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Multispecies Monocultures. Organic Agriculture and Resistance on Indian Tea Plantations

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ABSTRACT: *This article investigates the multiple ontological politics of agriculture on Indian tea plantations from a more-than-human perspective. Plantation agriculture is an ontological politics that enacts authoritative simplifications of plant morphologies and is performed by precarious labour. Each plantation also comprises multiple other practices: the efforts of planters to reform the ecological relationships in their tea fields through organic cultivation techniques, the resistances of workers and supervisors to their working conditions, the unruly growth of tea plants, and the interventions of various other non-human species. The article uses multispecies ethnography to sketch how organic cultivation, labour resistance, and non-human agency negotiate monoculture production. This approach probes the potential of ontological perspectives to evoke multiple variations and minor contestations, while also accounting for the persistence of dominating ontologies.*

KEYWORDS: *Ontological Politics, Resistance, Multispecies Ethnography, Plantations, Organic Agriculture*

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As supervisor Nayan led me through the vast fields of the Darjeeling tea plantation where he worked, he often paused to inspect particular tea plants along the monotonous rows of near-identical bushes. Sometimes he bent down to pluck flowers or pointed out particularly beautiful trees. Enthusiastically, he would show me a fungus that grows on the underside of tea leaves and improves their taste, or he would demonstrate the excellent soil quality of the fields by rubbing a lump of earth between his fingers (Fieldnotes, 22.11.2016).

On organic tea plantations such as Nayan's workplace, a variety of non-human species help to produce hyper-productive tea monocultures. But their actions and interactions are closely monitored: Nayan and his colleagues are required to make tea plants and their companion species interact according to management incentives, and to keep unruly behaviour in check. And as much as Nayan is fascinated by his daily encounters with non-human life, they also exhaust him. Most of the time, workers and supervisors are already overworked, and since they do not benefit from the additional value that organic production creates, they sometimes resent these additional tasks of care and often avoid them.

When I first entered India's boundless fields of tea in 2016, travelling to the plantation regions of Assam, Darjeeling and the Nilgiri mountains, I was intrigued by what seemed to

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me paradoxical projects to cultivate plantations through organic agriculture, for I understood plantations to be industrial monocultures that disrupt diverse ecosystems. In anthropology, plantations are discussed as markers of colonial and capitalist projects to turn living landscapes into resources through precarious labour. Starting from here, I wondered how organic cultivation interferes with what plantations are or might become. Therefore, in this article, I turn to ontology, since this literature is equally concerned with »the conditions of possibility« (Mol 1999, 75), of how the world (or, in this case, agriculture) is open to be made otherwise. At the core of current attention to ontology is the proposition that, if the reality is constantly re-enacted in many different ways, there are always options for interference and transformation. But rather than adding another hopeful account to the anthropological repertoire of alternatives, I am concerned here with the persistence of certain dominating ontologies within (or in spite of) ongoing change (cf. Eitel/Meurer this issue).

In this article, I analyse plantation agriculture, organic cultivation practices, lively non-human agency, and labour resistance as multiple »ontological politics«, defined as sociomaterial practices through which »reality is transformed and where new ways of doing reality are crafted« (Mol 1999, 75). Ontologies become political through attempts »to make some realities realer, others less so« (Law 2004, 67). Analysing my ethnographic material, I track these various strands of practices and ask how they rub off each other. How do planters (plantation owners) attempt to implement organic cultivation and engage in crafting new versions of tea plantations; and how do workers and supervisors resist their attempts? Specifically, I emphasise world-making practices beyond the human (Haraway 2003; Kohn 2013), for instance the botanical ontologies (Daly et al. 2016) enacted by tea plants. Thus, I follow the many intersecting, competing, or mutually supporting practices across more-than-human relations through which tea cultivation is done, known, and transformed. This approach allows me to sketch how specific practices enact and merge seemingly opposed ontological positions (cf. Meurer this issue): the mechanistic manipulation of non-human life as economic resource on the one hand, and encounters with lively, sometimes unruly non-human life on the other. By attending to multiple ontological politics, I show that the appreciation of non-human relations underpinning organic agriculture can facilitate the plantations' coercive cultivation (Tsing 2012). Specifically, I demonstrate how both intersecting forms of agricultural ontological politics are articulated through labour issues at the heart of the plantation system: the profitable togetherness (Münster 2017, 32) of many species relies on exploitative labour. The workers' and supervisors' resistance against their precarious situation encourages a form of multispecies togetherness that differs from what the planters envision—including weedy monoculture fields, overgrown tea bushes, or ineffective soil care. I engage the »multispecies ontological turn« (Tsing 2018, 233) not just to make visible a world of many worlds (de la Cadena/Blaser 2018), but to analyse the interspecies power relations between them. This shows that ontological perspectives help us not only to imagine and do agriculture otherwise (cf. Laser/Sørensen this issue) but also to account for the persistence of (colonial, capitalist) power structures within new departures (cf. Schiefer this issue). Coercive plantation cultivation is not only so pervasive that it re-arranges ecologies around the globe to co-produce a new geological era (Haraway 2015), it is also fiercely persistent in the face of transformations, continuous resistance, and unruly growth.

