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Cultivating "Care": Colonial Botany and the Moral Lives of Oil Palm at the Twentieth Century's Turn

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COLONIZING CARE

In 1889, the first documented attempt to cultivate a plantation of African Oil Palms in Malaysia failed (Oil Palm 1889). Yet by 1907, Henry Nicholas Ridley, the British Director of Singapore's Botanic Gardens, felt justified in stating that the African Oil Palm (*Elaeis guineensis*) should be cultivated "for profit" in Southeast Asia since it gave a "good return in Africa at little expense" (1907: 37). His statement drew on decades of back-and-forth correspondence among trading companies, colonial officials, and botanic gardens who had long been considering a cross-continental move for this plant from its homes in West and Central Africa. Today, this move has come to shape not only the landscapes of Malaysia and Indonesia (as just two examples), but also the ways people around the world consume packaged snacks, cook, wash their hair, feed their livestock, and fuel their cars.[1] This has had enormous societal, environmental, and

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[1] The palm oil market was valued at US$65.73 billion in 2015, and was expected to reach US$92.84 billion in 2021. Globenewswire reporting on Zion Market Research, 30 July 2019, https://www.globenewswire.com/news-release/2019/07/30/1893425/0/en/Global-Report-Palm-Oil-Market-Size-Share-Estimated-To-Touch-the-Value-Of-USD-92-84-Billion-In-2021.html (accessed 10 Mar. 2021).

economic impacts, creating what is now termed the "oil palm complex" (Cramb and McCarthy 2018). This denies simplistic notions of center and periphery: Indonesia and Malaysia currently provide the majority of the world's supply to centers of consumption in China and India (Byerlee, Falcon, and Naylor 2017).

But the oil palm is not a new food crop. Across West Africa, people have been developing food and other uses of oil palms for millennia. There is evidence for its early use in Ghana during the late Holocene (Logan and D'Andrea 2012). It is also prominent in culinary and material cultures elsewhere in the region, from Senegal to Angola, where it has been consumed and traded for centuries. Throughout west and Central Africa and as far east as Tanzania, its oils are used in cooking, soap, and as a light fuel. It is favored as a condiment for *fufu* (Watkins 2011; Martin 1988), can be used to make palm wine, and as a medicine. For example, it is a Yoruba treatment for smallpox (Robins 2021: 21).

In the eighteenth century, European visitors to West Africa began to take note of the "quality of the soap made from palm and palm kernel oils, mixed with ashes from palm fronds" (ibid.: 18; Watkins 2021: 186). By the 1790s, these foreigners were experimenting with making their own palm oil soaps (Robins 2021: 41) and the trade in "black soap" had become essential to the Portuguese economy (Watkins 2021: 186). By the 1900s British industries had found palm oil to be a useful substitute for other oleaginous substances in food, soaps, candles, tinplating, and industrial lubricants, and as a precursor for making new chemicals needed in the industrial age (Robins 2021: 74). By the 1920s, the palm was being planted in earnest in plantations across Southeast Asia. These early plantations laid the groundwork for the enormous expansion that oil palm plantations underwent in the region after the Second World War. In Malaysia, following independence and aided by government incentives, the land covered by the palm exploded from 55,000 hectares in 1961 to 5 million by 2017, and the country's share of the world export market for palm oil rose from 9 percent in the mid-1950s to 73 percent in 1983 (Byerlee, Falcon, and Naylor 2017: 28). Scientific practices and values that developed in the late nineteenth and early twentieth centuries were central to this massive expansion. Today, similar scientific and managerial techniques that grew out of this period of transplantation and massive expansion are used to justify agro-industrial palm oil expansion in Brazil (Watkins 2021: 216–17) and elsewhere.

Often, European scientific knowledge grew out of encounters with local knowledges, which became subject to colonial practices of "translation" (Bewell 2017; Raj 2007: 18). Yet the mechanisms and techniques by which oil palm was translated (and transplanted) remain underexplored. This article focuses on how local knowledges and uses of oil palms were turned into "immutable mobiles" that became central to European attempts at "domination at a distance" (Latour 1987: 221–25). In so doing, it tells of the broader moral values that shaped palm oil expansion at the turn of the twentieth century, in which interlinked notions of careful scientific work and the moral improvement of colonial subjects through

cultivation came to the fore.[2] Care, cultivation, and colony—the etymologies of each of these English terms are linked through their origins in the Latin term *colere*: "to till, tend, care for" (Moore, Kosek, and Pandian 2003: 9). In the later nineteenth century these ideals regarding cultivation and colonialism were grafted onto "much older discourses of imperial providence and 'improvement'" (Ross 2017: 9; Drayton 2000).

My focus on how moral ideals of *care* intersected with practical techniques of scientific, botanical, and bureaucratic *carefulness* grows from tracing a historical biography of the oil palm through official documents, letters, reports, and notes contained within the economic botany archive collection at London's Kew Gardens (RBGK ECB/8/1 634.622, "Oil Palm: Manuscripts and Reprints Bound Together 1876–1913").[3] I view this collection alongside Kew directors' correspondence (RBGK DC) and contemporary secondary literature such as Kew's *Bulletin of Miscellaneous Information* and other publications. Sources therein include not only memos, reports, and requests written by Kew officials, but also materials sent to them by government officials, trading companies, research institutes, and naturalists around the world. These offer a broad picture of the issues, assumptions, and priorities of Europeans who were encountering oil palms and their produce at that time. Being largely authored for practical purposes, these sources demonstrate not only a timeline of events but also the machinations and techniques through which caring attitudes were made effective.

The circulation of knowledge about plants between botanical gardens around the world was a form of empire-making, in which institutions like Kew facilitated the "despotic paternalism" of the British Empire (Drayton 2000: 227). Being central to the industrial revolution, palm oil had a particular significance for Britain, which would wind up controlling "the heart of the oil palm belt" after the "scramble for Africa" (Robins 2021: 3). Due to my focus on English-language sources at Kew, this paper will highlight British priorities, yet other European colonizing nations, too, helped develop the scientific processes that became central to *Elaeis guineensis*'s proliferation.[4] Also central were the diverse Indigenous knowledges of this plant that only make themselves known in the archives through their omissions, or in ventriloquized form, in British-authored sources. Though this paper explores *Elaeis* through the lens of the British colonial experience, I contextualize this through attention to what is masked in the British record, which often comes to light through European

[2] In linking the craft of botanical science with moral value I take inspiration from Jim Endersby's work on the life of Joseph Hooker (Endersby 2010[2008]). This paper follows similar headings to his book.

[3] Similar plant biographies have also been traced by Brockway (2002), Osseo-Asare (2014), and Schiebinger (2004).

[4] For example, France, Portugal, the Netherlands, and Germany.

frustrations as they attempted to co-opt and streamline the knowledge about *Elaeis* that they believed they were "discovering" (Stoler 2010: 1–4).[5]

The intense bureaucratic, enumerative, and classificatory activity around the oil palm at the turn of the twentieth century is not unique. It can be contextualized within the British context of increasing numeracy, literacy, Gladstonian fiscalism, and actuarial thinking in the mid-eighteenth century (Appadurai 1993). Enumeration, quantification, measurement, and classification were all carefully employed to "manage [the] mess and heterogeneity" that otherwise might have consumed the colonial office as it set about documenting the peoples and resources of the colonies (Verran 2001: 72). In British discourses around *Elaeis*, these became practices of scientific care and carefulness, described as such in its identification and classification, harvesting, planting, processing, and trade. Through this carefulness, *Elaeis* was translated into an object worthy of scientific attention (Daston 2000; 2004). The plant—its seeds, leaves, inflorescences, and oils—all had to be subsumed, rendered artefacts in a standardized format to become knowable to colonial officers and politicians. The botanists based at colonial botanic gardens played an important role here, carefully standardizing and presenting this plant such that knowledge of it could be communicated among the confusion of letters between gardens and colonies. The Royal Botanic Gardens at Kew was at the center of this work at the century's turn (Brockway 2002), exemplifying how botanic gardens have been part of shaping European views of "the tropics" (Bonneuil 1997; Grove 1996; Arnold 2014). Gardens such as Kew were laboratories "in which a teeming, disturbing, savage nature had to be tamed, ultimately disciplined, boxed in" (Bonneuil 1997: 83). Through everyday scientific practices of care rooted through these gardens, the oil palm became both an object and a tool of empire.

My approach is necessarily interdisciplinary, bringing together discourses on care in STS and narratives from environmental history and the history of science. This interdisciplinarity is essential since botanists and colonial officials used "care" in two forms. First, care was expressed as carefulness. Botanists expressed the need for extreme carefulness in the collection and transport of their specimens. They learned and taught skills of careful identification, observation, breeding, and experimentation. This points to how care is an affectively charged mode of attention or concern. It is more than a mere stance; it is practical and has material consequences as a "concrete work of maintenance" (Puig De La Bellacasa 2017: 4). Care not only structures how scientists come to know but is integral to science's inspiration (Daston 1995: 3). Yet care is a deeply ambivalent "selective mode of attention: it circumscribes and cherishes some things, lives, or phenomena as its objects. In the process, it excludes others.

