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'Robot Farmers' and Cosmopolitan Workers: Technological Masculinity and Agricultural Development in the French Soudan (Mali), 1945–68

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In 1956, Administrator Ancian, a French government official, suggested in a confidential report that one of the most ambitious agricultural schemes in French West Africa, the Office du Niger, had been misguided in its planning to produce only a 'robot farmer'.[1] The robot metaphor was no doubt drawn from the intense association between the project and technology. However, it was a critical analogy suggesting alienation. By using the word 'robot', Ancian implied that, rather than developing the project with the economic and social needs of the individual farmer in mind, the colonial Office du Niger was designed so that indistinguishable labourers would follow the dictates of a strictly regulated agricultural calendar. In effect, farmers were meant simply to become part of a larger agricultural machine, albeit a machine of French design. The robot comparison also belied Ancian's ambivalence about the impact of technological development and modernity in Africa.[2] He was reiterating a long-standing concern of French officials who worried that change in rural African society would lead to social breakdown and create the necessity for the colonial state to support and reinforce patriarchal social structures in the French Soudan.[3] The image of a robot farmer, which suggested an unnatural combination, also gestured toward an uncertain future in which African farmers would employ industrial agricultural technology without fully comprehending it. Indeed, Ancian gave little credence to an African attachment to or understanding of agricultural technology in modern rural life. He concluded alarmingly, 'In the final analysis, the machine is eating the men'.[4] In assessing the Office du Niger, Ancian failed to see that African men at the project were already shaping their own engagements with modern agricultural technology and, at the same time, interacting with the shifting international politics of development.

This French official's fears about creating robot farmers revealed more about changes in the French Empire and the shifting international arena than the reality for African men working on the Office project. Since the end of the Second World War, relations between Europe and its colonies had been altered dramatically and the

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political future of relations between France and West Africa was uncertain. France and the other European imperial powers faced growing nationalist movements and increased pressure from the United States and the Soviet Union to reform colonial policy. By the late 1950s, the French colonies in the region had gained a small measure of political autonomy.[5] The way forward proposed by the two emerging superpowers centred on the marriage of technology and development, making the Office a critical site of international struggle.[6]

As an agricultural scheme, the Office du Niger of the 1950s and 1960s was shaped in part by the politics of the late colonial era and the emerging global Cold War. Policy makers and advisors (French, American and Soviet) all championed a greater emphasis on technology, which lay behind the push for large-scale mechanisation at the agricultural project. For the French government and its immediate postcolonial successor, the Office was meant to be a showcase of development and African industry in the new world order.[7] Quite obviously, many individual French observers of the Office were more ambivalent about the practice of technological development in the West African colony.

Nevertheless, the move to mechanisation marked a turning point at the Office du Niger. It ushered in a generation of African project workers, men who staked their very identity on the scheme's technological trappings. They operated heavy agricultural equipment and gained prestige through their work with machines. They saw themselves as part of a grand project and developed a distinct masculine technological culture. Yet, they lost little in the event of immediate technological failure. By contrast, smallholder farmers at the scheme, the supposed robots, were more akin to sharecroppers. Their position at the Office du Niger was rooted in the project's coercive beginnings; they individually cultivated land controlled by the institution and sold their harvest to its marketers. They also interacted with the irrigation infrastructure, tractors and other agricultural machines of the Office but were more cautious in assessing the project's technology in their own lives. Farmers invested greatly in the future agricultural success of the project, but they also bore most of the risks. There was not one singular experience of being an African man at the Office du Niger.[8] Rather, both African farmers and workers engaged with the new global forces as they sought to define their own identity in the shifting technological terrain of the Office.

Scholars of technology and colonialism have argued for a shift from a previously dominant Eurocentric frame of analysis to one starting with the experiences of the colonised.[9] This article moves in just such a direction with an examination of a gendered African technological culture at the Office that extended well into the postcolonial years. The original design for the Office du Niger was ambitious, and its planners expected to irrigate 1,850,000 hectares of land. By 1960, only about 54,000 hectares of land had been developed. When Mali, formerly the French Soudan, gained its independence in the same year, it inherited a large unwieldy infrastructure, institutional debt and the economic and social development promises of an earlier era. Mechanisation, in particular, failed to bring about the hoped for economic development. In this respect, the Office was not unlike many other high modernist development schemes.[10]

Quite obviously, the early technological history of the Office du Niger is not easily read as triumphant. Previous studies have shown that the colonial era project impoverished most of its smallholder farmers.[11] Ironically, the French technocrats and

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administrators behind the Office project promised to make the men who came to the scheme prosperous and technologically savvy. These European men thought they would make modern farmers in West Africa. The uneven power dynamics of colonialism played a role in this history. However, by looking at African men's accounts of their diverse relationships to the very technology that was meant to serve as a monument to French colonial power, a more complicated story emerges.

As historian Gabrielle Hecht has recently argued, the 'technopolitics' of the Cold War era were deeply entangled with empire and Mali was no exception.[12] However, as Tim Mitchell has pointed out, such top-down schemes necessarily led to unexpected outcomes. In particular, technical agency is not easily defined and, in the case of the Office, was claimed by European administrators but also by African workers and farmers.[13] In recent decades, oral histories have transformed accounts of the colonial years in Africa from the dominant perspectives of the imperial power to those of the colonised.[14] Here, I similarly rely on oral accounts to shift the recent technological history of Africa from one centred on the 'tools of empire' to a narrative that emphasises African men as technological agents in the midst of dramatic local and international change.

Optimism about the possibilities of technological advancement and industrial agriculture persisted after the end of colonialism. From the perspective of the workers, who came to the Office du Niger in the late 1940s and continued to work for the scheme into the 1960s and well after, the Office was not a malfunctioning agricultural machine. It was a space of economic opportunity, modern work and cosmopolitanism. Moreover, its farmers did not perceive of themselves as robots. Over several decades, administrators, farmers and workers agreed that the institution was strongly linked with masculinity, and that technology was at the crux of what it meant to be a man. Yet these men disagreed as to what kind of man. In the sections that follow, this article will trace the early twentieth-century beginnings of the Office du Niger as a masculine space and the intensified association between men and technology at mid-century during an institutional shift to large-scale mechanisation. The argument will then shift focus to African men at the project and the ways in which they shaped their own masculinities through their engagements with the Office: farmers struggled to create a liveable modern rural world, while workers created a cosmopolitan work culture that extended beyond the colonial French Soudan.

