

Reproducing Portuguese Villages in Africa: Agricultural Science, Ideology and Empire

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This article examines the political and ideological uses of agronomic research, focusing on state-directed rural white settlements in Angola. Implemented ‘against the tide’, in the mid-1950s, with Angola’s African anti-colonial movement already under way, these schemes contained numerous contradictions. Under a modernising agenda, the Estado Novo dictatorship created the colonatos of Cela and Cunene, with the expressed purpose of reproducing Portuguese rural villages in Africa, settling poor Portuguese peasants and perpetuating colonial rule. Drawing on a range of primary sources from Portuguese colonial and scientific archives and the literature on Angola, I analyse the relationship between policymakers and the agricultural engineers mobilised to study the soils and its agricultural suitability in the regions chosen for the colonatos. I show that several experts criticised state-sponsored development of white rural settlements and exposed the policy’s drawbacks. I also place this particular example within the context of the existing literature on the history of science and development in post-war Africa. I will argue that the Portuguese version of the ‘developmentalist’ colonial state was burdened with an anti-progressive ideology that criticised industrialisation, urbanisation and proletarianisation, ignored technical and scientific conclusions, and despised settlers’ aspirations of upward mobility, seeing such aspirations as potentially politically disruptive. According to this model, the ideal type of white settler – modest, rooted in the land, earning only enough to get by – would be emulated by the African peasant, ensuring both social peace and colonial order. The failure of this experiment illustrates the (dis)connection between science and ideology in the last years of the Portuguese Empire, and the social and economic cost of their disengagement.

Introduction

This article examines the imperial entanglements between agricultural science and colonial ideology, focusing on two white rural settlements (*colonatos*) established in Angola during the late Portuguese colonial empire at a time of unprecedented economic development, white population growth and anti-colonial contestation: Cela in the central highlands and Cunene (also known as Matala) in the Cunene river valley.¹ My analysis draws on a range of primary sources from the Portuguese colonial archive and the literature on Angola during the last decades of Portuguese rule. My main intent is to insert this particular case within the existing literature on the history of science and development in post-war Africa, which is still mainly focused on the British and French empires. My study will emphasise the important differences and specificities

1 Gerald J. Bender produced some of the first insights into directed white settlement in rural Angola, from a critical perspective. G.J. Bender, ‘Planned Rural Settlement in Angola, 1900–1968’, in F.W. Heimer (ed.), *Social Change in Angola* (München, Arnold Bergstralsser Institut, 1973), pp. 235–79; G.J. Bender, *Angola under the Portuguese: The Myth and the Reality* (Berkeley and Los Angeles, University of California Press, 1978), pp. 95–132. His work showed that the *colonatos* did not increase the pace of white rural settlement despite the huge amount of public money spent on them.

of Angola's European *colonatos*, and Portugal's place in the history of 'developmentalist colonialism'.²

Portugal continued vigorously to colonise Angola and Mozambique 'against the tide, promoting substantial state-sponsored projects at the very moment that other colonial powers began to reconsider their colonial empires and restrain settler efforts to secure and extend their authority'.³ In other words, Portugal's bolstering of settler colonialism occurred just as decolonisation got under way.⁴ The rural white settlement schemes were part of a proactive, developmentalist agenda of the *Estado Novo* dictatorship in line with the modernisation tactics that other European colonial powers in Africa had introduced in the 1940s and 1950s to reinvigorate their empires.⁵ Similar to these earlier development projects, the Portuguese *colonatos* not only received a vast influx of public funding, science and technology expertise and state agency, but they also failed. From this perspective, the *colonatos*' history offers nothing new for the record.

However, in addition to its different demographic target – Europeans sent to Africa from the metropolis instead of native Africans – what seems to be peculiar is that, although conceived within a modernising agenda and publicised as such (successful 'Little Portugals' in Africa, promoting agricultural development, increases in production and better social conditions for the white settlers), the *colonatos*' ethos and realisation were deeply conservative, and they were unable to fulfil their goal of raising the standard of living of the white settlers.

Science and Agricultural Development in Post-War Africa

The British and French colonial empires in the 1940s and 1950s responded to African social movements with state-sponsored, funded and executed development programmes intended to guarantee economic growth, social welfare and political stability, thus reinvigorating colonialism.⁶ Drawing from their own distinct interwar experiences, both imperial states established similar legal instruments: the British established the Colonial Development and Welfare Act (1940 and 1945); and the French, the Fonds d'Investissement pour le Développement Économique et Social (Economic and Social Development Investment Fund) (1946). For the first time, these metropolitan governments willingly invested massive sums to undertake programmes of social and economic development in their colonies, not only to build infrastructure and increase production, but also to raise the standard of living of the colonised people through investments in social services.⁷ The British and French strategy, aimed at retaining power, re-energising colonial rule and re-legitimising the colonial mission, demanded considerable state planning and numbers of expert personnel, especially

2 For a recent overview of development and 20th-century colonialism in Africa, see J.M. Hodge and G. Hödl, 'Introduction', in J.M. Hodge, G. Hödl and M. Kopf (eds), *Developing Africa: Concepts and Practices in Twentieth-Century Colonialism* (Manchester, Manchester University Press, 2014), pp. 5–22.

3 J.M. Penvenne, 'Settling against the Tide: The Layered Contradictions of Twentieth-Century Portuguese Settlement in Mozambique', in C. Elkins and S. Pedersen (eds), *Settler Colonialism in the Twentieth Century* (New York and London, Routledge, 2005), pp. 79–94.

4 For a comprehensive appraisal of the era of decolonisation, see M. Shipway, *Decolonization and Its Impacts: A Comparative Approach to the End of the Colonial Empires* (Oxford, Blackwell, 2008).

5 For an analysis of British and French development policies in post-war Africa as a means of legitimising and re-energising empire, see F. Cooper, *Africa since 1940: The Past and the Present* (Cambridge, Cambridge University Press, 2002), pp. 38–65.

6 F. Cooper, 'Modernizing Bureaucrats, Backward Africans, and the Development Concept', in F. Cooper and R. Packard (eds), *International Development and the Social Sciences: Essays on the History and Politics of Knowledge* (Berkeley and Los Angeles, University of California Press, 1997), p. 62; F. Cooper, 'Development, Modernization, and the Social Sciences in the Era of Decolonization: The Examples of British and French Africa', *Revue d'Histoire des Sciences Humaines*, 10 (2004), pp. 15–17.