[5] This is despite the impossibility of making clear "discovery" claims on plants, particularly in African contexts (Osseo-Assare 2014).

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Practices of care are always shot through with asymmetrical power relations" (Martin, Myers, and Viseu 2015: 627). Scientific care, through techniques of carefulness, has long been used to organize, discipline, and classify human and non-human bodies. Botanic gardens are primary sites in which to examine this process because they are places where an "attitude" of ownership toward plants and people came into being (Tuhiwai Smith 2012: 58).

In this way, careful scientific practice was linked to a second form of care: the broader narratives of care associated with ideologies of improvement and use. As such, care offers an analytic framework that allows for the rhetoric of use and improvement identified by Drayton (2000) to be understood in relation to the micro-practices of scientists and officials, reflecting how ethics of care were both enacted through scientific practice and grounded in everyday bureaucratic communications with and about botanic gardens. As carefulness became the valued scientific skill of the time, colonial subjects were branded as *uncareful* and in need of moral improvement. While the new science of botany became an opportunity for the creation of power and social capital, epistemological (and physical) violence was being done in the colonies, as European colonizers sought to force the colonized to "improve" themselves by imitating colonial practices of care.

Palm oil's story is not radically different from other crops that colonial governments transplanted to new locations. Rubber, cinchona, sisal (Brockway 2002), and others received similar treatment. Indeed, the palm oil trade in Malaysia built on the infrastructures and systems of forced labor already in place for rubber (Giacomin 2018b; Kaur 2014), which in turn had built upon those developed for sugar (Lees 2017). Despite this, the oil palm is more commonly seen as one of the many "Anthropocene" phenomena that define our *current* epoch—a symptom of modernity and a death-knell for humanity's future (Haraway 2015). Yet, the oil palm today is tied to its past (Trouillot 2015: 15), and after tracing its biography, this paper will compare earlier narratives of care with those found in the palm oil industry today, particularly as they are embedded within discourses on corporate care. For this, I rely on industry and NGO reports, corporation marketing campaigns, and secondary ethnographic literature. These make clear the ongoing legacy in the industry of notions of care and carefulness as both practical techniques and moral concepts. Discourses on scientific care for plants, and colonial "care" for people, were and still are interlinked. Care remains a powerful narrative that masks its own troubling undersides and implications in unequal power relations.

Today, consumers in the global North are often encouraged to care *about* palm oil. A visitor might marvel at Kew's careful curation of exotic plants as exemplifying the "wonders of a fast-vanishing world," while at the same time they are encouraged to care about the "environmental impact of massive oil palm plantations" (Teltscher 2020: 308). Consumers may come to care about plantations' effects on orangutans, biodiverse rainforest environments, and

(less often) the displacement of Indigenous peoples and smallholders in Southeast Asia.[6] But as people and corporations express and enact care about these issues, such narratives may again obfuscate the histories of environmental, scientific, and social care that coalesce around palm oil. Following how those associated with palm oil expressed and enacted techniques of care and carefulness in the decades when the industry began expanding globally reveals that its development in ways that have harmed so many was not inevitable. This casts light on care's less benevolent history and offers insights into how one might foster more critical forms of environmental, scientific, and social care in the present day.

ENCOUNTERING *ELAEIS*

It is likely that *Elaeis guineensis* first became known to Europeans around the beginning of the Atlantic slave trade. The first European botanist to name it was not in West Africa but French Martinique: Dutch botanist Nikolaus Jacquin in his *Selectarum Stirpium, Americanarum historia*, first published in 1763 (Hartley 1988: 37; Robins 2021: 10). Jacquin named it after what he assumed was the plant's native home: Guinea. In the Caribbean, British colonists valued the palms for ornamental purposes. Their tall, imposing presence likely provided structural border markers between estate and plantation, and lined avenues and squares (Casid 2005: 11). Writing from Jamaica's botanic gardens in 1876, botanist and gardener George Samuel Jenman, Superintendent of the British gardens in Guiana (and later of the botanic gardens in Jamaica), told Kew Gardens Director Joseph Dalton Hooker that he would happily oblige his request to further examine the *Elaeis* that he found growing in Jamaica "in great abundance."[7] He does not mention that *Elaeis* would have arrived since 1655 with the millions of enslaved Africans the British transported to Jamaica to work their sugar plantations.

On board ships, the oil was used as food for slaves, and some was reserved for African doctors to use for medicinal purposes (Osseo-Asare 2014: 82; Robins 2021: 39). Slaves would then have their shoulders smeared with the oil before being branded with the mark of trading companies (Robins 2021: 31). The Portuguese-African trade in both slaves and palm oil goes back even earlier, to the early sixteenth century, when "palm oil seasoned and enriched the various gruels that sustained captives awaiting transport and during the Middle Passage. On arrival in the New World, sailors and dockhands rubbed enslaved bodies with palm oil to tone their skin and 'ready' them for sale" (Watkins 2015, 19). The

[6] Pye and Bhattacharya (2012) review these issues, and Colchester (2011) discusses palm oil and Indigenous peoples in Southeast Asia.

[7] Letter from G. S. [George Samuel] Jenman to Sir Joseph Dalton Hooker; from the Botanic Gardens, Golden Spring P.O., Jamaica; 9 Nov. 1876, London's Kew Gardens (henceforth RBGK) DC 211/612.

beginnings of the European relationship with palm oil are, then, inextricably intertwined with the history of chattel slavery. Yet palm oil was also central to resistance across the Americas: enslaved people planted oil palms on subsistence plots, where they were both central for sustenance and formed part of symbolic religious practices, thus becoming part of the ongoing survival of Candomblé, Santeria, Voudou, and Obeah (Carney and Rosomoff 2010: 170; Robins 2021: 35; Watkins 2015: 19).[8]

In England, palm oil was not the prevalent commodity it is today, though people did know of it. They, too, used it for medicinal purposes such as treating chilblains, and though this practice had waned by the nineteenth century, Europeans marveled at African medicinal knowledge of palm oil. There was even a roaring trade in "fake" palm oil in Britain (Robins 2021: 37–39). But palm oil remained of negligible interest to the British public even at the beginning of the nineteenth century.[9] Traders, who never stepped off their boats when trading in palm oil, held "quaint" beliefs about this palm, such as that the oil came from the plant's roots (Hartley 1988: 10). Not until later in the eighteenth century did the network of plant collectors in correspondence with Kew become interested in *Elaeis*, though even then, it does not appear that in their encounters with *Elaeis* they subjected it to particular scrutiny in comparison with other species. Nonetheless, the work of those early collectors was a central foundation to the shapes that *Elaeis* would later take.

Collectors who sent *Elaeis* specimens back to Kew often did so at the behest of successive directors of Kew Gardens. Botanist and explorer Joseph Banks was the first, though unofficial, director of the gardens during its early days (his position was formalized in 1797). Following his death, the gardens lay dormant until, during a period of rapid British expansion overseas, they were taken over by the state in 1841. William Jackson (W. J.) Hooker was appointed the first formal Director of the gardens within its new situation as part of the ever-expanding colonial state. In 1865 he was succeeded by his son, Joseph Dalton (J. D.) Hooker. Joseph, in turn, passed the Kew directorship onto his son-in-law, William Thiselton-Dyer, in 1885. This ensured almost a century of family rule, until David Prain took over in 1905. As the directorship passed between these men, they presided over different phases in the "polycentric communications network" (Chambers and Gillespie 2000) that facilitated *Elaeis guineensis*'s many journeys.

Plant collecting as an endeavor of empire was cemented during Banks' tenure at Kew. He would send botanists out on voyages to bring back exotic plants. These trips may have been purely botanical in scope, or there may have been joint

[8] Indeed, a community organizer interviewed by geographer Case Watkins stressed the importance of foregrounding African agency and resistance in narratives of how the oil palm came to proliferate in Brazil (2021: 96).