The beginnings of the Office du Niger

The Niger River had always been of particular strategic and economic interest to the French. However, it was not until the early 1920s that the colonial government developed a plan to capitalise on the river's economic potential for agriculture in the French Soudan. Emile Bélime, an engineer with experience studying irrigation methods in India, proposed an extensive agricultural scheme along the river with a large dam as its centrepiece. His proposal responded to another long-term French interest for their West African colonial possessions: cotton production for the struggling national textile industry. However, by the time Bélime's proposal had garnered enough metropolitan and local government support, nearly a decade had passed, and a series of regional food shortages led French West Africa's Governor-General to demand a planning revision

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to incorporate rice production for export to neighbouring Senegal.[15] From the outset the Office du Niger was a project designed for the demands of a colonial economy.

Construction on the dam and its accompanying irrigation canals finally began in the 1930s in the midst of a global depression. France's economy and that of its colonies were greatly impacted by the market crash of 1929, and the poor financial state of the colonial government slowed down project construction. Later, officials attributed the long delays to the eruption of the Second World War in Europe.[16] Some popular local memories even represent the war as 'bringing the Office into being' because it created a market for the project's cash crops: cotton for soldier's uniforms and rice to feed them.[17] Such recollections underscore the popular perception that the Office was in reality a product of global forces arising out of the Second World War.

From its beginnings, the Office was associated with men and technology. Ostensibly, it was built by men: European technocrats and forced labourers. Over nearly two decades, the government conscripted more than 50,000 men from across French West Africa for public works service under military supervision; the vast majority of these workers were sent to the Office. Thousands more were requisitioned locally to provide additional labour. Only a small number of men volunteered to work for the construction consortium in charge of Office work sites.[18] All these men were tasked with building the dam, digging irrigation canals and constructing new agricultural villages. The Office du Niger was not unique in this respect, as many public works and modernisation projects completed under the auspices of colonial governments relied heavily on manual labour.[19]

The project quickly gained a negative reputation for its harsh labour conditions. The worksites were extremely dangerous and workers were given little to eat. Daily life for workers was further regulated by harsh discipline and punishment.[20] The men sent to the Office as labourers were soon joined by another group of men who were recruited to cultivate cotton and rice. Living conditions for these men were equally dire. The vast majority of farmers were brought by force and they suffered further from flooding in their towns and fields, food shortages, dysentery and malaria.[21] These problems quickly drew attention from the scheme's metropolitan critics who also questioned its enormous financial costs.[22]

For most of the project's early history it was a distinctively masculine space. Recruiters for the project sought to bring whole families, even entire towns, to the Office to farm. Yet, many of these first 'families' were made up of only men.[23] European staff designated one senior man per 'family' as household head and made him responsible for organising labour to cultivate his allotted fields. The same man was also in charge of paying water fees and equipment costs. Although farmers were expected to earn a profit from selling their harvest to colonial marketers, they often earned very little and many of them became indebted to the institution.[24] Daily life for all African men at the early Office du Niger was difficult to endure. However, two distinct categories of men emerged from the outset, and their differences derived from their connections to the technologies of the project: men who earned wages and men who farmed.

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The turn to mechanised agriculture, 1945–68

The Second World War was a turning point in the history of the Office du Niger. Similar to other colonial institutions, the Office went through a reform process in the late 1940s. An administrative investigation in 1945 resulted in a series of organisational, economic and social changes, with some improvements for Office workers and farmers. In addition, the empire-wide abolition of forced labour in 1946 slowed recruitment. Even after the most important piece of the project's infrastructure, the Markala dam, was completed in 1947 and the need for labour was reduced, the Office's administration worried that the agricultural labour force was too small to make the institution profitable. These fears prompted interest in large-scale mechanisation for its potential financial savings.[25]

The turn to mechanisation marked a major departure. Despite the institution's poor record on labour, the technological shift ushered in a new group of African workers. Wage work was now voluntary, and for some men the Office du Niger offered a permanent career path. In the years to come, even farmers saw greater economic opportunity in cultivating for the Office. Those who stayed at the project after 1946 were joined by a second generation of voluntary farmers and their families. Still, many of the differences between men who earned wages and farmers remained.

Following the reforms, the Office dramatically expanded its effective reach. A vast territory fell under Office control, and after 1949 the administration moved to develop more of the land for irrigated cultivation and at the same time to increase mechanical services.[26] The most radical technological change was the creation of an all-mechanised rice cultivation sector called the Centre de riz mécanisé (CRM) in the new town Molodo-Centre. To operate the new planting, harvesting and threshing machines, the Office hired thousands of men. Meanwhile, workers who operated tractors and newly purchased mobile threshing machines extended these mechanical services to individual farming households outside the CRM. Between 1950 and 1960 the amount of land cultivated using some means of mechanisation rose from an average low of 11 per cent to an average high of 60 per cent.[27] This steep rise was due in part to the creation of new semi-mechanised farming sectors in the expanded territory, which also employed thousands of men as machine operators and seasonal wage labourers.[28] Throughout the late 1940s and 1950s, the Office became one of the largest employers of salaried African workers in the French Soudan.[29]

As a workplace, the Office was dominated by machines and heavy equipment. Many of these men worked for the Travaux Neufs, the administrative division tasked with extending the scheme's irrigation network and preparing land for new towns and fields. They drove tractors, bulldozers, digging machines and other heavy equipment. Even workers in the farming sector, called the Service d'Exploitation, operated industrial farm equipment as a service to farmers. In 1956, 1,217 African men were full-time employees for the Travaux Neufs, and between April and October, roughly 3,200 additional men were employed seasonally. That same year, the Service d'Exploitation had 133 full-time workers and hired 878 seasonal workers between February and July.[30] More men were also employed in the industrial workshops at Markala manufacturing ploughs and other equipment. The oil and soap factories offered further wage-earning opportunities. Finally, to maintain and repair all this equipment, the Office trained

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full-time mechanics. Wage workers certainly did not outnumber farmers, but they were a significant presence.

In the 1950s, wage workers and farmers became increasingly invested in the project's future success. The farmers with the greatest interest were those who moved to the new semi-mechanised sectors where agricultural machines were employed for much of the planting and harvesting labour. Meanwhile, other farmers continued to use the plough and only selected technological services. The new sectors were attractive to newcomers because they were exempted from any fees for water or mechanised services. In exchange, farmers in these new semi-mechanised sectors agreed to give 60 per cent of their harvest directly to the Office. They were free to sell the remaining 40 per cent either to colonial marketers or in regional markets.[31] Farmers who managed semi-mechanised fields realised significant economic benefits because they avoided the debt problems that had persisted among farmers of the first generation. They also risked less in the case of machine malfunction.