My argument draws on ethnographic fieldwork I conducted at several tea plantations across India. In particular, I use data gathered at a small plantation in the flat valley of the large Brahmaputra river of the Assamese Dibrugarh district (65 hectares, 40 employees) and at a large plantation in the foothills of the Himalayas in the Darjeeling of West Bengal (640 hectares, 400 employees). In 2016 and 2017, I was present for the so-called *autumn flush*, the

last harvest period of the year. Over a total of six months, I participated in the daily work in the tea fields and factories and lived with the workers in the so-called labour lines, the accommodation provided by the plantation management. Through participant observation I not only become acquainted with the everyday lives of workers, supervisors, and planters (plantation owners) but also learned how the interactions between people, tea plants, and other non-human species influenced labour and production. Thereby, I used the methods of multispecies ethnography: working with those involved in devising organic practices, I observed plants, pests, and weather patterns and discussed these topics in structured and unstructured interviews. Further, I read agronomical literature to learn about soil microorganisms, fungi, and insects, paying special attention to the resources that organic planters use in their own practices. This allowed me to correlate plantation labour with plant growth and other ecological processes in my doctoral thesis.

In the following, I reflect on ontological politics through a series of ethnographic vignettes of tea plucking and organic fertilizer production, activities that underline the specificity of organic tea cultivation. Both plantations organise their labour largely according to industry conventions. For example, they practice strategic and coercive plucking of tea leaves and only tweak cultivation standards with certain organic practices, such as homemade fertilizers. Therefore, at first glance, these two plantations look exactly the same as their conventional neighbours—monotonous dark green surfaces that stretch as far as the eye can see. But closer inspection reveals a modest variety of other species that also participate in the cultivation. I show how the planters Swaroop (in Darjeeling) and Vinod (in Assam) attempt to integrate these seemingly opposing ontological politics—as well as how their employees negotiate the terms of production (introducing the supervisors Nayan and Palash, and the worker Deepa), and how various non-human species intervene. These encounters reveal the convergence of multiple ontological politics on unequal terms, in the course of which the plantations are re-arranged within the boundaries of their established, persistent organisation.

In the next section I introduce my theoretical framework and present my ethnographic material. Following this, I first discuss the intersection of coercive and organic ontological politics before turning to the various practices of resistance.

The Multispecies Ontological Politics of Agriculture

Turning to ontologies makes for interesting anthropological accounts of agriculture because it sharpens our focus on the more-than-human dimensions of the ecological crises faced by cultivators all over the world. Here, engaging multiple ontologies not only means paying attention to different ways of doing agriculture (including their historical emergence and situated contingency); it also opens these discussions to a consideration of non-human life in which plants and animals are actors in their own right, with their own becomings and agendas.

Recently, a number of scholars have employed the ontological lens of Science and Technology Studies (STS) to examine the potentials and pitfalls of more-than-human entanglements in agriculture. On the one hand, they show how promising solutions may derive from acknowledging human/non-human interdependencies and carefully crafting relational ontologies. Maria Puig de la Bellacasa (2017, 170) envisions permaculture and organic soil care as transformative »alterontologies« that may foster alternative caring relations; and Daniel Münster (2018, 751) describes organic farming as an »ontological project of recu-

perating vitality, multispecies togetherness, symbiotic processes, and prosperity in a dying and degraded world of smallholder agriculture«. On the other hand, an ontological lens can also draw attention to exclusions and injustices. Contrary to Münster and Puig de la Bellacasa, Anna Krzywoszynska (2020, 244) finds that in the UK, soil-biota-oriented farming actually reifies »the ontology of land as a resource« and effectively expands »the enrollment of ecosystems into capital accumulation«. Such ontological criticism has also been directed at various other forms of industrial agriculture. For example, Sophie Chao (2018, 642) describes how the expansion of palm oil plantations in Indonesia »jeopardizes the well-being of the life forms populating a dynamic multispecies cosmology«, and Les Beldo (2017, 112) denounces the »flattened« ontology of living and nonliving beings that exploits the »metabolic labor« of broiler chickens in the United States.

