in their houses, they still felt that

they *belonged*, as owners, on the highveld. How could they – indeed, how could any European-derived minority – develop such a resilient claim to extra-European territory?

<<INSERT FIGURE 4.1 ABOUT HERE>>

In large part, Southern African whites did so by idealizing, celebrating, and generally obsessing about the territory itself. Of course, agriculture inevitably brought farm-owners into frequent contact with farm-workers. “The labor” could facilitate or disrupt farm operations, enriching or infuriating the boss. Even so, these blacks operated within the confines of whites’ administrative project: Euro-Zimbabweans *managed* them but did not construct an identity around them. Commercial farmers, like many other savannah whites, felt the primary tension or contradiction as (white) Man against the land – not white against black (cf. Krog 2003:76). If European-descended farmers could only master African land, they presumed, then all else would fall into place. In this effort, they acted on Coetzee’s second “dream topography,” complementing the first literary vision of empty land (see Chapter 3). This imaginary landscape constituted:

a network of boundaries crisscrossing the surface of the land, marking off
thousands of farms, each a separate kingdom ruled over by a benign patriarch
with, beneath him, a pyramid of contented and industrious children,
grandchildren, and serfs (Coetzee 1988: 6-7).

Note: black “serfs” enter only as an input, as labor, for an enterprise already designed (cf. Rutherford 2001:85). Taken together, the dream topographies constitute an almost Jeffersonian progression towards yeoman farming: whites converting a howling wilderness into the productive garden of settler nationhood. (White) Man and land would become one as the native slipped into invisibility.

Much later, in black-ruled Zimbabwe, precisely this fixation on the landscape helped white farmers to adapt and flourish. Indeed, the Africanization of politics increasingly limited rural whites to farming. And they farmed very well. In the 1990s, commercial farmers carried out a veritable hydrological revolution of dams and large-scale, mechanized irrigation. Needless to say, white men blocked rivers primarily for economic reasons - to irrigate crops – but the cultural side effects became nearly as important. Symbolically, this recarving of the terrain united two, otherwise contradictory bases for white claims to land – the two dream topographies. Dams constituted an unparalleled agricultural improvement. They demonstrated the continued efficacy of white land-ownership and its associated property lines and labor hierarchies. In principle, however, such celebrations of development ran counter to wilderness discourse. Some whites still claim that their forefathers initially settled on virgin land.³ An even larger number, who admit to having trespassed against African farmers, frequently argue that whites *understand* the virgin bush better. They know it, value it, and preserve it. How can they, then, justify the impounding of streams and rivers? White farmers turned this criticism on its head. Dams and reservoirs, they believed, actually *enhanced* natural waterways. In other words, the same hydrological revolution that industrialized the bush also demonstrated good ecological stewardship. The dream of farming and of wilderness became one.

Dams thus served as multipurpose fetishes of white belonging – an aquatic fix to whites’ political dilemmas. For Euro-Africans on holiday, Kariba’s shoreline provided aesthetic comfort. In the productive pursuit of agriculture, dams exerted an even more pronounced, enracing effect. And one that was particular to Zimbabwe: other settler populations – notably Kenya’s whites – limited their financial exposure in-country. After Independence, relatively benign inducements gradually shifted them from the highlands, freeing up estates for

black businessmen (Rothchild 1973:374; Uusihakala 1999:28). In Zimbabwe, by contrast, whites redoubled their investments in infrastructure even as the black-ruled state repeatedly threatened to remove them. In retrospect, they seem to have lost touch with economic and political constraints. In another sense, however, whites were investing in identity, and dams bore a heavy symbolic load. Whites I met in 2002 and 2003 described themselves as farmer-dam-builders. Those who fled persecution to the safety of Harare missed their land and its embankments. This, second set of assets – whose spectacular loss could have worsened their anguish – actually gave them comfort. Thanks to the dams, whites left the commercial farms with their pride intact. Although irrevocably dispossessed, they still felt like the true owners of the highveld. Impounded water, in short, helped hydro-power whites’ enduring sense of entitlement to land in Zimbabwe.⁴

Geography and Whiteness

Euro-Zimbabweans defy spatial categorization. The first white settlers – an amalgam of Anglophones and Dutch-, French, and Scottish-descended Afrikaans-speakers – crossed the Limpopo from South Africa in 1890. They soon welcomed immigrants directly from Britain, from Britain by way of Asian colonies, and from Southern Europe. In one sense, this plurality of origins made Zimbabwe a “global ethnoscape.”⁵ Yet, unlike the South Asians to whom Arjun Appadurai applies this term, Zimbabwean whites have refused a global identity. They have consistently struggled to enracinate and re-territorialize themselves. In 1923, settlers voted overwhelmingly for self-government – as a colony – rather than for continued administration from London. Nearly two generations later, in 1965, the Rhodesian Front government declared independence unilaterally from Britain. Whites then fought a 10-year war against two guerilla

armies. They lost, but the war itself drew them together. Although many left after independence in 1980, those who stayed considered themselves patriots, rather than expatriates.⁶ Among them, some soon demanded the status of a native, a claim that did not tend to stick in wider discourse.⁷ Whites – while undeniably cosmopolitan – yearn for a parochial identity.

In part, they have succeeded in giving local meaning to even the most global aspects of their history. Virginia, for instance, lies on arable highveld east of Harare, close to the town of Marondera (Figure 4.1).⁸ Settlers did not name their Virginia after the American one – at least not directly. They named it after one of Virginia’s crops: tobacco. Columbus and Cortes had originally brought tobacco to Europe from Cuba and Mexico, respectively. In 1585, Sir Walter Raleigh named the original, Atlantic Virginia after his virgin queen, Elizabeth. A generation later, another Englishman, John Rolfe experimented with tobacco in Jamestown, Virginia. Rolfe returned to England in 1616, bringing new varieties and an Algonquian wife. These movements generated the famous American tobacco industry and its “Virginia strain” of light, flue-cured leaf.⁹ Cultivated by African slaves, tobacco made white men into Virginia gentlemen. Rhodesian farmers turned to the same crop and African labor for a similar upliftment. Yellow, flavored leaves soon became the marker of colonial success – not least, in “Virginia,” Marondera, and the tobacco belt east of Harare. “Over tens of thousands of then desolate acres,” recalled Edward Harben, ex-vice-president of the Rhodesia Tobacco Association, in a co-authored book, “a vegetable El Dorado was ... brought into being.”¹⁰ His veiled references to empty land and Cortes complete the circle of tobacco’s history: an Amerindian crop – grown by an English-Indian couple, popularized in Europe, and transplanted to Africa – miraculously justifies whites’ position in Zimbabwe. With such aptitude for meanings and materials, surely whites could make their home in both Virginias or anywhere in Africa.

Whites' actual movements in Zimbabwe, however, betray a distinct caution. Alert to the land's environmental unpredictability, whites have advanced with trepidation and backward glances to Britain. Nineteenth-century "non-cosmopolitan" theories of climate suggested that whites could not survive the heat of the tropical "torrid zone" (Redfield 2000:192-99; cf. Price 1939:194-204). By 1890, newly documented plateaux gave reason for hope (Ravenstein 1891:35). Altitude could mitigate the effect of latitude. In that same year, the British South Africa Company's "pioneer column" of settlers crossed the Limpopo from South Africa and settled the central highlands of what is now Zimbabwe. White-owned estates soon traced the major watersheds, including the line between the Save and Mazoe catchments, where Marondera and Virginia lie.¹¹ By 1901, the Company described Rhodesia's upland climate confidently as "as healthy and bracing as can be found anywhere" and promised that, "children may grow up there as strong as they would at home [i.e. in Britain]."¹² At 1500m above sea level, malaria presented only minimal danger. Against the sun – the one remaining threat – whites armored themselves with pith helmets and umbrellas (Kennedy 1987:110-14). Still, doubts persisted. Over lunch outside Marondera, a farmer confessed, "We [whites] shouldn't be in Africa because we are made differently," she said. The plateau's air was too thin for her: "We haven't got the noses that they [blacks] have."¹³ Most whites in Marondera inhaled without complaint. Yet, the lowveld – parts of which were once denoted on maps as "not fit for white man's habitation" – made many whites uncomfortable (Fuller 2001:161; Wolmer 2001:33). White writers still describe the valley's hottest period, October, as "suicide month."¹⁴ If only indirectly, Zimbabwe's environment could still strike a European dead.