7 Hodge and Hödl, 'Introduction', p. 15.

in agricultural science.⁸ Due to long sojourns in the field, scientists and technical officers in the colonies produced ‘place-based knowledge’ generated through interactions with indigenous people, a type of knowledge that featured an interpenetration of western scientific and local African expertise and practice.⁹ Some of the knowledge produced in the late colonial setting – especially in the areas of ecology and the social sciences – even possessed the potential to call into question the contradictions and inequities of colonialism, and eventually erode its foundations.¹⁰ The differing views held by British tropical agricultural scientists, shaped by their research traditions and institutional networks, but also by the interaction with local knowledge and farming systems during their fieldwork, generated vigorous policy debates at the Colonial Office which prefigured the postcolonial ideas and practices concerning African environments and development.¹¹

The settlement and agricultural development schemes that flourished in Africa between the 1930s and the 1970s are good *loci* from which to observe the role that science played in the building of the ‘developmentalist state’.¹² The agents of the colonial state who developed these schemes were driven by concerns with public health, irrigation, the colonisation of unpopulated and potentially fertile regions, and with increased agricultural production and mechanisation. These large-scale, state-planned development schemes were aimed at African populations – rather than at white settlers – and transformed the conditions of life and modes of production in rural areas, with the assistance of a flood of experts.¹³ However, space remained for contestation and negotiation within those schemes.¹⁴

Monica van Beusekom’s works on French Sudan’s Office du Niger irrigation scheme, initiated in the 1920s as part of a plan for imperial economic self-sufficiency, reveals ‘how the day-to-day interactions between farmers and government officials [...] shaped colonial development thinking and policies’ in the 1950s. She says that ‘[t]he agriculture practiced at the Office was not the ideal described in project plans, but one that emerged from multi-layered negotiations among the numerous groups implicated in the scheme’.¹⁵ Her path-breaking approach to what actually happened in the Office du Niger irrigation scheme highlights the ‘disjunctures in theory and practice’, the complex interactions between metropolitan policymakers, Office managers

8 ‘The imperialism of the postwar era would be an imperialism of knowledge and planning as well as of capital’, according to Cooper, in ‘Development, Modernization’, p. 19. For an in-depth approach to the late British colonial imperialism as an imperialism of science and technology, in which academics and scientific experts rose to positions of unparalleled authority, see J.M. Hodge, *The Triumph of the Expert: Agrarian Doctrines of Development and the Legacies of British Colonialism* (Athens, Ohio University Press, 2007).

9 W. Beinart, K. Brown and D. Gilfoyle, ‘Experts and Expertise in Colonial Africa Reconsidered: Science and the Interpenetration of Knowledge’, *African Affairs*, 108, 432 (2009), pp. 413–33. For a distinction between the locally situated knowledge of the colonial period and the portable knowledge of the postcolonial era, see D.C. Mehos and S.M. Moon, ‘The Uses of Portability: Circulation Experts in the Technopolitics of Cold War and Decolonization’, in G. Hecht (ed.), *Entangled Geographies: Empire and Technopolitics in the Global Cold War* (Cambridge, Mass., and London, MIT Press, 2011), p. 44.

10 H. Tilley, *Africa as a Living Laboratory: Empire, Development, and the Problem of Scientific Knowledge, 1870–1950* (Chicago and London, University of Chicago Press, 2011).

11 J.M. Hodge, ‘The Hybridity of Colonial Knowledge: British Tropical Agricultural Science and African Farming Practices at the End of Empire’, in B.M. Bennett and J.M. Hodge (eds), *Science and Empire: Knowledge and Networks of Science across the British Empire, 1800–1970* (Basingstoke, Palgrave Macmillan, 2011), p. 209.

12 About the ‘developmentalist state’ in tropical Africa, see C. Bonneuil, ‘Development as Experiment: Science and State Building in Late Colonial and Postcolonial Africa, 1930–1970’, *Osiris*, second series, 15 (2000), pp. 258–81.

13 See *ibid.*, pp. 261, 264–65.

14 For an examination of the relationship between discourses and practices of development in late colonial times and how development practice may be shaped by local struggles and redefine official discourse, see M.M. van Beusekom and D.L. Hodgson, ‘Lessons Learned? Development Experiences in the Late Colonial Period’, *Journal of African History*, 41, 1 (2000), pp. 29–33.

15 M.M. van Beusekom, ‘Colonisation Indigène: French Rural Development Ideology at the Office du Niger, 1920–1940’, *International Journal of African Historical Studies*, 30, 2 (1997), pp. 299–323; ‘Disjunctures in Theory and Practice: Making Sense of Change in Agricultural Development at the Office du Niger, 1920–60’, *Journal of African History*, 41, 1 (2000), p. 80.

and African settlers, emphasising the ‘important changes in development policy at the project level without overturning broader models of development’.¹⁶

Adams and Anderson have pointed out that ‘[i]rrigation has remained a key element in development planning in sub-Saharan Africa [as a route to increasing rural crop production] and in particular has remained central to the policies advocated by international development agencies’ in the postcolonial period.¹⁷ The Office du Niger irrigation scheme highlights the continuities between colonial and postcolonial development planning. As we will see below, irrigation also became an important issue in Portugal’s development planning for the *colonatos*.

Scientists, Policymakers and the ‘El Dorado Myth’

According to Valentim Alexandre, two myths captured the motivation behind the Portuguese colonial project after the loss of Brazil (1822) and the subsequent turn to Africa: first, the ‘Sacred Heritage myth’, or the long-lasting, structural idea that the maintenance of every part of the Portuguese empire was historically mandated and that the survival of the Portuguese nation depended upon it; second, the ‘El Dorado myth’, the belief in the wealth of the African colonies, especially Angola (the most important and promising Portuguese colony in the late 19th century and throughout the 20th century, owing to its natural resources).¹⁸ This belief became a widespread topos of Portuguese nationalism, which still echoes occasionally today despite scientific rebuttal.¹⁹ Since at least the last quarter of the 19th century, the ‘El Dorado myth’ demanded action, mainly from the state but also from private initiatives, to develop the colonies’ vast natural resources.

A booklet published in 1922, based on the work of agricultural and chemical engineer José Firmo de Sousa Monteiro, head of the Angolan Agricultural Service, stated that:

The possibilities for agricultural production in Angola are many and its productive capacity is enormous. It should be noted that the African agricultural land is characterized by a life considerably more active than in Europe, so that the lands on the European continent considered average or poor in Africa, or, more narrowly, in Angola, can be considered fertile. [...] The statements made about the huge possibility of production increase of various modalities of crops due to the enormous vegetative potential of the Angolan soils and its immeasurable productive capacity that is both extensive and intensive are totally acceptable.²⁰

The image of Africa as a naturally rich continent was also commonplace in other European empires in the early 20th century and ‘permeated the agendas of most colonial governments, which were [...] preoccupied with turning these territories into vibrant producers of agricultural commodities and natural resources for the global export market’.²¹ The interwar period marked the beginning of the British imperial state’s mobilisation of science and technology, in order to develop its colonies. The colonial technical and research services and staff, especially

16 Van Beusekom, ‘Disjunctures in Theory and Practice’, pp. 98–9.

17 W.M. Adams and D.M. Anderson, ‘Irrigation before Development: Indigenous and Induced Change in Agricultural Water Management in East Africa’, *African Affairs*, 87, 349 (1988), p. 520.

18 V. Alexandre, ‘A África No Imaginário Político Português (séculos XIX e XX)’, *Penélope*, 15 (1995), p. 40.

19 *Ibid.*, p. 50. Even today the agricultural potential of Angola is an unquestioned fact in the public’s perception. People who lived in Angola during the late colonial period often say, for example, that its soil is very fertile, every crop flourishes and its natural resources are endless.

20 República Portuguesa, *A Agricultura em Angola: Breve Resumo sobre os Recursos Agrícolas da Província de Angola* (Lisboa, Agência Geral de Angola, 1922), p. 27. The idea that Angola had fertile soil and a prosperous future would also emerge at the First Congress for Colonial Agriculture. Cf. J.P. Ferreira Martins, *Ensino Agrícola Colonial: Comunicação Apresentada ao Primeiro Congresso de Agricultura Colonial, Porto, 1934* (Porto, Tip. Sociedade Papelaria, 1934), p. 4.

