Title
The Rosewood Paradox: from the Malagasy forest to the modern Chinese home

Author
Zhu, Annah Lake

Publication Date
2018

Peer reviewed|Thesis/dissertation

The Rosewood Paradox: from the Malagasy forest to the modern Chinese home

By

Annah L. Zhu

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Environmental Science, Policy, and Management

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Nancy Peluso, Chair
Professor Kate O'Neill
Professor Aihwa Ong

Spring 2019

Abstract

The Rosewood Paradox: from the Malagasy forest to the modern Chinese home

by

Annah L. Zhu

Doctor of Philosophy in Environmental Science, Policy, and Management

University of California, Berkeley

Professor Nancy Peluso, Chair

Globalization, many now acknowledge, is characterized by disconnection as much as by connection. Capital "hops" across various hubs of development, bypassing underdeveloped spaces altogether. Yet between zones of intensive development and those areas entirely "left behind" are the places that straddle the difference. Northeastern Madagascar provides a unique example. Through its illicit trade in endangered rosewood, this remote region of Madagascar is tied to the global cosmopolitan centers of Chinese consumption and Western conservation, despite its extreme lack of development outside of these basic connections. China sends thousands of ships to the undeveloped shores of northeastern Madagascar to pick up rosewood fresh from the forest in order to fuel a growing demand for classical furniture, while the United States and Europe fund a "rosewood task-force" to fight against the trade. The equivalent of over a billion US dollars has been channeled into Madagascar to finance either rosewood conservation or logging in an area where most make less than a dollar a day.

This dissertation uses the case of rosewood, as it travels from the Malagasy forest to the modern Chinese home, to explore emerging global resource dynamics. I find that the rosewood logging crisis has not only transformed the forests of northeastern Madagascar, but has also contributed to the political rise of a group of local rosewood traders with direct ties to China. These elite traders now ride the wave of Chinese demand for rosewood, gaining new political heights within the Malagasy government in a power grab the international community has yet to fully appreciate. Meanwhile, on the other side of the world in China, global financial speculation has reinvented classical rosewood furniture into a new form of speculative investment. Certain species of rosewood have become worth nearly their weight in gold. Paradoxically, environmental restrictions imposed for the protection of these species often exacerbate the speculation, driving Chinese importers deeper into the forest to satisfy the booming market.

As the world's most trafficked endangered wildlife, rosewood serves as a powerful symbol of wider struggles for resources as they unfold across the globe. While often portrayed in terms of an East-West tension, the divergent global demands to cut or conserve rosewood demonstrate not the stark contrast of an increasingly bifurcating global order, but rather an emergent space of global connectivity that complicates binary understandings of East and West while simultaneously speaking to the reality of these geopolitical imaginaries. Taken altogether, the case reveals the paradoxical reality that those closest to global resources benefit least from their extraction and, conversely, that places that seem to be furthest removed from larger clashes in the global system can become one of the primary arenas of their unfolding.

The Rosewood Paradox

From the Malagasy Forest to the Modern Chinese Home

I. MADAGASCAR

II. CHINA

Acknowledgements

This dissertation is an attempt to understand “the global” and emerging global dynamics through one very particular economy that spans Madagascar and China. I am so grateful to those whose lives have been shaped by this economy – for better or for worse – for sharing their knowledge and experiences with me. From my friends in Madagascar to my family in China, thank you for the stories you shared. I am especially thankful to my friend and research assistant in Madagascar (who I will leave un-named due to the dangers of the trade) for taking me around the villages and tolerating my infinite questions, as well as to my host family back from my Peace Corps days for helping me again when I returned to do fieldwork. Likewise, I am so thankful to my father-in-law for taking me around Shanghai to chat it up with rosewood dealers (and even trying to convince me to join the business) and my mother-in-law for watching the kids while I was away. At Berkeley, I would like to thank my dissertation committee – Nancy Peluso, Kate O’Neil, and Aihwa Ong – for their feedback and support. Their work has been such an inspiration to me and will continue to be moving forward. I would also like to thank Land Lab for gathering to review early drafts and the Center for African Studies and Center for Chinese Studies for providing research and writing support. Although all the way on the other side of the country, I am so thankful to my mother and father for being there for me – in their very different ways – throughout my dissertation process. Lastly, a special thanks to my two boys, Theophilus and Malakai, for taking me away from work – both when I needed it and when I didn’t – and, above all, to my husband, George Zhu, for helping me think through all of my chapters with a critical perspective. How boring this dissertation would be if it were not for you.

Introduction

There are two types of trails in Masoala National Park, the largest national park in Madagascar located in the northeastern corner of the island. One trail is for the tourists. On this trail, Malagasy guides lead foreigners on multi-day hikes through tough terrain. When the foreigners ask to see endangered rosewood trees, the guides obligingly pass by a solitary tree growing at the base of the trail, 30 years old and still too small for commercial exploitation. The tree – covered in thick bark that hides its splendid rose-colored core – is unremarkable. Tourists nod and continue along the trail. Not far away lies the other trail of Masoala National Park. This trail is for rosewood loggers. Here, century-old trees are felled with bright red splinters scattered at the stump. They are dragged through forest and river – dangerous feats that often leave loggers injured or dead.

Since around 2000, and especially after the country's *coup d'etat* in 2009, northeastern Madagascar has become a site of global conflict over rosewood. On one side of the conflict, China sends hundreds of ships filled with Malagasy currency to the undeveloped shores of the Masoala Peninsula to pick up rosewood fresh from the forest. These ships are sent not only to Madagascar but also across the tropics to meet a growing demand for furnishing the homes of a rising Chinese elite. Rosewood, *hong mu* in Mandarin, is a group of precious hardwoods (most of which are also endangered species) that have become a hot cultural commodity in China within the last two decades.[1] The demand for this particular wood dates back to the Ming Dynasty, when rosewood species were used to craft an elaborate style of furniture sold to the Emperor and the Chinese social elite (Figure 1). This style of furniture – deeply associated with the wood with which it is made – has since 2000 been revived as a cultural icon in modern China. With many Asian rosewood species nearly extinct, the country has been soliciting new imports from across the tropics. Malagasy rosewood, with its rich hue and fine grain, is among the most expensive. Although selling for only the equivalent of $26 per ton in the forests of Madagascar, the wood sells for up to $60,000 per ton in timber markets in China (Ratsimbazafy 2016).

On the other side of this global conflict, Malagasy rosewood is championed as an endangered species in a country said to contain 1% of the world's biodiversity and the most genetic information per surface area in the world (Aymoz et al. 2013). The Chinese-backed "rosewood massacre" is considered the latest environmental grievance to inundate the island (Shuurman and Lowry 2009). Along with lemurs and periwinkles, rosewood now serves as a powerful icon of the consequences of unchecked exploitation of natural resources in Madagascar. Rosewood has become the world's most trafficked group of species, accounting for a third of all seizures by value, which amounts to more than ivory, rhino horn, lions, and tigers put together (Figure 2a). Of total global rosewood seizures, Malagasy rosewood represents over 60 percent by volume, with nearly all of it headed to China for domestic consumption (Figure 2b). International trade in Malagasy rosewood was prohibited in 2013 under the Convention on International Trade in Endangered Species (CITES).[2] Yet trade prohibitions have counterintuitively heightened demand, driving thousands of loggers into the forest in search of rosewood to sell directly to Chinese ships floating at the horizon.

Figure 1. Ming Dynasty rosewood furniture and decorations from the Imperial Palace, Beijing (Photo by author, December 2014)

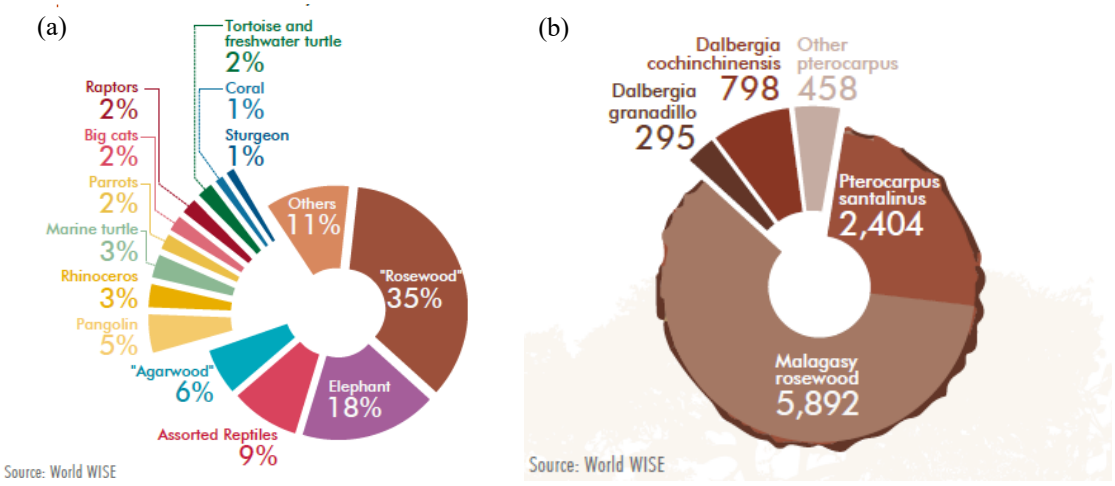


Figure 2. Illegal wildlife trade seizure data, including **(a)** proportion of wildlife seized from 2005 to 2014 according to type (with rosewood accounting for more than elephant, rhinoceros, and big cats combined), and **(b)** total volume of rosewood species seized from 2005 to 2015 (with Malagasy rosewood accounting for well over half). *Source:* UNODC 2016, Figures 3 and 7, respectively.