New international development funds, which were in part the product of Cold War politics, helped mechanise the Office. The institution purchased a sizeable number of new agricultural machines and equipment using monies from a new French colonial development fund called FIDES (Fonds d'investissement pour le développment économique et social) and the US economic assistance programme commonly referred to as the Marshall Plan.[32] Rhetorically, the US programme sought to increase technological progress in developing countries. As other scholars have argued, the Marshall Plan more observably supported the maintenance of European empires as a bulwark against the spread of communism.[33] Not surprisingly, mechanisation and expansion were costly endeavours for the Office. Yet, as greater international attention was paid to technological developments in West Africa, the institution continued to increase its store of heavy equipment.[34] To this end, France welcomed US financial support in its African colonies but took care to safeguard the primacy of its own cultural influence in the region.[35]

In 1960, after a decade of intense development efforts at the Office du Niger, Mali declared its independence. The United States and the Soviet Union were already wrangling for political influence in the region. The next year, the Non-Aligned Movement was founded, and in the same spirit, Modibo Keita, the new Malian President, clearly expressed his intention to resist an alliance with either side in the Cold War.[36] Since Keita was a self-defined African socialist, the Soviets quickly pledged financial assistance for several development projects.[37] Other support from the Czech Republic and China specifically targeted the Office scheme.[38] At the same time the United States promised food supplies and financial aid for Mali's internal security and road building projects. Even France continued to assist Mali, pledging eight to nine million dollars annually.[39]

Still, Keita drew a great deal of inspiration from the Soviet model. He, like many of his counterparts in the developing world, professed a faith in technology-driven development and collectivism.[40] At the Office du Niger, state-run mechanised farms were established, increasing the number of wage workers.[41] In addition, the Office administration created collective towns and established collective fields in sections of the older land allocations. These new measures prompted widespread resistance among farmers against the increased labour without greater economic gain.[42] Farmers had long protested the worst of Office policies, but those who stayed into the 1960s

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and 1970s were equally invested in making the Office work in their interests, as were the workers in their machines.

'The Office has only to do with men': notions of masculine labour at the Office du Niger

From its beginnings, the Office maintained its reputation for being a masculine space. When women increasingly came to the Office in the 1940s, their food production labour was vital to the survival of their families. Many women even threshed rice paddy by hand next to some of the industrial harvesting machines.[43] Yet, most people at the Office, including women, do not associate the project's history with women. Even today researchers are told, 'The Office has only to do with men'.[44]

One of the reasons for the widespread association of the Office with men was that it was promoted as a masculine endeavour. When the French arrived in the region, hoe cultivation was practiced by both men and women, though particular tasks were gendered.[45] Office policies sought to alter these agricultural practices. For example, European instructors at the project introduced the plough in the 1930s as a specifically masculine technology. As Michael Adas has argued, by the time of European conquest in Africa and elsewhere, western science and technology had become a barometer of progress, and it was assumed to be a particularly male endeavour.[46] In the French Soudan, the gendered contribution of men to agriculture was also highly respected and was a source for African men's notions of masculinity and work at the Office du Niger. Indeed, men's participation in farming activities was celebrated and even punctuated by frequent competition in the fields between young men. It was also intricately related to achieving adult masculinity because adulthood was closely linked to marriage. Young men's farm labour was part of the many exchanges between families during marriage negotiations.[47] Office farmers drew from this picture of an ideal productive male farmer in constructing their own identities.

Yet, the Office's modern agricultural technology was frequently experienced by farmers as an obstacle to achieving adult masculinity. Most obviously, the extensive technological infrastructure was costly for farmers. Farmers regularly complained that the water fees were too high, and by the 1950s when the Office regularly began to use tractors, threshing machines and other heavy agricultural equipment, farmers paid even higher fees.[48] To avoid paying, farmers often refused to bring their harvest to the Office, instead choosing to sell it in regional markets. The heavy burden of fees even led farmers in the towns Segou-Koura and San-Koura to boycott mechanical services in 1958 and 1959.[49]

Young men in particular were troubled by the heavy debt associated with farming at the Office precisely because it was an obstacle to marriage. As in other regions of Africa, generational hierarchies held great social significance, and the most senior men were expected to pay for the marriage expenses of young men in their household. Yet, the men who were in charge of Office farming households often did not have the financial resources to help junior men marry. In fact, it was common knowledge that they did not marry early. On top of such financial troubles, young men had no immediate access to land that they could farm on their own account.[50] In the same space of the Office, workers frequently financed their own marriages and even economically supported family members in their home towns. Contrastingly, Office farmers often

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felt as if they were treated like slaves, who also, up until the early twentieth century, engaged in farming on behalf of their masters.[51] Many had been brought to the Office by force and were, in fact, descendants of slaves.[52] In addition, they lacked ownership over the fields they cultivated, were frequently indebted and their mobility was restricted.[53] Farm labour at the Office may have been masculine, but it did not make it easy to be a man.

Respectable social status in the region had long been associated with livelihood. The Mande cultural world, of which most men at the Office du Niger were a part, recognised distinctions between the vast majority of people who engaged in farming and several professional groups or castes. The two major forms of male work at the Office related to what it meant to be a male farmer, but also to what it meant to be a man working with technology. The latter was closely aligned with the Mande caste of blacksmiths. Blacksmiths customarily worked with wood and metal to craft useful tools, such as the hoe, and important ritual objects. Socially, they stood apart from the vast majority of agriculturalists but were respected and even feared for their work. Male blacksmiths, in particular, had a monopoly over ironworking; women in the same caste primarily manufactured pottery.[54]

The men who operated and repaired industrial machines for the Office claimed esoteric technological knowledge that was not unlike that of blacksmiths. Many Office workers repaired the project's metal machines, while others were trained to make ploughs and other agricultural implements. This association with the mostly metal machinery served to reinforce the association with wage work at the Office as a distinctly male endeavour. Although workers embraced their employment as part of something new, they still understood their changing world through older cultural notions of livelihood, respectability, family and masculinity.

An important difference separated the Mande blacksmith occupation from working with Office machines: only young men born into blacksmith families were trained in the profession, while work at the Office was open to men from all regional and caste backgrounds. The wage work at the Office, therefore, offered young workers a well-paying male occupation with highly desirable cultural associations. It is likely, therefore, that many young men sought work with the Office after the 1940s, not only for the economic benefits but also for the distinction of becoming men who worked with machines.

Neither robots nor '*paysannat noir*'

Even though farmers bore the costs of the industrial Office, they were not necessarily opposed to the adoption of new agricultural technologies. Most farmers used the European plough and oxen-drawn wagons, both of which were promoted heavily in the early years of the project. Farmers also recognised the potential of the irrigation system, in a region prone to periodic drought, when they diverted water from Office canals to their personal fields on nearby land.[55] While farmers resisted the heavy-handed policies of the institution, they did not refuse French technological interventions writ large. Rather, it was a matter of mitigating the possible negative consequences of farming at the Office by selective adoption. For example, Moctar Coulibaly was among the first generation of farmers to arrive at the Office town of Sirakoro. Moctar experienced many of the uncertainties and difficulties of early farming life at the

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project. Yet, he opted to stay on for years, even as many others fled. Today he is the village chief, and in his yard he guards a technological relic from the early days. It is an old metal rake that was meant to prepare fields for cotton cultivation. The first settlers in Sirakoro had refused European staff orders to cultivate cotton even before Moctar settled there. In fact, he never used the rake that is now in his yard.[56] For him, the old rake remains a striking symbol of the town's refusal to grow cotton. In Moctar's framing of his own history as a farmer at the Office du Niger, the rake is a material reminder that farmers chose the tools for their own agricultural development, even in the most difficult years of colonial rule at the Office.