21 Hodge, *Triumph of the Expert*, p. 147.

in agriculture and related fields, expanded considerably in those years. Eventually British agricultural and pedological research scientists would come to the conclusion that many of the soils of tropical Africa had low fertility. Among the staff, the 'optimistic rhetoric about Africa's agricultural potential was noticeably dampened and often replaced by subtle critiques of European thought and practice'.²²

The Portuguese empire lacked a critical mass of agricultural technical officers and researchers until the 1960s. According to the governor-general in Angola, the post-war situation of the Agricultural Services was critical.²³ Agronomic technique was not used to promote production, and there was no adequate technical assistance for any category of producers. The technical staff who could provide direct and assiduous assistance to farmers (African and white settlers) hardly existed. Some regions of agricultural interest had not a single technical officer. Material resources at the disposal of the Agricultural Service were scarce as well: only three experimental stations came directly under the Agricultural Service: *Estação Agrícola Central* (Central Agricultural Experiment Station), *Estação Agrícola de Malange* (Malange Agricultural Experiment Station), and *Estação Agrícola da Humpata* (Humpata Agricultural Experiment Station). The network of experimental stations included four other establishments associated with the *Junta de Exportação do Algodão* (Cotton Export Board) and the *Junta de Exportação dos Cereais* (Cereals Export Board).²⁴ There was no basic agricultural research institution.

The scarcity of experts and lack of research capacity may explain why ideas about agricultural potential and soil fertility that researchers elsewhere in Africa were already questioning continued to be spread, even by the highest Angolan government authorities, without being contradicted. Moreover, both the governor-general and some field technicians recycled the usual judgements about African peoples and territories, including notions that environmental degradation was caused by Africans' rudimentary farming practices, that African agriculture was exclusively of a subsistence nature and that Africans were indolent and their lifestyle primitive. Both the governor-general and field technicians also reiterated the idea of vast, sparsely occupied regions and, thus, encouraged increased white settlement.²⁵

To compensate for the lack of imperial agricultural research infrastructure and the paucity of knowledge of soils and environments, the Minister of the Colonies, Marcelo Caetano, argued that the overseas Agricultural Services should lose its bureaucratic character and become, instead, a research and experimental station network overseen by the *Junta das Missões Geográficas e de Investigações Coloniais* (Geographical Missions and Colonial Research Board). The lack of *in situ* research stations and field experts should be compensated for by temporary research missions sent to the colonies and consisting of professors and scientists from metropolitan educational and scientific institutions, generally co-ordinated and supported by the Colonial Research Board.²⁶ It was in this context of great ignorance and overweening ambition that the Portuguese government planned the *colonatos* programme.

22 Tilley, *Africa as a Living Laboratory*, p. 156.

23 Arquivo Histórico Ultramarino, Lisbon (hereafter AHU), Ministério do Ultramar, Gabinete do Ministro, 305, 1/2G, Proc. 15/48, letter from the Governor-General of Angola to the Minister of Colonies, Luanda, 22 October 1948.

24 The situation seemed worse than 12 years earlier. By the end of 1936, only nine experimental stations and laboratories existed in Angola; see AHU, Ministério do Ultramar, Inspeção Superior de Administração Colonial, 546, António Lopes Mateus, *Relatório do Governador Geral de Angola para o ano de 1936*, pp. 48–9. I thank Samuël Coghe for this reference.

25 AHU, MU/GM, 305, 1/2G, Proc. 15/48, letter from the Governor-General of Angola to the Minister of Colonies, Luanda, 22 October 1948.

26 Order of the Minister of Colonies, Marcelo Caetano, 19 April 1945, quoted in a letter from the Governor-General of Angola to the Minister of Colonies, Luanda, 22 October 1948 (see previous footnote).

White Settlement in Angola: Ideas and Policies

Since the late 19th century, all Portuguese political regimes – the Constitutional Monarchy (1820–1910), the Republic (1910–1926), the Military Dictatorship (1926–1933) and the *Estado Novo* (1933–1974) – have been confronted with the question of how to increase the number of Portuguese settlers in Angola as a means to guarantee Portuguese sovereignty, effective land occupation, the ‘civilising’ of native peoples and economic progress.²⁷ Widely discussed in political and scientific fora, these concerns resulted in three different positions concerning the role of the Portuguese state in settling whites in its major African colony. The first defended the state’s direct intervention in the selection, transportation and settlement of Portuguese rural settlers in the lowlands of Angola (this position advocated directed or planned settlement). Those who supported this position even considered colonial settlement to be a viable alternative to Portuguese emigration abroad, namely to Brazil. The second position argued for indirect promotion of white settlement through facilitating free colonisation and establishing economic development policies. Meanwhile, a third ‘argued for free or spontaneous settlement whereby prospective settlers must assume all their own costs and responsibilities’ without state intervention.²⁸

The omnipresence of the white settlement topic in Portuguese political discourse had no equivalent in political practice, being too much entangled in ambiguity, indecisiveness and material constraints. Except for one-off measures aimed at creating agricultural settlements and transporting a few hundred Portuguese settlers free of charge to Angola in the mid and late 19th century, and later in the 1920s, the Portuguese state took no direct role until the post-war period. During its first decades, the *Estado Novo* government imposed tight restrictions on the entry of Portuguese migrants into Angola. Only individuals who had a high level of income or had received a ‘call letter’ guaranteeing employment or the means of subsistence at their destination were allowed to emigrate. Central government opposed mass migration to the colonies. Thus, any migration that did take place was undertaken mainly by businessmen, managers and qualified technical staff. The colonial government shared this policy because of its concern about the arrival of settlers who, without capital and technical skills, might swell the ranks of the unemployed. Both governments also feared any change that might heighten the image of Angola as a land of poor whites, a sign of the failure of any colonising and civilising project.²⁹ Thus Angola’s only experience of European rural settlement was carried out during the 1930s and 1940s by a private railway company: the Companhia de Caminhos de Ferro de Benguela. In 1949, when this experiment came to an end, only nine Portuguese families had actually settled, while a similar number had dropped out.

After the Second World War, however, Portuguese migration to Angola grew significantly, thanks to economic development brought about by the high value of colonial commodities on the world market.³⁰ In the early 1950s, the Portuguese state adopted a more interventionist policy regarding white settlement in Angola: it promoted economic development (especially transportation and communications infrastructure, which were an indirect means of attracting spontaneous settlement), lifted some of the restrictions on overseas migration (it was not until

27 After the path-breaking work of Gerald Bender on Portuguese white settlement policies in Angola – Bender, *Angola under the Portuguese* – the theme was revisited by C. Castelo, *Passagens para África: o povoamento de Angola e Moçambique com naturais da metrópole* (Porto, Edições Afrontamento, 2007).

28 Bender, ‘Planned Rural Settlement’, p. 236.

29 C. Castelo, ‘Colonial Migration to Angola and Mozambique: Constraints and Illusions’, in E. Morier-Genoud and M. Cahen (eds), *Imperial Migrations: Colonial Communities and Diaspora in the Portuguese World* (Basingstoke, Palgrave Macmillan, 2012), p. 111.

30 The increase in population flow from the metropolis to Angola steadily added to the number of whites in Angola. In 1920, the white population was 20,700; in 1940, 44,083; in 1950, 78,826; in 1960, 172,529; in 1970, 280,101. Castelo, ‘Colonial Migration’, p. 113.