In the context of these debates, ontological politics offers a conceptual tool for integrating both criticism and the quest for alternatives. According to Annemarie Mol (1999, 77), ontology describes how »reality is manipulated by means of various tools in the course of a diversity of practices«. Consequently, John Law (2004, 66) highlights that »different constellations of practice and their hinterlands might make it possible to enact realities in different ways«. This makes any performance that shapes the situations, constellations, and materialities of life a form of ontological politics. Thus, reality is always the result of a multiplicity of ontological politics clashing, merging, and transforming each other. Transferring this notion to agriculture, Daniel Münster (2018, 751) argues that »the politics of alternative agriculture performances lies in their production of alternative realities«. Like Münster, I take ontological politics to mean not only any practice by which people influence crops or livestock but also ways in which non-human life itself participates in the encounter. The strategic plucking of tea leaves is an ontological politics, but so is the tea plants' subsequent sprouting of new leaves. However, I am not only interested in alternative performances but also more conventional practices: more often than not, mainstream agricultures and their alternatives are closely interrelated, as shown by more extensive studies on organic food systems (Campbell 2009; Guthman 2014). Thus, I am asking how the alternative realities that organic cultivation techniques produce oppose, support, or change more established ways of doing agriculture.

Thus understood, I use ontological politics to engage with both the emergent field of more-than-human approaches as well as longstanding concerns with social justice. Focusing on the various ontological politics of non-humans broadens the possibilities of ethnographic description and allows us to bring together such seemingly disparate processes as plant growth and labour resistance. This approach allows us not only to respond to the urgent need to understand how the world is enacted by non-human life but also to carry forward discussions of social justice. Thus, I also offer ontological politics as a partial answer to concerns that multispecies perspectives do not pay enough attention to the historically formed social and political structures at the centre of various contemporary ecological crises (Bessire/Bond 2014; Graeber 2015; MacCall Howard 2018). By engaging with ontological politics at the intersections of environmental and social concerns, ethnography can make complex actor-networks available for critical analysis.

What characterises the ontological politics of plantation agriculture, organic practices, labour resistance, and non-human agency? Let us begin with the ontological politics of plantations, the most pervasive practices that shape my field sites. Prime examples of the commodification of non-human life through techno-scientific control and productionist paradigms (Haraway 2015; cf. Sapp Moore et al. 2019), plantations are often described as reductive, biomechanical ontologies that treat living beings as pliable machines and exclude

their vital life forces (Beldo 2017; Chao 2020). In her extensive work on plantations, Anna Tsing (2012, 148) bases her multi-faceted arguments on the observation that plantations practice »cultivation through coercion«—of both plants and people. Both historically and today, plantations are established through the displacement or even extermination of local people and plants, the preparation of newly empty land, and the import of precarious labour and cloned cash crops for mass-production (Tsing 2015). Plantations are »ecological simplifications« (Tsing et al. 2019, 186) in which living organisms are disciplined into resources by removing them from biodiverse life worlds and reinserting them into economically structured and rigidly managed environments: »Investors simplify ecologies to standardize their products and to maximize the speed and efficiency of replication« (Tsing 2017, 59). Plantations thus become »machines of replication« (Tsing 2016, 4), designed to produce massive quantities of assets whilst attempting to eliminate all life that does not contribute to profit. This management is a »project of rule« (Besky/Padwe 2016, 10) that seeks to make plant growth scalable. Such a project of coercive cultivation and ecological simplification also reflects the prevailing ontological politics on Indian tea plantations: exploited workers cultivate vast monocultures where there used to be large forests; tea bushes are cloned, plucked, trimmed, and sprayed so that they become more productive and predictable; the interactions between tea plants and other species are strictly limited; agro-chemical pesticides abound. Thus, a plantation could be seen as an attempt to enact a profitable *one world world* (Law 2015)—or a one lifeform world—by forcibly eliminating any other attempts at world making.