Administrator Ancian, the official who compared Office farmers of the 1950s to robots, contrasted the men he saw with what he considered a more desirable image of a '*paysannat noir*' or an African peasantry. He was no doubt alluding to the promises of the early promoters to create an independent farming class modelled on the idea of the French peasantry. At the same time, these new African farmers were expected to engage in modern farming practices. Ancian appeared to think the two notions were incompatible at the Office. In particular, he questioned why an agricultural project founded on the labour of settlers embraced mechanised agriculture, if the chief advantage of mechanisation as suggested by the Office staff was that it required fewer labourers.[57] Ancian implicitly wondered: how could such a scheme ever benefit the farmers?

The drive for mechanisation that so worried Ancian was greeted by the project's European staff with great enthusiasm. Many of them were drawn to what might be termed a 'civilizing mission' in the creation of an ideal African peasantry. However, they did not see the ever more technological Office to be in opposition to that rustic ideal. By the 1950s, the idea of the French peasantry had become an object of nostalgia but was also deeply imbued with a sense of French nationalism extending to its overseas territories.[58] For example, in 1951 a rice-threshing machine that had recently arrived at the Office was affectionately named by the European staff 'La Bourguignonne'.[59] The name evoked both a popular French dish made with beef and red wine and the Burgundy region famous for its agricultural production. Naming an Office du Niger threshing machine after a region in France suggested the ways in which Office staff and other colonial officials associated the project and its technology with the best of French culture.

'La Bourguignonne' was not a name that suggested African ownership over technology. Rather, it evoked imperial French mastery over technology and nature. Yet, the project's agricultural machines frequently failed to bear out the expectations of European planners and staff members, let alone those of farmers. For example, some administrative reports from the late 1950s suggested that 'La Bourguignonne' was not such a good worker. The threshing machines failed to process the majority of the rice harvest until 1957. Up to that point, the Office continued to rely heavily on hand–threshing to complement its mechanisation services.[60] Mechanisation was not only costly, it was proving inefficient.

Many farmers were unsurprisingly ambivalent about the possibilities for mechanised agriculture. In particular, they were suspicious of the all-mechanised rice sector and what it meant for their future livelihoods. In 1957, an article published in the African newspaper *L'Essor* voiced some of the farmers' concerns. The article accused the Office and its staff members of introducing machines that put the farmers out of

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Figure 1: Mechanical harvesting at the Office. Source ANOM 8Fi 417/171 Office du Niger Aménagement rurale, 1935 and 1954.

work.[61] Although farmers faced severe constraints, they were not mere robots of the agricultural machine. Moreover, they had an understanding of agricultural technology that was rooted in practice. Mechanisation was a financial burden with real social implications, but for farmers the technology in itself was not the problem.

The cosmopolitan workers' Office du Niger

Workers interacted with the Office's agricultural technologies in overtly positive ways. In fact, some young men who grew up at the project sought work with the very same machines that posed such problems for farmers. For example, Harouna Bouaré travelled as a young man for seasonal work at the rice processing facility in Molodo-Centre (CRM). He grew up in nearby Molodo-Bamana, a town that was annexed by the Office in the mid-1940s. He recalled that at the time, it was hard for young men to acquire money by any means other than to go and work for the Office. During the harvest, Harouna bagged the processed rice that shot out of a large thresher machine. Then, he carried the filled bags to a nearby warehouse. Harouna, comparing this mechanised past with its present (2010) production, remembered that the Office produced much more rice in the 1950s. His perception of there being 'so much rice' was almost certainly related to the high volume of rice processed by the harvesting and threshing machines in a few short hours. The machines processed such great quantities of the rice that the bags could be piled up to the height of the men (see Figure 1). As a young man

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Harouna was impressed by the machines he worked with and the great efficiency with which they processed the harvest.[62]

Harouna did not mention the fact that carrying rice from the field to be stored or processed was considered women's work locally. It was seemingly transformed into young men's wage-work when it involved an industrial machine. Indeed, women at the Office continued to transport small quantities of rice from the fields for home consumption. However, they were barred from the lucrative work with machines. In fact, when a visiting French agricultural scientist toured the Office in 1951 and suggested that the staff allow women use the machines to process rice for home use, the visitor's idea was roundly dismissed.[63] The European staff at the Office clearly perceived the machines as having to do with men, despite the presence of women winnowing nearby to help process all the harvest.

While Harouna worked for the Office, he continued to live in Molodo-Bamana and travelled to work mostly by foot, but sometimes by bicycle. These memories stood out in his mind because in the 1950s, a bicycle was quite expensive. He, like other young men, had an interest in earning cash for marriage. Moreover, their earnings gave them access to bicycles and other imported consumer goods.[64] Over time, workers even increased their purchasing power because wages more than doubled in the decade following 1949.[65] Yet, many temporary workers like Harouna returned to farming with other members of their family. Indeed, not all young men in Molodo-Bamana went to the Office for wage work, despite the nearby economic opportunities at the CRM.[66] Most young men were busy working in the Office fields of their families, and the majority of positions were filled by long-distance migrants.[67]

Tchaka Diallo was one of the young workers who travelled a great distance to work at the Office. He was born in Koutiala, a region in the southwest of the French Soudan. In telling his story, he recounted that he attended a Protestant missionary school, but by the time he completed school, his father had not been able to find him a wife because of financial difficulties. Around the same time a farmer from the Office came to recruit workers. This farmer told the chief of Tchaka's village that men could make a lot of money at the Office. The recruiter even took out some bills to support his claims. This was the first time that Tchaka had ever seen paper money. Up to this moment he had only dealt with coins, and the moment stuck in Tchaka's memory. With the recruiter's promises in mind, Tchaka decided to go work at the Office. In 1954, Tchaka began work as a timekeeper in the mechanisation sector. Then one of the European staff members took him aside and suggested that he become a worker who operated machines. Tchaka followed the man's advice and began to drive 'Caterpillars', tractors named after the US company.

