The imperial weight of tea: On the politics of plants, plantations and science

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ABSTRACT

The cultivation of tea has had major impact on societies and environments across the world. It has been the cause of imperial wars, colonial appropriations of territories and capitalist exploitation of people and ecologies. In this article, I am particularly concerned with the British empire of tea, what preceded it and its afterlife in the former colonies. Research on tea within the social sciences and humanities have mainly concentrated on the precarious situation of plantation laborers. Informed by recent scholarship in multispecies- and critical plant studies, I seek to trace the intimate relationships between people and plants. Taking a cue from James C. Scott’s “grain hypothesis,” I suggest an “imperial crop hypothesis” asking if there are any particular attributes of the tea plant that lend itself to imperial ambitions. In this I straddle between a political ecology concerned with power, resources and infrastructures that enabled the British to establish its empire of tea, and a multispecies approach that foregrounds the entangled ecologies of plant life. I concentrate on four particular moments of this history: the British “discovery” of tea grown by indigenous peoples in the hills of the newly annexed Assam kingdom in the early 19th century; the establishment of the Assam plantations during second half of the 19th century; the travel of tea across the Indian Ocean and the making of Kenyan tea industry during the 20th century; and, finally, the development of purple tea, a new variety of tea projected as the tea plant for the 21st century.

“The world needs to know that that tea which is being exported from Kericho is blood tea. We need to bring a closure by demanding reparations and an apology from the UK government. Those multinationals are operating from stolen land.”
Paul Chepkwony, Kericho County Governor


1. Introduction

Tea is intimately connected with power. The plant Camellia sinensis has during the last three centuries been the cause of imperial wars, colonial expansions, scientific explorations, nation-state building projects and corporate exploitations of people and environments around the world. While it was the Chinese that had monopoly of tea until the 19th century, the “empire of tea” that eventually took shape, expanding production and trade across continents, was British (Ellis et al., 2015). In this paper, I will look closer into a few key moments in this larger imperial quest for tea. In doing so, I seek to stay close to the tea plant, looking at the intimate plant-people relationships formed at specific historical junctures. The larger question I pose is, how tea has turned out to be such a suitable crop for imperial ambitions? Are there, for example, any specific properties of the plant itself that can explain this? Or, is this mainly a matter of tea as a commodity? While the thirst or desire for tea is an acquired taste, something that for long was associated with the aristocrats or elites, one must assume that there is also something with the brewage itself that make it especially palatable for humans. Similar questions can be raised for other major colonial crops like coffee, tobacco and sugar. Sidney Mintz (1985, p.208) speaks about “the affective weight of sweetness,” alerting us to addictive aspect of sugar, the sucrose that is being extracted from the sugar cane. In the case of tea, caffeine is the main addictive substance hooking up people. And as many people prefer to drink tea with sugar the affective weight arguably intensifies.

While taste and addiction certainly are central in explaining why tea is consumed globally, I will follow another path in tracing, what I, after Mintz (1985), call the “imperial weight of tea”. With this I think of the power, resources and infrastructures that enabled the British to establish its empire of tea, controlling land, labor and markets. In pursuing a political ecology (Karlsson, 2015) of crops, I seek to foreground the intimate relations forged between people and the tea plant. Starting with the tea plant, we will follow how it is pleated into historically formed power differentials, violence and care. The Kericho governor, Paul Chepkwony speaks about ‘blood tea’ to stress the historical injustices.
and the continuous pain of the communities that were evicted in the 1930s to pave way for large-scale tea plantations (Juma and Lali, 2019). This was, as we will see, also the case with the plantations established earlier in India. Tea, like many other colonial crops, carry a history of violence. Yet, tea is not only a crop and a commodity. It is first of all a plant, a living being, which has coevolved with humans for thousands of years. As scholars in the social sciences and humanities we need to be attentive also to these more evasive aspects of biotic life that commonly is outside our field of competence (Karlsson, 2018). Even scholars with expert knowledge in the art of tea cultivation point to the adversities of knowing the plant intimately. In a handbook on tea cultivation in Northeast India, tea scientists Sayed E. Kabir and Abhaya P. Das state, “It is difficult to specify the ideal or average climate that tea requires” (Kabir and Das, 2017:9). Soil, altitude, temperature, rainfall, drainage, evaporation, wind, light, shade and a number of other environmental aspects have to be factored in (Carr, 1972). As we will see, what eventually works where have commonly been established through practical, trial and error experimentations.

My point of entry in thinking about the natural properties of the tea plant springs from and seek to expand on James C. Scott’s grain hypothesis, which holds that all classical states are based on grains. As he puts it,

History records no cassava states, no sago, yam, taro, plantain, breadfruit, or sweet potato states. My guess is that only grains are best suited to concentrated production, to assessment, appropriation, cadastral surveys, storage, and rationing (2017, p.21).

If the properties of grain seem to resonate with state-making projects, what about tea and other tropical plantation crops that have played such a critical role in establishing Western dominance and imperial control over people and territories across the world? Can we think of an imperial crop hypothesis? I raise this question as a challenge and a provocation in Scott’s spirit. Even Beckert asks in Empire of Cotton: A Global History (2014) why England that had “the least to do with cotton… created and came to dominate the empire of cotton?” The explanation he arrives at is based on what he terms ‘war capitalism’ that violently expropriated land and labor in Africa and the Americas (Beckert, 2014, p.26). Without questioning Beckert’s masterly crafted account I am intrigued by the lack of concern with the cotton plant itself. He mentions that people in different parts of the world cultivated various types of cotton, but that one type came to dominate the empire of cotton (ibid., p.35–36). This particularly variety—originally grown by indigenous peoples in highlands of central Mexico and appropriated by an American planter in early 19th century—had better quality fibers and larger bolls that could be picked faster (ibid., p.327–328). Beckert just briefly touches upon this critical aspect of the empire of cotton.