Meeting in the forests of Madagascar, these contrasting global demands have made Malagasy rosewood a *kakazo malaza* – a famous tree – but famous in strange ways. It represents two very different things for two very different collectives, neither of which are particularly Malagasy. Indeed, my friend who has been on both trails in Masoala National Park – as logger and as guide – has asked me, why all this interest in rosewood? What will the *Chinois* do with the logs they are buying and what will the *vazaha* (foreigners, typically white) do with the forest they are conserving? Most Malagasy people living in the region agree. They have little idea why the local price of rosewood has increased over twenty fold in the past two decades while other wood prices remain stagnant, and why only the Chinese are interested in buying this particular wood. Likewise, most Malagasy people are not sure why *vazaha* so desperately want to protect this seemingly unremarkable tree. Why leave a tree worth up to $60,000 per ton in timber markets in China standing thousands of miles away in the forests of Madagascar?

Not buying the conservation narrative, a number of people in the region believe that the National Parks have in fact been established to facilitate the future extraction of resources. Communities all around the borders of Masoala National Park see foreigners enter and exit the park with maps and gear. The possibility that these foreigners are "just looking" at trees and animals appears to many Malagasy residents to be a poorly crafted guise.[3] Malagasy friends have told me that the much more likely explanation is that these foreigners are instead scouting for resources – timber, gold, precious stones. Indeed, this explanation makes a great deal of sense given that similar types of resource exploitation have been happening throughout the island since before the colonial period. One friend in particular – the one mentioned above who worked as both logger and guide in Masoala National Park – referred to this scenario as *financement parallèle* (parallel financing): a situation in which one party takes advantage of another by offering a few trinkets in exchange for a much greater prize. He had learned this term in school and asserted that it described many investments in Madagascar quite well. With regard to the park, he observed that Malagasy people were offered conservation assistance in the short term, but were losing out in the long term. Yet, when I inquired what exactly he thought we Americans wanted in return for the park, he could not answer. "That," he replied, "is what I was hoping you would tell me."[4]

The answer that inevitably surfaces for many Malagasy people is that – to my great surprise – Americans want rosewood logs for themselves. A rosewood trader I met in a logging village phrased this conviction most bluntly. The old Malagasy government, she explained, had a contract for rosewood with the Chinese, but the new government (those voted into office in 2013) broke the contract in favor of the Americans. The Chinese are now angry, she continued, because the new Malagasy government wants to have a contract with the Americans instead. Next, she warned, gesturing toward me and my American colleague, it will be you Americans coming with your boats to buy rosewood from the forest.

On some level, this answer is not wrong. Madagascar sits at the intersection of two global demands for rosewood, both attempting to buy the Malagasy government in their favor. The equivalent of over a billion US dollars has been pumped into Madagascar from both sides – to finance either rosewood conservation or logging.[5] Chinese importers have allegedly bragged that their money "can go through even the most highly placed doors,"[6] while western donors have created a special task force in an attempt to ensure that this does not happen.[7] Yet rather than stopping or slowing the trade, conservation task-force members merely impose fines as logs pass unimpeded. "Precious timber is a resource like any other," one task-force member

justified his fining (rather than prohibiting) the trade, "everyone needs to get their slice of the cake" (Ratsimbazafy 2016, 60).

These interpretations of the significance of rosewood in Madagascar – that of the rosewood trader who claims Americans will be next to buy rosewood and that of the conservation task-force member who is just trying to get his slice of the "cake" – are not technically wrong; they just miss the nuances of exactly who wants what and why. These interpretations miss the hidden layers that reveal how an otherwise unremarkable tree in the forest has become such a large "cake" for others across the world. The interpretations one might hear from the American or Chinese perspective would also likely miss this nuance. Indeed, Chinese retailers point to the rarity of the wood as a reason to preserve it for centuries in the form of furniture, while conservationists see preservation only in terms of an undisturbed forest ecosystem.

The struggle for rosewood is a powerful symbol of wider struggles for global resources as they unfold across the world. The contradictory value systems of the people laying claim to the tree – rosewood as endangered species, rosewood as cultural icon – dictate its global worth in an increasingly contentious arena. For the conservationist, the fallen tropical hardwood symbolizes a relentless onslaught against one of the most biodiverse ecosystems in the world. The fight against rosewood logging is symbolic of the larger fight against biodiversity loss in the tropics. For the modern Chinese consumer, in contrast, classical rosewood furniture symbolizes the cultural sophistication of a nation yet to be properly recognized by the global community.

The global dynamic that surrounds rosewood is familiar: conservationists predominantly from the United States, timber importers and consumers from China, and residents of northeastern Madagascar navigating the global junction. This trio exemplifies the tri-polar world of east, west, and everywhere in between that characterizes – or perhaps more accurately, caricaturizes – the 21st Century. From these opposing vantages, there is no ground to be given; there is no compromise possible.

In Madagascar, this global dynamic manifests as parallel trails in a contested National Park, as described above. Following the tourist trail, one sees the value of the tree in the forest – an endangered species surviving at a density of at most one to two trees per hundred hectares, a rare node within its broader forest ecology. Following the logging trail, one sees the value of the wood apart from the forest – the beautiful rose-colored core that will eventually be sculpted into ornate classical furniture designed centuries ago and to last for centuries to come. These two trails run side-by-side but never meet; they are specifically designed that way. Conservation agents in northeastern Madagascar warn new guides not to let tourists venture onto logging trails. Logging bosses likewise insist that their men stay off tourist trails. As with the opposing global imaginaries that carved these trails in the forest, distinctions are laboriously maintained.

Yet when one chips away at these global imaginaries and examines their area of overlap more closely in all its ethnographic specificity, the opposition begins to unravel. The case transforms from a quintessential struggle for resources battling it out in the "Third World" or "Global South," into a set of heterogeneous global assemblages overlapping in the forests of northeastern Madagascar. These global assemblages meet in the moment when the first few blows of an axe exposes the bright red heartwood of a towering tree in the forest. For the brief moment in which the tree remains standing yet exposed, the two distant values of the tree for the first time stand side by side in a discomforting cohesion. A part of the forest is killed, but the hidden inner beauty of an otherwise ordinary tree is brought to life. Surely neither is watching at this point in the process, but if they were, the conservationist could not deny the hidden beauty

of the tree and the furniture connoisseur could not ignore the beauty of the forest in which the tree remains, at least for the moment, inextricably a part. This meeting point reveals a hidden junction, where both sides of the story come together and both values occupy the same space. This is a space of contestation, but also a space of common ground.

Rosewood, as a conflicted global resource, tells us exactly what we expect to hear about global dynamics and natural resource management. And if we listen very carefully, it also tells us the opposite. Like chipping away at the thick bark and gray sapwood of a tree, and exposing the heartwood underneath, the case of rosewood reveals both the stereotypes of global resource struggles as well as their unique foils. Rosewood, as this dissertation will show, reveals the hyper-specificities of conservation science as well as the mythologies that underpin them; the rationalities of capitalism as well as the cultural logics with which they articulate; and perhaps most importantly, the global blind spots that have paradoxically become quite central to ongoing international resource competitions. Through the case of rosewood, I will demonstrate how the United States begins to transform from a harbinger of conservation, development, and democracy into a harbinger of mythology and magic; how resource-hungry China appears to increasingly engage in a unique brand of Chinese environmentalism; and how Madagascar begins to reveal by virtue of its own marginality the minor battles fought by global superpowers and the intricate local networks that thrive in their shadows. Far from elite cosmopolitan centers, yet so deeply affected by their speculative ups and downs, northeastern Madagascar's rosewood forests host the materialization of distant global demands through diverse local assemblages. Elite exporters exploiting clandestine global ties, rural "hot-money" spenders embracing a life without savings, and rent-seeking officials capitalizing off the global conservation drive, all navigate distant demands for rosewood via the forests and people of Madagascar. Understanding this space where global demands meet is key to understanding their strained opposition. Too complacent with one side, you miss the rose-colored core of the other. Too focused on the clash, you miss the common ground.

The Paradox(es)

The case of rosewood raises a number of contradictions: the U.S. conservation movement as both modern and mythical, China as both a leading environmental offender and an emerging environmental leader, and Madagascar as both marginal and yet somehow quite central within the global resource arena. These contradictions are best understood as paradoxes.

At its most general, a paradox is a contradiction that, from a certain perspective, makes sense – a falsehood that upon further scrutiny appears true, or conversely, a truth that taken to its logical conclusion is revealed to be false. Stemming from the Greek *para* (παρα, meaning alongside of, past, or beyond) and *doxa* (δόξα, meaning opinion), paradox simply means contrary to received opinion.[8] It had been used in English as early as the 16th Century to express a "wonderful strange...opinion inopinable."[9] In its most frequent usage, the term refers to not only something contrary to common opinion, but something contrary in a way that makes sense – thus bestowing its "strange" and "wonderful" character. The paradox is contrary to common opinion, but not contrary to reason.[10]

The strength of the paradox is that, in defying received wisdom, it serves as a type of critique. The paradox reveals the limits of reason and its unavoidably situated underpinnings. Those phenomena that have come to be referred to as paradoxical inspire a type of critical

reflection that casts worldly dynamics in a new light. The paradox thus allows for an appreciation of complexity as fundamental and irreducible. The emphasis is placed not on knowledge and understanding, but its limits, in such a way that – paradoxically – enhances knowledge and understanding.[11]

In short, a paradox is a meaningful contradiction – something that simultaneously does and does not make sense in a way that is good for thinking. It is a generalizable term that can be applied to things, statements, situations, and questions in order to expose their latent contradictions and inspire critique.