[9] Exact monetary figures for this trade's profits in the nineteenth century are difficult to recreate exactly due to an absence of hard data. See Lynn (1992) for a summary of these issues and some approximate figures.

motives of botanical discovery and colonization (Brockway 2002: 84). In the nineteenth century, botanists often encountered *Elaeis* either growing semi-wild or cultivated as an ornamental or for practical uses as a foodstuff. As with other potentially useful plants, they also took *Elaeis* seeds provided by Kew with them when they traveled to experiment with transplanting them in new locales, though not always successfully. In 1850, for instance, one British botanist lamented that the Kew *Elaeis* seeds he had taken to Ceylon had all been eaten by ants.[10] Correspondents often addressed such seemingly mundane topics, but as letters continued to fly from around the world into the Hookers's reigns at Kew, the resulting networks of collectors became "possibly the single most important tool of the imperial scientific endeavour" (Endersby 2010: 84). Collecting became an "essential tool for negotiating who had scientific and social authority and how they could use it" (ibid.: 54). The care that collectors were taught to take in handling, documenting, and transporting the seeds demonstrated this—it was essential that seeds got to Kew in a state that would allow them to be examined, or even germinated so experts could study living specimens and cross-reference them with botanical books and specimens sent by previous collectors (ibid.).

One German botanist and erstwhile Kew gardener, Gustav Mann, wrote to Kew in 1859 from Equatorial Guinea that he had been sick, but had found some birds' nests made from *Elaeis guineensis*.[11] Mann had been recommended by W. J. Hooker to Lord John Russell (British Prime Minister, 1846–1852, 1865–1866) as an appropriate botanist to join an imperial survey: the "Niger Expedition" (Drayton 2000: 203). In 1860, having made it to the mouth of the Niger, he sent some *Elaeis* seeds, writing, "I have passed a most tiresome time in the rainy season … the things I had on board [the ship] will scarcely reach England in good condition." His plants, including *Elaeis* seeds, were gathered "with much difficulty."[12] Yet Mann commented on not only plants but also people and their agricultural practices. He dismissed the island of Bioko (then Fernando Po) as "entirely uncultivated," with cotton "growing very well without being looked after, quite wild only taken by the people there when they have nothing else to do." Their fields, he surmised, "could scarcely be called so." Their methods of palm oil cultivation he likewise found insufficient: "The men bring the nut from the tree to their houses and the women make and sell the oil. The island could give ten times as much Palm oil if the Boobies would make use of all that is going here."[13] Politicians such as Russell hoped that the British

[10] Letter from G.H.K. [George Henry Kendrick] Thwaites to Sir William Jackson Hooker, from Peradenia, Kandy [Peradeniya, Ceylon], 13 Apr. 1850, RBGK DC54/521.

[11] Letter from Gustav Mann to the Royal Botanic Gardens, Kew, from Clarence, Fernando Po, 29 Dec. 1859, RBGK DC60/199.

[12] Letter from Gustav Mann to the Royal Botanic Gardens, Kew, from S. S. Rainbow, Mouth of the River Niger, 6 Sept. 1860, RBGK DC60/209.

[13] Letter from Gustav Mann to the Royal Botanic Gardens, Kew, from Clarence, Fernando Po, 31 May 1860; DC60/203.

would both "identify the crop" and "teach [the African] how to wield his spade," uplifting them from "sloth and depravity" (ibid.: 233). Mann's search for botanical knowledge was thus not neutral or merely a quest to fill Kew's herbarium; collecting knowledge of "raw materials" was seen as a specialized scientific craft and also a moral undertaking in the service of improving humanity (Mignolo 2011: 12–13; Drayton 2000; Endersby 2010).

With this combined, developing focus on agricultural efficiency, profit, and the development of "natives," later into the nineteenth century, not just naturalists but also British mercantile companies became particularly interested in palm oil and how Kew could help them increase supplies (Lynn 1992; 1981). With this change, *Elaeis* began to take on a more prominent role. Trading companies, too, became drawn into the existing correspondence networks since they hoped that Kew could advise them on whether there were more productive varieties of *Elaeis.* For them, too, careful collecting practice was paramount. A series of letters in December 1876 between William Thiselton-Dyer—not yet Kew's Director but based there under his father-in-law—and the Liverpool-based commission house James Irvine, indicates the complexity of this: they debated at what point of ripeness the seeds should be sent, and how they should be selected "carefully" and packed dry in an air-tight barrel.[14] By the following January, the commission house wrote that they had "the pleasure in advising [Kew], that I have this day sent off a small parcel of palm kernels which was specially selected…. They are as fresh as it is possible to get them in the circumstances, and I hope they will germinate—I am told that they have repeatedly been planted and have always failed to grow; however with the extra advantages of Kew and Kew Superintendents perhaps they may grow with you."[15] As the palm oil trade between West Africa and Britain was in its early years, the care of the *Elaeis* seed in situ, in the colonies, in transit, and at Kew became care of the empire's interests.

MARKETING *ELAEIS*

As these letters traveled back and forth, they facilitated a series of developments in the palm oil trade. During the early years of its trade to Britain, Europeans did not consider palm oil a foodstuff. Used to bland oils, they thought its taste, color, and odor were too strong (Robins 2018). Yet its emerging popularity for making soap meant that the palm oil trade expanded from a negligible 112 tons per year exported from West Africa to Britain in 1807, to 11,000–14,000 tons per year in the 1830s.[16] It became so popular for soap that in 1853 British Chancellor

[14] RBGK ECB/8/1, 5, 6.
[15] RBGK ECB/8/1, 9.
[16] All statistics in this section come from data in Hartley (1988: 12), Martin (1988: 28), and Lynn (1992: 90).

William Gladstone (Liberal Party), agreed to abolish the excise tax on soap, and framed this explicitly not only in terms of care for the health and prosperity of the nation, but as an anti-slavery exercise: abolishing the soap tax would offer an increased incentive for slavers to trade in palm oil instead, and offer a "legitimate" revenue (Gladstone 1853). Botanist Berthold Carl Seemann wrote in 1856 that, by offering an alternative to the African "traffic in slaves," the oil palm presented a unique opportunity for a plant to exercise "moral and physical" improvement of African nations (1856). A technique was developed to treat palm oil's fatty acids so that it could be used to make stearic candles, after which companies such as London Prices Patent Candle Company began using the antislavery narrative as a marketing tool (Martin 1988: 28). That palm oil was *known* to the British because of the slave trade was not mentioned, nor was the fact that the trade had been already abolished in Britain for almost fifty years and yet no "legitimate" trade had replaced it. Other post-abolition trades in pepper, tin, ivory, gold dust, rice, and gum copal had failed to halt the traffic in human bodies (Hartley 1988: 10). Still, those involved with palm oil increasingly viewed their work as a moral endeavor not only in the service of Britain but in caring for those who would no longer have to suffer from slavery. Indeed, one of the stated purposes of Russell's Niger Expedition, on which Mann made his observations of *Elaeis*, was to find a legitimate trade to replace slavery (Drayton 2000: 203).

These developments helped the palm oil trade expand to 25,000–30,000 tons per year in the 1860s,[17] but rather than contributing to the demise of the illegal slave trade, the twinned trades in palm oil and slaves continued to expand alongside one another. For example, the international slave trade from the Bight of Biafra peaked in the 1820s and remained brisk through the 1830s, demonstrating how both trades co-existed for decades (Northrup 1976: 354–57). Increased demand for palm oil also meant an increase in domestic forms of slave-trading and systems of unfree labor (Lovejoy 2011: 160). In Ibadan, slavery was reorganized for agricultural production and carrying oil to the coast (ibid.: 174). And throughout Biafra, wealthy individuals were able to consolidate "their position in society through the control of lineage land, trade, and the acquisition of slaves and pawns" (ibid.: 178). One famous case was Jaja, once himself enslaved, who rose, through his commercial palm oil establishments, to become the ruler of Opobo and own over a thousand slaves (ibid.: 180).

Palm oil trade was also used as a *cover* for slavery (Robins 2021: 45). Anthropologist Zora Neale Hurston recorded the life history of Oluale Kossola, the last living survivor of the last slave ship of the middle passage, the *Clotilda.*

[17] The trade in the 1850s had a value of around 1,000,000 GBP per annum, an increase in value that ran ahead of the increase in volume (Lynn 1992: 90).

His story recounts how, although capturing slaves from across the Atlantic had been illegal for over fifty years, two slaveholders from Alabama saw a local report that said the King of Dahomey was running a brisk trade in slaves. They outfitted their ship the *Clotilda* for "contraband cargo" and set out for the Bight of Benin, anchoring at Ouidah in 1859, where Kossola and others were held. The ship's clearance papers stated, "She was sailing for the west coast for a cargo of red palm oil" (Hurston 2018: 7). The slave trade was thus able to co-exist on multiple levels with the supposedly "legitimate" trade in palm oil. Indeed, many abolitionists of the time did not oppose the institution of slavery, only the *trade* in slaves (Robins 2021: 52).