Precipitation also has given whites, particularly farmers, ample cause for discomfort. Zimbabwe's rainfall is as *intemperate* as its heat, differing from that of Britain in both

seasonality and intensity. On the highveld, rain falls only from late October to early April. Almost from their arrival, whites have reveled in the long dry season. In 1928, two ex-missionaries founded the Anglican Ruzawi School for whites outside Marondera because, as they later wrote, the area boasted a “climate as nearly perfect as could be found” (Carver and Grinham n.d.:25). Farmers, however, found the climate far from ideal. H.K. Scorrer who trained Marondera’s early settlers in agriculture had difficulty raising drought-resistant livestock. “If we don’t go too fast with European blood [in breeding cattle],” Scorrer predicted in 1908, “we shall get a beast that will stand the climate of this country.”¹⁵ While aridity hindered animal husbandry, downpours destroyed crops and eroded topsoil. Zimbabwe’s rainfall spiked violently and unpredictably. One hundred millimeter events were not uncommon. In 2001, a 150mm storm breeched the smaller of two dams on Airlie: “literally the cloud up above just drops everything that it has,” recounted the farmer, still with an air of disbelief.¹⁶ Such conditions – implicitly compared to English mildness - made agriculture an extreme sport. Referring to Zimbabwe’s “vindictive climate,” Harben and his co-author praised tobacco farmers for “a ruthlessness, an independence, a physical endurance and courage, a coming to terms with harsh forces with which their fellows in more sophisticated societies have long lost contact” (Clements and Harben 1962:188).

If the land and climate challenged rural whites, it also filled them with awe. In the midst of losing their farms, they felt and remembered a sense of wonderment. When I met Steve Pratt, he spoke first of his fears. As the provincial representative of the Commercial Farmers Union, he was dashing to occupied farms to negotiate for the release of white families and their movable property. Whites, he said, had been “hugely confident” but were now feeling “a kind of angst about their identity.” He was feeling it too. Still, he loved Africa, he said, and felt “an

exhilaration” when in the bush. I asked him to be more precise. “When the rain comes,” he began, “that smell! When you can hear a storm sort of approaching...” As a child on a Marondera farm, he knew the river would rise outside his window in an hour. He recalled listening expectantly. Failing to describe the sensation in his own words, he cited a line from Shakespeare’s *The Tempest*: “Show me the magic!”¹⁷ The literary reference was even more apt than Pratt suspected. News of America’s Virginia inspired *The Tempest*, a work that - according to Leo Marx (1964:34-36) – presaged the American pastoral ideal of wilderness and agrarianism (quite similar, in fact, to South Africa’s pastoral canon). Pratt’s imagination and profession combined the same opposites: empty land and efficient farms. Cathy Buckle, who wrote fiction and political literature (see Chapter 2), described Zimbabwe as “so wild just on your doorstep ... modern but yet not.”¹⁸ The landscape defied categorization. For farmers – especially those as imaginative as Buckle and Pratt - the highveld was home without being normal, reliable, or safe. To belong there remained a work in progress.

Intensive Conservation

For farmers less artistic than Pratt and Buckle, collective efforts gave expression to the quest for belonging on the highveld. Chief among these was soil conservation, which had concerned the colonial government for most of its tenure. In the 1930s, the state had encouraged farmers to combat erosion. Edward Alvord, the American-born Chief Agricultural Officer, wished, at all costs, to avoid an African version of Oklahoma’s Dust Bowl.¹⁹ Initially, he and his colleagues faced an uphill battle: both farmers’ economic survival and the drive to settle the highveld with Europeans overrode concerns about long-term fertility. Simply put, Rhodesian farmers mined the soil without check for at least four decades. In 1941, however, the

colony created a Natural Resources Board, which, in turn, fostered intensive conservation associations (ICAs) at roughly district level (Phimister 1989). Organized by farmers themselves, ICAs encouraged farmers to construct and maintain broadbase terraces.²⁰ The Resources Board delegated to them authority over conservation in black-held land outside the commercial farming areas. In these zones, the ICAs never succeeded. Smallholders, working undersized, sloping plots with little labor power could not comply with conservation rules and interpreted them as meddlesome and even racist.²¹ Blacks surely noted the fact that most ICAs met in the whites-only social clubs of their districts. By the 1990s, blacks' refusal to cooperate had turned the ICAs exclusively inwards. When they mentioned blacks at all, they complained about workers causing erosion on farms. As their main activity, ICAs inspected the members' terraces and dams, keeping records, issuing warnings, and, if all else failed, levying fines. As deeply committed to private property as it was, white society permitted these intrusions. Only land seemed to trigger such acquiescence and cooperation. Labor – which was as scarce as soil – did not generate a single local-level organization in white Zimbabwe. Of course, whites colluded privately over wages, and many complained personally about the “labor problem” to and through the national-level Agricultural Labor Bureau.²² In formal terms, however, the districts' white bureaucracy largely ignored blacks and even its white members' concerns regarding blacks. Virginia's teamwork was environmental.

The imperative to protect soil followed from settlers initial decision to occupy the watersheds. Altitude lowered the temperature, making the plateau a more comfortable and salubrious home than the lowlands. The lower temperatures, in turn, allowed moisture to precipitate, bestowing roughly 800-1100mm of rainfall on the highveld, as opposed to the lowveld's mere 500mm. The wetter climate, of course, benefited agriculture, but it came at the

cost of a more arable topography. Whereas, along the Zambezi, Save, and Limpopo Rivers, Zimbabwe's lowlands lie flat, at altitude, the country breaks up into granite outcrops, streams, and uplands. Virginia, for instance, straddles the Macheke, Shavanhohwe, Munyuki, and Nyadora Rivers, the last one falling 400m in 35.5km (Figure 4.2).²³ Of family-owned farms ranging from 500 to 1500 ha, farmers considered only 100 to 500 ha flat enough to plant crops. Even on these arable patches, gradients generated ferocious runoff that could destroy the soil profile. To minimize such damage, land-owners devised means of "mechanical conservation," specifically, agricultural terraces. Farmers built terraces slightly off the natural contour, at a 1-2 percent slope, and separated by 1m of elevation (as shown in Jean Hahn's painting, Figure 1.3). They planted grass on the tops and along the drainage waterways located at the downstream end of each ridge. When the terraces worked, water would run down the slope for no more than a vertical meter, then take an abrupt, 90-degree turn, and move slowly along the terrace, infiltrating the soil to the desired degree. Some farmers elaborated still more intricate systems of holding earth and harvesting water. Perpendicular to the contours, Doug Dunford built tie ridges and, perpendicular to them, "little dams" every 1.5 m. Each dam created "a very large, bath-sized sort of thing to hold water ... so it can take probably four inches of rain in a night and not spill a drop."²⁴ Dunford effectively harnessed the 100mm storm and turned Virginia's topography to his advantage.

<<INSERT FIGURE 4.2 ABOUT HERE>>

Although whites took credit for such ecologically-minded farming, it derived as much from pre-existing social and ecological circumstances. Virginia's small community of 72 land-owning households presented ideal social conditions for the ICAs' form of self-organization and self-policing.²⁵ Although differentiated by income and national ancestry – British, Greek,

Afrikaner, and more recent Dutch – they increasingly identified themselves as a unitary white minority. Every farm automatically belonged to the ICA, and any owner or manager could attend the meetings. In Virginia in the 1990s, roughly five farmers came monthly to such gatherings, invariably held at the country club.²⁶ A respected, conservationist farmer chaired the meetings, and another member (almost always a woman), minuted them and sent the minutes to the entire community. With such institutional transparency, the mere threat of labeling and stigma motivated many a lazy conservationist. Also, the behavior of the soil and terraces themselves virtually demanded cooperation between farms. Once constructed, terraces could rapidly exacerbate the erosion problem they were meant to solve. The raised part of a terrace would develop breaks, allowing water to pour through, and run down to the next terrace, possibly breaking that one as well. Especially in the prevalent sandy soil, fields became gullies, known among the farmers by the Shona word *donga*. With an affect bordering on horror, Bruce Gemmill, ex-chair of the Virginia ICA, reported seeing on at least one commercial farm “a *donga* that will drop a London bus into it.”²⁷ Large-scale erosion of this nature could diminish the productivity of an entire watershed. Loosed soil would enter streams and eventually silt up reservoirs used for irrigation. Especially during the dam-building boom of the 1990s, erosion threatened the entire hydrological basis of white wealth. These combined motives of environmentalism and self-preservation gave Virginia’s ICA an unparalleled moral authority.