It is interesting to note a resurgence of research on and in plantations in anthropology and related fields, partly as a response to Donna Haraway’s naming of the present era as the ‘Plantationocene’ (Haraway, 2016, 206). Such work rightly stresses the exploitation of people and plants, as well as the destruction of local livelihoods and environments following in its wake (see Haraway et al., 2016; Li, 2017). Along with this, a number of scholars informed by recent multispecies approaches (Dooren et al., 2016) are also engaging with the entangled lives of plants, even if these are growing in more confined contexts like plantations or urban gardens (see Myers, 2015; 2017; Hartigan, 2019). Sophie Chao (2018) points to the affective bonds and the care that scientists and nursery workers in the Indonesian oil palm industry display for or develop in relation to seeds and young plants. Tracing such affective bonds between people (planters, scientists and laborers) and plants also make sense for the story of tea (Besky, 2014; 2020).

As Mintz points in case of sugar cane, the entire plantation economy is structured around the life of the plant. When the sugar cane is ripe, it needs to be cut and immediately afterwards, the cane has to be processed (1985, p.50). As he puts it, ‘the inherent perishability of the crop’ requires factories to be located in the vicinity of the field. This again is the case with tea, where harvested leaves ideally should reach the factory within a couple of hours after plucking.¹ Monocultural tea estates also attracts a multitude of other, uninvited beings. To keep insects, fungi and various diseases out of the plantation is an ever-ending struggle for tea producers all over the world (Dey, 2018).²

To build my case, I draw on the rich literature on tea and further my own ongoing field research on tea in India and Kenya. I concentrate on four particular moments or junctures of this history: the British ‘discovery’ of tea grown by indigenous peoples in the hills of the newly annexed Ahom kingdom in early 19th century; the establishment of the Assam plantations during second half of the 19th century; the travel of tea across the Indian Ocean and the making of the Kenyan tea industry; and finally, the release of the new tea clone, TRFK 306/1, or Purple tea as it is popularly known.

Tea Research Institute in Kericho developed Purple tea and, like with other clones, the new variety stems from the germplasm, seeds originally brought by colonial planters from Assam (Barhua, 2015). The purple or dark red colored leaves is projected as the future of the Kenyan tea industry, being more climate resilient and supposedly with additional health benefits for consumers. While some might associate the purple color with blood, it is anthocyanins, a pigment also found in red grapes and blueberries, that lends it the color. As I will come back, the particular journey of the tea plant covered here is based on my own trajectory of carrying out long-term research among indigenous peoples in Scott’s (2009) Zomia uplands in the Eastern Himalayas - the original growth place of tea - and later, while living in Kenya, discovering a thriving tea industry based on the once wild Zomia tea plant. The movement of plants is certainly nothing new or spectacular. Yet for me, finding Assam tea in Kenya continues to fascinate and provoke ever new questions (see Karlsson, 2021). In the next section, we trace the discovery of the indigenous tea plant in Assam, but first some notes on the longer history of plant-people relationships.

2. The civilized Chinese plant versus the savage Assam plant

Botanically, the tea plant is usually described as being of two distinct kinds or varieties, the Chinese (Camellia sinensis var. sinensis) and the Assam or Indian variety (Camellia sinensis var. assamica). An important difference between the two, critical for tea cultivation, is the size of the leaves; the Chinese having smaller ones than the Assam variety. Recent research seeking to map the tea genome suggests a split around 22,000 years ago of the plant into the two main varieties – China tea plant and Assam tea plant. A subsequent split of the Assam plant into two distinct lineages – the China Assam line and the Indian Assam line – occurred around 2770 years ago (Meegahakumbura et al., 2018; see Xia et al., 2017). Some scholars also identify a third variety named Camellia sinensis var. cambodiantis. The finer aspects of what constitute a species, a subspecies or a distinct variety is beyond the scope of my expertise, and I stick here to what appear to be the dominant idea of Camellia sinensis having two major varieties—Chinese tea and Assam tea—with their respective histories of domestication (see Drew, 2019).

Most accounts of tea trace the early beginnings to China, and based on myths, archaeological findings and historical documents one gets a history spanning several millennia. What commonly is forgotten in such accounts is the other history, that of hill peoples growing tea along with other crops in their shifting fields and using tea both as beverage and vegetable – cooked, fermented or pickled. Westerners came in contact

¹ Timing differs according to quality, but for black tea the green leaves should be processed within twelve hours of harvesting (Monroy et al., 2013).
² In Feral Atlas, Anna Tsing and colleagues are tracing the variously unintended consequences of large-scale infrastructure projects with focus on nonhuman entities like insects and microbes that accompany people and plants as they travel around the world, see feralatlas.org.

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with tea from China and Japan in the 16th and 17th centuries and by the 18th century the beverage was widely appreciated by the upper strata of Western society and had also started reaching the laboring classes. The Dutch East India Company controlled the trade in tea until the 18th century when the British East India Company established itself as a key player in the trade from Canton. With increased demand, the import from China became an increasing nuance and financial burden for England. The British developed a devilish scheme to grow opium in Eastern India for export to China. The Chinese rulers banned the trade and eventually seized and destroyed large quantities of opium at the trading port of Canton. This escalated to what is known as the First Opium War, 1839–42, between China and Britain. Control over the profitable trade in tea had also earlier led to imperial skirmishes, for example, the large-scale protests in North America against the high taxes on tea, the Boston Tea Party in 1773, which eventually burgeoned into the American revolution (van Driem, 2019).