Rosewood, at first, most likely does not strike one as paradoxical. As a group of dense and slow-growing hardwoods, rosewood is found across the tropics from Asia to Africa to South America. In terms of wood quality, rosewood species from Madagascar (Figure 3) are closer to Asian species than other African or South American species. Its density renders Malagasy rosewood finely grained, exceptionally durable, and extremely resistant to insect and water damage, like the Asian species. The trees grow up to 30 meters tall and 1 meter in diameter, with deep red heartwood hidden by 3 to 4 centimeters of grayish sapwood (CITES 2013).[12] Malagasy rosewood blossoms annually and, given enough light through the canopy, saplings sprout around the trunks of their progenitors. After years of initial growth, saplings that survive develop a hardened trunk and their reddish heartwood begins to form (Figure 4). At almost eighty years old, growing at a snail's pace of 3 millimeters per year given favorable conditions, the tree will reach a state of economically viable harvest (Ratsimbazafy 2016).[13] At well over one hundred years old, the tree reaches full maturity (Razafimamonjy 2011).

Figure 3. Malagasy rosewood, approximately **(a)** 5 years old and **(b)** 20 years old.

Figure 4. A branch of rosewood, beginning to form the reddened heartwood that characterizes this type of tree.

Beyond the physicality of the tree, rosewood's particular role within the global economy also most likely does not strike one as paradoxical. Malagasy rosewood has been internationally traded since the early 15th Century at least, during which time expeditions led by the famous explorer Zheng He brought Chinese ships to the shores of Madagascar and East Africa. Since this time, the trade in rosewood between Madagascar and China has continued intermittently. During the 18th Century, as demand for rosewood to build palaces and furniture increased, the Qing imperial court sent explorers in search of new global rosewood supplies, including those from Madagascar. During the 19th Century, trade in rosewood was primarily between Madagascar and Britain and France, with such trade relations lasting until the end of the colonial period in 1960. After the colonial period and especially after the global conservation efforts of the 1980s and 1990s against tropical hardwood logging, trade in Malagasy rosewood was greatly reduced. Within the past two decades, however, Chinese demand for rosewood has once again re-emerged, triggering an unprecedented spike in exports of endangered rosewood.

In this most recent period of its global trade, Malagasy rosewood can be understood as upholding prevailing global stereotypes of East versus West in a world defined by scarcity. Yet if one follows the story of rosewood to its logical conclusion, as noted above, it is possible to find the opposite of what is expected. The battle for rosewood is not the product of a bifurcating global order – it is not really a battle at all. Instead, rosewood reveals an emergent space of global connectivity that complicates binary understandings of East and West, while simultaneously speaking the realities of these geopolitical imaginaries. In this emergent space, out of the way places that seem to have the least say in global dynamics can end up becoming the primary site of their unfolding. This contradiction – this inversion of proximity and distance, centrality and marginality – forms the basis of what I refer to as "the rosewood paradox."

As with all paradoxes, the rosewood paradox arises when one ventures to consider the opposite of what is otherwise quite obviously true. There are five parts of this paradox – five specific paradoxes surrounding rosewood, each building on the last. The first rosewood paradox becomes evident when encountering this rather unspectacular gray-trunked tree in an otherwise spectacular rainforest. In order to see the tree's inner beauty, it must be killed – at least in a way. For the Chinese furniture connoisseur who sees woodworking as the progressive transformation of forest into furnishing, far from being killed, rosewood quite literally comes alive in the process of its crafting. The secret beauty of the tree is unleashed at the hands of the

woodworker. With its lifeless gray bark shed, the fine-grained wood underneath is sculpted into a wardrobe, bed frame, or throne that will last for centuries. During the Ming and Qing Dynasties (15th to 19th Century), the soul of the craftsman was thought to become immortalized in the polished wood, demonstrating both the skill of the worker and the refined taste of the consumer destined to pass on the family heirloom from one generation to the next.[14] Carrying on the tradition in the present, nearly all rosewood pieces made today contain ornate carvings of iconic Chinese symbols and imagery thought to bring luck and prosperity to the owner (Figure 5). Thus when cut and polished, rosewood materializes both personal prosperity as well as a long-standing cultural excellence. The tree is – paradoxically – given a new life in its cutting and crafting. But for those who see the value of the tree only in terms of the forest, this particular beauty will always remain a secret.

Figure 5. A panel of rosewood decorated with the fortuitous dragon image, carved by machine and to be touched-up by crafters.

The second paradox builds on the first. Rosewood, as discussed, has found its way into two contradictory value systems surrounding the tree. The tenets of one (to conserve rosewood trees as endangered species) preclude the tenets of the other (to progressively transform rosewood trees into their culturally superior form). They cannot both be realized at the same time for the same trees. A closer look reveals, however, that despite the opposition, these value systems follow a similar logic. As we will see in Chapter 1, the divergent values associated with rosewood stem from the same modern conjuncture – they represent two manifestations of an increasing global nostalgia. Conservationists aspire to preserve remaining rosewood territories across Madagascar as pristine remnants of a ravaged globe. Meanwhile, classically styled rosewood furnishes the homes of a rising Chinese middle class, materializing a daily reminder of

a romanticized national past for a tumultuous generation.[15] Despite their apparent opposition – rosewood as a global natural heritage versus national cultural heritage – these contrasting demands for rosewood reveal fundamental symmetries. They are completely contradictory and yet, paradoxically, follow the same preservationist logic.

The third and fourth paradoxes reveal an even deeper symmetry between the global assemblages surrounding rosewood: they are mutually reinforcing. Conserving rosewood, it turns out, is good for cutting rosewood, and conversely, cutting rosewood is good for conserving it.

This requires some explanation. Justification for conservation efforts typically requires a looming threat. In Chapter 4, I show that the recent increase in illegal rosewood logging in Madagascar is now cited in place of more traditional and general critiques of locally-driven deforestation in Madagascar. In other words, "the current rosewood plunder in Madagascar has temporarily usurped *tavy* [swidden agriculture] as the main scourge of the eastern forests" (Sodikoff 2012, p. 4). Swidden agriculture has long been a point of contention between conservationists and government officials discouraging the practice on one hand and local resource users who consider it a cultural mainstay on the other (Kull 2004, Corson 2016). By focusing on Chinese-backed illegal logging rather than swidden agriculture, this tension can be eased – if only slightly. Thus, one sees in conservation discourse in Madagascar, a shift away from "environmental orientalism" – based in narrations of local environmental practices as strange and defective (Davis and Burke 2011) – and toward a more "traditional" orientalism (as defined by Said (1978)) based in representations of the Chinese resource investments in Madagascar as destructive and exploitative. Shifting the villain from "local management techniques" to "Chinese-backed illegal logging" is convenient for conservation discourse, adding an even greater destructive force (i.e., China, perceived as growing in power and authority globally) against which to fight. In this sense, cutting rosewood is good for conserving it – so long as the resource survives, that is.

In China, cutting rosewood is also paradoxically good for conserving it – although in a completely different way. As the price of rosewood furniture grows, so does the value of the trees in the ground. The devastation of rosewood species in China and across Asia have led Chinese authorities to promote plantations of endangered rosewood species as a new form of investment, as discussed in Chapter 6. Discouraging large-scale plantations in eucalyptus and other fast-growing varieties, the Chinese government has proposed rosewood plantations as a long-term cultural, economic, and ecological investment. Since around 2007, thousands of hectares of endangered rosewood trees have been planted across southern China, where the climactic conditions are conducive to tropical hardwood growth. This model of rosewood plantation agriculture is also being implemented across borders in neighboring Cambodia and Laos. Thus, while China's booming rosewood market has triggered the devastation of forest resources across the globe, it has also triggered the proliferation of rosewood plantations as a related form of investment.

Not only is cutting rosewood good for conserving it (the third paradox), but conversely, conserving rosewood is good for cutting it (the fourth paradox). Similarly manifesting in both Madagascar and China, this fourth paradox is the flip side of the third. In China, as discussed in Chapter 5, conservation restrictions contribute to higher prices and stronger markets for endangered rosewood (along with other endangered species). These restrictions ensure the rarity of the wood; they exaggerate the scarcity of supply that already exists, artificially driving up price. The situation has become so prevalent with rosewood that the tree now serves as a

speculative investment. Rosewood in China is being bought not only to be consumed as nostalgic furniture, but as a financial investment, buttressing Chinese investors against the throes of inflation. The scarcity of the resource – exaggerated and ensured by conservation restrictions – has made rosewood a very promising investment opportunity. In the face of waning returns and increased volatility in stock, bond, and housing markets, rosewood has become a new investment avenue with a potential for appreciation made significantly stronger by international trade restrictions. Indeed, immediately after the implementation of international trade restrictions for a number of rosewood species in 2013 – including rosewood from Madagascar – prices peaked, amounting to a 500 percent per year increase for certain species since 2005 (Wenbin and Xiufang 2013). The following year, aggregate rosewood sales in China peaked, with annual market sales exceeding $25 billion (EIA 2015). Conservation restrictions – contrary to their intended purpose – have played a significant role in these market dynamics.[16]

On the ground in Madagascar, efforts to conserve rosewood also seem to backfire, making rosewood conservation paradoxically good for rosewood cutting. In particular, conservationists' current push to re-assess all existing rosewood stocks (those logs that have already been cut but not yet exported) has ironically encouraged further pressure for selective logging. Rosewood stock re-assessments, which are required by CITES and certain World Bank loans in order to determine current supplies, have created a renewed impetus for exporters to replenish their stocks. Over the past few years, exporters have been illicitly siphoning these stockpiles through clandestine export operations, making them now much lower than previously recorded. In order to make up for this discrepancy when the next stock reassessment takes place, these exporters must harvest new logs from the forest. The threat of impending stock reassessment thus provokes new logging efforts to replenish stocks to previously recorded levels so that missing logs go unnoticed (Ratsimbazafy 2016).