1962 that Portuguese citizens could enter or settle anywhere in Portuguese-ruled territory), and intervened directly in settling Portuguese rural families in planned agricultural settlements.

Nevertheless, throughout the years, free or spontaneous settlement was always the most significant part of white colonisation, which determined the social profile of the white population settled in Angola. This colony attracted mainly people in trade, services and public administration, who would settle in the major cities, contradicting the rural view disseminated by official propaganda.³¹ The level of education of the settlers was higher than that of the metropolitan Portuguese population and of the Portuguese emigrants who settled in countries other than Portuguese colonies. Although a gradual decrease in the settlers' socio-economic status was observed during the golden age of overseas migration (the mid 1950s to the mid 1960s), a long-term analysis confirms a more socially heterogeneous migratory pattern towards Angola.³² The *colonatos* fit into the golden age pattern of a decrease in settlers' socio-economic status, instigated and supported by the state.

In the 1950s, the *Estado Novo* invested massive sums in the creation of two large rural settlements in Angola associated with irrigation systems that were exclusively designed (Cela) or mostly designed (Cunene) for white peasants.³³ The initial projects called for the settlement of thousands of white families from the rural areas of Portugal. Recently Joseph M. Hodge has suggested that '[f]rom a southern African perspective, [...] Portugal's bolstering of settler colonialism doesn't seem so out of step, nor does its emphasis on large-scale settlement schemes which other colonial and early postcolonial states also sponsored across sub-Saharan Africa at the time'.³⁴ However, none of the co-eval state-sponsored schemes in South Africa or Rhodesia envisaged the settlement of poor white peasants from Europe within such an anti-progressive framework.

The Cela and Cunene agricultural settlements received funding from the colonial government, but also from imperial state-sponsored development plans. In the first two Overseas Development Plans (1953–58 and 1959–63), white rural settlement played a central role, following communications and transport, and exploration of natural resources. In the interim plan (1964–66) and the third plan (1967–73), expenditure for white rural settlement, irrigation schemes and infrastructure decreased while industrialisation increased.³⁵

Frederick Cooper notes that the Portuguese dictatorship 'built its own repressive version of the developmentalist colonial state' in Angola and Mozambique, and that much of its post-war effort was indeed channelled towards 'bringing in whites from Portugal in order to make up the middle and lower middle levels of enterprises'.³⁶ My case study of the Cela and Cunene *colonatos* reveals that the Portuguese state also planned and directed the selection, transportation and settlement of poor Portuguese peasants, intending them to become nothing more than humble small landowners rooted in the Angolan soil, thus providing an idyllic model of social organisation that the African peasants should emulate. While represented in the official discourse as agents of Portuguese sovereignty and civilisation in Africa and as models for the African population, the settlers were in fact the poorest of the poor and the most illiterate among

31 R. Pélessier, *La Colonie du Minotaure: Nationalismes et Révoltes en Angola, 1926–1961* (Orgeval, self-published, 1978), p. 38.

32 Christine Messiant suggested that one of the peculiarities of white Portuguese settlement in Angola resulted from the low level of education of the Portuguese settlers, in comparison with the white settlers in the British and French empires. C. Messiant, 1961. *L'Angola Colonial, Histoire et Société: Les Prémisses du Mouvement Nationaliste* (Bâle, P. Schlettwein Publishing Switzerland, 2006), pp. 186–205.

33 In the late 1940s and 1950s, state-planned native and mixed rural settlements were established in Angola, but those schemes received far less funding. After 1961 and the beginning of the colonial war, the Portuguese military and civil administration used the resettlement of African populations in strategic and rural development villages as a method of counter-insurgency.

34 J.M. Hodge, 'Epilogue', in Hodge, Hödl and Kopf (eds), *Developing Africa*, p. 372.

35 V. Pereira, 'A Economia do Império e os Planos de Fomento', in M.B. Jerónimo (ed.), *O Império Colonial em Questão: Poderes, Saberes e Instituições* (Lisbon, Edições 70, 2012), pp. 251–85.

36 Cooper, *Africa since 1940*, p. 62.

the so-called ‘civilised’. This strategy of de-proletarianisation and production of ideal settlers also paralleled the internal colonisation policy followed in the metropolis itself.³⁷

White Settlement at Cela: ‘Portugal in Miniature in Angola’³⁸

Located in the mild climate of the Amboim plateau (South Kwanza), Cela is the first and more representative ‘model’ of the European *colonato* in Angola, due to size, public investment and number of families settled. As the geographer Orlando Ribeiro wrote: ‘[f]or years the *colonato* of Cela was a kind of living room of Angola, where the myth of Portuguese colonisation was exhibited to the admiration of strangers’.³⁹

The governor-general of Angola, José Agapito da Silva Carvalho, staunch supporter of European rural settlements, issued an order on 25 February 1949 commanding the preliminary identification of areas suitable for white settlement and evaluation of their agricultural potential. He attributed the failure of previous attempts at both directed and spontaneous colonisation to the lack of preparatory studies. An agricultural studies brigade of the Angola Agricultural Service, directed by the agronomist Ilídio Barbosa, surveyed the areas of the *postos administrativos* (administrative posts) of Cela, Ebo and Condé with that goal in mind, pinpointing an area deemed suitable for the settlement of metropolitan families in the *Cela posto administrativo*. On 11 November 1950, Barbosa presented a preliminary report which outlined the ‘fundamental elements for defining the problem at large’. He, however, left questions of detail to be dealt with after the completion of the final project – which never happened.⁴⁰ As it turned out later, the choice of Cela had no scientific basis:

The idea that interested the Brigade was the apparent fertility of the lowlands of the Cussoi valley [which was] based upon the existence of vast plains of black soils to which irrigation would ensure greater productivity. [...] Thus the proposal for European colonisation of the Cussoi valley was born based on impressionist[ic] recognition, or rather a somewhat romantic notion, concluding hastily that [since] the lowlands of the Cussoi valley were very fertile that it was essential to irrigate them (the survey was done during the dry season).⁴¹

Lacking any real knowledge of the soils and their agricultural capability (no detailed pedological study had been done previously), work began in May 1951; in early 1953, the first settlers arrived. They were chosen by the agricultural engineer Francisco António Teixeira Boaventura, who was sent to Portugal for that expressed purpose by the governor-general of Angola. The preference was for poor rural workers married, with children, from Trás-os-Montes, Beiras, Ribatejo and Alentejo (the northern, central and southern regions of Portugal). For their part, these settlers, mainly illiterate and unskilled, hoped that with initial support from the government they would become small landowners in Africa and improve their standard of living.

In the lowlands of the Cossoi river valley, 15 villages (Vimieiro, Freixo, S. Tiago Adeganha, Pena, Santa Isabel, Monsanto, Carrasqueira, Lardosa, Sé Nova, Vila Viçosa, Gradil, Macedo de Cavaleiros, Alqueidão, Melo and S. Mamede) were established, each with 25–30 *casais agrícolas*, agricultural smallholdings that could not be sold, divided between heirs or pledged to someone else. Each consisted of a dwelling-house with outbuildings, to be used solely for

37 Elisa Lopes da Silva has highlighted that the *Estado Novo*’s internal colonisation policy in the south of Portugal was a de-proletarianisation project that intended to produce small landowners whose life conditions and attachment to their lands would become the basis of a new rural social order in line with the regime’s conservative ideology.