In this context, blacks’ indifference to the ICAs confirmed whites’ low opinion of them (and whites’ high opinion of themselves). The ICAs continuously combated black recalcitrance. Although they excluded peasants from the ICA meetings, the associations invited them to district agricultural fields days – for competition and instruction.²⁸ Black commercial farmers who bought land in Virginia after 1980 *could* attend meetings. Yet, they chose neither to join nor to

obey the ICA. Their “problem farms” appear with disproportionate frequency in the minutes of Virginia’s association. In 2002-2003, whites dwelled on this discrepancy, describing blacks in general as deficient conservationists. “The communal land boundaries,” complained one farmer in 2003, “were like [bare] highways.”²⁹ Such whites felt they carried the conservation burden alone. Said Gemmill, “We are the keepers - or were the keepers - of the countryside.”³⁰ He was probably thinking of Dave Stevens his successor as ICA chair, who was murdered by a death squad in 2000.³¹ For whites, this killing framed the moral opposition perfectly: a great conservationist - “Mr Green himself” – political activist, and fluent speaker of Shona against an amoral, destructive state.³² As recalled in 2002-2003, Stevens and the Virginia ICA stood at the pinnacle of collective stewardship. “They are such conservationists, these men,” extolled one former member, “Their life is in the land.”³³ Conservation had become a discourse of hagiography and nostalgia.

In less politically charged conversations, Virginia farmers often reminisced about a quite different benefit offered by the Virginia ICA – a visual experience. Land-owners had already seen their estates from the air. In the 1960s, the government Department of Conservation and Extension (Conex) had used aerial photos to make detailed farm plans – photo mosaics which farmers in 2002-2003 still displayed with pride in their living rooms or offices. The ICA gave first-hand access to the aerial perspective. Twice per year, the group rented a light aircraft – often owned by a member – and flew the district.³⁴ The aerial view revealed all secrets. A broken contour, said one ICA member, “sticks out like sore thumbs”³⁵ “Fly over it,” explained one farmer with reference to the maize crop, “and you can see immediately that it’s not as great as you thought it was.”³⁶ The ICA also detected deforestation, eroding dam spillways, and all manner of changes to the soil and vegetation. Farmers reveled in this panopticon effect – what

Gemmill called the “eyeball inspection” – and even considered using satellite and aerial photos.³⁷ Yet, for all this attention to infractions – and their dutiful recording in the ICA minutes – farmers recalled good behavior much more readily than bad. “It [the flyover] made a huge impression,” said one farmer, “all this potential production.”³⁸ Gemmill himself spoke of production with greater specificity: “Fly over, and there were dams everywhere... [Virginia was] sparkling with farm dams all over the place.”³⁹ In short, the ICAs gave farmers the ability to see commercial agriculture from above, and they liked what they saw.

More broadly, the ICA and its aerial tours helped promote an aesthetic sensibility – one that drew attention to certain aspects of the land and rendered others invisible. Farmers were used to reducing a landscape to geometry. The Conex air photos traced the boundaries of fields and waterworks in clear lines. Contour maps, which the farmers also used and displayed, similarly represented the relationship between slope and water in linear fashion. Contour ridges constituted another set of curves, the less interrupted the better. Farmers took a keen interest in this geometrical, perspectival aspect. On the veranda of his estate, I asked a Marondera farmer what it meant to be a good farmer. I expected an answer related to technique and yields, but my informant dwelled on forms of cleanliness:

You can see good crops when you drive past ... [On] a farm that looks well looked after, ... the fencing is there. The roads are graded. ... You had other farms that looked very untidy. ... [They] didn't give a good impression.⁴⁰

Improvements, in other words, caused a farm to shine – even when they were not ecologically recommended. Removing stumps, for example, destroyed indigenous woodland permanently but left an uninterrupted field. As one farmer opined, coppicing, or regrowth from the stumps, was not only “so ugly” but also typical of blacks’ improper land management.⁴¹ Needless to say

(among whites), the erosion-battered communal lands were unsightly almost beyond redemption. Black Africans do not appreciate “beauty and nature,” asserted one white farmer, but “*We* must live with it.”⁴² He neglected to mention that the sweat of black Africans had made his farm as beautiful as it was. Indeed, the entire aesthetic sensibility of white farmers tended to render black labor invisible. Virginia farms employed up to 300 workers and housed most of them on the farm. Yet, like California growers and British gentry, owners saw the landscape as a product of whites’ *culture* rather than of blacks’ exertion (Mitchell 1996:26; Williams 1973:46). Whites, they implied, had encountered the land and, singlehandedly, made it a sight to see.

This tacit man-land story conjoined production and beauty. Without the effort one might expect, whites reconciled two seemingly distinct principles of land-use: landscapes of leisure and working landscapes, or spaces of consumption and spaces of production (A. Wilson 1991; Lefebvre 1990). In Virginia, what was pretty was also frequently useful. Terraces, for instance, beautified the topography while saving topsoil and improving yields. Although economic arguments initially drove whites to install terraces, an *aesthetic* disgust with erosion added to this motivation. Once terraces graced the hillsides, whites enthused about them in unabashedly aesthetic terms. Economically beneficial practices appeared – almost by definition – to be ecologically advantageous *and* beautiful. There were exceptions, of course. In 1991, Gemmill tried to abolish a practice that was of obvious economic merit: using free, indigenous timber, rather than purchased coal, for curing tobacco. Deforestation, he argued at the ICA’s annual general meeting, destroyed both ecology and pleasing prospects. As long as “the trees remain,” he foretold, “rural appearance and character remain for the benefit of present and future generations.”⁴³ What had he meant by “rural character?” I asked Gemmill at my home in Harare in 2002. “The person like yourself who drives in a motorcar out of town,” he explained, “should

be able to share in that view ... [so] that you are happy to go out there.”⁴⁴ Despite some cutting of trees, Virginia still held enough character to attract a “tourist gaze” (Urry 1990). Despite armed conflict – which had forced Gemmill off his own farm mere months before our meeting – Virginia still grew top-grade tobacco. Ingeniously, whites made a landscape that rewarded the eye and the bank account simultaneously.

Hydrological revolution

If terraces maintained white Virginia’s “rural character” in 1991, then, farm dams vastly improved it in the ensuing years. Whites, of course, had blocked waterways in Zimbabwe long before that. In the lowlands, the colonial governments of the Rhodesias and Nyasaland dammed the Zambezi in 1959, creating Lake Kariba, the largest reservoir in the world at that time. Whites recognized such accomplishments as epochal and took full credit for them. “To the air traveler,” began a 1969 tourist article (invoking the bird’s-eye view):

Rhodesia’s countryside is a panorama spangled with the flashing mirrors of a thousand lakes and dams. From the vast reaches of Lake Kariba to the humblest farm pond, every one of these is a legacy of the ingenuity and enterprise of generations of Rhodesians.

Nature formed Rhodesia without lakes: each one of them has been built by the hand of man (Anonymous 1969: 4).

The “man,” needless to say, was white, and after independence, whites began to construct dams and farm ponds that were not so humble. “Everywhere you could catch water, they caught the water,” recounted a Virginia man who came to the district in 1989, just in time for the “hydrological revolution” of the 1990s.⁴⁵ At the beginning of 1989, there were only seven impoundments in Virginia that held enough water for irrigation. Between then and the end of

1997, Virginia farmers built or raised another 38 dams, enhancing the district's storage capacity by a factor of seven (Figure 4.3).⁴⁶ Roughly one in two families engaged in this effort – probably similar to ratios elsewhere in the highveld.⁴⁷ Building halted only when, in November 1997, the state designated 1471 farms nationwide for compulsory acquisition; not a single dam went up in Virginia in 1998. Nonetheless, tobacco continued to boom under irrigation, growing two or three crops per year. Growers nearly bankrupted by the horrendous 1991-1992 drought weathered subsequent dry spells. All in all, Virginia “underwent a farming transformation,” wrote a displaced white in 2003, “from a rather drab farming address into an up-market place to be.”⁴⁸ These landowners grew rich, and – just as important – they grew entitled. Dams restored whites' sense of ownership and gave them a purpose.