Even though Tchaka was living in the Office's workers' town, he claimed that he never considered becoming a farmer because that would have meant staying permanently. About five years after he began work as a driver, he married a woman from very near his home town in Koutiala. In Tchaka's words, 'everyone wanted a wife from home'. This was possible for most workers because, as he explained, 'Markala was cosmopolitan, so you could find a wife from your area'. Once Tchaka started working, he also earned enough to pay his father's taxes. The formerly poor family was now free from the worry of paying taxes or the financial burden of Tchaka's marriage.[68] From Tchaka's perspective he had become a man; moreover, he was a worldly man.

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Men like Tchaka who chose to travel for work drew from another regional understanding of a powerful masculine identity associated with hunters. In local stories and myths, hunters were masters of the bush, meaning land outside of towns and fields that was understood to be dangerous because it was home to wild animals and other natural forces. Heroic young men who travelled in the bush and learned to manipulate its dangers were greatly celebrated in popular culture. These epic journeys also involved crossing great distances, which only heightened the aspect of adventure in the hunter voyage. Importantly, hunters were not clearly identified with a particular caste and, thus, it was an identity to which all men could aspire.[69] Hunter masculinity was also rooted in the acquisition of knowledge about the wider world, which fitted nicely with newly emerging perceptions among young men of the Office. In its twentieth-century articulation, the hunter ideal emphasised cash-earning, an increasing concern among young men at the Office and a marker of their masculinity.[70]

Office workers who operated tractors and other heavy machinery evoked the figure of the hunter. These men worked in bush areas near the Office transforming it into fields and towns for the scheme. They even encountered lions and other wild animals in the course of their work.[71] Like all industrial machinery, the tractors and other heavy equipment of the Office could be dangerous. For example, in 1960, the Office reported the death of a farmer following an accident with a threshing machine.[72] Therefore, mastery of such machines was a new technological performance of a common masculine identity.

Many young men may have come to the Office for adventure or simply to earn cash, but others remember being drawn to working with machines (see Figure 2). This was the case for Baba Djiguiba. When Baba started to work for the Office around 1947, he began as an apprentice chauffeur. After two years of training he became a driver for a European staff member. Then in 1960, he switched to driving tractors because his mother thought his job as a chauffeur was not the best one. Baba declined to elaborate on why his mother might have disapproved of him working as a chauffeur, but his account suggests that, at the time, working with the industrial machines was more respected employment.[73] From this point on, Baba drove tractors. More specifically, he operated three different types of Caterpillar tractors to prepare cotton fields. He also learned to operate digging machines for canal building, which, he specified, were German in origin.[74] For all the machines he had operated, he could identify the make, model and country of origin. The tractors and machines were at the centre of his recollections.

As Baba suggested, the Office fleet of agricultural machinery was impressive. It was also diverse in its national origin, and knowing how to work with machines from many different countries conferred prestige. During the colonial era, the Office administration purchased equipment from US, British and German companies.[75] Workers like Baba were fully aware that the equipment they used came from these different countries. This awareness was part and parcel of knowing how to work with machines, as each make and model required different handling. For example, workers came to appreciate the quality of some machines over others. Baba, for his part, reported that Caterpillar engines were the best because they were made from high quality metal.[76] European staff members may have preferred to call some of the machines by familiar nicknames such as ‘La Bourguignonne’ for the rice thresher. By contrast, African workers referred to the machines by their specific model name, like TD 24 for a

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Figure 2: Unidentified engine operator and other men at the Office. Source ANOM 8Fi 417/2.33 Office du Niger Aménagement rurale 1935 and 1954.

type of American Caterpillar, suggesting their cosmopolitanism and advanced level of technical knowledge.

Workers shared their interest in the machinery with their European supervisors, who paid a great deal of attention to the different types of machines in use, the effectiveness of each type and the production results. For European staff members even the daily technological operations at the project were deserving of documentation (see Figure 3). In the 1950s, the national origin of machines was especially important for the French, who were hoping to demonstrate technological superiority following their nation's humiliating defeat by the Germans during the war. They were also combating the rising US influence in their African colonies.

Similarly, a few African workers associated the Office machines with the 'work of whites'. This notion was no doubt reinforced when select workers were sent to France for further technological study, which sometimes included visits to factories where agricultural machines were manufactured. This association between technology and race also had great explanatory power for workers who were fully aware that they earned more money than African farmers at the project because they worked with the 'whites'.[77] However, for many other men like Baba, knowing the national origin of machines had less to do with any sort of loyalty to the French Empire than with a demonstration of technical worldliness. Both the European staff members and African workers were actively engaged in creating modern agriculture at the Office. In so doing, they were participating in an international conversation about the future shape of the new post-war world.

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Figure 3: Photograph of a Stahl-Lanz Machine and unidentified staff and workers. Source ANOM 8Fi 417/4.5 Office du Niger Aménagement rurale 1935 and 1954.

Demonstrating a mastery over the machines of the Office workplace was an important aspect of technological masculinity for African workers. For example, when the administration was going to introduce a new French machine called the NORALP, Tchaka remembered that the staff wanted him to be the first worker to try it out. He believed this was because he had gained a reputation as a good driver. Moreover, Tchaka's first drive with the NORALP was a big event. Several other workers gathered to witness the trial run, and the administration even organised to film the occasion. As Tchaka drove the NORALP, he passed by other workers, some of whom were older than him. He remembered that they called out to him, 'Hey! Ceni! Ceni! Look at him!' He recalled their exact words because 'ceni' means little or young man. Indeed, he was then only about twenty-two years old. Yet, he was driving the new machine. Before that moment, he had already learned to drive Caterpillar and Frick tractors. Now, Tchaka was operating a machine that none of the other workers had driven.[78] The NORALP machine may have been French in origin, but what mattered for Tchaka and his fellow workers was the practical display of technical skill.

Certainly, Tchaka, Baba and other workers knew that they possessed knowledge about the heavy industrialised Office that most farmers did not have. This sentiment persisted after the Office was handed over to the independent Malian government. For example, Baba continued to develop his skills as a driver. In the years after 1960, he operated machines purchased from Czechoslavakia, the Soviet Union and China.[79] In effect, the postcolonial years only broadened the technological world for workers. Tchaka similarly advanced his career by learning to drive Soviet machines, and by the

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end of his career he would even rise to become supervisor. In the 1960s, the Office selected Tchaka to travel to the USSR with a group of fellow workers for training in how to repair the machines. Not long after the group had arrived, Tchaka quickly realised that he already knew much of what the Russians were showing them.