Despite these failures, the palm oil trade from West Africa to Britain would again expand to over 87,000 tons per year by 1911, when it began to be used in the tin plate industry to prevent oxidation, and the palm kernels became a valued cattle cake after their oil had been extracted (Hartley 1988: 12–13). Only in 1902 did it start to be used in margarine, when the development of hydrogenation unexpectedly enabled producers to strip the oil of its taste and smell (Robins 2018: 329). By the 1930s it was a key food for Europeans (ibid.: 330). The interest in palm oil grew for ports in London, Liverpool, and Bristol, with various trading and shipping companies vying for exports, and this created tensions in the Niger Delta. Contrary to narratives of salvation, by the 1850s–1860s "aggressive behaviour" was noted between British traders "determined to stop at nothing" and local middlemen, and British assaults on Nigerians were commonplace. This led to appeals for British imperial intervention to "re-establish some order" (Lynn 1981: 348), and to the formation of the Royal Niger Company, which paved the way for British control in the lower Niger and various iterations of colonial control in the region until Nigerian independence in 1960. In this way, the palm oil trade had a major impact on the development of British imperialism in the region (ibid.: 331). Suffusing this was palm oil's marketing as a means of enacting care.

KNOWING *ELAEIS*

As these developments took place, botanists continued to develop their knowledge of plants, including *Elaeis,* through detailed observation, and to share these observations with Kew. The Kew archives contain the proceedings of an 1879 Meeting of the Committee of the Agri-Horticultural society of Madras, which record the Basel Mission in India's success with introducing oil palm seeds from the Gold Coast:

> The Oil-palm garden is situated just in front of the Mission House. The soil is of laterite formation … yet there flourish Casuarinas, high Teak trees, Poinciana regis, Acacias, the Ficus Indica, and the young Oil-palms are as healthy and

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> luxuriant as if they were planted in their African home. The palms are now ten years old, the seedlings having been put out in 1869 at a distance of about ten feet. The palms form now magnificent sheaves of pinnate foliage, and if only elevated to be the crowns of high trunks, they would prove worthy companions of the feathery cocoanut, the slender reach, and the stately palmyra.… Two years ago the Oil-palms yielded their first fruits, which have all been used for obtaining new seedlings, and last year I got a box full of such plants, which are all thriving in my "Experimental Garden." … At a later period the leaves become pinnate and resemble those of the wild Date … the ribs are very strong and gracefully curved back, and the petiole is armed with powerful thorns which, in their amplexicauline tendency, afford a formidable protection of the nuts which protrude in clusters from their axillary position.[18]

Typical observers such as this were "learning to be affected," to notice and to care about the micro-details of their plants (Latour 2004: 205), this in itself being seen as a worthwhile pursuit. Botanists had long sought to foster the skill of careful observation as the marker of their craft, mirroring developments in other scientific disciplines (Daston 2008). Yet the boom in trade meant that traders now felt a need for knowledge of how to gain as much oil from the palms as efficiently as possible. They sought Kew's help, and so the observations and measurements of *Elaeis* that Kew and its networks held were put in service to answer a question that would puzzle officials for decades: within the species *Elaeis guineensis*, was there a particular *variety* of that would offer a higher yield, making processing more efficient? Interest coalesced around a particular property—shell thickness. Thinner shells, it was hoped, would make processing more efficient. Across diverse linguistic contexts, African ways of naming the varieties of *Elaeis* had long encoded the specificities of their habits, the nature of how they reproduced, and the best ways to cultivate them, including in relation to shell thickness. Despite this, local names for oil palms were considered a frustrating hindrance as European officials struggled to systematize them according to their own botanical epistemologies so as to find the thinnest-shelled variety.

This frustration may have grown out of botany's long concern with developing a consistent naming system. At the beginning of the nineteenth century botanical collecting, research, and classification already had a long history. Yet British botany remained in the process of becoming stabilized as an "autonomous and distinctive field of enquiry," a distinct scientific discipline that could sit alongside the other rational sciences as a legitimate profession and

[18] RBGK ECB/8/1, 39.

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offer the potential for prestige, recognition, and the social capital linked with being a "scientist" (Baber 2016). With this developing opportunity for social capital, naming and classifying were considered essential ways of *translating* plants and knowledge about them into new contexts (Raj 2007), in turn cementing botany as a discipline characterized by "permanence" (Daston 2004: 154). Local naming systems did not, it was thought, fit in with this project. So, while local users and cultivators of these plants had complex and systematic naming systems for this well-loved plant, these were masked by British (and wider European) arrogance. In his 1912 report on "The Oil Palm and Its Varieties," the Assistant Conservator of Forests for the eastern province of Nigeria, J.H.J. Farquhar, concluded "The names given by the native to palm fruits are most unreliable; at different periods of development or ripeness of the fruits distinctive names are given them. The fruits in the early stages appear as small elongated drupes, flossy purplish-black in colour, with the stigmas adhering to them. The colour, size and shape of the fruit alter as they ripen, whilst they lose to a large extent the stigmas; all these stages in the development of fruits are honoured with distinctive names."[19] The skill of observing, of noticing minute differences between varieties was increasingly becoming recognized as offering the potential for great effects in terms of isolating particularly useful traits, but this skill, as with observation, was considered largely unattainable by the uninitiated (read, non-European) (Bonneuil 2019).

In the attempt to discover whether thinner-shelled palms could be considered a variety of *Elaeis* worthy of a name and investigation, British scientists began making minute measurements of shell thickness. This was of particular concern to the Secretary of State for the Colonies, successive Directors of Kew Gardens, and the West African Trade Association. In 1908, the Secretary wrote directly to David Prain at Kew, forwarding a copy of a letter from the West African Trade Association[20] stating that he "would be glad to be favoured with any observations that you may desire to make" regarding "a species of palm which bears soft-shelled kernels, inquiry into which might lead to good results."[21] Debate ensued regarding whether this was a new variety or variance due to the conditions of growth. It was agreed that more samples were needed at Kew. Yet Prain was doubtful they had identified a new variety: he argued that even the Conservator of Forests for Southern Nigeria, "known to be a careful observer," was unacquainted with this soft-shelled variety.[22] "Careful" observation was key to understanding these micro-differences that

[19] RBGK ECB/8/1, 323.

[20] British merchants established this association in 1897 with the aim of removing "unhealthy" competition among themselves and furthering the interests of traders. By 1898, German merchants had been invited to join, indicating a general desire for agreements between Imperial powers that would fix prices and control competition (Olorunfemi 1981: 25).

[21] RBGK ECB/8/1, 64.

[22] RBGK ECB/8/1, 70.

could be of use to the empire, yet again British researchers were reliant on the work of Nigerians for this. One contributor of data for an influential report on the oil palm published in the *Government Gazette* of 1908 was Thomas B. Dawodu, a Nigerian of Ebute Mette, Lagos.[23] He was trained at botanic gardens in Jamaica and Kew, later becoming Assistant Curator of Lagos Botanic Station.[24] Circulation of people as well as plants was thus critical to the project of empire, yet at the same time, careful measurements came to stand in for local knowledge and understandings, becoming ways of discrediting African knowledges of the palm (Tuhiwai Smith 2012: 44). In 1908, Prain's response to the West African Trade Association was one of frustration: "Careful and exhaustive reports" had already been published in his institution's bulletin, he stated, and the matter was closed.[25]

Naming and classification, then, was considered a moral undertaking in the service of empire. There was little to no recognition that Igbo or Efik naming systems for *Elaeis* might represent knowledges of the palm and its habits that the European botanists were unable to grasp. Yet colonial scientific observation did increasingly involve not only the plant's varieties, but also the practices of those who grew them and their methods for classifying, identifying, naming, and cultivating (see Figures 1 and 2). This was a process of "annexing native knowledge into a comprehensive big picture" in a process of "integration" that was also one of "disqualification, constructing the great divide between beliefs and Western science" (Bonneuil 1997: 79). The former was characterized by perceived carelessness and inaccuracy, the latter by care evidenced through quantification and measurement. European frustrations are in this way telling. Like the stories of many other crops during imperial agricultural expansion, the traces left behind by colonizers in imperial archives expose the active silencing of knowledges. This silencing was itself a part of the colonial enterprise (Chakrabarty 2000), yet the glimpses that remain also reveal how local knowledges refused to be subsumed into colonial epistemological frameworks, and local methods of cultivation refused absorption into colonial notions of proper land management and ownership.

Despite his frustration, in 1909 Prain was still engaged in the matter, which had taken a new inflection, part of a broader scientific turn to genetics prompted by the rediscovery of Mendel's laws. In an "Agricultural Supplement" to the September 1910 issue of the *Bulletin of the Imperial Institute*,[26] the Institute's Director published a twelve-page report on the different oil palm products of

[23] RBGK ECB/8/1, 60–62.

[24] Dawodu was rightly dissatisfied with his lower wages. Letter from Henry Millen to Sir Daniel Morris, from the Botanical Station, Lagos, 19 July 1894, RBGK DC184/252.

[25] RBGK ECB/8/1, 66.