<<INSERT FIGURE 4.3 ABOUT HERE>>

Many whites built dams, in part, so as to secure their ownership of the land. In the 1990s, commercial farmers faced the serious prospect of losing the highveld. In 1990, provisions of the Lancaster House constitution – designed to protect whites politically and economically – expired automatically. Whites had already surrendered their guaranteed parliamentary seats (in 1987). Now, they lost their all-important veto power over land redistribution, the practical consequence of a willing buyer-willing seller format in effect between 1980 and 1990.⁴⁹ Suddenly – in a shift of far more legal significance than Zimbabwe's independence – the state disposed of the power to confiscate land without recourse and redistribute it to black farmers. At the same time, a strategy to retain their land presented itself. The 1992 Land Acquisition Act, which eventually enabled the designations of 1997, permitted the state to take land without compensation – it having been in theory stolen by the pioneers. Fortunately for whites, the state *would* reimburse land-holders for improvements they had made.⁵⁰ This loophole revised all economic priorities. Dams,

tobacco barns, even workers' housing, which had previously been considered *desirable* under the right conditions, now appeared absolutely *vital* under any conditions. Fortuitously, Structural Adjustment reforms of 1990 allowed farmers keep a much higher fraction of export earnings. They accumulated capital and could borrow more from the banks. "Guys spent ... bags of money on improvements," marveled one farmer, referring to an apparently over-sized reservoir on the White Gombola River, just outside Virginia.⁵¹ "The more you've invested in your property and the more infrastructure you've got," confided a Marondera farmer, "... then they might go and look for a less developed property."⁵² Farmers modernized their estates beyond government's price range. The strategy seemed to work: high costs – and, especially after 1997, legal challenges from the farmers – stalled land reform during the 1990s.

Recalling that ten years' grace period, most whites tended to downplay such political calculation and to highlight economic national service. In 1980, they remembered, Mugabe promised whites that they could stay as long as they produced for Zimbabwe. Whites already possessed the requisite personal ambition and entrepreneurial spirit. Explained a Virginia farmer relocated on the outskirts of Harare, "We were a generation or a nation of developers."⁵³ True capitalists, whites reinvested profit in their farms, rather than stashing all of it in overseas bank accounts – a pattern they identified with *Zambian white farmers*. "You stagnate; you die," warned Johann Swanepoel, an Afrikaner and one of the few farmers still cultivating in Virginia in 2003.⁵⁴ Having so invested in the land – in a fashion that recalled the colonial beneficial occupation clause - commercial farmers felt that they had *earned* a place on the post-independence highveld. And the beneficence of their occupation was patent. Under irrigation, secondary and tertiary crops of tobacco doubled and trebled foreign exchange (forex) earnings – revenue which the state taxed ever more rigorously. Forex proved their indispensability. So did

the brute, material infrastructure. Dams, claimed one farmer responsible for one of Virginia's largest impoundments, were "the turnaround of this country."⁵⁵ Trusting that they could build and harvest their way to security, farmers seized on any hopeful evidence they could find. In 1995, for instance, Mugabe visited the Virginia Club by helicopter and in the company of ICA member Tom Sweeney. According to Sweeney, the president – gazing downwards - remarked to an aide, "Isn't it wonderful the way we built all these dams?"⁵⁶ Apparently, Mugabe thought his government had constructed the embankments, but that mistake hardly mattered. Virginia farmers – even if they did not hear or believe Sweeney's story – *expected* the state to appreciate the dams. Surely, they reasoned, those who impounded water to such good effect deserved a reprieve from land reform.

But reservoirs were not natural. In order to rejoice wholeheartedly in the new hydrology, farmers first had to reconcile dams with their self-image as ecological stewards. Surely, each artificial impoundment had caused ecological harm, drowning the valley upstream and dessicating it downstream. In 2002-2003, Virginians did not deny this damage, but – through various improbable theories – asserted that dams had enriched habitat and hydrology in other ways. An impoundment "is an improvement," insisted Constantine Gavras, who had memorialized his dam on video. "When you've got hundreds of dams in the country ... you increase your rainfall."⁵⁷ He was referring to the effects of added evaporation on highveld micro-climates – an effect that has never been measured and probably does not exist.⁵⁸ More plausibly, Virginia growers claimed to have improved the flow of the Nyadora and other rivers. In 1988, another farmer blocked the Chikumbakwe, a tributary of the Nyadora that ran only in the rainy season. Due to seepage through this and other earth structures, he told me, "rivers run all year round."⁵⁹ Even if only a trickle ran through and dried up, the next dam downstream

would revive the stream. “The more dams on a river the better,” concluded Henk Jelsma, adding saltily that when his pre-impoundment river ran dry, “I couldn’t hardly have a crap myself without flushing it [by hand]. It was desperate!”⁶⁰ Clearly, Jelsma and his river benefited from the dam in multiple ways. Indeed, because seepage varies directly with the square of the height of a porous dam,⁶¹ the higher dam walls of the 1990s raised dry season flows exponentially. Of course, the newly perennial stream may drown plants and animals adapted to annual dessication. My informants did not appear to be aware of this complication, a consequence of the artificial nature of Virginia’s new lakes. The aquatic mania seemed to blind them to all negative effects of water – except, of course, erosion.

Actually, dams could easily cause erosion, and this risk brought them to the attention of the Virginia ICA. As with terraces, the ICA used its monitoring role to pronounce on good and bad stewardship. In this case, it directed criticism not against blacks – for they did not possess dams – but against mostly white engineers and builders. The problem centered on spillways and return channels. Engineers designed impoundments to pass water in the rainy season. Don Lanclos – a former Conex officer who had planned many of Virginia’s dams – looked for rock close to the surface so that spilling water would carve a hard return channel to the riverbed.⁶² It was precisely this practice to which the ICA objected. Soil removed from return channels, as they eroded to rock, eventually clogged pools and killed aquatic life farther downstream. “The issue must be pursued,” record the minutes of a 1996 ICA meeting, “because of the mess being made on our rivers.”⁶³ The following year, a dam under construction wrought much worse havoc. The ICA chair reported somberly to his association, “Some 20 km of complex riverine ecosystem below the [Royal Visit] dam was scoured away and the riverbed now resembles a lifeless moonscape of rocks and sand.”⁶⁴ Contractors, it seemed, had fallen fatally behind

schedule. When, on rare occasions, the farmer himself bore responsibility, the ICA put matters delicately: “WET!!!” Gemmill alerted a meeting at the height of the 1998-1999 rains, “Whaley dam in serious trouble – spillway problem. Erosion has been huge. ... Problem seem sot [sic: seems not] to be the engineer[‘]s fault – wrong site.”⁶⁵ At another level, Whaley and all farmers were obviously liable for dam-induced erosion. *They* had decided to block Virginia’s rivers. In 2002-2003, none accepted this ultimate responsibility. Packing for New Zealand, the owner of Royal Visit blamed the contractors and then showed me his photo album of the dam’s construction, collapse, and reconstruction.⁶⁶ Water, even when it caused an erosive disaster, could still fill whites with pride.