What was new for Tchaka in the Soviet Union was the social environment. He and the other Malian men were greeted with curiosity by the ordinary Russians whom they met on the street. Tchaka supposed that they had never seen black people before, because many people approached them to touch their skin and hair. He was lucky during his short visit to the USSR in that he did not face the severe discrimination, harassment and abuse that many African students endured while on exchange in the country.[80] Tchaka even laughed when he recalled his experiences in the Soviet Union and said 'They were like anyone else without knowledge of different people'. Of course, he and his colleagues had long worked with Europeans, as well as with African men from different regions. Unlike those ordinary Russians, Tchaka and his fellow Malian workers were quite worldly.[81]

Technological men

By the 1970s, labour for all men at the Office was understood to be masculine. Technological masculinity was bound up with financial stability, marriage, acquired knowledge, travel and a sense of the global world. However, distinctions among African men profoundly shaped their engagements with the project's technologies and gave rise to differing and sometimes opposing interpretations about the relationships between masculinity, work and technology. Two decades prior, Europeans had struggled to see African peasants as technologically capable. In reality, even the farmers who feared a loss of their income to mechanisation were not anti-modern or anti-technology. They simply wanted the irrigation infrastructure and machines of the Office to bring their promised benefits. Moreover, while the French were preoccupied with their mastery of nature, the workers whom they trained were demonstrating a mastery over technology. Yet few Europeans fully appreciated the ways in which African men embraced the project. From the colonial period well into the 1960s, African men chose how to engage not only with development at the Office but also with shifting global forces, as they sought to shape the new rural world. The Office du Niger became a space in which all African men asserted their identities as technologically savvy men. Modern rural life was a reality, and it was quintessentially integrated with irrigation canals and tractors. The failure of the Office was that while it succeeded in linking African men with Cold War technology, the global world, which enabled that identification, failed to create economic opportunities for all the men who embraced a technological masculinity.

Notes

1. During the colonial era, the contemporary nation of Mali was referred to as the 'French Soudan'. In this article, I use both names: the French Soudan for discussions of the colonial era and Mali for discussions of the postcolonial period. The Office du Niger, a vast irrigated agricultural scheme flanking the Niger River in the French Soudan, was established in the mid-1930s. It was intended to provide cotton to the French textile industry and rice to the neighbouring Senegalese market. By the 1950s it had become one of the largest agricultural development projects in French West Africa and a major industrial employer for African

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workers. Archives Nationales d'Outre Mer [hereafter ANOM] FM 3TP/334, G. Ancian, 'Incidence sur le compted'exploitation de l'Office du Niger des reformes en cours ayant trait aux relations entre l'Office du Niger et les colons', November–December 1956, pp. 35–6. All translations are by the author unless otherwise stated.

2. The term 'modern' has been rightly subjected to interrogation in African historiography regarding its precise meanings and uses. See Lynn Thomas, 'Modernity's Failings, Political Claims, and Intermediate Concepts', *American Historical Review* 116 (2011), pp. 727–40. Here, I refer to an underlying hierarchical assumption that Africa was dominated by a static traditional rural society, while France and other Western countries were associated with more advanced societies and their technological trappings.
3. See Stephen R. Wooten, 'Colonial Administration and the Ethnography of the Family in the French Soudan', *Cahiers d'Études africaines* 33 (1993), pp. 419–46.
4. ANOM FM 3TP/334, G. Ancian, 'Incidence sur le compte d'exploitation de l'Office du Niger des reformes en cours ayant trait aux relations entre l'Office du Niger et les colons', November–December 1956, pp. 35–6.
5. See Tony Chafer, *The End of Empire in French West Africa: France's Successful Decolonization?* (New York: Berg, 2002), pp. 143–58.
6. For a good review of the literature on the Cold War in developing countries, see Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (Cambridge: Cambridge University Press, 2005). The first President of the Republic of Mali, Modibo Keita, also framed his new government's international policy against the framework of 'two opposing blocs, that of the West and that of the East' in an address to the Royal Institute of International Affairs (Chatham House) in England. Modibo Keita, 'The Foreign Policy of Mali', *International Affairs (Royal Institute of International Affairs)* 37 (1961), pp. 432–39, here p. 432.
7. Archives Office du Niger [hereafter AON] 118/2, Georges Peter, 'Un exemple d'Assistance Technique: l'Office du Niger', 1 January 1955. AON 6bis, Government pamphlet titled *Le Delta Ressuscité* (The Rejuvenated Delta), *c.*1960s.
8. I draw on the theoretical work of Stephan Miescher and Lisa Lindsay, who have argued that multiple masculinities and paths to manhood have co-existed in modern Africa. Stephan F. Miescher and Lisa A. Lindsay, 'Introduction: Men and Masculinities in Modern African History', in Lisa A. Lindsay and Stephan F. Miescher (eds), *Men and Masculinities in Modern Africa* (Portsmouth: Heinemann, 2003), pp. 1–9.
9. For a review of this literature, see Suzanne Moon, 'Place, Voice, Interdisciplinarity: Understanding Technology in the Colony and the Postcolony', *History and Technology* 26 (2010), pp. 189–201, see esp. pp. 189–91.
10. For a detailed analysis of modernisation theory's influence in large development schemes, see James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998).
11. Amidu Magasa, *Papa-Commandant a jeté un grand filet devant nous: les exploités des rives du Niger, 1902–1962* (Paris: François Maspero, 1978); Jean Filipovich, 'Destined to Fail: Forced Settlement at the Office Du Niger, 1926–45', *Journal of African History* 42 (2001), pp. 239–60; Monica van Beusekom, *Negotiating Development: African Farmers and Colonial Experts at the Office du Niger, 1920–1960* (Portsmouth: Heinemann, 2002).
12. Gabrielle Hecht, 'Introduction', in Gabrielle Hecht (ed.), *Entangled Geographies: Empire and Technopolitics in the Global Cold War* (Cambridge: MIT Press, 2011), pp. 1–3.
13. Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002).
14. David William Cohen, Stephan F. Miescher and Luise White, 'Introduction: Voices, Words, and African History', in David William Cohen, Stephan F. Miescher and Luise White (eds), *African Words, African Voices* (Bloomington: Indiana University Press, 2001), pp. 1–27.
15. See Beusekom, *Negotiating Development*, pp. 7–12. On the French interest in colonial cotton production, see chapters 3–6 and 10 in Richard Roberts, *Two Worlds of Cotton: Colonialism and the Regional Economy in the French Soudan, 1800–1946* (Stanford: Stanford University Press, 1996), pp. 60–144 and 223–48.
16. Georges Spitz, *Sansanding: Les irrigations du Niger* (Paris: Société d'Editions Géographiques, Maritimes, et Coloniales, 1949), pp. 63–70.
17. Interview by author with Mme. Koné Mariam Diarra and Tchaka Diallo in Markala-Diamarabougou, 26 January 2010. Comment by Mariam Diarra.
18. Interview by author with Koké Coulibaly and Fode Traoré in Markala-Kirango, 3 February 2010. See also, Myron Echenberg and Jean Filipovich, 'African Military Labour and the Building of the Office du Niger Installations, 1925–1950', *Journal of African History* 27 (1986), pp. 533–51, here pp. 537, 41.