Parallel to these legal and economic struggles ignited by the control over tea imports from China, various schemes of growing tea elsewhere were in circulation. Botanist Carl Linnaeus was determined to get hold of seeds and plants to establish plantations in Skåne, the southern-most district of Sweden, which he argued had similar climatic conditions as the tea growing areas of China (Linné 1765(2), Koerner 2001). Other Western botanist were also involved in similar shady undertakings to illegally smuggle seeds and living plants out of China. In 1771, the Duke of Northumberland could showcase a tea tree in full flower, supposedly the first to be flowering in Europe (Ellis et al., 2015, p.111). But for the British empire of tea, it was another series of events that eventually changed the course of history. This goes under the rubric of the ‘discovery’ of tea ‘growing wild’ in hills of the newly annexed Ahom Kingdom of Assam. With this, the British enrolled the until then unknown Assam tea plant, *Camellia sinensis* var. assamica, in service of the empire. The historian Jayanta Sharma gives a telling account of what transpired. She writes,

As discovered by Charles and Robert Bruce, pioneering explorers in the region, the wild tea plant grew on the Assam-Burma frontier in abundance. Locals used its leaves to brew a beverage, probably medicinal in character. The Bruce brothers witnessed this use of tea as early as 1823 but did not succeed in obtaining scientific recognition for their discovery. Almost a decade later, the credit for the tea discovery went to Lieutenant Andrew Charlton of the Assam Light Infantry. Charlton, like Bruce, acquired local forest lore and identified the tea plant (Sharma, 2011, p.30).

Charlton sent tea seeds and plants to the newly formed Tea Committee in Calcutta, and in 1834, after prolonged deliberations, the scientific committee established that the plant in question was indeed *Camellia sinensis* and, further, “that the tea shrub is beyond all doubt indigenous to Upper Assam” (cited in Sharma, 2011, p.30). The discovery was announced with much triumphalism, declaring that under proper management the plant would be of highest commercial value to the empire (Dey, 2018, p.43). The British East India Company assigned a scientific delegation led by the prominent botanists, Dr. Nathaniel Wallich and Dr. William Griffith to inspect the tea forest and suggest how to best grow tea in Assam. Despite differences of opinion, they settled on a path of action based on the idea that the indigenous Assam tea plant was ‘unacceptably savage’ and had to be replaced by the ‘civilized’ Chinese tea plant (Sharma, 2011, p.30). As per instructions of the Committee, the tea forests were deemed to be taken over by the government, the indigenous tea shrubs should be uprooted, and superior Chinese tea seeds and plants introduced and allowed to cross-pollinate with the native variety. Skilled Chinese tea workers were also to be brought in. Charles Bruce was put in charge of the new experimental tea plantations (Sharma, 2011, p.31; Rappaport, 2017, p.99).

In a report to the Tea Committee, Charles Bruce, now designated Superintendent of Tea-Culture, writes that had found the “tea-tracts” more extensive than he had earlier reported:

Last year, in going over one of the hills behind Jaipur, about 300 feet high, I came upon a tea-tract, which must have been two or three miles in length, - in fact I did not see the end of it; the trees were in most parts as thick as they could grow, and the tea seeds (smaller than what I had seen before) fine and fresh, literally covered the ground: this was in the middle of November, and the trees had abundance of fruit and flower on them. One of the largest trees I found to be two cubits in circumference, and full forty cubits in height (Bruce, 1840, p.3).

What I found especially telling here, and what commonly is forgotten in the case of tea, is that it is a tree. The largest one Bruce found was 40 cubits, which is just above 18 m. The further Bruce travelled, he encountered ever new tea-tracts. He also reports on conversations with the indigenous peoples inhabiting these forest areas; an older man tells him that his father as young man had migrated here and had brought tea plants along with him, planting them on the hill where they still grow. The man further told that his father ‘cut the plant down every third year, that he might get the young leaves’ (Bruce, 1840, p.4-5). The knowledge that Bruce gleaned from local sources is combined with what he learns from the Chinese tea workers. Bruce goes on planting both imported tea seeds and seedlings gathered from the surrounding forest, and he seems never really convinced about the superiority of the Chinese variety. In comparing the two, he writes, “(Our) trees, or plants, are certainly more than four or five times the size of theirs, and must consequently yield so many times more produce; theirs is the dwarf, ours the giant tea” (Bruce, 1840, p.16).

3. Planter’s Raj

The first batch of tea from the experimental gardens was auctioned in London in 1838, sold at a much higher rate than Chinese black tea. Various nobilities praised the quality and taste of the tea, but most of all they seemed pleased with the fact that it was their own, imperial produce (Rappaport, 2017, p.85). Investors were quick to see the potential and a new joint-stock enterprise, the Assam Company was established. Through a new set of legislations, the Wasteland Rules of 1838 and 1854, extensive tracts of land were made available to the Assam Company and other investors on long-term lease under the most generous conditions. This triggered a virtual land rush, and by 1870–71 around 0.7 million acres of land had been settled with planters in Assam (Guha, 1977, p.13–14). The land handed over to the planters was not actually “waste”, but under various forms of usage by indigenous shifting cultivators, pastoralists and subsistence farmers. Many of these cultivators naturally resisted the land grab, and the military had to be called in to secure the plantations against various rebellions and raids.

The other leg, of what economic historian Amalendu Guha (1977) calls the Planter Raj (rule of the planter), related to labor and the controversial legislation the Transport of Native Labourers Act of 1863 (with various later amendments), which enabled planters to recruit tea laborers from present-day Jharkhand and adjoining areas of eastern India. The earlier scheme of importing Chinese laborers had failed and most of the early recruits had absconded or died. Assam was scarcely populated and as local people stayed away from plantation work, labor shortage was an acute problem for the planters. The situation of these indentured laborers has rightly been compared to those of bonded slaves (see Behal, 2014). But as the aim was set on establishing an independent source of tea, such draconian measures were obviously deemed necessary by the colonial government. During the second part of the 19th century, tea came to completely transform Assam (and adjoining areas

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3 According to Kew Garden’s Plants of the World, tea trees in its natural state can grow to the height of about 17 m, see http://www2.kew.org/taxonomy/urn:lsid:ipi.org:names:8285480-1#descriptions.
of Duars and Darjeeling), turning it into a plantation economy that catered to the world market. The ecology was transformed through the massive clearance of dense jungles. The demography and ethnic composition changed. In addition, through large-scale infrastructure projects, like constructions of roads, railways, bridges, telegraph lines, steamers and ports, the region was connected to foreign markets. By the end of the century, Indian tea export had bypassed that of the Chinese, the ultimate triumph of the British empire.