[26] The Institute was set up in Britain to encourage trade and links within British-controlled territories. Its quarterly bulletin contained information relating to the agricultural, mineral, and other industrial resources across the empire.

Southern Nigeria. This included the different compositions of samples from their oil palm seeds, organized by their names in Nigerian languages, alongside information about where they were collected, and the measurements of qualities including average length, diameter, thickness of shell, weight, monetary value, saponification value, Iodine value, gravity at 15 degrees centigrade, and acid value. He then emphasizes the importance of understanding whether these qualities will be passed on, coming "true from seed."[27] Consequently, while naturalists saw nature as a wealth of *species* resources, they came to re-evaluate these stores in terms of their *genetic* value (Bonneuil 2019). Like other plants, oil palms were now seen not as "unitary wholes, but as 'materials' harboring a set of different 'traits' that could be isolated and recombined" (ibid.: 3). While observations of plants had been focused on the gestalt of the plant visible to the naked eye, now plants were identified at the miniscule level of genetic difference (Bonneuil 2016).

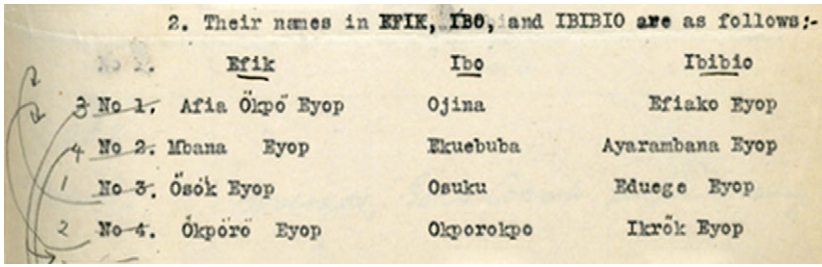
This further increased the idea that supposedly careless "native" methods of cataloguing and naming these varieties were of no use, even while colonial experimentations with heredity were embedded in local knowledge.[28] This simultaneous embedding in, and dismissal of, local knowledge of *Elaeis* was notably evident in how experimenters repeatedly found that despite their best efforts to isolate genetic traits through breeding, their carefully selected seeds did not "come true." A report from 1909 documents an experiment undertaken in Cameroon, where Lisombe seeds had been sown and seventeen plants raised, with seven then flowering and fruiting, but only two with the "characteristics of the Lisombe palme." Despite the "care" taken, "this experiment appear[ed]s to confirm the native reports" that the plant does not come true from seed. The report went on to conclude that further experiments were needed, for which "care" would be central: "care would have to be taken to prevent cross-fertilisation" and "careful records" would have to be kept regarding genetic lineages.[29] Finally reporting on this research to the British Colonial Office in Downing Street, Prain concluded that the matter could only be "settled by careful experiment":

> It may that the flowers of the palms of one variety receive pollen from those of a distinct variety and that the seeds therefore yield plants of a hybrid character. If experiments could be undertaken to ensure that the flowers of a definite variety be pollinated from the flowers of the same variety and the resultant seeds be carefully collected and sown, the question as to the offspring of the different varieties might be solved. Since it seems clear that certain varieties yield a higher percentage of oil than others

[27] RBGK ECB/8/1, 286–93.

[28] For more examples of this increase in attention to genetic characteristics of *Elaeis*, see the Kew *Bulletin* (Varieties of the Oil Palm 1909).

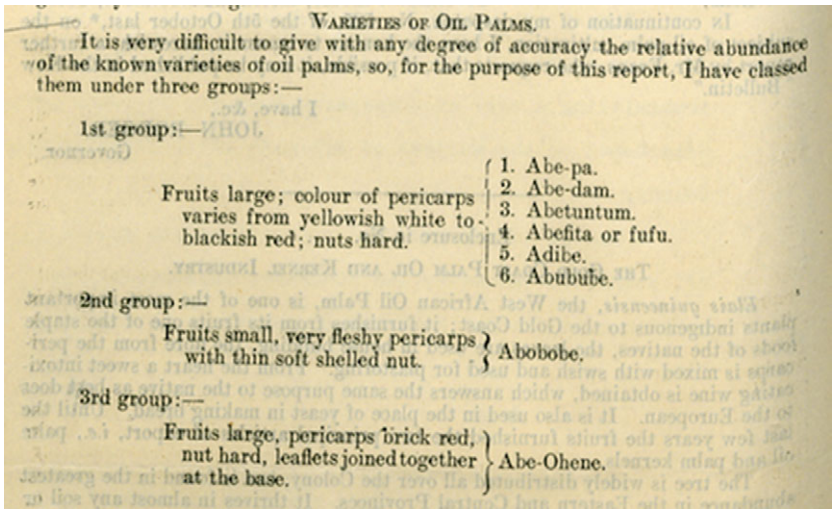
[29] RBGK ECB/8/1, 199.



2. Their names in EFIK, IBO, and IBIBIO are as follows:-

	Efik	Ibo	Ibibio
No 1.	Afia Ökpö Eyop	Ojina	Efiako Eyop
No 2.	Mbana Eyop	Ekuebuba	Ayarambana Eyop
No 3.	Ösök Eyop	Osuku	Eduege Eyop
No 4.	Ökpörö Eyop	Okporokpo	Ikrök Eyop

FIGURE 1. Types of oil palm enclosed in a letter from Calabar to Kew. Economic Botany Archive collection, Kew Gardens 8/1, 115.



VARIETIES OF OIL PALMS.

It is very difficult to give with any degree of accuracy the relative abundance of the known varieties of oil palms, so, for the purpose of this report, I have classed them under three groups:—

1st group:—

Fruits large; colour of pericarps varies from yellowish white to blackish red; nuts hard.
1. Abe-pa.
2. Abe-dam.
3. Abetuntum.
4. Abefita or fufu.
5. Adibe.
6. Abubube.

2nd group:—

Fruits small, very fleshy pericarps with thin soft shelled nut. — Abobobe.

3rd group:—

Fruits large, pericarps brick red, nut hard, leaflets joined together at the base. — Abe-Ohene.

FIGURE 2. Attempt at classifying diverse African terms for *Elaeis*'s varieties. Report by Mr. Evans, later published in the *Kew Bulletin.* Economic Botany Archive Collection, Kew Gardens 8/1, 121.

> I am of opinion that experiments conducted on these lines are likely to be of considerable economic importance for the Palm Oil industry.[30]

Europeans, then, were slow to accept what farmers had long known, that this high-yielding variety was a sterile hybrid, whose oils many considered less flavorful than other varieties (Robins 2021: 130–31). Despite this, colonial scientists "hoped to convince Africans to replace existing groves with their own higher-yielding varieties, grown under more "scientific"

[30] RBGK ECB/8/1, 185–86.

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conditions" (ibid.: 131). To them, what made an experiment scientific was that it was "careful." This care, they believed, could only be taken by the European. In 1911, Farquhar wrote to Kew to report that the Victoria gardens in Cameroon contained "a few small blocks" of oil palms, of the "Lissombe" variety (as Cameroonians called it). But, he said, it appeared to him "to be a type which possesses characteristics which are far from constant and permanent and which are liable to change with differences of soil, climate, rainfall." That said, he considered "that by careful cultivation and selection these characteristics could be made more permanent."[31]

CULTIVATING *ELAEIS*

So, "traditional" and colonial agriscience were embedded (Osseo-Asare 2014; Raj 2007), yet colonial agriscience and its forms of care were backed by power, which meant European desires came to dominate African landscapes (Ross 2017), as the case of oil palm cultivation shows. As traders began seeking to ensure that they had not only an efficient but a reliable source of palm oil, questions came to be asked regarding whether this or that variety of this semi-wild crop, which seemingly flourished on its own in human-altered landscapes, could be cultivated in plantations. But the habits of *Elaeis*, as well as local methods of cultivating it, once again frustrated European attempts to answer them.

In the Southern Igbo region of southeastern Nigeria, Ngwa people relied heavily on the oil palm. There, the plant grew in semi-wild groves, but did not thrive under shade, and so required an element of human disturbance to get enough sunlight (Martin 1988: 22). This characteristic was referred to in the primary reference text for the oil palm, C.W.S Hartley's *The Oil Palm*, where he states that it is difficult to tell whether or not palms exist in their groves due to human intervention (1988: 4). It is a pioneer species, often being the first to colonize previously barren or recently disrupted landscapes and ecological border zones, with a strong "capacity to regenerate" (Maley and Cheptstow-Lusty 2001). Because of this ability to proliferate in a semi-wild fashion in the wake of human disturbance, "native" practices of cultivating it mystified colonial officers. The Colonial Secretary and Kew received letters about this from Nigeria, Sierra Leone, and Ghana. The colonial office repeatedly requested information on exactly *how* the palm could be cultivated, often relaying queries from trade companies and commission houses in Liverpool. In a 1908 issue of the *Government Gazette* from Southern Nigeria, the Conservator of Forests H. N. Thompson detailed his observations of the plant's habits, and of "the native's" practices, which drew partly from

[31] RBGK ECB/8/1, 305.