Another example of conservation policies ironically backfiring is that, in the National Parks of northeastern Madagascar where rosewood still grows, the presence of strictly enforced conservation restrictions are generally associated with increases in general deforestation patterns, rather than decreases. As discussed in Chapter 4, recent studies suggest that strict enforcement of hardwood logging bans in Masoala National Park resulted in a higher rate of general deforestation than when the hardwood ban was relaxed (Innes 2010, Randriamalala and Liu 2010, Allnutt et al. 2013). Although unclear why, this association seems to be a result of increases in swidden agriculture and artisanal mining in the same National Parks where rosewood grows in order to make up for lost logging income (Burivalova et al. 2015). These activities have significantly more impact on biomass and biodiversity than the selective logging of rosewood, which turns out not to have such devastating environmental impacts.[17] This demonstrates yet another way in which conserving rosewood is – paradoxically – good for cutting it.

Rather than exaggerating the scarcity of the wood through trade restrictions or indirectly encouraging more destructive activities in the park through logging prohibitions or stock re-assessments, conservation policies may be more effective by establishing rosewood forestry plantations to help preserve the species and meet future demand. Some wealthy residents in northeastern Madagascar have already begun planting mixed agroforestry gardens containing rosewood as a type of inheritance for their children (Figure 6). Similarly, as discussed in Chapter 6, wealthy Chinese residents as well as the Chinese government have also established large-scale rosewood plantations across vast tracts of land in southern China (Figure 7). Yet conservation groups that influence policies in Madagascar – for no apparent reason other than

their desire to protect pristine nature over a working landscape – overwhelmingly emphasize prohibitions against cutting rosewood over policies that promote rosewood planting.[18]

Figure 6. A rosewood tree growing as part of a living fence in a private tree reserve covering 10 hectares in northeastern Madagascar. Other wealthy residents have also established rosewood and other precious hardwood plantations in the region.

Figure 7. A government plantation of rosewood and other precious hardwoods covering over 2,000 hectares in Guangdong, China. The plantation is a demonstration plot meant to encourage plantations of non-eucalyptus species. Wealthy residents looking for an alternative investment avenue are imitating it (see Chapter 6).

The fifth and final paradox brings us to the forests of northeastern Madagascar, where this once unremarkable tree (to local imaginaries) has now become quite famous, as people from far away dispute its conflicting values. Distant global demands for rosewood have shaped the Malagasy forest and the practices of the people at its margins. They have carved the national parks of the region with parallel trails – those for the tourists and those for the loggers – running side-by-side but never touching. Residents know the feats undertaken to uproot century-old rosewood trees, or conversely, to keep them standing. They know of rosewood's global values in and out of the ground, and, more importantly, they know that they have little chance of accessing the bulk of these distant values, no matter how close they are to the tree.

The fifth paradox is thus a paradox of the global. It reveals that those closest to global resources are often the furthest removed from controlling them. It is a paradox that we see in many, if not all, global resources – a type of globally-controlled local access, wherein those closest to global resources have least say in their development, while those who are the farthest away become the primary drivers of change. But that is not to say that we can then simply ignore those marginal places when considering global dynamics – indeed, the opposite. The flip side of this final global paradox is that while local resource users might have little control over global resources, we still must look to these marginal places to understand global dynamics. Because in the paradoxical space of the global, "out of the way" places such as Madagascar – places that seem to be furthest removed from larger clashes in the global system – become one of the primary arenas of their unfolding.

As with paradoxes generally, the paradoxes surrounding rosewood indicate a greater flaw or limitation that, to be properly addressed, requires an entire reevaluation of one's thinking. This is the subversive potential of the paradox: it threatens received wisdom and the status quo. Cutting against the grain of "common sense" – both in terms of the U.S. nature preservation and the cultural preservation of Chinese woodworkers and consumers – these rosewood paradoxes suggest a fundamental reexamination of key assumptions that might otherwise go unquestioned. The scientific foundations of conservation, the cultural clash with China, and the marginality of Madagascar must all be reexamined. This subversive potential is precisely why Thomas Hobbes noted centuries ago that those with authority speak of the paradox "with such scorn or detestation, that a simple reader would take a paradox either for felony, or some other heinous crime."[19] The judicious reader, Hobbes continues, knows that "a paradox is an opinion *not yet* generally received."[20] The paradox, in other words, has a unique potential to turn the tides of received wisdom.

But as the pendulum swings from one vantage point to another, new contradictions arise. The paradox does not offer resolution, but critical reflection. The strength of the paradox is not the primacy of one side over the other, but the critical reflection inspired by considering them both simultaneously in all their complexity and contradiction. Frustrated, most have come to accept the presence of paradoxes as unavoidable and largely unproblematic. The label "paradox" is now used to acknowledge – but also to ignore – that which does not conform. The label gives temporary resolution to the unresolvable, allowing anomalies to be swept under the rug. Though this gives peace of mind, every so often it is useful to reinvigorate the subversive potential of the paradox – not by replacing one received wisdom with another but by considering them both simultaneously. In the case of rosewood, the paradox comes into focus when investigating its spaces of overlap. Examining Western conservation practice, Chinese cultural history, and Malagasy work in the forest as overlapping assemblages that meet within

the context of rosewood allows for the paradoxical potential of this space of global contestation to become, as noted above, a space of common ground.

Methods

This dissertation is based on ethnographic fieldwork conducted in Madagascar and China, and is supported by policy, economic, and historical analyses. My research interests originate in my experience living in northeastern Madagascar as a Peace Corps volunteer in 2010 and the beginning of 2011. I returned to conduct fieldwork in the same location during the summers of 2014 and 2015. During my fieldwork in Madagascar, I interviewed rosewood loggers, traders, and conservation agents through approximately fifty formal interviews, fifteen of which stretched over the course of days or weeks in an attempt to create an oral history of the rosewood trade in the region. In addition to these formal interviews, informal interviews with residents indirectly affected by the trade were held daily. In total, I informally interviewed approximately fifty additional residents, discussing topics ranging from the dynamics of market opening and closure, price changes over times in both rosewood and other items subject to inflation due to rosewood price dynamics, the impacts of rosewood price and policy dynamics on the community, and government monitoring and control. Additionally, for those that participated in the rosewood economy directly as loggers or traders, interviewees and I made maps of the routes of the logs as they traveled from the interior of the forest to the surrounding villages and finally to the coast for export. After the end of my fieldwork, I maintained contact with many residents living in the region to monitor continuing developments, and have incorporated this information into my dissertation analysis.

Supplementing my fieldwork in Madagascar, I also catalogued and analyzed approximately fifty news articles covering the rosewood trade from local and national news outlets, including *Madagascar Tribune, L'Express de Madagascar, La Gazette de la Grande Ile, Madagascar Matin, Midi Madagasikara,* and *La Vérité*. I further corroborated this information to the extent possible with international reports on the rosewood market and national and international policies regulating its trade, as discussed in Chapter 2.

Through interviews, ethnography, and textual analysis, my research in Madagascar was an attempt to construct a local perspective of the rosewood trade in order to supplement existing international accounts. While my ultimate goal is to understand rosewood as a global phenomenon, I maintain an ethnographic approach to the global. Acknowledging that there is no abstract layer one might call "global," I approach global dynamics as (dis)connections across time and space that bring disparate cultural, political, economic, and ecological elements together, even if only momentarily.

In addition to my work in Madagascar, I also conducted fieldwork and policy, economic, and historical analysis in China. My fieldwork was carried out primarily in Shanghai, during the winters of 2014, 2015, and 2017, and Guangdong Province during the Spring of 2018, for a total of about four months. During this time, I interviewed timber importers, furniture makers, and urban Chinese families who recently purchased rosewood furniture or maintain a family heirloom. Supplementing my fieldwork, I also reviewed market reports on the rosewood trade in China since 2000 and Chinese policies governing the trade. In order to historically situate this contemporary demand, I analyzed the cultural history of rosewood in China dating back to the Ming and Qing Dynasties, as discussed in Chapter 5. This historical analysis involved secondary

textual reviews of ancient rosewood furniture artisanship during the Ming and Qing Dynasties and interviews with individuals and families who lived through China's Cultural Revolution, and in many cases, had their rosewood family heirlooms confiscated or destroyed. Finally, I reviewed China's historical and contemporary forestry policies related to rosewood and reforestation and visited three rosewood plantations in Guangdong Province, as discussed in Chapter 6.

As with my research in Madagascar, my research in China adds new perspectives to some of the longstanding issues in rosewood debates, as well as conservation debates more generally. Most prominently, rosewood demand is discussed in the international news and academic literature summarily at best – often chalked up to a particular brand of Chinese conspicuous consumption that exemplifies Orientalism *par excellence*. Rooted in ethnography, my research in China attempts to bring the situated perspective of rosewood importers, crafters, and owners into the global arena. The conclusion to this dissertation reflects on what accounting for such disparate vantages will mean for the future of global environmental governance.