There are various attempts to explain how this could happen. At a general level, one can point to a complex conjuncture of several larger political and infrastructural developments—marine logistics, military might, land regulations, financial mechanisms, technology, extraction of coal and oil, botany and agricultural science. Technical or technological advances in the processing of tea is often ascribed particular importance, for example, the development of new machinery for rolling, sifting and drying of leaves. In the new book Tea War: A History of Capitalism in China and India (2020), Andrew B. Liu (2020) questions this, arguing that while technology was important it was rather the state-backed exploitation of migrant labor that was the key to the success of Indian tea during the formative decades of the industry in the second half of the 19th century (ibid., p.131). As Liu stresses, productivity was increased by squeezing the labor force ever harder: longer shifts, reduced payments, and stern punishment if laborers tried to run a way or failed to meet the set quota (ibid., p.134). Even after machines replaced humans for certain tasks in the production process, the labor force continued to grow between 1870 and early years of 1900 (ibid., p.131).

In A Thrust for Empire: How Tea Shaped the Modern World (2017), Erika Rappaport proposes another explanation, stressing the particular role of the mobile planter community - the majority being of Scottish heritage - that ‘shaped the political and cultural economies of tea.’ As planter, she includes not only owners and managers of tea estates, but also investors and businesspeople. Central to their mode of operation, Rappaport argues, was the pioneering usage of advertising and marketing, through which they could ‘alter retail and consumer practices, design new drinking habits, and transform bodily experience’ (ibid., p.9). Already from the 1850s and 60s, planters moved around the British empire and outside seeking out new markets and ways in making tea appealing to the varied audiences (ibid., p.10). While both Liu and Rappaport draw our attention to critical aspects of the British imperial success in tea, it is striking that they hardly pay any attention to what after all must be regarded the main protagonist, the tea plant itself. Plants, of course, do not create plantations on their own; these are products of human labor and ingenuity. Yet, to get a fuller understanding of cultivation of tea or any other plantation crop, the plant and the wider ecological conditions of organic life must be taken into consideration (see Dey, 2018). Recent scholarship increasingly also understands plants and other nonhuman beings as historical subjects (see McNeill, 2010; Roy, 2017; see also Fischer, Rogers et al., and Matthan, this volume).

4. Plant ecology

As it turned out, the Chinese tea plant never really did well in Assam and by 1870s most planters had switched over to the native Assam variety, described as more sturdy and high yielding. The Chinese-Assam hybrid plant was later even regarded a ‘plague’ by the planters (Sharma, 2011, p.71). This was of course a loss of face for the scientists of the Tea Committee that had promoted the Chinese plant. Botany was a prestigious science in the service of the empire and both, Dr. Nathaniel Wallich, the secretary of the Tea Committee, and the younger Dr. William Griffith were of highest repute (Arnold, 2005, p.147-184, cf. Drayton 2000). In this case, however, it was the practical knowledge of the planter that gained supremacy. The imported Chinese tea plant did, however, well on higher altitude plantations like in Darjeeling, where it is still in use, producing the much sought after, highest quality tea (see Besky, 2014). The Dutch tea industry on Java also switched in the 1870s from using Chinese plants and cultivars from Japan to the Assam variety, importing seed from India and later establishing their own seed gardens (Ukers, 1935, p.120). William Ukers, author of the two-volume All About Tea, goes so far to state that planters in all tea producing countries, besides China and Japan, favor the Assam plant (1935, p.142).

At the height of their success in late 19th century the Assam planters had started getting seriously worried about increasing damages caused by insects and plant diseases. They were well aware of the sudden demise of the once flourishing coffee industry on Ceylon (today’s Sri Lanka) caused by what was initially thought to be a harmless fungal disease. But as it turned out, the ‘coffee leaf disease’ came to completely wipe out the entire coffee industry on the island (see Duncan, 2007). The fear was that something similar could happen to tea in Assam. The colonial government of India appointed well-known botanist Sir Dr. George Watt in 1898 to investigate the ‘tea blights’ (fungi) and pests that were troubling the planters. He undertook a three-month long field investigation and in his subsequent, meticulous report notes that the root cause of these troubles was that the tea plant was kept in an unnatural state in the plantation. The plant, he argues, had been ‘deprived of the power of flowering and fruiting’ and was not allowed to rest and had been deprived of the shade and ‘association with other plants’ (Watt, 1898, 16-20). As Watt puts it, paradoxically, the ‘success consists in the production and development of a diseased state.’ This allows for high yields but makes plants predisposed to various diseases (ibid., p.17).

In reaching his conclusion, Watt compares tea grown in the plantation with tea growing wild in the forest. In the case of the latter, Watt could not find any of the pests and blights that were causing trouble for the planters. While perhaps not intended, Watt’s observation seems to favor the indigenous forms of tea cultivation that Robert Bruce had initially encountered among the Singpho people. Interestingly, even present-day researchers have started looking at indigenous agroforest tea cultivation as an alternative to the monocultural plantation, as the latter is becoming increasingly vulnerable due to climate change. By keeping tea trees in the forest, the surrounding vegetation becomes a natural buffer against extreme weather events, increasing temperatures and attacks by insects (see Ahmed et al., 2010; Ahmed et al., 2013).

Watt supports the planters’ choice of the indigenous Assam variety, but questions if any of the plantations in Assam has a pure stock of the Assam plant as uncontrolled hybridization had being going on since the inception of the industry (Watt, 1898, p.42-43). Watt calls for further research on tea, arguing that there is always space for improvements of plants and if done scientifically, hybrid varieties can become valuable (ibid., p.46). The Indian Tea Association soon also appointed a scientific officer based at the Calcutta Museum, with field stations in Assam. This rather modest beginning soon developed into what became the first tea research center in the world; today known as, the Tocklai Tea Research Institute, based in Jorhat, in the heart of Assam’s tea districts.