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research conducted by the aforementioned Dawodu (Curator of Lagos Botanic Station):

> In the Western Province the systematic planting of Oil Palms is not commonly undertaken by the natives. On newly farmed lands where the palm happens to be scarce and in the forests where they have been destroyed by elephants, seedlings are sometimes transplanted from suitable localities and put down at convenient intervals, where the land is not being farmed, the planted area being occasionally "brushed" over to clear the young palms of dominant growth from the under wood.… On the other hand where oil palms already happen to exist in fair numbers when the land is cleared for farms, seedlings sprout up in immense numbers about a year or two after the clearings are first made, from seeds dropped several years before. These seedlings are frequently thinned out and planted all over the farms, this being usually done in the rainy season. With the above exceptions no particular efforts are made to stimulate the natural regeneration of the species. Very little planting seems to be undertaken by the natives in other parts of Southern Nigeria. The large numbers of Oil Palms met with in well cultivated Districts of the Eastern and Central Provinces are due to spontaneous growth that springs up under the protected mother trees when these areas are cleared for farms. At each successive felling rotation of the Forest growth that springs up on the fallow land, more seedlings sprout up and are in their turn spared from destruction.… The oil palm is generally so plentiful in the moister portions of the Central Province that the natives very rarely take the trouble to cultivate and tend the plant.[32]

Again, the trope of the careless native is evident. If the plant was not being planted or cultivated systematically in gardens or plantations in large numbers, that must indicate an inefficient, careless method, with people not "taking the trouble" to do things properly. The 1909 Cameroon report mentioned earlier made an explicit comparison with the practice in southern Nigeria: "In Southern Nigeria it has been noticed that trees growing on old farms are more prolific than those growing in the dense forest. This is due partly to the greater exposure to sunlight that the palms experience on the farms, and partly to the greater amount of attention they

[32] RBGK ECB/8/1, 60.

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receive in the matter of trimming the leaves, &c., on such areas. There appears to be no doubt that tended trees give a greater yield of nuts than those growing uncared for in the forests."[33]

Harvesting from semi-wild trees did not fit with the European vision of productivity, and once again this was expressed as a lack of proper care: palms were left growing "uncared for." Plantations became a marker of plants that were cared for, yet they excluded other kinds of care for oil palms in the process. Following Mann's earlier reports from Bioko, another from southern Nigeria in 1900 expressed concern that the "natives" were so happy collecting palm oil "owing to the ease with which the collection of oil and nuts provides for the requirements of their lives" that they did "not readily attempt to grow or collect other products."[34] If the palm was not cultivated in a manner pleasing to Europeans, it was assumed that the moral benefits of would be limited. This extends much earlier European views on tropical agriculture. Joseph Banks, for example, had an "inability to see labour": to him the tropics were a superfluity of abundant riches, on which local labor had had little effect (Tobin 2005: 5). Local forms of care were dismissed, yet still made themselves felt, as this extract from Farquhar's report demonstrates: "It is the belief among some farmers in the Western Province that all nuts from young trees are more or less thin-shelled, and as the tree gets older the shells harden, and very few retain that thinness. It is said that farmers prevent the Arunfo turning into the Pankoro by smearing the wounded fruiting stalk with oil or agidi (maize flour) after the cob has been cut off."[35]

Where locals did adhere to colonial agricultural techniques, they were praised as the exception to the rule. Proofs for an issue of the journal *Forestry West Africa* from 1909, sent to Kew by the Governor to the Secretary of State for the Gold Coast, reported,

> The Krobos are the only natives who really pay any marked attention to the cultivation of oil palms, and their plantations, which are said to have been planted with oil palms about 40 years ago, are an example of native industry not at all compatible with the reputation which is often attributed to the natives of this Colony. All decayed branches are cleared off, and the heavy share of the palm trees prevents the growth of weeds, so that the plantation presents a very tidy appearance; and it would well repay natives, from other parts of the Colony

[33] RBGK ECB/8/1, 199.
[34] Colonial Reports—Annual, no. 353, Southern Nigeria, Report for 1900, "Presented to both Houses of Parliament by Command of His Majesty," Apr. 1902, 13.
[35] RBGK ECB/8/1, 317.

> interested in the palm oil industry, to pay these plantations a visit.[36]

Tidiness, neatness, and orderliness became moral aesthetics viewed as necessary for the proper care of the palm, even though they were later found to be detrimental to palm growth (Robins 2021: 118). In turn, "natives" came to be classified along these same lines. A 1908 Arthur William Hill (then Assistant Director at Kew), sent a report to the Undersecretary of State in response to his request for information on the cultivation of oil palm in other colonies, and it refers to plantations being made in Dahomey by only the most "careful natives."[37] Care for palms in plantations became a moral skill in which "natives" had to be educated.[38]

One prominent figure shifted the focus on promoting the palm's cultivation, according to his belief that one could instead carefully cultivate the life of the "native" to ensure that he collected the wild palm's fruits in a properly efficient manner: Lord Leverhulme, otherwise known as William Lever. While looking for a reliable source of palm oil—or "cheap grease"—to supply his soap factories at Port Sunlight in Liverpool (Nworah 1972), he had turned his attention to what was then the Belgian Congo (latterly the Congo Free State). In the aftermath of King Leopold's reign of terror (Hochschild 2012), Leverhulme found in the Congo a pre-existing system of forced labor ripe for his exploitation (Hochschild, introduction to Marchal 2008: xii). Conversely, he had a squeaky-clean reputation in Britain as a soap magnate who had made that country sanitary, which helped him convince the Belgian government to grant him concessions: "Lever passed in Europe for a philanthropist with enlightened views, on account of the excellent conditions under which the workforce lived and worked at Port Sunlight [near Liverpool]" (Marchal 2008: 3).

Having been granted concessions, Leverhulme employed coercion to ensure that fruit cutters would bring back enough fruits to him from what had previously been *their* oil palm groves: "The Africans would have to work 'his' palm trees as wage-labourers, on the pittance he chose to pay them" (ibid.: 4). He set up military posts and implemented contracts that forbade cutters to sell fruits to anyone else. If they tried to do so, or kept the fruits that had once been theirs, they risked being charged with theft, and jailed and tortured (ibid.: 56). He moved entire Congolese villages nearer to industrial enterprises to work his concessions (ibid.: 170). Laborers were his "serfs," just as the palms were now his property. Yet, "In Europe and North America, few did much looking. Most people continued to think of Leopold as the philanthropic king.… This was a pattern that also would be repeated in the later period of the Lever Brothers'

[36] RBGK ECB/8/1, 121.
[37] RBGK ECB/8/1, 98.
[38] Yet though plantations proliferate across African countries today, during this period most in West Africa failed. See Martin (1988) and Udo (1965) for histories of the plantation model in Nigeria.

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empire … brutal exploitation in the Congo itself, and much talk in Europe about uplift and civilisation" (ibid.: 3). Sales of Leverhulme-made soaps *in Africa* were seen as proof that the palm oil mission was civilizing (Robins 2021: 79).

In an uncanny echo of the early 1900s, in 2021 the European Development Bank-financed company Feronia Plantations et Huileries du Congo was accused of torturing and multiple murders on its plantations in response to the "theft" of small amounts of palm nuts by locals.[39] That company was founded by Lord Leverhulme in 1911. Today its plantations supply Leverhulme's global food company Unilever, which is the single largest buyer of palm oil in the world, purchasing 1.5 million megatons each year (Byerlee, Falcon, and Naylor 2017: 31).[40] In response to this brutality, community members have taken over abandoned plantation land to set up a community mill, stating, "With access to these lands, we are able to resume our palm oil production which was violently interrupted with colonisation."[41] That today's violence has a long history is not lost on community members. The moral values underlying it are grounded in an earlier form of "liberal radical rhetoric" that saw "unproductive" (read, non-European) land ownership as "intolerable" (Lewis 2012: 155).

TRANSPLANTING *ELAEIS*

Ridley's prescient statement with which this paper opened is in a report on the *African* oil palm that he published in a *Singapore* journal, the *Agricultural Bulletin of the Straits and Federated Malay States*. It was based on research in west Africa, London, and elsewhere, and he had received initial seeds from Governor of Lagos Walter Egerton.[42] Such far-reaching intercultural encounters were central to the dynamics of translation that made transplantation possible (Raj 2007). Suffusing these were narratives of care. In Hill's 1908 report to the Undersecretary of State he wrote, "Care would have to be taken that only seed of the best varieties be selected for the purpose of starting plantations" outside of Africa. He cited previous research conducted on the Gold Coast in collaboration with Kew, which found that the best soft-shelled variety was known as "Abobo-be," a variety also reportedly known in French Dahomey, where he had described

[39] https://www.farmlandgrab.org/post/view/30066-development-finance-as-agro-colonialism-european-development-bank-funding-of-feronia-phc-oil-palm-plantations-in-the-democratic-republic-of-congo (accessed 26 Sept. 2021).