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19. David Arnold, 'Europe, Technology, and Colonialism in the 20th Century', *History and Technology* 21 (2005), pp. 85–106, here p. 96.
20. Magasa, *Papa-Commandant a jeté un grand filet devant nous*, pp. 61 and 72–8; Echenberg and Filipovich, 'African Military Labour and the Building of the Office du Niger Installations', pp. 544–8.
21. Magasa, *Papa-Commandant a jeté un grand filet devant nous*, pp. 89–112; Beusekom, *Negotiating Development*, pp. 57–77.
22. A representative example is Pierre Herbart, *Le Chancre du Niger* (Paris: Gallimard, 1939).
23. Women who were related to the male recruits frequently refused to travel to the project or fled. Laura Ann Twagira, *Peopling the Landscape: Colonial Irrigation, Technology, and Demographic Crisis in the French Soudan, ca. 1926–1944*, vol. 10, Program for the Study of the African Environment (Boston: African Studies Center, Boston University, 2012). A small number of women worked at Office installations as cooks, requisitioned alongside the vast majority of men requisitioned for construction labour. Echenberg and Filipovich, 'African Military Labour and the Building of the Office Du Niger Installations', p. 537.
24. Beusekom, *Negotiating Development*, pp. 103–10.
25. Spitz, *Sansanding: Les irrigations du Niger*, pp. 66–70; Emil Schreyger, *L'Office du Niger au Mali 1932 à 1982: La problématique d'une grande entreprise agricole dans la zone du Sahel* (Paris: L'Harmattan, 1984), pp. 130–37, 49.
26. Schreyger, *L'Office du Niger au Mali 1932 à 1982*, pp. 136–45.
27. AON 52/5 A Ouattara, Réflexions sur le réamenagment à l'Office du Niger: Historique de la mécanisation, July 1972, p. 7.
28. AON 238/1, Rapport Lamour [Philippe Lamour], 1982.
29. AON unnumbered document, Note sur la situation de l'Office du Niger, *c*.1958, p. 8. The unnamed author of this report estimated that one quarter of salaried workers in the French Soudan worked for the Office and that the number had been even higher in earlier years.
30. ANOM FM 3TP/334, René Nabonne, 'Rapport sur l'adaptation des services d'exécution à la réalisation du nouveau programme de l'Office du Niger', Ségou, November 1956.
31. ANOM FM 2TP/104 Office du Niger 1946/1952.
32. AON unnumbered document, Note sur la situation de l'Office du Niger, *c*.1958; ANOM FM 2TP/104 Inspection général des Travaux publics, Office du Niger 1946/1952, Folder 2. See also, Schreyger, *L'Office du Niger au Mali 1932 à 1982*, pp. 144–8.
33. Hecht, 'Introduction', p. 5. See also Westad, *The Global Cold War*, pp. 24–7.
34. AON 52/5, A. Ouattara, Réflexions sur le réaménagement à l'Office du Niger: Historique de la mécanisation, July 1972, pp. 5–7.
35. Louisa Rice, 'Cowboys and Communists: Cultural Diplomacy, Decolonization and the Cold War in French West Africa', *Journal of Colonialism and Colonial History* 11 (2010) online at <http://muse.jhu.edu/journals/journal_of_colonialism_and_colonial_history/v011/11.3.rice.html>; Martin C. Thomas, 'Innocent Abroad? Decolonisation and US Engagement with French West Africa, 1945–56', *Journal of Imperial and Commonwealth History* 36 (2008), pp. 47–73, see esp. pp. 55–6.
36. Keita, 'The Foreign Policy of Mali'.
37. Sergey Mazov, *A Distant Front in the Cold War: The USSR in West Africa and the Congo, 1956–1964* (Stanford: Stanford University Press, 2010), pp. 218–26.
38. AON 52.5 Réflexions sur le Réaménagement à l'ON: Historique de la Mécanisation 1972, p. 8.
39. Mazov, *A Distant Front in the Cold War*, pp. 218–26. France continued to support the Malian expansion of the Office even though several departing French staff members made it clear that they now believed mechanisation had proven to be a financial failure. It was for this reason that the French closed the mechanised rice centre in 1961. AON 1/1 CCTA-Ségou Aperçu sur l'Office du Niger 1961. See also Schreyger, *L'Office du Niger au Mali 1932 à 1982*, pp. 234–6.
40. Keita, 'The Foreign Policy of Mali', p. 437; Westad, *The Global Cold War*, pp. 92, 109.
41. Schreyger, *L'Office du Niger au Mali 1932 à 1982*, pp. 234–6 and 41–2.
42. Schreyger, *L'Office du Niger au Mali 1932 à 1982*, pp. 231–4; Jean Marie Kohler, 'Les Mosi de Kolongotomo et la collectivisation à l'Office du Niger (Notes Sociologiques)', Travaux et Documents de l'ORSTOM no. 37 (Paris: ORSTOM, 1947), pp. 45–52; Interview by author with Bakary Marka Traoré in Markala-Diamarabougou, 23 January 2010.
43. Laura Ann Twagira, 'Women and Gender at the Office du Niger (Mali): Technology, Environment, and Food ca. 1900–1985' (unpublished doctoral dissertation, Rutgers University, 2013).
44. Conversation between the author and a Malian agricultural expert, who has decades of experience at the Office and has served as consultant for several pilot agricultural projects at the Office, in Bamako, 22 December 2009. Conversations between the author and several former male administrators, clerks and

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workers from the industrial workshops in Markala, January–February 2010. I am not at liberty to name these men specifically.