In 2018, I visited the institute along with fellow researchers. A young scientist was assigned to take us on a tour of the premises and he proudly showed us the ‘Mother plant.’ The mother plant, he explained, was the original source of their plant breeding work. It was a rather humble looking tea bush, two-meter wide and about one and half meter in height. A large signboard behind the bush informed its importance. As it says, the Mother plant is a China-Assam hybrid! This came as a surprise. The planter community had dismissed the usage of hybrids, yet it was the celebrated cultivar for the institute’s plant breeding ventures. Even if Watt was correct in assuming that there was no longer any pure Assam tea in the plantations, there ought to have been plenty of places to collect seed from wild growing indigenous tea trees. But as the signboard informs, the wife of the chief scientist A. C. Tunstell went to the nearby tea estate Cinnamara to collect seed. Cinnamara in Assamese means 'hybrid' is in fact a misnomer as both varieties belong to the same species, Camellia sinensis (1898, p.46).
prepared by Chinese,5 which suggests that the tea plants initially planted would be of the imported Chinese variety, later crosspollinated with the local variant producing the named China-Assam hybrid. The choice of the Cinnamara Estate is not without historical significance. Cinnamara Tea estate was founded in 1850 by Maniram Dewan, an Assamese pioneer in tea. Dewan is said to be the person who informed Robert Bruce about the Singpho people’s cultivation of tea. Dewan worked initially for the Assam Company, but left to start his own plantations. He was a patriot and later was hanged by the British for his participation in the freedom movement—the Sepoy Rebellion in 1857. The Cinnamara estate was subsequently sold on auction, bought by the well-known British planter George Williamson (Hazarika and Talukdar, 2011, p.8-10). The mother plant hence unwittingly attests to Dewan’s legacy. (See image 1)

The signboard further points to one of Tocklai’s main scientific achievement, vegetative propagation. The TV1 clone was released to the industry in 1949 “as vegetatively propagated clones to maintain their distinctive attributes.” What this implies is that a field or plantation with TV1 (Tocklai Vegetative Clone 1) would have genetically identical plants. And as one can read on the Tocklai webpage, the TV1, TV2 and TV3 tea clones were the first of its kind using the method of vegetative propagation of green cuttings instead of the conventional method of seed propagation. A. C. Tunstall developed this method in the 1930s, later to become the standard procedure in the tea industry world over (see image 2). Through the impact of Tocklai’s research, the webpage further states, the productivity in tea has increased from 424 kg/ha in 1900 to about 2153 kg/ha in 2017. However, increased productivity through the usage of high-yielding, genetically identical, clones make plantations less resilient. I was reminded about this when I later visited the Kenyan sister institution, the Tea Research Institute in Kericho. The researcher there were equally proud of the high-yielding clones they had developed. However, they had started to become increasingly worried that by encouraging farmers to uproot the older plantations of seed-based tea bushes and replace them with high-yielding clonal tea, the industry is becoming more vulnerable to diseases, pests and climatic variations. Climate change, they told, is a reality they have to address and with increasing temperatures and heavy rains and longer dry spells, the long-term survival of the industry is at stake. The challenge now, as one of the senior scientists explained, is to bring new diversity into the plantation and the original tea bushes that were planted from seed that the first generation of British planters brought with them from Assam has become a living germplasm archive that needs to be preserved.6

But before moving with the tea plant to Kenya, let us pause and retrieve some of the key points of the story so far. By the turn of the 20th century, the British had developed a successful plantation model in Assam based on indentured migrant labor and large-scale land expropriation. These are features similar to the ‘war capitalism’ of cotton and several other colonial crops. The imported, civilized, Chinese tea plant was hence discarded in favor of the savage, local Assam variety. The Assam plant was later found to grow well also elsewhere in the world and Assam tea seeds and seedlings were exported to other tea growing areas like Java, Ceylon (Sri Lanka) and East Africa. But why Mrs. Tunstall went out to collect seeds for the mother-plant at Cinnamara remains unclear to me; did she act under instructions of her husband (who at the time was out serving in the First World War) or was there any other reason for her choice? It is worth noting that the tea seeds that was brought from Assam to Kenya is of uncertain pedigree, Assam tea yes, but not entirely. Besides the crosspollination with the China variety, there are also internal differences talked about in the industry as different “jats” of the indigenous Assam plant, like Singlo, Bazaloni or Namsang, as well as Cachar and Manipur jats (Watt, 1898, p.30).

5. Assam tea in Kenya

Drive some 35 km outside of Nairobi and you reach Limuru, the first place where tea was planted in Kenya. Waving hillocks all covered in various nuances of green. The tea bushes are all in the same height, about one meter, giving the impression that it is a flat surface like a lawn of grass. But once you see people moving through, you realize that it is bushes that stand in straight lines close to each other. The bushes form what is known as the plucking table, roughly reaching the waist of the workers. The laborers return and pluck the same bushes every 10 to 12 days, depending on the season. In the larger estates, the lines of tea bushes in neat geometric blocks never seems to end. There is something seductive about the landscape, serene and eternal. The famous Kenyan author Ngugi wa Thiong’o grew up in Limuru and in his biography he reminisces how he once went with his older sisters to work in a nearby tea estate:

I would have to try my hand at picking tea. I begged my older sisters to let me accompany them to a tea plantation owned by a white man nicknamed Gacurio because he wore trousers with suspenders over his belly. Tea seeds from India were first introduced in Limuru in 1903, but to me, looking at the vast endless greenery in front of me, it looked as if the tea bushes had been part of the landscape from the beginning of time. An African overseer assigned the rows to be picked to different workers. Limuru was chilly and often subject to thin sheets of rain. Sisal sacks hanging from our heads served as raincoats. This task proved too difficult for me; I could hardly reach the top of the tea bushes, and I could not pluck them the way the experienced hands were able to do. They could pluck the leaves and expertly throw them over their shoulders into a huge basket on their backs. I did not have a basket on my own, and I became more of a nuisance, always in the way, and my sisters did not take me with them again (Thiong’o, 2010, p.53).