Theory

This dissertation connects three bodies of literature, each rooted in different fields of study. The first field is *political ecology*, and specifically the branches within political ecology that study socionatural formations, or "socionatures." Following those political ecologists that go against the analytical grain, slicing the world perpendicularly to the nature-culture divide, I approach rosewood as a socionature. This means that I emphasize the entanglements of social and natural elements rather than their isolation. The second field is *global governance*, and specifically studies in global governance that see resource competitions as contestations over both meanings and materialities. Following those global governance scholars that analyze resource struggles beyond purely utilitarian concerns, I explore the global discourses and cultural elements that govern rosewood conservation and logging. As with all global resources, geopolitical struggles over rosewood are based in discursive formations that legitimate or de-legitimate material controls. The third field is *anthropology*, and specifically the subfield within anthropology focused on "ethnographies of the global." Following those anthropologists that consider the global not as a uniform layer enveloping the Earth but as a network of connections that isolate as much as they unite, I use the case of rosewood conservation and logging to document specific moments of global (dis)connection from an ethnographic perspective. Each of these theoretical approaches are discussed below.

Political Ecology: Socionatures and Conservation

Opposing the idea of nature as an objective category existing in isolation of the human, the concept of "socionatures" complicate traditional nature-culture binaries.[21] For socionatural scholars, nature is "inescapably social" and best understood in light of this entangled sociality (Castree 2001). In this way, socionatures de-naturalize nature, revealing that far from an objective category the concept of nature is a potent breeding ground for politics and power. This hybrid concept thus shifts the focus of analysis from objective nature and instead toward socionatural productions.

The implications of a denaturalized nature for conservation are considerable. By questioning the existence of a pristine, humanless nature, socionatural approaches problematize preservationist models. Under a socionatural lens, a nature devoid of humans does not exist; nature is in fact understood as a profoundly human creation, a "reflection of our own unexamined longings and desires" which "could hardly be contaminated by the very stuff of which it is made" (Cronon 1995, 69-70). Thus, as noted in Chapter 1, protecting pristine nature from humans is tantamount to protecting the created from the whimsy of their very own creators. Rather than protecting one from the other, a socionatural approach emphasizes the unavoidable hybridity of social and natural worlds. In doing so, the concept fundamentally questions the ability – and desirability – of a Western conservation agenda based on nature as separate from a human world.

In this dissertation, I analyze rosewood as a socionature. Although rosewood might at first appear rather one-sidedly natural or cultural, a fresh analytical slicing reveals the tree's deeply socionatural entanglements. This means cutting against the grain, so to speak – transecting the nature-culture divide that dominates global imaginaries of the tree. It means understanding rosewood not just as an endangered species, but also as a symbol of a tropical landscape that gives substance to the pristine nature conservationists are intent to preserve. Outside of the conservation context, it means understanding rosewood not just as an exquisite building material, but also as a material that gives substance to the cultural heritage that many in China are equally intent to preserve. And most importantly, it means questioning the apparent opposition between these natural and cultural understandings of rosewood.

Global Governance: Discourse and Power

Global governance studies now grapple with an expansive definition of power – power as productive, generative, and facilitating, as opposed to simply repressive and compulsory. Understanding power as productive puts discourse at the fore of any policy analysis. By framing objects and delimiting the possibilities of action in relation to them, discourses are indeed quite powerful. This new vision of power, however, has yet to be adequately implemented in studies of global governance, particularly by those interested in analyzing the nation-state or inter-governmental organizations as the primary unit of analysis. Despite its "ideational turn," global governance scholars typically isolate power in terms of discrete independent variables – "norms" and "ideas" – neatly excised from their discursive contexts. Even more problematic, these variables are often relegated as strictly residual, only accounting for those factors otherwise not explained by materialism. This is especially true for studies concerning global resource conflicts and geopolitical struggles (the fight for oil, minerals, land, water, and so forth), which offer perhaps one of the last refuges for a purely materialist critique.

Rosewood provides an opportunity to revise utilitarian explanations. Unlike many global resources that inspire conflict, rosewood is not demanded primarily for utilitarian purposes. Despite its geopolitical significance, the demand for rosewood is based on situated ethics. It is not a generic timber, but a tree with rich histories based in divergent ethical configurations. Its particular biophysical characteristics – slow growing, deep hue, fine grain, rare – articulate with cultural elements that define the tree as either endangered species or preeminent cultural resource. Rosewood thus reveals the discursive elements through which resources are made meaningful and the fight for them made (il)legitimate.

Applying the lessons from rosewood to other global resources, one might better see the discursive elements (manifest destinies, terrorist dictators, cultural superiorities) that legitimate, for example, land annexation, mineral monopolization, or tropical forest conservation. More specifically, when applying these lessons to the field of global environmental governance, one might better see the legitimating construct of the "global environment" – a powerful imaginary that permits highly localized resources (such as rosewood) to be conceived of and governed in a global context. By bringing discourse and other cultural and ideational elements into the terrain of global resource studies – along with material considerations already well-developed in the field – I hope to demonstrate how the ethics surrounding rosewood are produced through battles of discursive formation in addition to material contestation.

Anthropology: Ethnographies of the Global

The concept of the "global" aspires to a certain universality. The global is an attempt to abstract the particular into the standard, permitting a singular metric or calculation to connect space and time, no matter the distance between.[22] The consequence of such universal aspirations, as discussed in Chapter 1, is not any sort of *actual* universality or homogeneous connection, but rather hybrid configurations that reconcile universal rationalities with situated practices. The result is the "actual global" (Ong and Collier 2005) or "the grip of worldly encounter" (Tsing 2011) – not the universal, but that which stems from a faltering aspiration toward universality as it articulates with situated elements across the globe.

Investigating the global thus requires a reconciliation of universal aspirations with situated practices and the hybrid configurations that ensue. Global connections shape disparate regions through transient yet profound association. They bring disparate elements together in a situated confluence that reorders and reorganizes particular geographies. Yet, as discussed in Chapter 3, global connections are often highly selective, operating amidst a great deal of disconnection (Ferguson 2006). The process of globalization is not sanitized connectivity, but rather brutal distortions that bring together supply and demand, along with little else. Far from homogenizing, globalization is highly selective, heterogeneous, and contested.

In this dissertation, I use rosewood as a prism, refracting its global and situated elements through an ethnography of the global. By locating rosewood within its broader configuration of culture, capitalism, science, and the state, this dissertation interrogates global connections beyond the economic and beyond the (aspirationally) universal. In doing so, it provides a multi-scalar ethnography that brings global paradoxes to the fore.

Chapter Overview

The next six chapters of this dissertation follow Malagasy rosewood as it travels from the forests of Madagascar to the modern Chinese home. The first chapter provides a global overview, while the remaining five chapters are divided into two parts: Part I on Madagascar, containing three chapters, and Part II on China, containing two chapters. The conclusion discusses the implications of the case of rosewood for emerging global dynamics.

Chapter 1 uses assemblage thinking to dissect the two global assemblages that define rosewood as either an endangered tree or cultural commodity. The chapter contrasts the global *conservation assemblage*, stretching from American NGO headquarters to the parks of

northeastern Madagascar, with the global *commodity assemblage*, circulating the felled trees within these parks to their final Chinese destinations. Despite their opposition, these global rosewood assemblages demonstrate a subtle congruence that casts doubt on the stark East-West opposition typically characterizing debates surrounding rosewood and other endangered resources (ivory, rhino horn, tiger parts, and so forth). Resource conservation and extraction efforts in the developing world, the chapter finds, are not as distinct as commonly understood.[23]

Chapter 2 focuses on the political economy of the rosewood trade in Madagascar. This chapter documents the political infiltration of a group of local rosewood traders from northeastern Madagascar into the highest levels of the Malagasy government. The chapter argues that revenues generated during Madagascar's rosewood logging outbreak, combined with the country's return to electoral politics at the end of 2013, have together facilitated the political ascendancy of this elite group of local rosewood traders with direct ties to China. These traders now ride the wave of Chinese demand for rosewood, gaining new political heights within Madagascar's post-coup regime in a pivotal power grab the international community has yet to fully recognize. While some might understand these political dynamics as backward or corrupt, they ultimately reveal electoral patterns that can be found in even the most advanced democracies.

Chapter 3 widens the lens of analysis to consider not only rosewood, but also vanilla – the other major export commodity of northeastern Madagascar. Together, rosewood and vanilla dominate regional economic development. Through their boom and bust cycles, these export commodities provide loggers and farmers with record returns one year, and little to nothing the next. Rather than saving or investing during market booms, these loggers and farmers often spend their earnings in "hot money" sprees on cold beer, gambling, and other forms of immediate consumption. This chapter argues that, far from being illogical or unproductive, hot-money spending and other practices associated with export economies provide an everyday tactical approach to the extreme volatility of the new global economy. They demonstrate a "cultural logic" – not of late capitalism generally, as Frederick Jameson might say, but of the experience of late capitalism from the margins. Yet while coming from the margins of global capitalism, these tactics express extreme dynamics found at its core.

Further complicating global dynamics, conservation interventions have attempted to stop rosewood exports from Madagascar. More than stemming the trade, however, the intensification of conservation efforts has occurred alongside continued logging and export. Chapter 4 argues that this combination of intensified conservation efforts alongside continued logging has engendered a "worst-case conservation" scenario. Fines generated from rosewood logging have encouraged rent-seeking practices by environmental authorities that end up increasing – rather than alleviating – logging activities. Conservation penalties are imposed generally on villages regardless of individual adherence to regulations. The widespread belief that villagers will be penalized no matter what ensures that environmentally detrimental practices continue – even proliferate – despite regulation.