Having built dams, farmers were obliged to reorganize their terraces. Typically fields lay on the slopes surrounding a low-set reservoir. Therefore, Zimbabwean commercial farmers had to pump water uphill.⁶⁷ Fighting gravity in this way required elaborate technology and imposed material constraints. First, farmers had to install electric or diesel-powered pumps. Then, since canals would not hold water moving uphill, they also had to lay elaborate networks of underground and above-ground, movable pipes. Zimbabwean manufacturers made such aluminum pipes only in 9-meter segments and only in straight or right-angle pieces. Suddenly, the curvilinear pattern of contour-hugging terraces made no sense. To use the equipment of irrigation, farmers would have to redo their terraces in a rectilinear fashion. This “squaring up” of fields occurred in Virginia over the 1990s, transforming arable land into strips 9 meters wide and multiples of 9 meters long. This grid differed aesthetically from the intricacy of Kariba’s shoreline, and farmers chiefly appreciated it for its managerial, rather than aesthetic, qualities. “Parallel layouts” simplified relations between the farmer and his labor force. In the past, farmers and foremen had allocated piecework according to field areas, but no one had measured

the areas between terraces with precision. Hence, farmers judged them by sight. The resultant ambiguity led to delays and disputes with employees. Farmers usually had to guess at the size of areas between terraces and then deal with unforeseen delays and disputes (cf. Rubert 1998:178; Rutherford 2001:110-11). Layouts, however, brought Taylorist, Fordist techniques to rural Zimbabwe. “It was a work efficiency scenario,” explained Les Wood, the former water coordinator for Virginia.⁶⁸ Within the grid, “it’s easy to calibrate” piecework, enthused Johann Swanepoel, “now you don’t always have to stand at his [the worker’s] back.”⁶⁹ In other words, Swanepoel’s topographical designs – shown to me on vellum sheets - replaced face-to-face contact. Layouts gave the clearest material form to that unmediated (white) man-land relationship so valued in highveld culture.

Layouts also problematized that relationship by raising the specter of erosion. The curvilinear form of terraces had allowed them to hold to a shallow 1/250 slope, keeping water at low, safe velocity. Once straightened and made parallel, however, waterways inevitably cross-grained the landscape (Elwell n.d.:7). If farmers wished to maintain the 1/250 gradient, they would have to close off layout segments where the land dipped. Understandably, farmers were loath to take precious arable soil out of production, and many were tempted to extend layouts until they created dangerously steep gradients. Such a practice courted erosive disaster, and the ICA issued warning after warning. In the gentlest tone, Dave Stevens informed the 1993 annual general meeting, “Because of the nature of our farms, we cannot all have parallel contour systems.”⁷⁰ Three years later, Stevens spoke more explicitly and with climatological detail: “Members are urged to review their land layouts very carefully and to provide a sufficient area of waterway beside and within lands to cope, not just with moderate rainfall, but also with those 4 inch storms.”⁷¹ Yet, the problem persisted. In 2002-2003, Virginia farmers recalled layouts

tilted recklessly at 1/60 gradients. Such farmers, many of whom, were then abandoning their estates, were criticized *in absentia*. “Your priority is to look after the land, not to make your life easier,” chided one farmer in an interview.⁷² Layouts, recommended another whose ridges ran at 1/300, worked only “if the lie of the land is suitable.”⁷³ Obsessed with topography, irrigating farmers relearned and recommitted themselves to the broken landscape of the highveld.

At the same time, and in a somewhat contradictory fashion, conservationists grappled with the new aesthetic possibilities of layouts. “Squaring up” straightened the curvilinear format characteristic of broadbase terraces – to the delight of many farmers. Indeed, the grid almost became a goal, in and of itself, related to but distinct from the economic advantages of irrigation. Gemmill, while ever-vigilant against badly-made layouts, thrilled at the sight of well-made ones. “We could pick that up from the air,” he reminisced, “a beautiful grid.” Indeed, Gemmill had converted some fields to rectangles even before the installation of his irrigation dam in 1991. “I did it for easier layout,” he confessed, “it all seemed tidy to me.” Gemmill seemed to recognize where this fastidiousness could lead. Symmetry threatened to supercede conservation. Rather than round off a corner – to allow for some topographical or ecological obstacle – farmers would run pipes and ridges straight through it. “Don’t bulldoze out trees where you don’t need them,” he advised me in the same conversation, “just because you want a straight edge to your land.”⁷⁴ Les Wood, also an upstanding conservationist, seemed entranced with such geometry: “Something that looks squared and laid out and done properly has a certain appeal. Doesn’t it? ... [It’s] aesthetically pleasing. ... As a people, the whites, generally speaking, like straight lines.” Given his and his co-ethnics preference for grids, Wood advised farmers on a minimal form of layouts. Rather than extending a rectangle into dubious areas, he suggested foreshortening it dramatically. “Pull back, take it out,” he exhorted. Farmers who followed his advice sacrificed

sizable chunks of perfectly arable land. Wood suggested that such marginal land did not produce high-grade tobacco in any case.⁷⁵ Still, many farmers would surely have seen his solution as economically sub-optimal – but implemented it anyway. Conservationist aesthetics, drawn on vellum, set the course for many a tractor in the 1990s.

Virginia's hydrological revolution, in fact, conjoined beauty, production, and belonging even more thoroughly than had the earlier terraces. Swanepoel, who in our first conversation had explained the efficiency of labor, later summed up his entire enterprise in loftier terms. "The obvious thing," he declared, "is to develop and to beautify."⁷⁶ This combination of seemingly opposed values did not initially ring true to me. A month later, I asked Tom Sweeney, which was *really* more important, economic development or beauty? Of course, dams brought economic benefits, he admitted: before them, southern Marondera had been "a bum-farming area ... almost a peasant area. I'm talking on a white scale." At root, though, economics and aesthetics were equivalent. "If you have farmed in a series of droughts," he explained to me (an obvious urbanite), "then water becomes a very ... beautiful thing to see... like jewels" when viewed from the air.⁷⁷ From their planes, farmers gazed down on the landscape they made and that made so much of value to them. Dam-builders found a way to transform the highveld, love its landscape, and belong in Zimbabwe all at the same time. And almost as soon as they grasped it, they lost it. Moving into a gated community outside Harare, an ex-Virginian predicted that whites might one day regain farms somewhere, but "we will never develop them, beautify them as we did. [Rather than invest in them] we will get US bucks outside the country."⁷⁸

A room with a view

Dams did not merely irrigate crops. Their non-agricultural attributes – particularly shoreline - contributed a substantial increment of aesthetic value. Recall Zimbabwe’s hydrological deficit vis-à-vis Europe: the country contains not a single natural lake and no coastline. Many Zimbabwean whites have felt this lack keenly. They desired water not only to nourish their tobacco plants but, more emotively, to look at while relaxing and smoking tobacco. Before irrigation dams, they could only gain access to Lessing’s “long, grey sea” at Kariba and by dint of the most advanced engineering. The hydrological revolution of the 1990s brought these to very doorsteps of commercial farmers. As bulldozers did the work of small glaciers, reservoirs inundated highveld valleys and, along upland contours, created numerous vantage points from which to view the resulting reservoirs. In Virginia alone, dam construction between 1990 and 1997 increased the district’s shoreline from 38 to 203 km (Figure 4.4).⁷⁹ Whites found that interface between land and water beautiful, and, still in 2002-2003, identified it with European heritage. “I think water has always been a calming effect,” said Swanepoel, “We [whites] in Africa always like a nice view and trees, and we like nature.”⁸⁰

<<INSERT FIGURE 4.4 ABOUT HERE>>

Some shorelines excelled in providing such sheer, non-productive beauty. I asked Les Wood which, of Virginia’s 203km of littoral, gave the greatest aesthetic pleasure. He pointed me towards Chingezi reservoir, lying across the Nyadoramuchena river and one of the district’s largest by capacity.⁸¹ The owner of Chingezi, Henk Jelsma, had built the dam in 1993 and raised it in 1996. He did not, according to Wood, select the best site for irrigation. The impounded water filled a bowl, requiring Jelsma to pump it up steep slopes to his flatter, arable lands.⁸² Yet, in aesthetic terms, Jelsma made an inspired choice. The very same slopes pinched the reservoir basin, forcing water up the Nyadoramuchena and into three tributary streams. The

resulting shoreline extended over 9.9km, the fourth longest in the district.⁸³ More importantly, the topography above the waterline – creased by four watercourses – created a sense of privacy along the shoreline. People could watch the water without, themselves, being watched. This seclusion, combined with one’s distance from cultivated fields, gave Chingezi an air of wilderness. Jelsma himself showed me the littoral. “You’ve got trees all the way round,” he narrated as we walked, “It’s very quiet in the bush – virgin, scenic.” “Virgin” meant “scenic” and scenery depended on water and on the lines of sight around it. The impoundment of the river – upsetting to another kind of nature-lover - only enhanced the valley’s pristine quality. “Idyllic,” Jelsma pronounced.⁸⁴ He and other whites had, once again mastered the highveld’s broken topography. What terraces achieved for cultivation, reservoirs accomplished for contemplation.