My first encounter with tea in Kenya was also in Limuru, during a weekend outing to the Kiambethu Farm. The farm is well-known expat and tourist destination that, as stated on its webpage, ‘provides a tranquil insight into life on a settler farm.’ The farm, it says further, was bought in 1910 by A. B. McDonnell, ‘a pioneer in the tea industry being one of the first to make and sell tea commercially in Kenya.’9 Fiona Vernon, the granddaughter, passed around stalks with green tea leaves while telling her well-rehearsed story of tea. What caught my attention was her causal remark that all tea in Kenya is of the Assam variety that settler brought with them from India. This, as mentioned initially, triggered my curiosity.

Through a small grant, together with a group of Kenyan and Indian researchers, we set out to trace the Assam tea plant’s travel across the Indian ocean, and the subsequent making of Kenya as one of the world’s largest producer and exporter of black tea. It is estimated that tea is planted on 200,000 ha of land, creating livelihood for several million people, and along with tourism being a central source of foreign revenue for the state. Besides the large multinational companies with their major tea estates in Limuru and Kericho, a small-holder tea sector has been established since independence that today involve about 600,000 tea farmers organized under the Kenya Tea Development Agency (KTDA) producing around 60 percent of Kenya’s total output (Kamunya et al., 2012; Ochieng, 2010; Mose et al., 2016). The Kenyan small-holder tea sector is commonly considered a remarkable success story that has been copied elsewhere (Buch-Hansen, 2012; Mose et al., 2016). Tea was initially reserved for the white settlers, but with the Swnnerton Plan in

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5 Thanks to Sanjay Barbora for bringing this to my attention.
7 Formerly known as, the Tea Research Foundation of Kenya.
8 Interview, February 21, 2018.
9 See the farm’s website, http://www.kiambethufarm.com.
late 1950s, African farmers were encouraged to cultivate tea and other export crops to ease the popular frustration with colonial rule that spurred the Mau Mau uprising (Thruston, 1987; Anderson, 2005).10 Considering the importance of tea in Kenya, the absence of scholarly accounts is striking. There are a number of journalistic articles, reports and unpublished theses on various tea related topics, especially on the small-scale tea sector, but outside the agricultural or plant science research community, tea has obviously not been considered of any significance to scholars. Not only does this stand in sharp contrast to the rich scholarship on tea in India and Asia, more generally, but also in relation to the large body of research dealing with other aspects of white settler colonialism and the struggle over land that runs through much of the history of Kenya. Why scholars have stayed away from tea is hard to tell. The recent political stirrings around ‘blood tea’ might change this. Along with the BBC, The Guardian carried this story and refer to the tragic fate of the Kipsigis and Talai communities, the original owners of the land that converted into tea plantations in today’s counties of Kericho and Bomet. As the article points out, people were forcefully moved by the British army and resettled in ‘arid and disease prone “native reserves”’. Those that lost their lands and their children (more than 100,000 people) now seek justice through the UN Human Rights Council in Geneva (as a matter of gross human rights violations) and compensation from the UK government. But so far neither the multinational companies presently running the tea estates nor the UK government have shown any willingness to address the complaints, The Guardian reports (Parveen, 2019). When land is up for grabs, the political stakes are always high in Kenya. Things can easily go out of hand as with the 2007 post-election violence where land and ethnicity snowballed into a lethal cocktail (Kanyinga, 2009; Rutten and Owuor, 2009). But let us visit the site of the controversy, a place where tea reigns.

Kericho is the main center of the Kenyan tea industry. Everything in the town and surrounding areas is about tea. You have the large corporate estates by Unilever (earlier Brooke Bond), James Finlay and Williamson Tea, several large factories, the Kenyan tea research institute, a tea hotel and the old colonial infrastructure of a planter’s club, golf course and tennis courts. Along the highway, hawkers sell tea packages and specially designed lorries carry fresh leaves hanging in large bags. Brooke Bond and James Finlay acquired their estates in the area in mid-1920s and soon started planting tea in a big way. It is interesting to note that these companies began their journey into tea in India. Growing nationalist sentiments and labor unrest in Assam, combined with generous conditions in acquiring land in the new crown colony and favorable natural conditions pertaining soil, rainfall and temperatures in the East Africa highlands made a shift to Kenya an attractive proposition. As it turned out, an additional advantage for tea growers in these highlands is the relative absence of pests and diseases, and hence the much lesser need for pesticides (Elbehri et al. 2015, p.20). Tea can also be grown practically all around the year in East Africa, which sets it apart from Asia where the tea plant goes into winter dormancy for a few months.

6. Purple tea

I arrived in Kericho to meet the Kenyan tea farmer, Mr. Kim Martin. Kim’s father had bought a larger estate from a white settler in the 1980s and was a pioneer grower of purple tea. With more than 200 ha under tea, he was not the typical small holder tea farmer (with an average holding of about 0.5 ha), but still a small grower compared to the multinational corporations. Kim welcomed me with open arms, inviting me to stay as long as I wanted and to move around freely and talk to anyone as I pleased. He introduced me to the office staff and told me to drop by at any time. This came as a surprise as I had been told about the secrecy and suspicion prevalent in the tea industry, especially in the case of the large tea companies. Before reaching Chesumo, Kim’s farm, I had also stopped to take some photographs of two laborers in a field belonging to Unilever harvesting tea with a machine. When I approached them, they directly told me they were not allowed to talk to journalists. I explained that I was not a journalist, but curious about the plucking machine they were using. However, they still insisted I had to take permission from the head-office. Machine plucking, I learned later had become as source of conflict with the labor unions fearing that its

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10 Tea was earlier also grown in an informal, small-scale manner by African farmers, but such ‘sun-dried tea’ was mainly for domestic usage and sale on local markets (Thruston, 1987, p.38–39).
introduction would lead to lay-offs and weaken their bargaining position in negotiations over salaries. None of this seemed to be bothering Kim. He was pursuing various business ideas; one being to open up the farm for tourists, allowing them to follow the tea production from plant-to-cup, as he put it. For this, he needed to build his own factory, which would enable him to develop his own brand and sell tea directly to consumers. He had everything worked out. It was now only a matter of getting the necessary government license (a challenge in itself).