Traveling from the forests of Madagascar to the booming timber markets of China, Chapter 5 begins Part II of the dissertation. This chapter investigates the cultural history of rosewood in China in order to understand current global demand. The chapter finds that the current boom in demand for rosewood cannot be reduced to burgeoning "exotic tastes" or wanton "conspicuous consumption" on the part of the Chinese. Rather, the contemporary demand for rosewood is the result of a convergence of traditional aesthetics and a frenzied

economic growth that have turned classical rosewood furniture into a speculative cultural commodity. Again, conservation interventions intended to stop the trade in rosewood end up exacerbating the situation – in this case, heightening its speculative demand.

Chapter 6 uses the case of rosewood and other precious hardwoods to demonstrate the rise of what I refer to as a new type of "agro(cultural) forestry" in China. Along with increasing speculative demand for rosewood, many investors have also turned to rosewood plantations as a way to secure both long-term returns and maintain the cultural legacy of the country. Mixed with shorter-term "understory economies" (*lin xia jingji*) in high-value cultural commodities (herbs, teas, essences),[24] these plantations have become quite lucrative and are beginning to replace the near-ubiquitous eucalyptus plantations outside of Guangzhou. This chapter demonstrates that although China consumes rosewood in unprecedented quantities, the country has also established unprecedented reforestation projects in an attempt to meet future demand. Through reforestation and plantation agriculture, China engages in a type of environmentalism that circumvents a western conservation ethic, even as it attempts to save species.

Together, these six chapters on Madagascar and China offer a new approach to the global. Beyond the economic ties that span the globe, globalization is the connection of vastly different cultural and political elements across time and space. One sees in the case of Malagasy rosewood how this singular tree unites the cultural legacy of a country as vast as China with the political identity of a modern day Malagasy regime through an endangered species designated global conservation priority in the West. Transecting scales and disciplines, this dissertation reveals paradoxes that are the hallmark of global dynamics. As global demands for rosewood that are in many ways more similar than different duke it out in the forests of Madagascar, it becomes increasingly clear that the Malagasy people closest to the resource will have the least input in determining its fate. This is a paradox of rosewood, but also a more generalizable paradox of the global: the counterintuitive reality that those closest to global resources benefit least from their extraction and, conversely, that places that seem to be furthest removed from larger clashes in the global system can become one of the primary arenas of their unfolding.

[1] Rosewood, as it translates in Mandarin (*hong mu*, 紅木), is an informal term referring to a group of hardwood species that are (usually) red in color and widely used for furniture making in China. Original species comprising this group include *huali* (花梨, typically represented by *Dalbergia odorifera*) and *zitan* (紫檀, typically represented by *Pterocarpus santalinus*). These species have since become virtually extinct and largely replaced by other species of the *Dalbergia* and *Pterocarpus* genus (Wenbin and Xiufang 2013). Rosewood from Madagascar (卢氏黑黄檀 or 大叶紫檀, typically represented by *Dalbergia louvelli*, among others) is one of these replacements.

[2] All species from Madagascar within the genus Dalbergia (representing rosewood and palisander species) and Diospyros (representing ebony species) were listed under CITES Appendix III in 2011 and uplisted to CITES Appendix II in 2013.

[3] Walsh (2005) and Keller (2015) also make this observation.

[4] Interview, Antalaha, July 25, 2014.

[5] Significantly more money, however, has been spent on rosewood logging, with that figure alone reaching the equivalent of over a billion US dollars. Conservation finance, especially that specifically mentioning rosewood or intended to curb rosewood logging, remains in the hundreds of millions.

[6] As noted by Randriamalala (2012), "But it is clear that the prediction made on November 15, 2009 by a close collaborator of the [rosewood] traffickers is on track: 'We hear arrogantly from Chinese buyers, that the export will always continue in one way or another, because with their money, they think they can go through even the most highly placed doors'" (translated from French).

[7] A special task force of 120 troops and a helicopter was established to secure protected areas in northeastern Madagascar from the rosewood logging. Funding was provided by international donors (World Bank, UNESCO and others), while conservation NGOs (World Wildlife Fund, Wildlife Conservation Society, and others) provided logistical and material support (Ratsimbazafy 2016).

[8] Oxford English Dictionary (OED 2018), entry for "paradox."

[9] More (1533), cited in OED (2018): "To proue vs thys wonderfull straunge paradox, thys opynyon inopinable."

[10] London News (1890), cited in OED (2018): "A paradox is a proposition really or apparently contradictory to a commonly received idea... It is, as its name indicates, a conceit contrary to opinion, but not..contrary to reason. A position contrary to reason is a paralogism."

[11] As Soren Kierkegaard (1962) provocatively notes, the paradox is the "passion of thought," paradoxical in and of itself, as through the paradox, the thinker seeks the limits of his own understanding – the desire to "discover something that thought itself cannot think."

[12] Sapwood refers to the vascular tissue of the tree that is located between the outer bark and the inner heartwood.

[13] This age of minimum economically viable harvest should be considered with suspicion. The economic value of the wood depends on the growth of the individual and, although bearing lower quality wood, it is likely that trees may be harvested at a younger age.

[14] As discussed in Chapter 5, furniture making became so revered, in fact, that the furniture itself was considered "to have a soul, epitomizing the cultural or even moral height of its designer and the taste of its user" (Yuan 2011, 39).

[15] This "tumultuous generation" refers to those who have lived through China's Cultural Revolution (1967-1976), among other turbulent events of the Mao Zedong era, as discussed in Chapter 5. The "romanticized national past" refers to the late Ming and early Qing Dynasties, which is contemporarily evoked as a preeminent era of Chinese cultural distinction, also as discussed in Chapter 5.

[16] Importers I interviewed initially pointed out this connection to me, and I later confirmed it in news reports on Chinese timber markets after international trade restrictions were imposed.

[17] Selective rosewood logging typically creates a small gap in the forest canopy of 100-200 m^2 that can be sealed within months of cutting (Burivalova et al. 2015). Deforestation estimates, however, must also taking into account that a large number of additional lighter-weight trees are also typically cut for transportation of rosewood logs down rivers.

[18] The major conservation organizations working in northeastern Madagascar (World Wildlife Fund, Wildlife Conservation Society, and Conservation International) are much more focused on preventing the illegal logging and export of rosewood than re-planting rosewood or establishing rosewood plantations to meet future demand. For example, in developing the borders of Masoala National Park, WCS performed an economic analysis demonstrating that sustainable forestry could be performed outside the park to help promote sustainable livelihoods and offset the loss of arable land and resources imposed by the Park (Kremen et al. 1999). Yet, despite this analysis showing it is economically feasible, little funding or support has been provided to actually establish this type of sustainable forestry. Rather, the focus is on maintaining the park boundaries and curbing illegal logging within the park.

[19] Hobbes (1656), cited in OED (2018).

[20] *Ibid*. Emphasis added.

[21] Peluso (2012) likens a socionature to a "Latourian hybrid between cultural conceptions and representations of nature and the actual 'natural objects' and social relations they describe" (81). Swyngedouw (2004) is the first to coin the term, drawing on two distinct schools of thought: (1) critical geographers emphasis on the interconnectedness of society and nature (such as Harvey's [1996] insistence on the "naturalness" of New York City and Smith's [1984] "production of nature"), and (2) science studies scholars emphasis on the hybridity among the techno-scientific and organic (such as Latour's [1993] "quasi-objects" and Haraway's [1991] "cyborgs"). My usage of the term also derives from these two schools of thought, and follows Peluso (2012) to the extent that I use a socionatural approach "to better explore the entanglements of environment, commodities, and subjects" (81).

[22] In this sense, the "global" can be understood as a product of modernity. Modern institutions and rational systems have a peculiar proclivity for diffusion. Based on a distinct and circumscribed rationality, these modern forms – like global forms – retain a unique ability to disperse and re-associate. They are, in this sense, "universal" (as Weber would have it) or "disembedded" (as Giddens would have it).

[23] The notion of "green grabbing" – a term used to refer to "the appropriation of land and resources for environmental ends" (Fairhead et al. 2012, 237) – provides another argument for the similarities between resource conservation and extraction efforts in the developing world. The primary (although not exclusive) focus of the green grabbing literature is how environmental efforts bring new resources into capitalist circulation, thus providing an analogy with resource extraction efforts. Rather than focusing on the shared tendency toward capitalist expansion, my dissertation – especially chapter 1 – emphasizes another similarity between resource conservation and extraction efforts in the developing world. Using the case of rosewood conservation and logging, I show that both global efforts lay claim to Malagasy resources, but through situated ethics that are not at all shared by Malagasy people. In either case, the appropriation is not necessarily (or at least not exclusively) capitalist, but also cultural. See Chapter 1 for further elaboration.

[24] These understory economies are reminiscent of Kosek's (2006) "volatile" and "complex understories" that reveal deeper histories within their undergrowth (287).

Chapter 1

Rosewood Occidentalism and Orientalism

I. Introduction

For the conservation planner delimiting protected areas in northeastern Madagascar via offices in the United States, rosewood is an endangered tree to be accommodated within conservation areas to the greatest extent possible. Indeed, for an entire generation of conservationists, preservation of endangered species such as rosewood plays a pivotal role in confronting the global specter of biodiversity loss. In contrast, for the furniture connoisseur in Shanghai who looks quite favorably upon the progressive transformation of century-old trees into ornate classical furniture, rosewood is a cultural icon that materializes the greatness of a nation. Indeed, for an entire generation of Chinese citizens divided by a closed cultural past and a new global economy, classical rosewood furniture provides a harmonizing bridge uniting these two worlds. And for the Malagasy people whose lives have been intimately shaped by these contradictory global demands, rosewood has become a *kakazo malaza* – a famous tree.