However, as Tsing (2012) notes, plantations also have *unruly edges*—the marginal but disruptive entities and processes which plantation dynamics create. Ultimately, plantations cause the proliferation of pathogens, because monocultures are breeding grounds for those insects, fungi, and microorganisms that eat the respective cash crop (Tsing 2017, 52). Unruly edges undermine the rationality of plantations, but they do not erase their detrimental effects, and often even spread them beyond plantation borders. Together with Andrew Mathews and Nils Bubandt, Tsing (2019; 189) suggests that the landscape structures of »modular simplifications«—enacted by multiple plantation-like practices and »feral proliferations«, including not just unruly edges but also alternative cosmologies, are key components of the Anthropocene. These analytical terms draw attention to the pervasive influence of industrial forms on all global ecosystems. But they also highlight that this influence is uneven, and that it rubs up against alternative world-shaping projects—often only minor interventions, but nevertheless important in the quest for potential solutions. So far, most of the literature inspired by Tsing's argument has looked at how plantation-generated pathogens move beyond the boundaries of the plantation to disturb surrounding ecosystems (cf. Grandin 2009; Gan 2017; Perfecto et al. 2019). In contrast, this article examines the ontological politics of agriculture by focusing on minor interventions enacted on the micro-scale of the plantation itself, in the daily negotiations between workers, tea plants, planters, soil organisms, and many others.

Organic agriculture is often presented as an alternative to industrial farming. As mentioned above, some commentators have stated that organic practices can enact »friendly farming« (Tsai 2019, 343), against the odds. Daniel Münster (2018, 751) argues that Zero Budget Natural Farming offers smallholders in Kerala a wholly different ontological politics of farming: »sensing, inhabiting, and dwelling in new ways on the farm and cultivating modes of care that allow for symbiotically relating to soils, plants, insects, animals, and even microbes«. This improves not just the farmers' livelihoods, but also the quality of their relationships to non-humans. By contrast, on the tea plantations I studied, organic agriculture

had quite different effects (cf. Besky 2013; Sen 2017). Even though agro-chemicals are not used, organic plantations are still intensely managed, large-scale monocultures. Tea plants are still plucked, tasted, cloned, manufactured, and sold according to parameters similar to those used by non-organic plantations. To be sure, organic practices require supervisors and workers to engage more closely with tea plants and other species; like smallholders in Kerala, plantation employees also need to assess the consistency of manures and the relations of their plants to other species. However, this new ontological politics becomes just another technique for asserting the plantation's control over ecological relations. In this context, the purpose of organic practices is to instrumentalise interactions between insects, fungi, microorganisms, or cows to increase the productivity of tea plants. The goal is to create a strategic togetherness that serves to maintain tea monocultures by enlisting the diverse polycultures at their margins. In increasingly difficult ecological conditions, organic agriculture ensures the long-term productivity of plantations. As plantation-induced ecological damage takes its toll, tea plantations must modify their production techniques in order to carry on. Organic plantations thus represent the convergence of techno-scientific practices and (a kind of) biodiversity, of colonial land management and agro-ecological practices, and of labour exploitation and aspirations of sustainability.

While these variations of coercive cultivation are noteworthy in themselves, the following ethnography also describes two further ontological politics which I found on organic tea plantations. The first is the sometimes-disruptive intervention of non-human life. Although plantation management has a pervasive influence on the shapes and rhythms of tea plant growth, the plants are always responsive to other processes and other bodies. Despite the constant effort put into creating orderly growth patterns, slight variations appear all the time. Tea plant growth rates depend on variations in sun and rain, and may be slowed by negligent plucking practices or insect pests. Most of the time, these variations do not have much of an effect in the overall scheme of things, but their consistent appearance indicates the presence of minor alternative ontological politics beyond the coercive trimming, harvesting, and manufacturing of tea. The second ontological politics is the resistance of plantation employees to the precarity of their labour and lives. This issue has been thoroughly discussed by Sarah Besky (2013), Piya Chatterjee (2001) and Debarati Sen (2017), whose ethnographies of Indian tea plantations elucidate the reproduction of colonial power structures through caste, class, and gender. Writing from a multispecies perspective, I extend this focus by zooming in on the daily negotiations of power between tea workers, planters, supervisors, and non-humans.