According to Kim, Kenya needed to diversify the production and move into the more profitable segments of special teas, and hence not stick with production of the generic black tea it had become famous for. For Kim, purple tea was the road to success. He had only planted purple tea since the clone was released in 2011. He was raising his own purple tea seedlings in a large nursery, while also selling them to other growers. Kim was the vice-president of the Kenyan Purple Tea Association and a dedicated ambassador for the new crop. The market had not picked up yet but, as he told, once the health-conscious consumers in Japan, the US and elsewhere in the West discover purple tea, Kenyan growers will find it hard to meet the demand. Meanwhile, he was aware of the difficulties that smallholder farmers who had planted purple tea faced due to the lack of demand for their leaves. Some now considered uprooting their bushes. Kim was in close contact with the Kenyan Tea Research Institute (located some 20 min’ drive from his farm), who had developed the purple tea clone, which in their terminology was known as TRFK 306/1.

Along with Kim, I went to meet the director and senior researchers at the Kenyan Tea Research Institute. The institute is surrounded by massive tea plantations owned by Unilever and James Finlay. The institute director Dr. Bore and his colleagues told us that the modern breeding project from the 1950s had all been about creating uniformity and developing evermore high-yielding clones. But, as mentioned earlier, with climate change and more extreme and unpredictable weather patterns, during last two decades their priorities have started to change, thinking more about plant resilience. Paradoxically, Dr. Bore explained, they have now also come to understand the benefits of the old seedling tea. A seed always contains diversity and seedling tea has a stronger and wider root system and can therefore, endure draught better than clone tea, Dr. Bore explained. The institute had mainly been working with the Assam cultivars that the White settlers initially
brought with them. They had no more exact information about the locations and history of the respective cultivars. Some of the seeds had in fact been imported from Ceylon and not directly from Assam. As Dr. Bore put it, their cultivars were not pure Assam, but had a bit of Chinese in them. This was also the case with purple tea. It had taken the scientists more than 20 years to develop the new clone. In tea, breeding takes time, Dr. Bore and colleagues explained. Genetic modification is ruled out, they told, as it would put off consumers. During the meeting, they were served purple tea, made by fresh leaves from bushes just outside the window. Just add some lemon and the flavour comes out stronger, I was instructed. The tea had a gentle and refreshing taste with a light, pink or purple color. The director said they serve purple tea several times a day at the institute, and one of the researchers added that his health has significantly improved after drinking it regularly. Everyone nodded in agreement.\footnote{Interview, February 21, 2018.}

At Chesumoth, I followed the daily work. Plucking, weighing and loading bundles of leaves on trucks, pruning bushes, and caring for the young plants in the nursery. In one section of the farm planted with old, seed-based Assam tea, a bulldozer was busy clearing rows of bushes and leaving huge piles of bushes, up-side down in a jumble. It was sad sight. Soon, new purple tea clones will be growing there. Life and death are intimately entangled. During a motorbike tour around the farm, the field manager regularly stopped at sickly bushes, some without leaves others with just discolored leaves. As he explained, the bushes were infected with Armillaria root rot. Hence, infected bushes had to be uprooted and the plot left barren for a few years before being re-planted again. Following up on this I learned that Armillaria root rot is caused by a fungus (
emph{Armillariella mellea}) common in forest zones around the world, mainly in temperate, but also in tropical areas. It thrives on roots and stubs left in the ground after a forest has been cleared to make place for a plantation. Research in Kenya points to three different varieties out of which one is found to be native to Africa; the other two are assumed to have travelled along with tea plants from Asia (Otieno, 2002, p.349, Mwenje et al., 2006). The root rot is causing a lot of trouble for the tea planters, especially in the smallholder tea sector. And so far, no successful method to clear plantations from the fungi existed. It remains a companion species trailing along with the tea plant, but unfortunately it eventually kills the host.

7. Decolonizing tea

Tea is still a product of empire, even though it is no longer an imperial product, Rappaport sums up her global history of tea (2017, p.409). This is because for Kenya’s 100-year history of tea. Beginning as an outgrowth of the colonial plantation systems developed in India and with the expanding smallholder sector during the postcolonial period, tea is becoming an ‘African crop.’ While the smallholder sector is decolonizing tea, it nevertheless retains some of the problems with the monocultural plantation. As Sarah Besky argues in the case of India,\footnote{See interview with Wangari Maathai by John Vidal, “We know what to do, why don’t we do it?”, The Guardian, May 30, 2009. https://www.theguardian.com/environment/2009/may/30/africa-women-climate-change-wangari-maathai (accessed 1 December 2020).}

When smallholders rip up food crops to plant tea, we see abandonment of crop diversity, a doubling down on monoculture, and a recapitulation of the violent process of land takeover that occurred in the colonial period (2020, p.150).

The environmentalist and Nobel Peace Prize laureate, late Wangari Maathai lamented that farmers in her home district of Nyieri were replacing food crops like corn, millet and sorghum with tea, and how the tea fields were climbing higher and higher up on the hill sides, causing further loss of precious forests.\footnote{See Muiri, K., 2019. Revealed: How KTDA has been stealing billions from tea farmers. Daily Reporter, September 27. https://www.reporter24.com/adults/how-ktda-has-been-stealing-billions-from-tea-farmers (accessed 1 December 2020); Ndeno, B., 2020. Kenya: How Bad Tea Politics Brew Bitter taste for Smallholder Farmers. Daily Nation, September 28. https://allafriica.com/stories/202009290069.html, (accessed 1 December 2020); Ng’etich, J., 2020. KTDA officials summoned by investigators. Farm Kenya, August 23. https://www.standardmedia.co.ke/farmkenya/news/article/200138672/ktda-officials-summoned-by-investigators, (Accessed 1 December 2020).} In India, scholars have similarly noted that smallholder tea farmers not only expand into fields earlier used for cultivation of paddy and other food crops, but also into grazing land, bamboo groves and forest areas, causing further loss of biodiversity and the depletion of the resource base for common villagers (see Sharma and Baruah, 2012, p.154–155). If smallholder tea has improved the economic situation for certain sections of the rural population in Assam, Chandan Kumar Sharma and Parthana Baruah argue, they ‘perpetuate and exacerbate the existing conditions of the state’s dependency’ (2012, p.159). The individual farmer is also in a situation of dependency vis-a-vis the tea factories that are buying green leaves or the agents acting as middlemen between growers and the factories. As the plucked leaves is a perishable produce, factory owners have an upper hand in price negotiations (Das, 2012, p.24).