[40] https://www.farmlandgrab.org/post/view/30066-development-finance-as-agro-colonialism-europpean-development-bank-funding-of-feronia-phc-oil-palm-plantations-in-the-democratic-republic-of-congo (accessed 26 Sept. 2021).

[41] https://www.farmlandgrab.org/post/view/30166-resistance-against-industrial-oil-palm-plantations-in-west-and-central-africa (accessed 2 Sept. 2021).

[42] Letter from Sir Walter Egerton to Sir William Thiselton-Dyer, from Old Calabar, 7 June 1904, RBGK DC185/195.

the work of the more "careful natives" engaged in cultivation.[43] Careful classification, breeding, and cultivation, as defined by Europeans, were central to making the oil palm translatable across the colonies.

Initially, the trope of the "myth of the lazy native" (Alatas 1977) was invoked in palm oil's favor in the region. The Earl of Carnarvon, writing from Labuan, assured Hooker that "the rough unskilled labour … in boiling down the nuts for oil would be well adapted to a people one of whose principal industries is the manufacture of coco-nut oil."[44] Sure enough, and again conveniently eliding local labor, four hundred oil palms "sprung up" on a plantation on the "virile" island of Daat. A memorandum later sent to Kew reported that the seedlings had been "carefully fenced from cattle and kept free from weeds and undergrowth," yet after a few years the palms had "a stunned and starved appearance" as they "were allowed to fall out of cultivation and were abandoned to cattle."[45] Eventually the plantation was abandoned (Oil Palm 1889). Perception later shifted: in 1909, Director of Agriculture in Kuala Lumpur J. B. Carruthers wrote to Kew, "I am a little doubtful as to the suitability of [oil palm's] cultivation for the Native or for the Chinaman. The gathering of the comparatively lengthy process of extraction of the oil and the tiring nature of these processes will not commend themselves to the Malay especially when he can by the easier task of cocanut [*sic*] cultivation probably get as large a monetary return as by growing the oil nut palm."[46] Laborers in Malaysia were not yet considered morally worthy enough to cultivate oil palm.

Although the palm had been in the Dutch East Indies (Java) Buitenzorg gardens (whose name translates from Flemish as "outdoor care")[47] since 1850, and subject to a few failed plantation attempts,[48] it had been little used in the region except as an ornamental plant (Hartley 1988). Again, it often lined avenues and plantations. The botanic gardens in Singapore disseminated for ornamental purposes oil palm seeds that it seems to have received from Buitenzorg (Burkill 1966[1935], 1: 911–12; Ridley 1907).[49] In 1900, "The most notable use of oil palms in Singapore's botanic garden was as a host for ferns, orchids, and other epiphytes. Across the region, planters valued the tree solely for its looks…" (Robins 2021: 153). This "tall handsome plant, with a wide crown of large, drooping, pinnate leaves" (Henderson 1952: 10), nestled

[43] RBGK ECB/8/1, 98.
[44] RBGK ECB/8/1, 3–4.
[45] RBGK ECB/8/1, 33, 50.
[46] RBGK ECB/8/1, 148–49 (Economic Aspects 1909).
[47] Alex Pillen, personal communication, 2021.
[48] See Robins (2020) for a detailed discussion of this, and references to further archival sources.
[49] Letter from Sir Walter Egerton to Sir William Thiselton-Dyer, from Old Calabar, 7 June 1904, RBGK DC 185/195. See also a note in the *Straits Times*, 21 Mar. 1863: 1, "Java: From Our Own Correspondent," which notes "the Government offer the following plants from the celebrated garden at Buitenzorg to anyone who may wish to try the cultivation of them," listing Elaeis alongside India rubber, cinnamon, manioc, indigo, cloves, and many other plants.

among British garden and parkland aesthetics of rolling hills, symmetry, and formality, which even included a bandstand (Barnard 2016: 31).

From Buitenzorg, and from there via Singapore, seeds had been sent to Sumatra around 1879 (Burkill 1966[1935], 1: 911–12). It was while the offspring of these seeds were growing there almost two decades later that Adrien Hallet, a Belgian agro-economist with experience working among oil palms in the Congo Free State, recognized the uniqueness of the oil palms he saw lining avenues while scouting the possibility of making a profit from the palm in the region (Hartley 1988: 17; Berger and Martin 2000: 399; Robins 2020). He shared his information about these uniquely productive palms with his collaborator and friend, Henri Fauconnier, who took seeds from these original avenue palms (which in turn were bred from the original 1850 population from the Buitenzorg Gardens), to plant his first plantation in Malaysia in 1911–1912 (Giacomin 2018a: 295). When these came to full bearing in 1917, seedlings were planted in Selangor, on Tennamaram estate, now renowned as the first commercially viable plantation in the region (Hartley 1988: 17).[50] By 1925, 78,123 acres were planted with oil palm in Sumatra and 19,079 in Malaysia. Despite some complications, on the eve of the Second World War, in 1938, this had expanded to 228,100 acres in Sumatra and 72,143 in Malaysia (ibid.). The house Fauconnier built at Rantau-Pajang, the site of his first plantation, he named "the Palm House," and the avenue of palms planted there in 1913 still flank the driveway (Fauconnier 2003: 182–83).

Part of the oil palm's eventual success in Malaysia can be attributed to how it was able to take over the existing research infrastructures, unfree labor forces, and mechanisms for colonial land-grabbing that were already in place for rubber (Giacomin 2018a: 273). Land, even when occupied by forest-reliant peoples, had been considered empty and available for plantations (Harper 1997). To work these plantations, colonists drew on their stores of laborers from other colonies, who worked under brutal forced labor conditions (Robins 2020; Ramachandran 1994; Ramasamy 1992; Lees 2017). As Robins surmises, "Contrasting the Southeast Asian oil palm story with the African experience makes it clear that the rise of the plantation—whether populated with oil palm or rubber or anything else—was not down to a lucky plant, or scientific know-how or entrepreneurship. The key was power over people and land" (2021: 143). That trajectory would continue, and accelerate, after independence in the twentieth century's latter half. Recently, "Asian firms, driven by controversy over continued deforestation in Indonesia and attractive terms for land concessions in Africa, are now moving aggressively into Africa" (Byerlee, Falcon, and Naylor 2017: 26). For example, in Gabon, Singapore-based palm oil

[50] See note to this effect in *New Straits Times*, 19 May 2017, "Celebrating 100 Years of Malaysian Palm Oil," https://www.nst.com.my/news/nation/2017/05/240770/celebrating-100-years-malaysian-palm-oil-part-1 (accessed 10 Mar. 2021).

conglomerate OLAM is currently displacing Pépéyo communities.[51] Plantation corporations have become the new occupiers (Li and Semedi 2021).

CRITICAL CARE

Assertions of care in relation to the oil palm—whether care *for* or *about*, or techniques of *carefulness*—must account for how care and colonial assertions of control, improvement, and progress in the name of efficiency and profit have historically co-constituted one another. The story of palm oil exemplifies how acts of scientific care operate within broader intellectual milieu in which bureaucrats and politicians also shape policies. In the nineteenth and twentieth centuries, scientists were often inseparable from government officials, and one person might fill both roles. They were embroiled in the same government financial infrastructures and moved in the same intellectual and social circles linked through correspondence networks.[52] Embodied acts of care were assumed to be self-evidently "right"; that is, what one *should* do in order to improve the world's knowledge of plants and to improve the plants themselves. This was expressed in the discursive bureaucratic reflections on these processes, and implicated within a political, social, and economic climate in which those forms of care were considered incommensurable with "native" forms of knowing and caring for plants, despite reliance on that knowledge and labor. "Native" ways of caring for plants were branded as care-*less*, just as their practitioners were branded as inferior to Europeans. The "natives" were subsumed into the same infrastructures of colonial care that their palms had been, whereby what was articulated as care became a mechanism for violent exclusion that was portrayed as a mechanism for inclusion within the infrastructures of colonial care.