Coercive Organic Cultivation

Manipulating the growth of tea plants (*Camellia sinensis*) is the central activity around which tea cultivation revolves. Tea plants are a species in the family *Theaceae*, whose native varieties are found in forest undergrowth across Southern Japan and Korea, the South of China, North East India, and much of mainland Southeast Asia. In these forests, tea plants grow into small, evergreen trees with thick, waxy leaves, yellow-white flowers, and strong taproots. In the first half of the 19th century, after the British annexation of Assam, colonial personnel began to cultivate *Camellia sinensis* var. *assamica*, called the *Assam jat*, on the Indian subcontinent (eventually, after decades of trial and error, they also succeeded in cultivating the Chinese variety, called the *China jat*). For this purpose, they adopted the plantation model, which was already well established in other colonised places, and which

Sidney Mintz (1986) describes as a predecessor of both industrial agriculture and the factory. This cultivation form changes the growth forms and rhythms of the tea plant to enable the mass production of tea leaves for the global industry that was once so crucial for the British Empire (Sharma 2011).

Today, the cloning of hyper-productive specimens is the basis of the plantation cultivation of tea plants. In a laboratory, cuttings from hybrid mother bushes are propagated so that all plants of a particular clone type are genetically identical. Although raising plants from seed provides the genetic diversity that makes them potentially more resistant to pest and changing climates, genetically identical clones enable an assembly line style of production: plants sprout at the same time, react similarly to their environment, and develop a consistent taste. This allows cultivation areas to be scaled and controlled more smoothly, and pluckers to work faster and therefore harvest more leaves. Commercially distributed clone series are adapted to the requirements of different climate zones, soil conditions, or market niches. The plantations on which I conducted my fieldwork cultivate clone monocultures in different varieties: the plantation in Assam grew only the Assam jat and its hybrids; the plantation in Darjeeling grew mostly the China jat and its hybrids, but also some Assam jat hybrids. Although one organic consultant of the Assamese plantation expressed the view that cloned plants were not natural and should be substituted for more diverse plantings, both planters adhered to the convention of cloning. When new plantings are due—for instance because older bushes have become less productive or have reacted negatively to the drastic climate changes of recent years—the planters choose from the constantly updated clone series on offer. Therefore, their plantations not only look the same as their conventionally cultivated neighbours, they are also genetically identical to them.

But even optimised clones require diligent care to grow productively. For example, strategic plucking is necessary to synchronise plant growth with industrial production. Not just a harvesting method, it also accelerates the sprouting of fresh leaves. Since colonial times, pluckers have been instructed to pick only »two leaves and a bud«, because fresh leaves and buds are the most photosynthetically active part of the plant and contain a higher concentration of the chemical constituents that make a good drink. The darker, longer, coarser leaves, which grow lower on the bush, are merely considered *maintenance foliage* and are not fit for the factory. Furthermore, frequently removing these young shoots triggers growth impulses in plants and makes them quickly re-sprout. If these sprouts were not removed, the plants would direct their energy towards producing flowers and seeds, neither of which are valuable for tea production. Regular plucking makes plants commence the budding stage again and again, so tea flowers are rare, only growing on the lower, unplucked branches of bushes. The presence of flowers on the tops or sides of bushes would indicate that they had not been plucked for weeks: a loss in harvest and in productive plant energy.

This plucking practice not only increases the harvest and standardises growth, it also synchronises the re-sprouting of fresh leaves with industrial schedules. The more frequently young shoots are plucked, the more shoots follow, and the leaf period shortens. But the plants cannot continuously direct carbohydrates towards growing new shoots, so if too many shoots are removed too frequently, the bushes' productivity could decrease. Plucking should be done in a moderate and controlled way, guided by experienced judgement of plant growth. Ideally, plucking should manipulate the phyllochron—the time it takes for young leaves to appear—to an interval of five to nine days. To achieve this, the planters want supervisors and workers to pluck the rows of bushes consecutively and regularly, and to revisit the same spots at intervals that are attuned to leaf periods as closely as possible.

On conventional tea plantations, the ecological simplification of plant growth achieved through cloning and plucking is complemented with further techniques: agro-chemical fertilizers regularly and evenly supply the bushes with customised and quantifiable nutrient doses. Similarly, the extensive application of pesticides eliminates most life that does not contribute to profit and interferes with orderly plant growth (Tsing 2015): workers routinely kill fungi and insects that feed on tea plants as well as other plants that compete for root space. This is a point at which the ontological politics of organic agriculture comes into play: instead of killing non-human species, organic planters want to strategically employ their »metabolic labor« (Beldo 2017, 108), their ecological relationships with the tea bushes, for the sake of tea production. To this end, they instruct supervisors and workers to integrate insects, mushrooms, weeds, and other entities into daily labour, thereby recruiting these non-human species as co-labourers.