E. Silva, ‘Time to Settle Down: Property, State and its Subjects’, in L. Trindade (ed.), *The Making of Modern Portugal* (Newcastle upon Tyne, Cambridge Scholars Publishing, 2013), pp. 178–99 (especially pp. 189, 196–7).

38 This is the expression used by Horácio de Sá Viana Rebelo, governor-general of Angola (1956–9), HSV Rebelo, *Angola na África deste Tempo* (Lisbon, self-published, 1961), p. 121.

39 O. Ribeiro, *A Colonização de Angola e o seu Fracasso* (Lisbon, Imprensa Nacional Casa da Moeda, 1981), p. 183.

40 H. Lains e Silva, *Aspectos Agronómicos e Económico-Sociais do Colonato da Cela* (Lisbon, Missão de Estudos Agronómicos do Ultramar, 1961), pp. 7–8.

41 *Ibid.*, p. 8.

agricultural activities, plus farmland. Isolated culturally from the local environment, these farming villages reproduced an archetype of the Portuguese village made up of single-storey, single-family dwellings painted white, with communal oven, threshing floor and borehole, plus a combined church and school for daily primary education and Mass on Sundays.⁴² Each settler received a modest house and furniture, stable and yard, seeds, livestock, farm implements and a plot of around 18 hectares of land that should be worked exclusively by the family using basic implements, such as ox-cart and plough. Until the first harvest, each family also received a monthly subsidy. After their fourth year at the *colonato*, each settler had to begin paying back the state loans that covered all of these items, and were given 25 years in which to do so.

The first groups of settlers who arrived in Cela (composing Vimieiro village) faced great difficulties: their houses had no furniture or running water, and none of the promised technical assistance, distribution networks or commercial infrastructure were yet in place. Moreover, settlers were forbidden to recruit Africans to help with agricultural and domestic work. By prohibiting the use of African labour, the state aimed to prove that Portuguese peasants could survive in the countryside without African support, and, thus, that they could serve as models for the local African population. Some families gave up farming after only a few months, a fact that was not publicly disclosed. The prohibition on African labour ended in 1963 after numerous complaints from settlers.⁴³

The Portuguese settlers were not the only ones unhappy with the agricultural scheme and its assumptions; the settlement at Cela also attracted complaints from the local African inhabitants.⁴⁴ The government had based the scheme on a critical misreading of the environment (according to which the lowlands of Cussoi contained rich soils just waiting for efficient exploitation). Equally important, however, the government's racial prejudice of the time led it to explain the previous failure to exploit those lowlands as due to African backwardness, indolence and lack of skills needed to cultivate these soils.⁴⁵ As the Missão de Inquéritos Agrícolas de Angola (Angolan Agricultural Survey Mission) put it in the early 1960s, the vast majority of those lowlands 'had no effective agricultural occupation (though this did not mean that they were considered ownerless according to African traditional uses and rights). Most of the local African inhabitants were successively transferred to other areas of the Administration', with their lands given to the arriving settlers.⁴⁶

Settling white Portuguese farmers on the land did not solve the problems inherent in the environment, leading to disappointing economic results. Human beings may have found the climate comfortable, but that did not make it either sufficiently warm for tropical crops or temperate enough for temperate crops. Consequently, the low-quality crops that resulted from settlers' attempts to grow corn, beans, rice and potatoes had to be sold at very low prices, usually half to one-third of that obtained in the Portuguese markets familiar to these farmers. Moreover, markets either did not exist or were so far away that poor communication prevented effective crop marketing. Yet despite agricultural and economic studies that indicated the true reasons for failure, the state continued the expansion of the settlement scheme, based on the

42 Government propaganda included photographs of settlers installed in the first three villages, carrying out their daily routines; available at <http://actd.iict.pt/collection/actd:AHUC1317>, retrieved 7 January 2015.

43 AHU, Ministério do Ultramar, Gabinete do Ministro, Proc. 44A, Portugal de Além-Mar – Emigração inopinada do colonato europeu de Cela – Falando com os colonos que regressam (Frederico Filipe, correspondent for *O Comércio do Porto*, in Benguela) – Secção de Expediente e Cifra do Ministério do Ultramar, 3 November 1953.

44 David Birmingham wrote a fictionalised account of the life of a typical Angolan peasant farmer, Kinyama, a powerful account of the process of social and economic change imposed on the Waku Kungo rural community by white settlement policies. This process resulted in the takeover of land from the Ovimbundu farmers by the administration of the Cela *colonato*. D. Birmingham, 'Colonialism in Angola: Kinyama's Experience', *Portugal and Africa* (Athens, Ohio University Press, 1999), pp. 122–32.

45 Silva, *Aspectos*, p. 10.

46 Missão de Inquéritos Agrícolas de Angola, *Recenseamento Agrícola de Angola, Vol. 1: Bacia leiteira Cela-Catofe* (Luanda, 1962–63), p. 13.

idea ‘that the land was fertile and [...] that failures were partly due to settlers’ incompetence and partly due to lack of water’.⁴⁷

In the face of the economic difficulties suffered by settler families, and their complaints and demoralisation (as well as further negative results from scientific studies), the government eventually modified the framework for settlement, while crop production was diversified to reflect better the capacity of the local soils and climate. In 1958, the state decided that new settlers would receive larger farms and that more profitable crops could be cultivated. On 23 April of that year, government also contracted a North American enterprise – the Hydrotechnic Corporation – to give technical assistance for a new development plan for the *colonato*, a plan that included a much-needed irrigation project.

Manuel Rafael Amaro da Costa, the Under-Secretary of State for Overseas Development, ordered Missão de Estudos Agrónomicos do Ultramar (MEAU – Overseas Agricultural Studies Mission) of the Junta de Investigações do Ultramar (JIU – Overseas Research Board) to evaluate the report produced by the Hydrotechnic Corporation (‘Development Project: Report on Basic Hydroelectric and Hydroagricultural works’). In June 1961, the head of MEAU, the agricultural engineer Hélder Lains e Silva, visited the *colonato* and examined its operating conditions. He also studied the documents produced by the Junta de Povoamento Agrário (Agricultural Settlement Board), the Hydrotechnic Corporation and the agricultural engineers who worked at Cela. He concluded that the lack of basic agricultural, animal husbandry and socio-economic knowledge had caused the failure of smallholdings in the Cussoi valley. He also concluded that the site lacked the agronomic or economic–social requirements either for medium-sized farms or for the irrigation projects of the Hydrotechnic Corporation (January 1960 and January 1961) intended to water 8,000–11,500 hectares of land in Cussoi valley and 3,500–3,850 hectares in the western highlands. Finally, he pointed out the immediate need for a Cussoi valley soils map, necessary to conduct the kind of rural sociology studies required to plan land use. He also called for increasing the depth of studies of animal nutrition and ecology in order to devise a type of intensive dry land farming. In addition he advised the preparation of maps showing the amount of irrigation needed for more intensive animal husbandry, and a survey of local water resources of the Cussoi river basin.⁴⁸

Despite the clarity of his presentation and the seriousness of the situation, both the national and colonial governments failed to face up to the difficulties inherent in the *colonato*’s development, nor did they bother to establish responsibility for the *colonato*’s economic failure. As a result, the medium-sized farms continued to do poorly because the region’s structural problems remained unresolved.⁴⁹

The geographer Orlando Ribeiro, who visited the Cela’s rural settlements in the early and late 1960s, noticed some progress, which he registered in his field notes. In 1960 he commented that the situation at Cela was bleak: the *colonato* was built on soils that had not been studied before, and its potential for success had been based on assumptions about agricultural production in a situation in which marketing was not assured and production itself relied on outdated agricultural techniques. The machinery at the settlers’ disposal was not used because it was unsuitable for the size of the plots or it lacked parts, and often settlers did not know how to operate it. From his perspective, the settlers led hard lives on farms with poor productivity, a situation that would never enable them to repay their state loans or improve their living standards.⁵⁰ On his return in 1969, he was surprised to find ‘the settlement in better condition, and the city of Santa Comba

47 Silva, *Aspectos*, p. 15.

48 *Ibid.*, pp. 25–6.