These divergent vantages tell the story of what I call rosewood occidentalism and orientalism in Madagascar – the story of how, mainly in the past two decades, the forests of northeastern Madagascar have become intricately connected to either end of the world in very different but interrelated ways. The connection is often understood in terms of an East-West tension. Although the United States and other European countries have restricted rosewood trade, instead championing Madagascar as a vital "biodiversity hotspot" and denouncing the Chinese-driven "rosewood massacre," rosewood exports to China have nonetheless mushroomed, fueling a growing demand for classically-styled luxury furniture. Implicit in this global competition of Western conservation versus Eastern décor, is the stark contrast between the "realities" of conservation science and the "contingencies" of exotic taste. Chinese demand for rosewood – along with other environmentally sensitive resources, such as ivory, rhino horn, tiger parts, and shark fin – has become an iconic point of contention for conservationists in their struggle to save biodiversity the world over.

Analyzing rosewood through the lens of assemblage, this chapter problematizes the opposition on which this East-West tension is based. Assemblage is a conceptual tool meant to account for the multiplicity and contingency that characterizes the world, thereby countering analytical approaches that understand the world in terms of essentialized wholes. In this chapter, I analyze rosewood as simultaneously operating within two overlapping global assemblages: (1) the *conservation assemblage*, stretching from NGO headquarters in the United States to the rosewood forests of northeastern Madagascar, and (2) the *commodity assemblage*, transporting the felled trees within these forests to their final Chinese destinations.

The analytics of assemblage allows one to acknowledge – but also look beyond – the strategic essentialisms of East and West that have increasingly found their way into global conservation dilemmas. Although "East" and "West" is a problematic distinction, what is more problematic, I maintain, and what I will challenge in this chapter is not the distinction itself, but

the segregated validity and differential legitimacies this distinction implies. I evoke the dichotomy, therefore, to scrutinize it with all the assumptions of assemblage theory and, ultimately, to demonstrate a core similarity between the Eastern and Western approaches to rosewood and many other cultural products-turned-endangered species. This similarity – the situated ethics each assemblage recalls and the global rationalities that send the assemblages all over the world – belie popular accounts of the global opposition inherent in rosewood conservation and trade. By locating rosewood within its broader configurations of culture, capitalism, science, and the state, this chapter utilizes an assemblage approach to dissect the seemingly divergent global demands for rosewood. The goal is to expose the strategic essentialisms – occidentalisms and orientalisms – that have increasingly found their way into global conservation dilemmas.

The point of this chapter, therefore, is not to simply emphasize the conflicting occidental and oriental claims placed on Malagasy rosewood by Western and Eastern interest groups alike, but rather to show how these claims are based in separate but parallel and strategic representations. As Said (1978) warns in his seminal work, Orientalism is "not a misrepresentation of some oriental essence;" instead, "it operates, as representations usually do, for a purpose, according to a tendency, in a specific historical, intellectual, and even economic setting" (273). Taking Said's point to heart, this chapter acknowledges rosewood occidentalism and orientalism as strategic and situated representations that conjure essences. Going beyond Said's traditional critique, however, the chapters also acknowledges the evolution of these "isms" to include self-orientalisms as well as conspicuously-absent occidentalisms that are all performed – both parties being realistic about the matter – more in the sense of anxious competition than clear domination of the one over the Other. Acknowledging that cultural imperialism may now reflect defensiveness and insecurity more than confidence, this chapter agrees that today's orientalisms are deployed on less stable ground.

Sections II and III of the chapter lay out the conceptual framework for my analysis. Section II uses Deleuze and Guattari's characterization of an assemblage as rhizomatic – as opposed to arborescent – in order to set the stage for analyzing rosewood as a rhizome and not a tree. Section III displaces this framework to the global level by outlining Ong and Collier's (2005) definition of the global and the situated. Section IV utilizes the conceptual framing outlined in Sections II and III to dissect the conservation and commodity assemblages in terms of their global and situated elements. Each assemblage blurs situated cultural elements with global rationalities in order to ordain the worth of rosewood. The result is the fallacious appearance of either a universal science uncorrupted by culture (in the case of the conservation assemblage), or a cultural eminence uncorrupted by capitalism (in the case of the commodity assemblage). Section V follows these global assemblages as they meet in the forests of northeastern Madagascar, reterritorializing the situated Malagasy terrain. The chapter concludes with implications for emerging global dynamics that we will return to in the conclusion to the dissertation.

II. Rhizomatic Rosewood

The two essentializations of rosewood discussed in this chapter – rosewood as an endangered species of the soil and rosewood as a polished product of cultural eminence – can each be characterized, following Deleuze and Guattari (1980), as "arborescent." Arborescence, or "tree

logic," follows a linear chronology that underlines an assumed unity in things, their origin, and their conclusion. The metaphor is based on the image of a tree stretching from root to bud as a unified organic whole. Rather than apprehending the world in terms of provisional concepts that map its emergence and flow, arborescent thinking imposes superficial unities that imbue the perceived world with a false concreteness. This is the tendency with rosewood. Symbolizing either the untouched tropical world or its rightful and crafty domination, the "natural" and "cultural" histories of rosewood respectively stretch from root to bud, obscuring the multiplicity beneath.

But Deleuze and Guattari are "tired of trees" (15). Instead, they advance a rhizomatic understanding of the world. Analyzing rosewood as a rhizome and not a tree exposes the strategic essentialisms that manifest in both sides of the contemporary rosewood debate. In Deleuzian terms, that is to say, rosewood = (n – 1). Rosewood is not the arborescent unity of representation (occidentalism or orientalism) operating in its own empty dimension (the "1" to be subtracted), but rather the multiplicity beneath (the "n" often obscured): rosewood furniture inspired by the classical dynastic tradition is now manufactured in China on an industrial scale for domestic consumption.[1] Because of China's booming investment climate, the wood serves both as a timeless cultural icon and a very timely investment opportunity. With price increases of up to 500 percent since 2005, demand for rosewood in China has reached unprecedented heights and the country now looks to Africa for a fresh supply (Wenbin and Xiufang 2013). Madagascar, with its humid climate and weak state, provides the most lucrative opportunity, fetching $40,000 per m^3 in Chinese markets or $1.50 per kilogram hauled from the bush in Madagascar.[2] Malagasy rosewood species, however, are also critically endangered and grow only in the country's protected areas.

Rhizomatic rosewood is, as all rhizomes are, contingent – not constitutive. Rosewood does not have *intrinsic properties* (e.g., rosewood as "natural" or "cultural"), but only *capacities to interact* which are contingently exercised depending on the wider constellation of elements with which they associate (e.g., rosewood as cultural icon, turned investment commodity, turned endangered species, turned *kakazo malaza*, and so forth). As a rhizome, rosewood's connections result not in organic wholes (what Deleuze and Guattari would consider arborescent unities), but heterogeneous aggregations – or, *assemblages*.

Assemblages, at their most basic level, are defined as "wholes characterized by relations of exteriority" (DeLanda 2006, 10). In other words, assemblages are wholes comprised of a diversity of parts – or rhizomes – that are easily extracted and reinserted into other assemblages. They favor emergent, not intrinsic, properties. This is in contrast to organic wholes, which are defined by relations of interiority – relations which constitute the very identity of their component parts and preclude their parts' separate existence outside of the whole which they form (i.e., the parts are constitutive of the larger whole). From an assemblage perspective, relations of interiority and the organic wholes which they constitute are an epistemological illusion. They are arborescent unities obscuring the multiplicity beneath. Instead, all entities operate as rhizomes and cohere – only temporarily – as assemblages. Under the analytics of assemblage, even the tree is a rhizome.

The assumption of relations of exteriority is one of assemblage thinking's widely agreed upon merits. By maintaining that entities cannot be understood inherently, but only according to their position within a wider constellation of elements, assemblages "demand an empirical focus" and solicit an "ethos of experimentation" (Anderson et al. 2012, 174). They do not point to a pre-existing spatial imaginary or privilege a particular historical narrative or master concept,

but rather demand continual mapping (McFarlane 2009) with the boundaries of spatial inquiry drawn by the analyst. Yet, on the downside, by embracing emergent properties and contingent processes, assemblage thinking may facilitate a certain anything-goes inexactness that has the potential to obscure more than clarify (Robbins and Marks 2010, 192). Even more problematic, assemblage thinking, at best, does not readily connect with Marxist political economic critiques and, at worst, substantially undermines them (Brenner et al. 2011, Saldanha 2012). By missing the political economic "context of contexts," as Brenner et al. (2011) emphasize, assemblage theory lacks explanatory power and generally fails to grasp the world, quoting Marx, "by the root" (238).