Because of the extreme impact that oil palms are having on the world today, they offer a striking example of the genealogies of these processes. Though palm oil is an African crop first cultivated with African knowledge, skill, and labor, today the export value of palm oil from Malaysia and Indonesia "now exceeds the total value of all agricultural exports from sub-Saharan Africa" (Byerlee, Falcon, and Naylor 2017: 56). Even since independence, many of the profits of lucrative companies with plantations in Southeast Asia have gone to individual European families (Profundo 2020). One example is the Luxembourg-based holding company Socfin, founded in 1909 by Hallet and Fauconnier. Today, Socfin's main shareholders are Hubert Fabri (Belgium) and Vincent Bolloré (France) and their families, who are bound together in numerous business

[51] https://www.farmlandgrab.org/post/view/30166-resistance-against-industrial-oil-palm-plantations-in-west-and-central-africa (accessed 2 Sept. 2021).

[52] See Lynn (1992: 91) for examples of the link between palm oil traders and politicians, who often funded their political careers with palm oil profits.

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partnerships.[53] Together, Fabri and Bolloré own 93 percent of Socfin's shares. Socfin controls 400,000 acres of land across ten countries, largely in Africa and Asia, half of which is industrial plantations. The two families took home half the profits that Socfin generated in 2018, an estimated US$60 million.[54] Today, Socfin is accused of aggressively silencing and criminalizing plaintiffs to prevent their claiming compensation in Sierra Leone.[55] They are accused of land grabbing and using force to forward their interests in Edo state, Nigeria, among other human rights violations.[56] In Cameroon, Ivory Coast, and Nigeria, Socfin was granted certification by the palm oil sustainability certification body the "Roundtable on Sustainable Palm Oil" (RSPO), despite conflicts and charges of intimidation, prompting accusations of greenwashing.[57]

Underlying the massive profits and power of these corporations are genealogies of care that chart a direct path from the palm oil trade at the turn of the twentieth century. Today's neoliberal corporations frequently mobilize the need for efficiency and the avoidance of wastefulness, citing concerns with world hunger and climate change as their moral underpinnings (Li and Semedi 2021: 2). While evidence as to the efficacy of this model is mixed, technical forms of scientific care are assumed to be self-evidently right: "Their neatly aligned rows of crops and deployment of land and labor on a vast scale are claims to productive efficiency and technical mastery" (ibid.: 2). Through such mechanisms, plantation corporations, like the plantation-building colonizers of old, thus become "occupying forces": "supposed to bring prosperity and introduce the subject population to new and improved ways of living," while simultaneously disabling previous forms of life (ibid.: 9). In Bahia, Brazil, this desire for perceived efficiency and modernization takes the form erasing Afro-Brazilian oil palm knowledge and cultivation techniques first developed by enslaved people. Their small-scale, biodiverse, oil palm groves are seen as having little value because they are illegible—rendered inefficient simply because auditors do not document them (Watkins 2021: 216–17)—just as colonial officials once erased African ways of caring for and classifying oil palms even as they co-opted that very knowledge. Such narratives are forms of "imperial debris" (Stoler 2008), which once again rely on the notion that small

[53] https://grain.org/en/article/6443-unravelling-the-socfin-bollore-plantations-thanks-to-profundo (accessed 2 Sept. 2021).
[54] https://news.mongabay.com/2020/06/how-the-legacy-of-colonialism-built-a-palm-oil-empire/ (accessed 2 Sept. 2021).
[55] https://www.farmlandgrab.org/post/view/29966-suffering-silenced-in-sierra-leone (accessed 9 Sept. 2021).
[56] https://www.farmlandgrab.org/post/view/29966-suffering-silenced-in-sierra-leone (accessed 2 Sept. 2021).
[57] https://www.farmlandgrab.org/post/view/30309-pollution-and-green-washing-problems-around-socfin-plantations-continue (accessed 2 Sept. 2021).

scale farmers, villagers, or Indigenous peoples are incapable of looking after the land on their own (Li and Semedi 2021: 10).

Disrespect for human life and labor (Li 2017; Accenture 2012) alongside notions of how oil palm might morally develop a nation, can still be seen everywhere (Li 2011; see for example Kulim 2011). This prompts "comparative reflection on how contemporary plantation labor regimes are like or unlike those of the colonial era" (Li 2017: 245). In Malaysia, 90 percent of the oil palm plantation workforce are Indonesian migrants, often immobilized by coercive two-year contracts that forbid their being accompanied by their families or working for other companies, punishable by prison and caning (ibid.: 245–48). Indonesia has an endemic lack of rights for workers. By using contractors, the industry remains free of labor regulation: "Employers are free to buy units of labour power as needed, selecting for the particular (gendered, spatialized, racialized, age-related) capacities required for a particular task," in a regime "so free it is vicious" (ibid.: 248, 272). Carefully developed, obfuscating audits and measurements permit these practices, with the result that occupying corporations can act with impunity (ibid.: 7). This creates a jarring contrast with extolled values of corporate environmental and social care (palm oil conglomerate Kulim's 2011 report states, "We care for tomorrow").

Just as early twentieth-century scientists across west and Central Africa became increasingly concerned with the genetic lineages of their palms, so today's scientists, most often employed by massive plantation corporations, keep careful records of the pedigrees of their palms by coding them with names that trace back to the original palms from Buitenzorg (Hartley 1988). In Brazil, agro-industrial plantations are often stocked with hybrid germ plasm developed in colonial agronomic laboratories in Ivory Coast or Nigeria (Watkins 2021: 239). Locally bred seeds are seen as inefficient. And again, scientific breeding techniques are couched in terms of care writ large: *Elaeis* breeders employed by major corporations talk about their work as care for the planet's future through the continuing development of higher-yielding plants (Chao 2018a: 423).

In the light of this, a more critical care is needed, one that can unpack the relationship between techniques of careful control and the ambivalences of moral notions of care. One example is found in Sophie Chao's ethnography of Indigenous Marind peoples in Indonesia's encounters with oil palms. She describes how oil palms interfere with Indigenous ways of teaching children to care for the forest through acts of "interspecies practices of restrained care," as they replace the sago that the Marind rely on for food and cultural sustenance (2021: 258). Oil palms are thus considered "profoundly immoral and invasive plant-person[s]" (Chao 2018b: 628), even as people express sadness for these lonely, unloved, and unloving plants. For Marind, the "difficulty of encountering oil palm, combined with the elusiveness of its supply chain and the facelessness of its consumers, are precisely what give rise to its ambivalent ontology" (ibid.: 640). They are "directly mired in the morally fraught predicament of interspecies

care" (ibid.: 641). Again centering ambivalence, Wynter (1971) and McKittrick (2013) describe how the slave plots that existed alongside sugar plantations were ambivalent at the same time as they were spaces of resistance: "Secretive histories can be found in the plots … plots of land […] were given to some slaves so that they could grow food to nourish themselves and thus maximize profits," yet these same "plots of land […] also became the focus of resistance to the overriding system of the plantation economy" (ibid.: 10). In this way, "Alternative worldviews were not sealed off from or simply produced in opposition to the plantation; rather, they were linked to the geographies of the plantation economy and the brutalities of slavery" (ibid.: 12).

Such ambivalences force attention to moments "where the question of 'how to care?' is insistent but not easily answerable" (Atkinson-Graham et al. 2015). Analyzing these moments through attending to the ambivalences and gaps produced by particular techniques of caring, and the moral values that they produce, can help to illuminate critical care's flipsides: control, exclusion, and exploitation. Such an approach can celebrate survival and resistance while remaining grounded in an understanding of colonialism's genealogies and rooted in a "re-reading of imperial history by postcolonial and cultural studies scholars" (Tuhiwai Smith 2012: 150). It can "reframe" Indigenous and local social problems in the light of this history and call for lands to be restored and returned (ibid.: 154, 156) in line with the possibilities of local forms of governance and principles of collectivity and creativity. A critical, or "radical care" can become a "survival strategy," "push[ing] back against structural disadvantage" (Hobart and Kneese 2020: 2). But it will only do so if it forces attention to the histories of, and current predicaments caused by, care's often duplicitous effects.

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Abstract: This paper draws on archival research to trace the techniques used by scientists and government officials involved with palm oil at the turn of the twentieth century. For them, mundane practices of "carefulness" were paramount as they worked on collecting, identifying, marketing, and improving the oil palm. But they also applied this so-called care to people: care of the oil palm was thought to presuppose care of the "native," providing a correction for what were seen as "careless" local manners of cultivation. Colonial techniques of care thus sought to encompass both plants and peoples within contemporary liberal rhetorics of efficiency and moral improvement. This embodies how scientific and political care can interlink through their undersides of control, exploitation, and domination, which remain obscured by narratives of care themselves. Examining these links between commodity histories and scientific techniques is therefore essential for understanding environmental and social concerns regarding oil palm plantations today. An awareness of the afterlives of colonial discourses might encourage a more critical "care" in response to these issues today, challenging taken-for-granted notions of the benefits of corporate care.

Key words: oil palm, colonialism, Kew, botany, care, techniques, West Africa, Southeast Asia, commodity history