<<INSERT FIGURE 4.5 ABOUT HERE>>

Still, not every shoreline possessed Chingezi’s baroque curves. Farmers with bland littorals could retrofit them for complexity. For Gemmill, it was important to “end with something that wasn’t ... offensive when you walked through there.” He and the ICA advised farmers on various ways of “creating a pleasing appearance.”⁸⁵ Farmers added peninsulas and islands. No one east of Harare knew more about the efficacy of such measures than John Tessmer.⁸⁶ A teacher of ecology and manager of his school’s private woodland, Tessmer manufactured bird habitats. Although he advised farmers in Virginia – and had even spoken formally at an ICA annual general meeting⁸⁷ – Tessmer’s greatest work lay just outside the district. On Shiri Farm, Tessmer and the owner had added 260 percent to the length of the main reservoir’s shoreline (Figure 4.5). “A duck will only occupy one bay,” Tessmer informed told me, and so he designed twelve small bays on Shiri. Better to display the birds, Tessmer

constructed walkways into the reservoir. He used anthills to make islands. Finally and most ingeniously, Tessmer scooped out a set of six depressions in the reservoir's bottom that would hold water as it receded (at the top of Figure 4.5). A large draw-down for irrigation would actually *enhance* ornithological diversity. It worked – or at least observers thought it did. “We pulled the migratory route of ducks over this area,” Lanclos boasted. While flying from the Mediterranean to South Africa, he elaborated, the Egyptian goose and knobnose duck actually veer slightly eastwards to visit Virginia's reservoirs.⁸⁸ Bird counts did not confirm this global ornithological effect,⁸⁹ but the symbolism of the assertion mattered far more: birds voted with their wings. After viewing all of black-ruled Africa from the air, they favored Zimbabwe's white highlands.

Pro-avian enhancements to the shoreline benefited underwater species as well. A long shoreline and intricate topography provided habitat – known as structure – for aquatic plants, fish, and ultimately for their predators. Occupying the top of the food chain, sport-fisherman strove to enhance the biological productivity of their dams. The organization Zimbabwe Bassmasters and, especially, its Virginia-Headlands chapter stepped forward to help them. As the head of that chapter, Graham Murdock, explained, “I am a bass fisherman who looks to create more places to go fishing ... It doesn't come naturally. You've actually got to create that environment.”⁹⁰ In fact, one had to create everything about it: the bass – a fierce, fighting fish - were imported from the United States and introduced, by Bassmasters, to new reservoirs throughout Virginia. In the reservoirs, Bassmasters encouraged farmers to dump tires, logs, and other bits of artificial structure. Finally, and most heroically, Murdock actually rescued fish from reservoirs as they evaporated in the 1992 drought and transferred them to safe storage. Why did he and other Bassmasters and such a large portion of Virginia's farmers go to such

extremes? They enjoyed angling, of course, but it also animated their community. “A lot of these guys like their fishing,” explained Swanepoel, “It’s social. They go out on a boat and sit there and have their braai. It’s different from having a braai in the garden.”⁹¹ The difference lay in the water. Engineered hydrology fit hand in glove with rural white society.

That hydrology could appeal to urban whites as well. In 2000, Virginia farmers began to market the beauty of their water to tourists.⁹² In that year, Frank Richards constructed three chalets along his reservoir.⁹³ Blocking the Nyadora River since 1995, his impoundment boasted Virginia’s second-longest shoreline (15.15km) (Wood 2003). As a further aesthetic virtue, wildlife abounded on Richards’ farm. He saw kudu, sable, duiker, and klipspringer regularly and hyena, leopard, reedbuck, greysbok, steenbuck, wild pig, and jackal less frequently. Of course, the same animals roamed widely in Virginia. In this patchy, discontinuous habitat, they used the areas of farms too steep or rocky for cultivation. In effect, Richards found yet another way to use the highveld’s broken topography. Among his neighbors, the idea caught on. In 2002-2003, I found another five Virginia farmers who had considered chalets. Two of them planned to join their properties as a conservancy and – not satisfied with the existing biodiversity – to stock their land with impala, nyala, and zebra. Still, shoreline was the main attraction, and the conservancy’s chalets would have abutted it. “If you’re looking at water,” explained one of the owners, “and it’s pleasant, it’s quiet. What a way to relax.”⁹⁴ More intricate shorelines heightened this sense of calm. Jelsma planned to install lodging in the estuaries of the streams feeding his unusually dendritic reservoir. Guests would enjoy an unobstructed view of the water while ridges obstructed views of fellow guests. This type of optical geometry - Lanclos explained over lunch with Jelsma and myself – allowed chalets to “give [guests] the feeling of being completely by themselves.”⁹⁵ Tourists and their hosts craved human isolation and faunal

company – a combination that they called “virgin bush.” An ironic, anthropogenic nature was starting to flourish on the highveld.⁹⁶

Almost immediately, however, it was cut short and reduced to a mere rhetorical device. By 2002-2003, para-military violence had, at least, deferred the dream of eco-tourism (Hughes 2001). Whites cited, not extant chalets, but the *idea* of chalets as evidence of their ecological stewardship. Black farmers, they implied, never would have aspired to eco-tourism. “The world consists of two types of people,” Sweeney explained to me, “creators and users.” Clearly, most blacks fell in the latter category. Sweeney explained their instrumentalist approach to reservoirs and fish. In impounded water, they sought only food, as opposed to whites’ “bottom-line of generating something good and beautiful and valuable.”⁹⁷ Bassmasters, who practiced catch-and-release, expressed outrage at what they saw as a pervasive black tendency to overfish and even to vacuum reservoirs with nets. When black settlers moved onto his farm, Richards initially established a reasonably amicable relationship. “What killed it [however] was ... the total destruction of animals.”⁹⁸ What was being destroyed? Even if tourists had come in droves in 2002, Richards would not have earned much revenue: the chalets only charged the equivalent US\$1 per person per night. Tobacco, of course, did put money in the bank in peaceful times. Yet, in our conversation, Richards did not dwell upon those costs of the occupations. He and other Virginia farmers lamented ecological more than economic loss. Fuming in Harare, Gemmill denounced Mugabe: “he is an environmental pagan, this man. He doesn’t give a damn about any aspect of the environment.”⁹⁹ Some black settlers were even cutting impoundments, practicing gravity-fed irrigation on the downstream side and raising the specter of widespread dam failure. The environment whites had engineered threatened to implode around them.

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Before they were dispossessed, Virginia's whites created what Leo Marx (1964:23) calls a "middle landscape." Like Jefferson of the American Virginia, they imagined a garden, compromising between civilization and nature, between the primeval and the technological. Then, for reasons having little to do with aesthetics, commercial farmers *made* their Arcadian gardens and their geometry of beauty – a success that is all the more striking given the initial conditions. Under a climate of intense storms, Virginia's hydrology and soils behaved - to use Mike Davis's (1998:14) term for Southern California – like "Walden Pond on LSD." Primitive, wild nature raged just outside the kitchen door. Whites could not change the rain, but they changed the texture of the land. Terraces slowed runoff to a stately pace and held soil to soil. If managed properly, Virginia's gardens did not erode. In the 1990s, whites forged another compromise between the highveld's untamed topography and modern technology: the irrigation dam. They bulldozed earth, blocked rivers, and pumped water to agro-industrial fields over which tractors and combine harvesters rolled. Yet, amid the whirring of machines, lay a recessed, still space: the reservoir itself, flanked with trees and wildlife. Walden-like, these bodies of water invited transcendence. They also invited political discourse; for the middle landscape is "as attractive for what it excludes as for what it contains" (Marx 1964:138). Most tobacco plantations assigned one role and one role alone for blacks: manual labor.¹⁰⁰ Other categories of blacks, such as peasants and newly-minted commercial farmers, could not straddle the divide between primitivism and modernity. After 2000, the new settlers violated nearly all pre-existing codes. They killed wild animals, felled trees, or – as Cathy Buckle wrote after her farm was occupied – "rape[d] the land" (Buckle 2001:10). Portrayed as nearly atavistic in their

proclivity towards erosion, blacks did not qualify for admission to the middle landscape. Whites demarcated and regulated their own cultural reserve.