One example for this ontological politics of collaboration is *kunapajala*, the Assamese planter Vinod's recipe for a combined fertilizer and pesticide. The mixture is fermented from cow dung and various plants—an edible fern called *belongini* (*Diplazium esculentum*), leaves of the *karange* tree (*Millettia pinnata*), *halodhi* roots (*Curcuma longa*), leaves of the laurel variety *dighloti* (*Litsea salicifolia*), and flowers from wild hops (*Flemingia strobilifera*). The cow dung fertilizes the soil, while the plants are supposed to hinder the reproduction of the tea mosquito bug (*Helopeltis theivora*)—whose numbers are steadily increasing due to recent climatic changes—deter a number of mites and spiders, and have fungicidal effects. Despite deterring and sometimes also killing certain non-human beings, *kunapajala* creates a kind of biodiverse community on the plantation, or rather a new ecological togetherness. Cows now stroll through the identical rows of tea, and various plants are either cultivated on the hitherto fallow fields outside of the plantation or even grow between the bushes. Other examples of collaborative ontological politics are the installation of bird houses (encouraging as many birds as possible to nest in the tea fields and eat tea-eating insects) or the planting of lemongrass between tea bushes (which fixes nitrogen in the soil). This way, tea fields become weak versions of »polyphonic assemblages« (Tsing 2015, 24), an amalgamation of complex ecological interactions and temporalities, though one that remains oriented towards production schedules.

Integrating organic practices and standard plantation cultivation techniques allows Vinod and Swaroop to intimately encounter non-human life as well as control it. I participated in extensive tasting sessions in their offices and homes, and our casual conversations usually revolved around the wonders of ecology. The planters gain a sense of pleasure from tasting, smelling, observing, or photographing tea plants. As I mentioned above, workers and supervisors are often similarly appreciative of the non-human life they encounter during their work shifts. They are often proud to produce organic tea and point out the many shortcomings of conventional cultivation. Many also make a point of only drinking organic tea at home. Again, this interspecies intimacy and fascination is closely related to the more coercive plantation practices because it also provides valuable business information. People translate their knowledge about ecological relationships into management strategies. Thus, improvisational, unscripted impressions complement the precise techniques, such as cloning or homogenizing, through which tea plant growth is usually assessed.

This section has shown that planters who want to cultivate tea organically retain the general structure of the agricultural »machine of replication« (Tsing 2016, 4): they seek to regulate and optimise the growth of tea plants through cloning and plucking. But they substitute other conventional techniques of ecological simplification — most notably the extensive use of agro-chemical pesticides and fertilizers—for strategically placed symbi-

otic relationships between various species. Thereby, coercive cultivation becomes an even more dominating force, integrating more than just monocrops into the plantation project. That is, organic cultivation techniques integrate the unruly edges of the plantations into the production process. They decrease some of the harmful effects of intensive cultivation, but increase the overall influence that plantations can have over non-human beings. Yet precisely because it is vitally dependent on the collaboration of various actors, this is also a highly contested strategy.

Weak Resistance and Unruly Growth

Worker and supervisor resistance as well as the unruly interventions of non-human's influence both coercive and organic cultivation. For example, strategic plucking and soil care often fail because labour resistance makes tea plants growth unruly and changes the terms of organic collaboration across species. In the vignettes that follow, I focus on forms of everyday or weak resistance: the spontaneous, cautious, uncoordinated, and mostly anonymous everyday practices, such as noncompliance, slowdown, or unpunctuality, through which tea workers negotiate their situations (Scott 1985). In addition, I investigate how weak resistance affects (and is affected by) non-human agency.

The most obvious way workers and supervisors resist coercive cultivation is by not complying with plucking instructions. During my fieldwork, this took a number of forms: workers returned late from lunch breaks, showed up hungover after payday, or avoided plucking in the blazing sun; supervisors left the work group unsupervised or neglected the remote sections; child workers sang and played when unsupervised. As a result, several areas of the Assamese plantation were quite overgrown, particularly those furthest away from the factory. Even viewed from afar, the outline of the bushes looked irregular and the plucking table was very uneven. Upon closer inspection, ferns, grasses, and vetches grew higher than the tea in some places, and rows were no longer visible between bushes. Not surprisingly, the planter was frustrated with this improper state of the plantation, but tea pickers seemed to make the most out of the unmanaged situation, often foraging for edibles among the weeds on their way home. Particularly popular were fiddlehead ferns, called *dhekia*, which thrive amongst unkept tea bushes and often made it into the workers' *saag* dishes. Not only does the everyday resistance of workers change the normative, productive form of the tea bushes themselves, it also introduces a kind of multispecies togetherness other than those intended by organic practices.