49 Arquivo Nacional Torre do Tombo, Lisbon (ANTT), AOS/CO/UL-40, pt. 3, ‘Memorando sobre a situação das fazendas médias da Cela em fins de Julho de 1963’. AHU, DGE-GTP, Pareceres sobre diversos estudos, Vol. 3, Report no. 2/DP72, 13 June 1972, from JPPA.

50 A member of Ribeiro’s team recalls the settlers’ demoralisation and quotes a particular settler’s complaint: ‘I did not come to Angola to be more slave of myself than I was there [in Portugal]’. M. Feio, *As Causas do Fracasso da Colonização Agrícola de Angola* (Lisbon, IICT, 1998), p. 49.

[the *colonato* headquarters, named after Salazar's birthplace] transformed into a major centre for services, with a lively, varied and thriving commerce'.⁵¹ Small industries for processing agricultural products had also developed in the area. Settlers now widely used native labour and agricultural machinery, and an irrigation scheme was being developed. This far more positive scenario, however, did not mean that all was well. The settlements continued to be hampered by the lack of technical assistance, as well as by economically irrational decisions and arbitrary and authoritarian direction that gave little respect to the settlers, who were still waiting for permanent title grants to their farms. The rigid order imposed on the white settlers by colonial state agents (the brigade officials and technicians) also contributed to a high dropout rate.

The settlers' concerns crystallised into three clear demands: first, that the state loan repayments should be transformed into a much smaller property tax; second, that they needed more land to allow for crop rotation and fallow periods; finally, that they should be allowed to employ African labour. As previously mentioned, the state gave in to their third demand – to employ African labour – in 1963. Their second demand was also met in part by the departure of many settlers who, unable to repay the state loans and seeing the acquisition of sufficient property as an unattainable dream, decided instead to take up low-level civil service, petty trade and office jobs in towns.⁵² This allowed other farmers to acquire their farms and use the extra land for fallow periods and crop rotation. The colonial government, however, refused even to consider the settlers' first demand – to turn the onerous loan repayments into a smaller property tax.

Moreover, the continuing movement of farmers from the land into the towns became a source of anxiety for the authorities, for it seemed to prove that the settlers felt no particular attachment to the Angolan soil nor to farming and the modest lifestyle that was all they could attain in the *colonato*. Moreover, poor whites could be managed only within the *colonato* – once they left for the towns, social control over them became much more difficult. Always in danger of falling into poverty, they became a visible cause of embarrassment as 'third-class' whites competing for jobs with Africans. Regardless of these concerns, however, the mere fact that these white settlers remained in Angola (and did not return to Portugal) had one positive effect from the *Estado Novo's* point of view, for it meant a reinforcement of the Portuguese demographic presence in Africa.

Cunene *Colonato*: Ideology and Personal Agency

In 1946, the Minister of Colonies, Marcelo Caetano, sent the civil engineer António Trigo de Morais⁵³ on a mission to study the harnessing of the Cunene river (Huíla district, in the south of Angola) for energy production and white rural settlement enabled by irrigation.⁵⁴ The mission team also included another civil engineer, a topographer and a surveyor (all from the Junta Autónoma das Obras de Hidráulica Agrícola – JAOHA), but no agricultural engineer. In reality, they intended to explore the potential of the Cunene river for hydraulic exploitation. Almost immediately on arrival in the Cunene region, on 26 June, Trigo de Morais telegraphed the Minister of Colonies, informing him that the mission had already verified the Cunene river's enormous potential for wealth creation. By 1 August, the team had completed its study of the Cunene river and its left-bank valley; Trigo de Morais wrote to the Minister that conditions for industrial,

51 O. Ribeiro, *A Colonização de Angola e o seu Fracasso* (Lisbon, INCM, 1981), pp. 184–5.

52 Feio, *As Causas do Fracasso*, p. 50.

53 Paladin of irrigated agriculture in Portugal, president of JAOHA (Autonomous Board for Hydraulic Agricultural Works, of the Ministry of Public Works and Communications) and director of the Direção Geral do Fomento Colonial (Colonial Development Department of the Ministry of Colonies).

54 Trigo de Morais argued that 'the most effective solution, both in the metropolis and in the colonial empire, for the settlement of the [Portuguese] surplus population lies [...] in the multiple uses of water'. In his view, settlers would obtain their bread and dignity with the help of dams and irrigation channels – 'blessed water'. A. Trigo de Morais, *A água na Valorização do Ultramar: Conferência Proferida em 1 de Junho de 1951, no Instituto Superior Técnico* (Lisbon, Agência Geral do Ultramar, 1951).

agricultural and European settlement were excellent, and advised suspending land grants between the Ruacaná and the Matala rapids in anticipation of future hydraulic development.⁵⁵

Having in mind a state-sponsored scheme of white settlement based on irrigated agriculture, and following his nomination as Under-Secretary of State for the Overseas Provinces, Trigo de Morais ordered Joaquim Botelho da Costa – agricultural engineer and professor at the Instituto Superior de Agronomia (ISA – Higher Institute of Agronomy) – to complete a soil survey of the right bank of the Catepe and Cunene rivers to define the area's suitability for irrigation.⁵⁶ That mission was carried out in 1951 by Botelho da Costa, the agricultural engineers Ário Lobo Azevedo and Rui Pinto Ricardo (also ISA assistant professors) and the agricultural technician Rui Ferro Mayer. It was funded as part of the research programme 'Tropical Pedology Studies' of the JIU.

Their first fieldwork campaign surveyed 48,000 hectares in an area located between the confluence of the Catepe and Cutenda rivers, about five kilometres south of Capelongo. The initial team returned to the Cunene region the following year to conclude the Cunene basin agrological survey, in the area between Tchiteve and Humbe (50,000 hectares). Here they had the support of other experts from ISA, Junta de Colonização Interna (Internal Colonisation Board) and the Angola Agricultural Service.

The first campaign's report stated that it was not possible to delimit a continuous extension of 10,000 hectares usable for irrigated agriculture in the surveyed region. Although some areas possessed soils acceptable for irrigation, none of these amounted to more than 2,000–3,000 hectares. At best, these areas totalled 8,000 hectares, all located in the northern part of the region on a section of the Qué river, partly on the northern bank. In addition, but at a considerable distance to the south, they found some 3,000–4,000 hectares from Capelongo up to about ten kilometres further north. This region, the area of Matala, was not generally usable for farming based on irrigation. In the second region the soils were considered far from ideal for irrigation. These soils could be used (once free from flooding) only after gradual correction of their most glaring faults (excessive density, lack of structure and poor internal drainage) by an effective drainage network. This was considered indispensable as a defence against the potential danger of salination.⁵⁷

Accordingly, Botelho da Costa's team considered the climate in the Tchiteve-Humbe area more favourable to sugar cane culture than the area considered in the first report. They also believed that a viable cotton crop could be produced in the Tchiteve-Humbe area, since the cold and frost usually occurred only at the end of the plant's growing period.