There are various attempts in tea growing areas in India to organize cooperatives with their own factories, often specializing in green and organic teas. But such efforts are up against various difficulties, for example, getting bank loans, government licenses and connecting to logistical chain from the farmers’ fields to the end consumers.

In Kenya, the situation is more favorable as the sector is organized under the Kenya Tea Development Agency (KTDA). It has an interesting history starting as a joint venture between the state and multinational tea companies with financial support from the World Bank. Later, in 2000, KTDA turned into a private company owned by the smallholder farmers themselves (Ochieng, 2010). The management structure of the company is rather complex, for example, with factories as separate entities; a longstanding concern is the weak representation and influence of the growers/owners. During recent years, the KTDA has come under heavy critique for low and irregular payments to the farmers. Several of the senior board members are under criminal investigations for corruption. One such charge relates to price manipulations at the tea auction in Mombasa.\footnote{Interview, February 21, 2018.} This again suggests the vulnerability of small farmers in cash crop production where they depend on powerful actors higher up in the value chain. In tea, the largest profits accrue at the second stage of value addition – after factory and auction – with blending and packing, which to large extent is in the hands of multinational companies like Unilever, Associated British Foods and Tata Tea (Monroy et al., 2012, p.10).

In a roundabout manner, we are back to the issue of the inherent properties of plants and how certain characteristics determine their usage. The simultaneous ripening of cereal grains and the fact that they grow above ground make them especially attractive for tax collectors and ‘in this sense’, as Scott writes is, ‘prereadied for state-making’ (2017, p.133). Other crops have characteristics that make them resistant to such appropriation, for example, those that cannot be stored for long without being spoiled or that grow dispersed and blend in with surrounding vegetation and is hard to detect and tax. The latter crops are those that Scott famously attribute to Zonia’s shifting cultivators who seek to keep the state at arms-length (Ibid., p.195–196), that are, the ‘escape-crops’ (Scott, 2017; Roman and Westengen, this volume). What then would be the characteristics that make certain crops suitable for imperial projects? In the conclusion, I will return to and seek to tease out if tea can tell us something about this.  


8. Conclusion

In the above sections, I have traced the tea Assam plant from the jungles of Northeast India grown by indigenous hill peoples, to the highly disciplined environment of the monocultural plantation, and further across the Indian Ocean to large estates run by multinational companies and to smallholder farmers’ fields in Kenya. Along the journey, the plant has been subject to various experiments, it has been cross pollinated with imported Chinese plants, bringing forth new hybrid cultivars, and Kenyan tea researchers have developed a new tea clone—purple tea—that is projected as the future for Kenyan tea. Through historical snippets and ethnographic vignettes, I have tried to convey how people in different places and points of time live with and have enrolled the tea plant for various purposes, and how the plant simultaneously has enrolled people. Tea is making worlds; entire landscapes and societies have been transformed by the plant. The imperial weight of tea is still haunting people as the Kenyan blood tea case reminds us about, but the crop also ignites hope among farmers for a brighter future.

In thinking about tea and its imperial characteristics, I have struggled with questions that spans the different, yet overlapping, registers of plant-crop-commodity. With the imperial crop hypothesis, I seek to draw attention to intrinsic aspects of plants that render them suitable for imperial projects. This remains an incomplete venture. As a social scientist engaging with plants, I encounter several questions outside my field of expertise. Why, for example, didn’t the Chinese tea plant do well in Assam? Or, what made the Assam variety more suitable for travel and to thrive in plantations in East Africa and elsewhere? The Assam variety with its larger leaves worked well with the plantation form that the British opted for. This variety generated a large produce and the plantation model of tea cultivation was, what Anna Tsing refers to as, ‘scalable’, that is, possible to reproduce and expand almost endlessly (Tsing 2015, p. 39–40). Yet, as we see, the monocultural plantation is a fragile form that requires constant monitoring, improvement and care (cf. Hetherington 2020). Here I am struck by George Watt’s observation of the tea plant being forced into a ‘diseased state’ in the plantation, with all its energy pushed into producing new leaves. While this allowed for high productivity, it also made the plants vulnerable for pests and diseases, according to Watt. Purple tea was developed through conventional breeding, concentrating a compound that existed naturally in the plant, and if consumers find the taste and the health qualities propelling, the green hills of Kenya might for good or bad soon shift into purple. Yet, large-scale cultivation of this new tea clone reproduces many of the social and ecological problems of monoculture agriculture. The indigenous form of tea cultivation in the Zonia uplands stands as a non-coercive, sustainable, alternative to the colonial plantation.

Coda

The biologists Daniele Cicuzza and Stefanos Kokotos discovered an abandoned experimental plot with tea growing wild in Usambara Mountains in Tanzania. The tea plants, estimated to have been planted 50 to 80 years ago, had grown into ‘sub-canopy trees’ that were slowly migrating into adjoining forest areas (Cicuzza and Kokotos, 2006, 4-14). They describe this as a case of an invasive species that posed a threat to the nearby Amani Nature Reserve, hence suggesting that the tea trees and plants should be eliminated (ibid., 13). But, alas, this could as well be celebrated, the tea plant escaping the confines of the colonial plantation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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