An even more striking variation of normative tea plant forms was enacted during the 2017 general strike in Darjeeling, which lasted 104 days during the monsoon flush, the main harvest period. The agitation was led by the Gorkha Janmukti Morcha, an unrecognised subnationalist party striving to found a federal state, Gorkhaland, that would be independent from West Bengal. The Gorkhaland movement is linked to a long-standing dispute between the inhabitants of the district, the federal state of West Bengal, and the government of India. »Gorkhas remain pegged to the lowest levels of employment, while outsiders own the tea industry, meaning its profits flow out of the hills« (Bennike et al. 2017). Thus, the tea industry is the main scene of this conflict because the frustrations of tea workers are central to the widespread support enjoyed by the Gorkha Janmukti Morcha. One effect of the strike was a proliferation of plant forms: instead of a uniform *two leaves and a bud*, Darjeeling's tea plants grew into various shapes during the heavy rains—shapes that plucking would usually prevent. When I arrived on the Darjeeling plantation in November 2017,

months after the strike had ended, I noted that its tea fields still looked different from the previous year. Tea flowers were abundant, and I even saw a few tea plants that had presumably been overlooked by the workers and grown almost taller than me. They gave the impression that the plantation was turning into woodland, and the plants' stems had already become thick, almost trunk-like. I assumed that it would not be possible to revert them back to a bush shape. Supervisor Nayan agreed, speculating that if they were not chopped down, they would grow into tea trees—a common shape for wild tea plants, especially amongst the Assamica varieties, but rarely seen on plantations.

Employees resist organic practices in similar ways, with similar results. Consider, for example, the care for other species described above. Organic planters cultivate microorganisms mainly by feeding them cow manure. They thus seek to recruit cows to influence interactions between soil microorganisms and tea plants. But this collaboration often fails because the workers do not comply with the planters' directions. Prior to my fieldwork, planter Swaroop in Darjeeling had offered to buy dung from his workers if they invested in cows, so that the plantation could be self-sufficient in manure. But in 2016 and 2017 I could not find a single family who still kept cows. Worker Deepa explained that shortly after they had acquired their cow, the water supply of the labour lines broke down. For a couple of months, she had been forced to walk for half an hour every day to fetch water from a stream. Having neither time nor energy for the cow, the family sold it. Deepa said she wished that the management had repaired the water supply instead of introducing cows. She also said that she had liked the cows, just as she enjoyed keeping a pig, but she could eat the pig at some point, whereas she could only sell the cow's dung for a pittance. Deepa knows that cow dung is important for organic tea cultivation, but she was not in a position to provide it. When a disappointed Swaroop noted that his employees had become »too rich to care« for cows, he also implied that they had become »too rich to care« for the soil. Deepa's perspective was the opposite: on top of caring for tea plants, she could afford neither to keep cows nor to care for the soil. Because of the heavy workload they require, some of the beneficial relationships between cows, soil, and tea roots are too difficult to obtain.

The situation is slightly different on the Assamese plantation. The cows belong to the planter, and the workers have to care for them in their spare time, without additional pay. Women milk the cows in the mornings, and children gather their dung in the evening. Since the cows roam freely on the plantation, the men must sometimes herd them away from tea seedlings so that they do not trample them. These tasks are exhausting and exceed the diligence of workers. As a result, cow-based soil care often fails, lessening the influence the management can exert on soil microorganisms. This is exacerbated when employees avoid preparing and applying fertilizer. Even though planter Vinod required that workers spray *kunapajala* daily, supervisor Palash told me that they almost never do so. For Vinod, the mixture is a key element of his cultivation scheme, but because he rarely visits, he does not know that his staff by no means prioritise it. In addition to being overworked, they also find the fermented cow excrements repulsive. Like Swaroop, planter Vinod often complains about his employees' lack of sensitivity to the needs of tea plants and other non-human species, and he often laments that their lack of diligence jeopardises the health of his plants.[1]