They sent their soil samples to ISA in Lisbon, where they were analysed in both chemistry and pedology laboratories. The physical and chemical analysis and the analysis that followed this, based on the literature, revealed that the majority of the soils that they had surveyed could not be used for irrigated agriculture.⁵⁸ According to the professor and agricultural engineer Rui Pinto Ricardo, when Botelho da Costa delivered the study to Trigo de Morais in the form of a Capelongo soils map and map of land suitable for irrigated agriculture, which showed this graphically, the Under-Secretary of State for the Overseas provinces simply repeated that it did not matter because 'in Trás-os-Montes [the northernmost province of Portugal, where he was

55 AHU, MU, GM, n. 177, 1/2G. Processo 141/46, Missão de estudos do rio Cunene, Office letter n. 2417 from the cabinet of the minister of Colonies to the Colonial Development Department, 3 August 1946.

56 Joaquim Vieira Botelho da Costa (1910–1965) introduced the discipline of pedology and soil conservation in Portugal in 1952. R. Ricardo, J.A. Raposo and M. Madeira, 'Estudos dos Solos de Angola pelo ISA e pelo ICT: Contribuição para a Ciência do Solo Tropical', in I. Moreira (ed.), *Angola: Agricultura, Recursos Naturais, Desenvolvimento Rural*, Vol. 1 (Lisbon, ISA, 2006), p. 99.

57 *Reconhecimento Agrológico de Terrenos da Margem Direita dos Rios Catepe e Cunene. 2 – Características Morfológicas e Aptidão para o Regadio numa Zona entre o Tchiteve e o Humbe*. Apud M. Silva e Sousa, *Vida e Obra do Professor Botelho da Costa* (Luanda and Nova Lisboa, IIAA, 1971), pp. 148–50.

58 J. Botelho da Costa, A. Lobo Azevedo, E.P.C. Franco *et al.*, *Carta Agrológica e Carta de Aptidão para Regadio da «Zona de Capelongo» (Alto Cunene, Angola)* (Lisbon, JIU, 1954).

born] even stones give cabbages'.⁵⁹ He considered that the Portuguese settlers would have the capacity to overcome all obstacles. Like Gilberto Freyre, he believed that the Portuguese were particularly apt for the task of colonisation.⁶⁰

Thus the Cunene white settlement and irrigation scheme went ahead regardless of the negative scientific findings about Cunene's soils. A significant part of the *casais agrícolas* was located in lands unsuitable for irrigation, and, as later agricultural studies would show, the irrigated crops planned for cultivation and processing were not the most appropriate choices (lucerne,⁶¹ for example). In fact, the greatest problems diagnosed included the allocation of plots too small to be economically viable, and the absence of a drainage network. For this reason, much of the land was saline and impractical to use for any crop.⁶²

Orlando Ribeiro visited the *colonato* in 1962 and observed the technical errors made by the very poor, aged and illiterate settlers, and the problems they faced. Maria Margarida Silva e Castro, a female agricultural engineer from the Missão de Inquéritos Agrícolas de Angola (Angolan Agricultural Survey Mission), conducted a social-economic survey in the Cunene *colonato* in 1970. She, too, confirmed these observations. She also witnessed an atmosphere of latent demoralisation attendant on the serious economic difficulties that settlers continually faced, greatly increased by the despair at the delay in the granting of definitive property rights. At this time only a few settlers had managed to repay the state loans in order to obtain permanent title, thus becoming true smallholders.⁶³

The state had established the Cunene *colonato* in 1954, to run in conjunction with the construction of the Matala hydroelectric dam (inaugurated in the same year and named for Salazar). Cunene also benefited from funds given by the Overseas Development Plans. Trigo de Moraes asserted that both Europeans and Africans could settle in Cunene, but this amounted to little more than rhetoric. The *colonato* was in fact an experiment in social engineering designed for whites.⁶⁴

We want, of course, that the greatest possible number of white families from the Metropole settle in the villages of Cunene, making them strong settlement centres; families of settlers well-versed in the land, owning the land where they toil, exercising the traditional virtues of the Portuguese farmer – tenacity, sobriety, addiction to work – will set an example for their brothers in Africa. [In those villages] modest homes will be built to welcome the settlers and special attention will be given so as not to induce them to radically change their habits or lose their great qualities.⁶⁵

Four rural villages (similar to those in Cela, intended to imitate an archetypical Portuguese village) made up the settlement, which also included a small town, all of which spread along the waterway for around 22 kilometres.⁶⁶ In an attempt to preserve the practices and customs of Portuguese rural communities, the settlers engaged mainly in agriculture (growing wheat, tobacco, tomato, lucerne and vegetables, the latter for domestic consumption). Each family received a very small farm (5–10 hectares of irrigated land) with labour being family-based,

59 R.P. Ricardo, *Depoimento (Rui Pinto Ricardo, 2013)* (Lisbon, IICT, 2014), p. 12; available at http://actd.iict.pt/eserv/actd:MORPR/ACTD_Depoimento_RPR.pdf, retrieved 7 July 2014.

60 See Gilberto Freyre, *Casa-grande & Senzala* (Rio de Janeiro, Maia & Schmidt, 1933), Chapter 1 [English: *The Masters And The Slaves*].

61 Lucerne, *Medicago sativa*, also called alfalfa, is a perennial flowering plant in the pea family Fabaceae, native to warmer temperate climates. It has been widely cultivated as livestock fodder in temperate and dry climates.

62 M.M. Silva e Castro, *Monografia do Colonato do Cunene (Matala)*, (Luanda, MIAA, 1971).

63 *Ibid.*

64 Until 31 August 1963, the Cunene *colonato* contained 308 European families and only 16 African families. AHU, IPAD, n. 395. Ministério do Ultramar, Conselho Superior de Fomento Ultramarino. Província de Angola, Brigada Técnica de Fomento e Povoamento do Cunene, 'Aproveitamento Hidráulico e Colonato do Cunene' (unpublished document, 1963).

65 AHU, IPAD, n. 395. Ministério do Ultramar, Conselho Superior de Fomento Ultramarino. Província de Angola, Brigada Técnica de Fomento e Povoamento do Cunene, Aproveitamento Hidráulico e Colonato do Cunene (unpublished document, 1963).

66 The *colonato* included the villages named Matala, Castanheira de Pêra, Algés a Nova, Freixiel and Vila Folgares (with the exception of Matala, these names reproduced names of villages common in Portugal).

using hoe and plough with ox-cart. Initially also forbidden to recruit African labour, these settlers had a very limited likelihood of achieving prosperity. Tiago Saraiva already had called attention to the paradox of this project as part of a large state development plan in which technology played a key role.⁶⁷ In fact, technology did play an important role in the region through the influence of the hydroelectric dam that provided energy for the cities of Sá da Bandeira, Moçâmedes and Porto Alexandre, along with the road from Sá da Bandeira to Serpa Pinto and the Moçâmedes railway (both of which passed over the dam). But the settlement scheme itself reflected no such ambition or any sign of modernity.