In so doing, whites solidified the man-land relationship vital to their sense of belonging in Africa – and updated that trope for the era black rule. Those who remained in Zimbabwe into the 1990s identified themselves as liberal in their dealings with workers and other blacks. They would have concurred with Lessing’s forward-thinking critique of the fictional farmer Charlie Slatter who believed “that one should buy a sjambok before a plough or a harrow” (Lessing 1950:13). Yet, having relinquished the infamous hippo-hide whip, most white farmers did not replace it with another instrument or technique that reached across the color bar. Very few of the Virginia farmers I met had ever shared a meal with a black and few intended to do so. They kept away from more mixed venues and social circles in Harare. Inter-marriage was unthinkable. In short, rural whites adapted to postcolonialism by withdrawing from, rather than integrating with, the broader nation.¹⁰¹ Their liberalism engaged with the environment almost as an alternative to society. In place of Charlie Slatter, many Virginians would identify with Alexandra Fuller’s (2004:56) white Zimbabwean recluse: “Like the African earth itself, he seemed organic and supernatural at the same time ... Seeing him on his farm, I couldn’t decide if the man had shaped the land or the other way around.” Perhaps the land-shaping hydrological revolution substituted for a sociological one.

In this sense, the hydrological revolution was supremely conservative. Virginia’s farmers sorely wanted, first, to keep their individual estates and, second, to legitimate their collective status as a land-holding minority. Investing in the highveld advanced whites towards the former goal in a straightforward, Lockean fashion. Each impoundment deepened their sense of entitlement to the estates they owned. This infrastructure also added to the potential expense of

nationalization and compensation, making such an event that much less likely. At one level, then, farmers carried out a revolution in hydrology implicitly in order to forestall one in property. At another – even less conscious – level, hydrological enhancements could help farmers regain some of the political footing they had lost at independence. Black rule cast the highveld in quite an unfavorable light: an unjust anachronism, where European-derived people still possessed large swathes of extra-European territory. Could the ecology and beauty of shorelines naturalize such an exotic – even retrograde – sociology? Yes, whites felt in their bones. Dams not only legitimated their discredited minority, but admitted it into the moral center of Zimbabwe. Mugabe himself appreciated the impoundments – or so Sweeney had overheard. Amid dams and reservoirs, he, Gemmill, and Stevens fit in. “A white African,” said one farmer, “Dave Stevens was it.” Surely, *black* Africans would come to recognize this identity. Yet, my informant undercut this praise with a crucial qualifier: “if ever there was a white African.”¹⁰²

¹ Kennedy (1987:2-3). The white population crested in roughly 1975 at 278,000, as against nearly 7 million blacks (Godwin and Hancock 1993:287).

² Despite missing its targets by a wide margin, the land reform program, on balance, benefited the 70,000 resettled families substantially (Kinsey 1999).

³ A letter to the editor, for example, argues that “There were no black landowners to steal it [land] from then [before 1900]. Local blacks ... preferred to live a nomadic life.” The anonymous author described him- or herself as “3rd generation ‘white Zimbabwean,’ 9th generation ‘white African,’ hence Afrikaner” (The Daily News [Harare], 24 September 2002, p. 7). For a discussion of the ways in which white pioneers deliberately settled in the proximity of resident blacks – whom they needed for labor – see Hughes (2006:54-55).

⁴ Data on white farmers' experience of the occupations themselves will appear in a separate work.

⁵ Appadurai (1991); cf Clifford (1997;17-46). Rutherford (2001:80-81) describes commercial farmers in northern Zimbabwe in this fashion.

⁶ Godwin and Hancock (1999: 287); Buckle (2002:63). Note: my subjects frequently described themselves as "patriots," never as "nationalists"

⁷ In this connection, Uusihakala (1999:39) refers to "double diaspora" of white Kenyans (cf. Ward 1989:1; Wagner 1994:7)

⁸ In referring to "Virginia," this article follows the boundaries of the intensive conservation area bearing that name. Most farmers distinguished between the eastern, lower-elevation side of this area, Virginia proper, and the western, higher side, Macheke.

⁹ Clements and Harben (1962:28-33) summarize this history. On the cultural meanings of Raleigh, Elizabeth, and Virginia, see Lim (1998). Perhaps not unrelated to this link between the Virginias, a settler arriving in Marondera shortly after WWII named his farm "Raleigh" explicitly after Sir Walter Raleigh (English 1995:81)

¹⁰ Clements and Harben (1962:27). Edward Harben was vice-president of the Rhodesian Tobacco Association, an industry group of growers, from 1946 to 1954 (cf. Rubert 1998).

¹¹ The importance of the watershed to whites' view of the eastern Mashonaland landscape can hardly be overemphasized. The front cover of the 1972 agricultural survey of Marondera shows an aerial photograph with the watershed lines added in (Ivy and Bromley 1972). In 1987, a group of whites founded Watershed College in Wedza, slightly to the south of Marondera (Bissett 2003:45). English's (1995) reminiscences of life in Wedza from the 1920s to the 1940s refers repeatedly to the watershed.

¹² British South Africa Company, *Information for Intending Settlers*, 195, p. 34; cited in Kennedy (1987:121).

¹³ Interview, Marondera, 1 October 2002.

¹⁴ See Meadows (1996) and Nyschens (1997) for frequent uses of this phrase.

¹⁵ Quoted in R. Reynolds (1964:2). Hodder-Williams (1983:45-68) and MacDonald (2003:53) provide fuller accounts of Scorrow and early settlement.

¹⁶ Interview, Virginia, 14 November 2002.

¹⁷ Interview, Marondera, 16 January 2002.

¹⁸ Interview, Marondera, 17 January 2002. Cf. Foster (2008:262).

¹⁹ Regarding further transfers of soil science from the US, see Anderson (1984) and Dodson (2004).

²⁰ See Hodder-Williams (1983:199) regarding early ICAs. The terraces work best on slopes of 6-8 percent and comprise a cut trough and filled ridge. They are distinguished from the more well-know bench terraces which apply to much steeper slopes and resemble a flight of stairs (Schwab, et al 1993:154-55). Zimbabwean farmers refer to the broadbase terraces colloquially as “contour ridges” (cf. Elwell n.d.)

²¹ By the 1970s, the Rhodesian Front government was sponsoring a set of conservation organizations internal to the tribal trust lands. These did not succeed either. Regarding the failure of such conservation protocols among Africans, see Drinkwater (1991), Hughes (2006a:67), McGregor (1991), Weinrich (1975:151), and K. Wilson (1989).

²² In the same spirit, D.S. McClymont’s (1981) 90-page review of tobacco advice only mentions labor five times. The Agricultural Labor Bureau is a committee of the Commercial Farmers Union.

²³ Measured between the 1100 and 1500m contour lines on the 1:50,000-scale Macheke, St. Benedict Mission, Munda maps (respectively, numbers 1732C3, 1832A1, and 1831B2 from the Zimbabwe Office of the Surveyor General). This gradient of 1.13 percent actually exceeds the recommended slope for parallel layouts (see below).

²⁴ Interview, Harare, 22 Nov. 2002.

²⁵ Ostrom (1990:91-92). Cited by Virginia whites, the pre-2000 figure of 72 families is probably understated. Throughout, I am using the terms “farm” and “family” loosely. Large family units frequently managed multiple, adjacent farms jointly and/or as a corporation. The issue of arable land was hotly contested throughout the 1990s. The state frequently claimed that farmers failed to use their land fully. Farmers suggested that plowing marginal areas would ultimately wreck the soil.

²⁶ Roughly ten farmers attended annual general meetings.

²⁷ Interview, Harare, 14 March 2003.

²⁸ As representative of communal land residents, the Virginia ICA invited a staff member of Agritex, the agricultural extension agency, who (after Independence) would have been black.

²⁹ Interview, Harare, 18 July 2003.