These ethnographic stories reveal various resistance practices as separate but interrelated, and often mutually constitutive. Worker resistance sometimes spurs non-human resistance; non-human resistance sometimes limits worker resistance; and when both forms of resistance come together, they sometimes interrupt plantation production. These practices are not intentional interventions against domination, but they do emerge as a result of this domination. Workers and supervisors do not resist coercive or organic cultivation per se,

but rather the strain that both production forms demand from them. Unlike the planters with their organic ambitions, they are not interested in re-organizing tea cultivation but rather achieving a small degree of independence from it. Their everyday weak resistance enacts an ontological politics of evasion. Similarly, non-humans do not intentionally resist human instructions; they neither have a strategy, nor do they form an alliance. Rather, their occasional disturbance of plantation routines performs an ontological politics of interspecies collaboration, of polyphonic growth (Tsing 2015, 24), which coercive cultivation usually seeks to undermine. Both of these interrelated practices are therefore part of the unruly edges that authoritative ontologies create by seeking to dominate other forms of world making. Because they appear on the micro-scale of the plantation itself and do not affect other areas, I think of them as minor unruly edges. Minor resistance practices don't revolutionise tea cultivation, but they consistently limit and complicate it. This adds to the paradox of organic plantations: organic planters attempt to recruit the unruly edges into the plantation process itself—to render them *ruly*. But forms of unruliness continue to proliferate, both among the human and non-human denizens of the plantations.

Unequal Alternatives that are not Actually Alternatives

These ethnographic stories show the various ontological politics that enact tea plantations in transition, how they meet on unequal terms, and how they »make some realities realer, others less so« (Law 2004, 67). Organic cultivation techniques tweak the principles of monocultures by inserting monocrops into lively networks of ecological interactions, which nevertheless remain closely monitored (at least in theory). Therefore, in some ways, organic cultivation practices even reinforce the pervasiveness of the plantation system. Coercive cultivation continues to dominate tea plantations, not just by dictating work schedules and plant growth patterns, but also by utilizing divergent ontologies, such as the relentless sprouting of weeds or the interactions of soil microorganisms and plant roots. Ultimately, my findings suggest that the multiple ontological politics of non-human lifeforms enact more of an alternative to plantation agriculture than organic cultivation techniques—especially if labour resistance provides temporary and minor opportunities for lively, unruly interactions between tea plants and other species. Multiple doings constitute and change the more-than-human relations of tea plantations—but some practices retain the upper hand, and minor contestations don't easily turn into major transformations. While the disruptive effects of agricultural intensification continue to take a toll outside of the plantation grounds, organic cultivation can stabilise the production to an extent. Organic plantations might be more adaptable than conventional plantations to the unpredictable ecological disturbances which plantations themselves have co-produced. But ultimately, the attempt of improved control through organic care is as contested as coercive cultivation.

The ontological turn is, among other things, a quest for alternatives, among them more liveable eco-social arrangements. This is an aspiration which anthropologists currently share with many other people. Since agriculture is at the forefront of these endeavours, agricultural practices are now under the close scrutiny of farmers, activists, and academics alike, who assess the numerous transformations of more-than-human relations under the banner of sustainability. Ontological perspectives contribute by making visible the alternatives that are already present amongst the multiplicity of practices that shape the world. In this article, I have demonstrated how a multispecies ontological turn (Tsing 2018) may support such examinations of agricultural practices and the environments they create, tak-

ing ethnography as a tool to map ontologically distinct positions across more-than-human relations. But my analysis of organic plantations has not added another hopeful account to the repertoire of »alterontologies« (Puig de la Bellacasa 2017, 170). On the contrary, it has foregrounded the persistence of conjoined economic and ecological precarity within alternative agricultural practices. The »conditions of possibility« of tea cultivation vary and might be changed—but it seems that the more plantation ontologies change, the more they stay the same. Here, the ontological perspective becomes a means of critique rather than an indicator of progressive transformation.

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Endnotes

1 Workers also undermine soil care in another, less direct way: litter and even larger rubbish dumps are found in remote parts of the plantations, swelling between the tea bushes. As I strolled through these places, I often found myself in the midst of discarded television sets, broken furniture, or unidentifiable heaps of scraps and shards. Nayan told me that some of these materials (plastic, aluminum, or other heavy metals) leach into the soil. Not surprisingly, this is frowned upon by organic certification companies. The planters place prohibition signs all over the plantation, reminding passers-by to »care for the soil« and refrain from dumping rubbish on it, but Nayan found that the amount of littering has not changed.

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