45. Deborah Faye Bryceson, *Women Wielding the Hoe: Lessons from Rural Africa for Feminist Theory and Development Practice* (Oxford: Berg Publisher, 1995).
46. Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca: Cornell University Press, 1992). Scholars of gender and technology have further argued that technology and gender are co-produced, meaning that each is shaped by the other. Some technologies become expressly associated with a masculine or feminine identity. For a good review of this literature, see Wendy Faulkner, 'The Technology Question in Feminism: A View from Feminist Technology Studies', *Women's Studies International Forum* 24 (2001), pp. 79–95. Ruth Oldenziel has also argued that the idea that technology as a concept (and its associated material objects) was made masculine in an American historical context . See Ruth Oldenziel, *Making Technology Masculine: Men, Women and Modern Machines in America 1870–1945* (Amsterdam: Amsterdam University Press, 1999).
47. Conversation between the author and bards Madu Saré, Issa Saré and Kadja Coumaré and artisan B. Traoré in Markala-Kirango, 3 June 2010. See also Stephen Wooten, *The Art of Livelihood: Creating Expressive Agri-Culture in Rural Mali* (Durham: Carolina Academic Press, 2009).
48. Beusekom, *Negotiating Development*, pp. 104–05.
49. AON 106 Correspondance Directeur Général 1957 à 1960.
50. Interview by author with Mamadou Seyba Coulibaly and Soumaïlla Diao in Kolony (km 26), 26 March 2010. Comment by Soumaïlla Diao; Interview by author with Djewari Samaké in Kolony (km 26), 29 March 2010. For a discussion of the changing path for young men to marriage in central Mali, see Maria Grosz-Ngaté, 'Monetization of Bridewealth and the Abandonment of "Kin Roads" to Marriage in Sana, Mali', *American Ethnologist* 15 (1988), pp. 501–14.
51. For the provision of grains and other agricultural products to slave masters, see Martin Klein, *Slavery and Colonial Rule in French West Africa* (New York: Cambridge University Press, 1998), pp. 1–7.
52. Interview by author with Demba Diarra and Salla Traoré in Kolony (km 26), 17 March 2010; Interview by author with Fatoumata Coulibaly in Kolony (km 26), 24 March 2010; Interview by author with Mamadou Seyba Coulibaly and Soumaïa Diao in Kolony (km 26), 27 March 2010.
53. Farmers' debts to the Office in particular resonated with debt as historical cause of enslavement. See Klein, *Slavery and Colonial Rule in French West Africa*, pp. 4–5.
54. Patrick R. McNaughton, *The Mande Blacksmiths: Knowledge, Power, and Art in West Africa* (Bloomington: Indiana University Press, 1988), p. 7 and pp. 40–72.
55. Beusekom, *Negotiating Development*, pp. 121–2.
56. Interview by author with Moctar Coulibaly and Mariatou Traoré in Sirakoro, 28 April 2010.
57. ANOM FM 3TP/334, G. Ancian, 'Incidence sur le compte d'exploitation de l'Office du Niger des reformes en cours ayant trait aux relations entre l'Office du Niger et les colons', Novembre–Décembre 1956, p. 36.
58. On the nostalgia for the masculine past of the colonisers, see the contribution by Jialin Christine Wu in this special issue. Jialin Christina Wu, '"A Life of Make-Believe": Being Boy Scouts and "Playing Indian" in British Malaya (1910–1942)', *Gender & History* 26 (2014), pp. 589–619.
59. Archives Nationales du Mali [hereafter ANM] 1 E 40 Rapports politiques et rapports de tournées Cercle Ségou I (1940–1959), Niono 21–29 Janvier, 1951.
60. ANM 1 E 40, 1957 Rapports politiques et rapports de tournées Cercle de Segou I (1940–1959).
61. AON 156 [*L'Essor* articles folder] 'Echos de la Colonisation' *L'Essor* N. 2676, 31 Décembre 1957.
62. Interview by author with Nianzon Bouaré and Harouna Bouaré in Molodo-Bamana, 16 April 2010.
63. AON 138/2, Notes et Réflexions au sujet du rapport de M. Dumont Service de l'Exploitation, c.1951.
64. Workers at the Office like other African wageworkers purchased bicycles, sewing machines, phonographs and other imported consumer goods, but such purchases were not the only motivating factor in men's decisions to seek salaried work. See, Isaïe Dougnon, *Travail de Blanc, travail de Noir: La migration des paysans dogon vers l'Office du Niger et au Ghana (1910–1980)* (Paris: Karthala-Sephis, 2007), pp. 129–30.
65. AON unnumbered document, Note sur la situation de l'Office du Niger, *c.*1958, p. 4.
66. Interview by author with Nianzon Bouaré and Harouna Bouaré in Molodo-Bamana, 16 April 2010.
67. Intervention by Sekou Sall Ouloguem during interview by author with Bintu Traoré, Mariam Doumbia and Fanta Sogoba in Molodo-Centre, 15 April 2010. One of the main reasons for the migration of these workers to the Office du Niger was the possibility of earning a cash wage. Dougnon, *Travail de Blanc, travail de Noir*, pp. 129–30. The attraction of cash earning at the Office made the wage work for the institution not unlike other seasonal wage earning opportunities in West Africa following the Second World War.

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See Dennis D. Cordell, Joel W. Gregory and Victor Piché, *Hoe and Wage: A Social History of a Circular Migration System in West Africa* (Boulder: Westview Press, 1996), pp. 77–85.

68. Interview by author with Mme. Koné Mariam Diarra and Tchaka Diallo in Markala-Diamarabougou, 26 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 27 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 10 March 2010.
69. Mary Jo Arnoldi, 'Wild Animals and Heroic Men: Visual and Verbal Arts in the *Sogo Bò* Masquerades of Mali', *Research in African Literatures* 31 (2000), pp. 63–75, see esp. pp. 69–70. Young men engaged in long-distance hunting well into the mid-twentieth century and qualified the danger and valour of their voyages according to the types of animals they killed. Conversations with the late esteemed hunter Sékou Diarra in Kalaké-Bamana during the years 2000 to 2001 and conversations with hunters Manténé Diarra in Kalaké-Bamana and Nianzon Bouaré in Molodo-Bamana, 2009–10.
70. At the same time, young men were not encouraged to stay on migrations for too long otherwise they might forfeit support from the household for marriage negotiations and payments. Grosz-Ngaté, 'Monetization of Bridewealth', pp. 503–04.
71. Interview by author with Koké Coulibaly and Fodé Traoré in Markala-Kirango, 3 February 2010.
72. AON 106, Correspondance Directeur Général 1957 à 1960, May to June 1960.
73. Interview by author with Baba Djiguiba in Molodo-Centre, 10 April 2010.
74. Interview by author with Baba Djiguiba in Molodo-Centre, 10 April 2010.
75. By 1972, the garage of the Office was 90 per cent equipped with Russian equipment. AON 52/5, A. Ouattara, Réflexions sur le réaménagement à l'Office du Niger: Historique de la mécanisation, July 1972, pp. 5–7.
76. Interview by author with Baba Djiguiba in Molodo-Centre, 10 April 2010.
77. Dougnon, *Travail De Blanc, travail de Noir*, pp. 126–9.
78. Interview by author with Mme. Koné Mariam Diarra and Tchaka Diallo in Markala-Diamarabougou, 26 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 27 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 10 March 2010.
79. Interview by author with Baba Djiguiba in Molodo-Centre, 10 April 2010.
80. Mazov, *A Distant Front in the Cold War*, pp. 232–4.
81. Interview by author with Mme. Koné Mariam Diarra and Tchaka Diallo in Markala-Diamarabougou, 26 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 27 January 2010; Interview by author with Tchaka Diallo in Markala-Diamarabougou, 10 March 2010.

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