³⁰ Interview, Harare, 14 March 2003.

³¹ Although local agents of the ruling party and/or the secret police carried out the attack, the involvement of Party officials in Harare remains unclear.

³²For the quotation: interview, Harare, 10 June 2003. Regarding Stevens’ career, see Buckle (2002:53-54).

³³ Interview, Harare, 26 May 2003 (cf. Fortmann 1995:1058-59).

³⁴ Up to 1991, the Virginia ICA hired a government plane. When that aircraft became unavailable, Gemmill volunteered his own. (Virginia ICA, minutes of annual general meeting held on 26 September 1991, p. 2.)

³⁵ Interview, Harare, 10 June 2003.

³⁶ Interview, Harare, 22 Nov. 2002.

³⁷ Virginia ICA, minutes of meeting held on 6 June 1996, p. 2.

³⁸ Interview, Harare, 26 May 2003.

³⁹ Interview, Harare, 14 March 2003.

⁴⁰ Interview, Marondera, 30 July 2002.

⁴¹ Interview, Virginia, 14 November 2002.

⁴² Interview, Virginia, 7 November 2002.

⁴³ Virginia ICA, minutes of the annual general meeting, 26 September 1991.

⁴⁴ Interview, Harare, 29 October 2002.

⁴⁵ Interview, Virginia, 14 November 2002.

⁴⁶ Wood (2003) provides a full analysis of dam construction in Virginia.

⁴⁷ On the more arid lowveld, inadequate runoff greatly reduced the potential for dam-building. These areas, in any case, lay outside the symbolic and political heart of white agriculture.

⁴⁸ Anonymous posting to the Justice for Agriculture (Harare) “Open Letter Forum” email list, entitled “A return to Macheke/Virginia farming area,” 19 May 2003.

⁴⁹ After nationalizing derelict and abandoned farms between 1980 and 1983, the state, in fact, acquired very little land. Owners wishing to sell farms had to petition the state for a “certificate of no interest,” and the state almost always granted it. A considerable portion of Zimbabwe’s commercial farmland changed hands – mostly between whites (Rugube, et al 2003:129).

⁵⁰ Act 3/1992, the Land Acquisition Act. Cf. Moyo (2000:75).

⁵¹ Interview, Ruzawi, 23 July 2002.

⁵² Interview, Marondera, 10 October 2002.

⁵³ Interview, Harare, 26 May 2003.

⁵⁴ Interview, Marondera, 1 May 2003.

⁵⁵ Interview, Virginia, 23 July 2003.

⁵⁶ Interview, Harare, 10 June 2003. Tom Sweeney is a pseudonym. Sweeney overheard the remark in Shona – apparently made on the assumption that he did not understand that language – and recounted it to me and others in English.

⁵⁷ Interview, Virginia, 22 May 2003. Constantine Gavras is a pseudonym.

⁵⁸ Regarding the vastly larger Lake Kariba, Soils Incorporated (2000:73) confirms only a cooling effect “in the immediate vicinity of the lake.” In any case, wind would carry evaporated water a considerably distance before it precipitated.

⁵⁹ Interview, Harare, 18 July 2003.

⁶⁰ Interview, Virginia, 23 July 2003. Henk Jelsma is a pseudonym.

⁶¹ The relationship is slightly more complex because dams tend to grow wider as they grow taller, diminishing seepage in a linear fashion (Schwab, et al 1993:197-201)

⁶² Interview, Marondera, 12 June 2003. Don Lanclos is a pseudonym. Since spillway water is free of sediment (the sediment having fallen in the still water of the reservoir), it has a high capacity to pick up sediment as it accelerates (McCully 1996:33).

⁶³ Virginia ICA, minutes of meeting held on 1 August 1996, p.1.

⁶⁴ Virginia ICA, minutes of the 44th annual general meeting, 17 September 1997, p. 1.

⁶⁵ Virginia ICA, minutes of meeting held on 4 February 1999, p. 2.

⁶⁶ Interview, Harare, 18 October 2002.

⁶⁷ This irrigation infrastructure differed fundamentally from the gravity-fed systems more typically studied by anthropologists (e.g. Geertz 1963; Lansing 1991).

⁶⁸ Interview, Marondera, 20 March 2003. From the late 1990s, Wood had served as chairman of the Nyagui Sub-Catchment Council.

⁶⁹ Interview, Macheke, 31 July 2002. Johann Swanepoel is a pseudonym.

⁷⁰ Virginia ICA, Minutes of the 40th annual general meeting, 23 September 1993, p. 1.

⁷¹ Virginia ICA, Minutes of the 43rd annual general meeting, 1996, p. 1.

⁷² Interview, Marondera, 30 July 2002.

⁷³ Interview, Harare, 5 August 2002.

⁷⁴ Interview, Harare, 14 March 2003.

⁷⁵ Interview, Marondera, 20 March 2003.

⁷⁶ Interview, Marondera, 1 May 2003.

⁷⁷ Interview, Harare, 10 June 2003.

⁷⁸ Interview, Harare, 26 May 2003.

⁷⁹ All shoreline lengths apply at reservoirs' full supply level. Les Wood estimated most of the shorelines using original builders' basin surveys (Wood 2003).

⁸⁰ Interview, Marondera, 1 May 2003.

⁸¹ Chingezi is a pseudonym.

⁸² Interview, Marondera, 23 July 2003

⁸³ The longest reservoirs shorelines were 17.25, 15.15, and 13.13km. Wood (2003) calculated two others at 10.50 and 10.05km, but these lie within the measurement error of Chingezi's shoreline.

⁸⁴ Interview, Virginia, 23 July 2003.

⁸⁵ Interview, Harare, 14 March 2003.

⁸⁶ John Tessmer is pseudonym, as is Shiri Farm.

⁸⁷ Virginia ICA, minutes of the annual general meeting held 17 September 1997.

⁸⁸ Interview, Marondera, 12 June 2003.

⁸⁹ The African Waterfowl Census (carried out under the auspices of the International Waterfowl and Wetlands Research Bureau) conducted bird counts on one site in the vicinity of Virginia: Don's dam near Rusape. These findings show wild oscillations in the presence of Egyptian goose (*Alopochen aegyptiacus*) and knobnose or comb duck (*Sarkidiornis melanotos*) between 1993 and 1998. On the other hand, if the aggregate bird population were stable, one would expect decreasing bird densities during this period of major reservoir-filling (as birds dispersed themselves to more and more habitats). The absence of a clear decline in bird populations at any one site could indicate an increase in aggregate populations visiting eastern Zimbabwe. I thank Peter Rockingham-Gill for making these raw data available to me.

⁹⁰ Interview, Harare, 3 July 2003. Officially entitled the Zimbabwe National B.A.S.S. Federation, the Zimbabwe Bassmasters constituted a branch of B.A.S.S., of the global Bass Anglers Sportsmens Society, based in the United States.

⁹¹ Interview, Marondera, 1 May 2003.

⁹² In the late 1990s, various estates began labeling themselves as "safari farms" or "holiday farms" (Irene Staunton, pers. com., 7 July 2004; Mark Guizlo, pers. com. 10 June 2002; cf. Kramer 2003). I would distinguish this phenomenon from the slightly earlier conversion of large-scale cattle ranches into wildlife conservancies in the lowveld.

⁹³ Frank Richards is a pseudonym.

⁹⁴ Interview, Harare, 17 March 2003.

⁹⁵ Interview, Marondera, 12 June 2003.

⁹⁶ Regarding the association of “nature” and artificial water – particularly in the western US - see Fiege (1999), Hughes (2005), Langston (2003), McPhee (1971), and White (1995).

⁹⁷ Interview, Harare, 10 June 2003.

⁹⁸ Interview, Harare, 28 October 2002.

⁹⁹ Interview, Harare, 29 October 2002.

¹⁰⁰ At the national level, however, commercial farmers had taken significant steps towards supporting an emergent class of black land-owners. The Zimbabwe Tobacco Association, a part of the Commercial Farmers Union, systematically sponsored black tobacco growers through apprenticeships and supervised, independent farming.

¹⁰¹ See Davies (2001) for a treatment of this issue with respect to urban whites.

¹⁰² Interview, Virginia, 21 May 2003.