Why did the state fund a highly technological and modern big dam project while at the same time and in the same region insisting on a technologically backward style of agricultural settlement in the *colonatos*? The available evidence allows us to infer that political decision-making of this kind owed much to Trigo de Morais's ideological (pre)conception of the role of colonisation – the mystique of transplanting Portuguese irrigated agriculture to the tropics – and his personal agency. Orlando Ribeiro and Rui Pinto Ricardo have pointed out Morais's ability to influence Salazar,⁶⁸ with whom he shared a conservative, catholic, traditionalist and rural vision of society, a vision averse to urbanisation and proletarianisation and, at best, suspicious of large-scale industrialisation. The two projects – the *colonato* and the dam – could exist side by side only in the sense that the second provided the surplus water needed to irrigate the lands of the Portuguese settlers and thus promote the colonisation of the Cunene river as a 'last frontier'.⁶⁹ The character required for the success of the *colonato* owed nothing to the dam's technological modernity and everything to Portuguese traditionalism exemplified in the image of the humble but hard-working peasant tied to the land.

Conclusion

Despite some similarities between the modernising British and French colonial irrigation schemes of the 'second colonial occupation' and the Portuguese white rural settlements – intensive plough agriculture based on European expertise, private property, nuclear family labour and a coercive regime of production based on the same myth of the emptiness of African land⁷⁰ – the *colonatos* were a distinct endeavour aimed at Europeans and intended to reproduce in Africa Portugal's rural social and material landscape. In the case of the French colonial model – for example, the Office du Niger scheme – the day-to-day reality for African farmers was not that of peasant farming but of plantation agriculture. In the Cela and Cunene *colonatos*, the everyday life of the Portuguese rural settlers was not that of landowners but of poor and helpless tenants. In all those schemes, the settlers had little independence: the state imposed production and commercialisation regimes through the irrigation and settlement agencies.⁷¹ Somewhat

67 T. Saraiva, 'Paisagens Tecnológicas: O Domínio das Águas e a Colonização de Portugal e do Ultramar', paper delivered to the 5th Congresso Ibérico de Gestão e Planeamento da Água, Faro, Universidade do Algarve, 4–8 December 2006.

68 According to Orlando Ribeiro, Trigo de Morais said that Salazar was the only person who believed in him and in his idea of redemption through irrigation. It is not surprising – Ribeiro would add – 'because the dictator, always authoritarian but sometimes enlightened, also gave credit to not a few incompetents that flattered him'; Ribeiro, *A Colonização de Angola e o seu Fracasso*, p. 187. Rui Pinto Ricardo also states that Trigo de Morais convinced Salazar to approve the Cunene rural settlement, despite the negative conclusions of the soils and agricultural suitability studies; R. P. Ricardo, *Depoimento (Rui Pinto Ricardo, 2013)* (Lisbon, IICT, 2014), available at http://actd.iict.pt/eserv/actd:MORPR/ACTD_Depoimento_RPR.pdf, retrieved 7 July 2014.

69 See T. Saraiva, 'Forests, Dams and Colonization: The Portuguese Civilizing Mission in Africa and the Discovery of Portugal', paper delivered to the Second Plenary Conference of The Tensions of Europe Network, Finland, 2006.

70 M.W. Ertsen, 'Colonial Irrigation: Myths of Emptiness', *Landscape Research*, 31, 2 (2006), pp. 147, 163.

71 Monica van Beusekom has shown that the coercive practices of the Office du Niger personnel and government officials, imposed upon Africans who were resettled on the plantations, brought the Office considerable critical scrutiny (Beusekom, 'Colonisation Indigène', p. 84). In contrast, the coercive practices imposed on white Portuguese farmers resettled in Cela and Cunene were shielded from public scrutiny by the authoritarian nature of the *Estado Novo* regime.

anachronistically, the state, through its European *colonatos* in Angola, never seriously intended to improve the colony's productive capacity or the standard of living of the white settlers, as was the case in the development schemes for Africans elsewhere in the European colonies.⁷² The state instead wanted the *colonatos* to demonstrate the Portuguese people's traditional virtues and inborn ability to adapt easily to Africa, alongside the native African peasants, as argued in Luso-Tropicalism. Developed by the Brazilian social scientist Gilberto Freyre (1900–87), this doctrine proved to be very convenient for the Portuguese dictatorship, which appropriated and manipulated it for its own political and ideological purposes in the 1950s and 1960s.⁷³

This ideal, however, masked the state's ulterior motive, which was to settle Portuguese rural families in the Angolan countryside in order to prevent them from migrating to the cities (in the 1960s, especially, to cities in other European countries), thus preserving them from the 'evils' of urban life and modernity. Experimenting with rural workers – farm families – the state sought to emulate an imagined Portuguese pastoral way of life that should serve as a model for Africans. Internationally and locally, the *colonatos* also served as a symbol of the Portuguese commitment to stay in Africa forever, especially at a time of growing contestation of colonial domination by the Angolan liberation movements and the United Nations, and criticism from international public opinion.⁷⁴ The *colonatos* therefore embodied an anti-progressive ideology⁷⁵ and an uncritical imitation of Portuguese rural reality transplanted to Africa for geo-strategic, political, demographic, social and propaganda purposes.

The history of the *colonatos* of Cela and Cunene shows that techno-scientific knowledge mobilised by the colonial state and reproduced locally did not always support or legitimate colonial policy, and, moreover, could even highlight its drawbacks.⁷⁶ The dictatorial Portuguese regime muffled any criticism of the state-employed technocrats who developed the *colonato* scheme. At great cost at the time, the views of scientific experts only mildly constrained the weight of ideology by forcing successive small adjustments to the initial programme. But the basic impasse – a structural lack of agricultural, economic and social suitability of the land itself for the purposes intended by the authoritarian state – always persisted.

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72 On the contrary, the reformist colonialism that France and Britain intended for African natives had been beset by Africans' demands for equal wages, equal social services and an equal standard of living based on a notion of imperial citizenship; see Cooper, *Africa since 1940*, p. 197.

73 P. Burke and M.L. Pallares-Burke, *Gilberto Freyre: Social Theory in the Tropics* (Oxford, Peter Lang, 2008), pp. 188–9. C. Castelo, «*O Modo Português de Estar no Mundo*»: *o Luso-tropicalismo e a Ideologia Colonial Portuguesa (1933–1961)* (Porto, Edições Afrontamento, 1999).

74 In turn, due to its scale, high modernist rhetoric and violent social and ecological impact, the Cahora Bassa dam (Mozambique) was the most disturbing and overwhelming symbol of Portugal's commitment to retaining its African empire; see A. Isaacman and B. Isaacman, *Dams, Displacement, and the Delusion of Development: Cahora Bassa and its Legacies in Mozambique, 1965–2007* (Athens, Ohio University Press, 2013), p. 16.

75 Nevertheless, *Estado Novo*'s ideology never represented a monolithic bloc but comprised a combination of several elements (including political conservatism) whose relative weights changed over the years.

76 Helen Tilley, writing about the African Research Survey, has demonstrated that 'processes of knowledge production subversive of the status quo could emanate directly from the epicentres of colonial power in Britain and colonial Africa'; see Tilley, *Africa as a Living Laboratory*, p. 24.

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