Assemblage thinking does indeed prefer rhizomes over arborescent roots. Although this may lead to shortcomings when confronting Marxist political economy, the focus on rhizomes nonetheless permits a certain flexibility that is necessary for traversing the divergent geographies through which rosewood circulates. As a rhizome, rosewood connects China's ancient cultural legacy with rural villages at the edge of the Malagasy forest through an endangered species designated global conservation priority in the West. By placing these disparate milieus in comparative critique, an assemblage approach captures the dynamism that characterizes this rhizomatic global resource. It exposes the strategic essentialisms that manifest in the rosewood dilemma and the empty dimension in which they operate, thus *making* the multiple – not by adding a higher dimension, but by simply taking one away.[3]

III. The Global and the Situated

The "global" is a difficult concept to grasp, especially when conceived in terms of assemblage. Most frequently, the term indicates a ubiquity or transnationality reserved for phenomena occupying a vast geographic range. This definition of the global, however, is *not* how the term is used in assemblage thinking. Following Ong and Collier (2005), the global in terms of assemblage is instead defined with reference to Max Weber (1930), as characterized by a "specific and peculiar rationalism." The rationalism to which Weber refers is defined primarily by its potential universality. By way of example, Weber highlights capitalism's economic rationalism, which he claims is initially Western but has come to attain a "universal" significance. Economic rationalism, along with bureaucracy and the technosciences, are what Ong and Collier refer to as "global forms." They are abstractable from social context and therefore highly mobile. Mirroring the rhizome, global forms have the distinct capacity to disassociate and recontextualize, connecting disparate milieus as they travel.

The "global" in terms of assemblage is thus not defined by size or extent, but by a rationality that travels and connects. Global forms retain a certain autonomy from situated elements, even as they interact deeply with them. They are based on a significance and validity does not depend on "the 'props' of a 'culture' or a 'society'" (Ong and Collier 2005, 10). Similar to Latour's (1986) "immutable mobiles" – the images and inscriptions made to be so easily displaced across the globe and interpreted without regard to context – global forms retain a specific rationality that defines and connects them as they recontextualize throughout the world. They harbor the unique potential to become disembedded from social time and space. Thus, while many phenomena cross national borders or span the globe, only those phenomena with a distinct and circumscribed rationality – evoking a unique ability to disembed, disperse, and re-associate – can be considered "global" in this sense.

Take, for example, the conservation organization World Wildlife Fund (WWF) and its well-traveled giant panda icon. In terms of global coverage, WWF's giant panda is a global icon *par excellence*. But the image retains credence only in the registers of those familiar with the story and cachet of its philanthropic mission. The science and bureaucracy through which WWF and other conservation organizations undertake their mission, however, retain a significance and validity in relation to "the impersonal and self-referential terms of technical systems" (Collier 2006, 400). Conservation science and bureaucracy can be developed across any cultural context. It is the techniques of conservation – delimiting protected areas through ecological modeling global positioning system (GPS) coordinates, instituting complex bureaucratic procedures for their management – that are considered global under the analytics of assemblage, not because these techniques happen to exist all over the world, but because they are easily extractable from the situated ethical narrative on which they are based.

But global forms provide only part of the story. Global forms are sustained and incorporated through their interaction with situated elements – through their positioning within "the vagaries of a social or cultural field" (Ong and Collier 2005, 11). The situated provides, in some ways, an *actualization* of the global. As global forms proliferate and disperse, situated elements shape their dispersal and recontextualization. Again, consider the techniques of conservation. GPS coordinates of park boundaries designed at the desks of American conservationists recontextualize as red paint on trees in the Malagasy forest. Principles for managing forest resources recontextualize as community contracts for living on the land. A five-point monthly evaluation scheme for managing these communities recontextualizes as stacks of paper in a newly-built community office at the edge of the forest. And while these techniques of conservation might signify a noble cause to most Americans, they likely signify, as shall be discussed, something quite different to the Malagasy communities that are their target. The actual shape and significance of global forms for individual and collective life is realized through their interaction with situated elements.

Through the mutual articulation of global forms and situated elements, the "actual global" emerges – what Ong and Collier (2005) refer to as the global in the space of assemblage. Instead of the global enveloping or structuring the local (i.e., the political economic "context of contexts"), global assemblages denote a heterogeneous assortment of global forms and situated elements irreducible to a singular logic.[4] The global in terms of assemblage is not a unifying "context," but a diversity of forms – economic rationalism, bureaucracy, and the technosciences – circulating rhizomatically across various situated milieus. Consequently, assemblage approaches may miss the transcendental property of capital to reshape the world in its image, while political economic critiques grasp that quite well. But assemblage theory does grasp a certain complexity to the global, wherein multiple logics are at play.

Following recent studies that utilize an assemblage approach (Swanton 2012, Wood 2013, Havice and Iles 2015, Le Billon and Sommerville 2016, Nel 2017), my point is not to espouse the merits of assemblage thinking over political economic critique, but rather to demonstrate their potential for different critical insights. In doing so, I acknowledge modes of critical inquiry as assemblages in and of themselves, with different capabilities, differentially expressed. I analyze rosewood in terms of assemblage not because it provides a more accurate picture with more compelling explanatory power, but because it offers an ulterior prism for refracting the global and situated elements that have come to define this rhizomatic global resource.

IV. Global Rosewood Assemblages

This section dissects the global conservation and commodity assemblages in which rosewood and its associated "isms" circulate (see Figure 1). The objective is to identify which parts of these assemblages constitute global forms harboring a highly mobile rationality and, in contrast, which parts constitute situated elements embedded within "the vagaries of a social or cultural field" (Ong and Collier 2005, 11). The focus, therefore, is neither global nor situated components exclusively ("root-trees" with relations of interiority), but rather the articulation between the two and the emergent properties this articulation engenders (rhizomes with relations of exteriority).

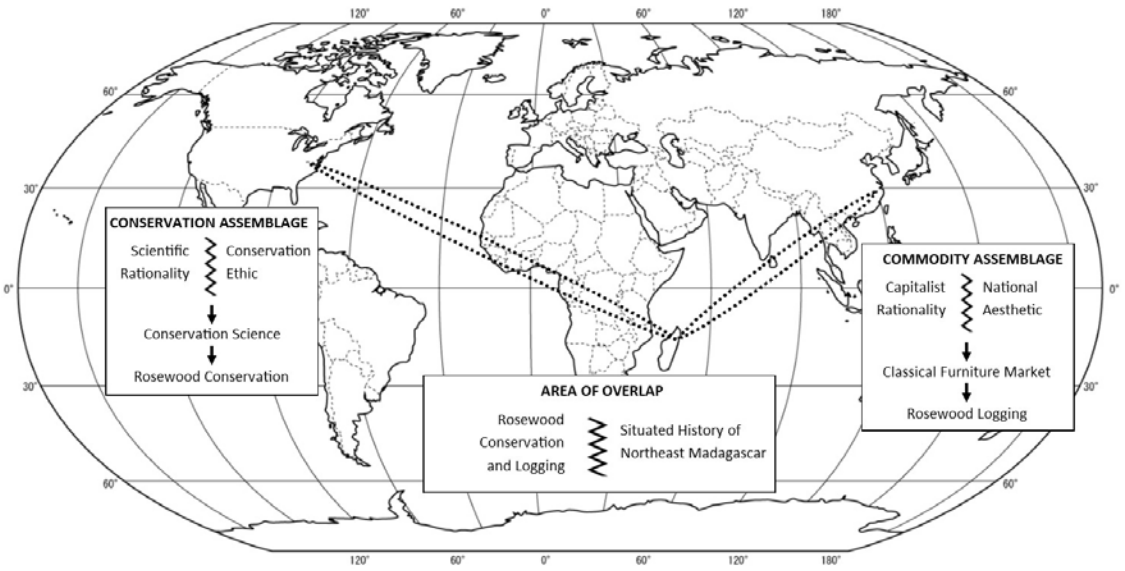


Figure 1. Global Rosewood assemblages, their situated and global components, and their area of overlap in northeastern Madagascar.

The Conservation Assemblage

The global conservation assemblage has emerged through the interdisciplinary field of conservation science and its mission to protect as much of the world's biodiversity as possible. The assemblage is based on the articulation of a global scientific rationality – the evolutionary and ecological sciences – with a highly situated, and definitively *not* global, conservation ethic. In combining science and ethics, the conservation assemblage deploys rigorous scientific analysis to achieve its normative mission. Yet, it also imposes situated conservation ethics across the globe under the guise of a universal science.

The combination of positivism and normativity on which conservation science is based has been recognized since the inception of the field. It is perhaps best expressed through Soulé's (1985) seminal introduction to conservation's "functional" and "normative" postulates. While the *functional* postulates (concerning the evolutionary and ecological sciences) may be tested scientifically, the *normative* postulates are not scientifically testable but rather provide an "attitude" toward life. They assert that organismic diversity and ecological complexity are "good" and, consequently, biodiversity has "intrinsic value" (730-731).[5] As with the field of

conservation science generally, these postulates are based on "the overarching normative assumption…that biodiversity is good and ought to be preserved" (Noss 1999, 117). They demonstrate a value judgement that conservationists share based on the perceived crisis resulting from the weakening of the Earth's biological infrastructure in the face of human activity.

Far from universal, however, the conservation ethic is a highly situated emergence. William Cronon (1995) traces its development through an odd reversal in the Western conception of wilderness. As late as the 18th Century in European and American history, Cronon writes, wilderness was "a place one came only against one's will, and always in fear and trembling" (71). By the end of the 19th Century, however, untouched wilderness became sacred and sublime, "the best antidote to our human selves" (69). Noting a similar phenomenon, Raymond Williams (1983) attributes the growing romanticization of wilderness during this time to the emergence of an urban bourgeois class, only able to appreciate so-called "nature" because of their isolation from it. In either case, a dualism of the human and nonhuman slowly bifurcated, allowing conservation to be considered a "crude conflict" between the two (Cronon 1995).

This dualism, spawned by a reverence for things untouched by the human, in turn created the concept of biodiversity – a more "scientific" expression of our wild reverences (Cronon 1995, see also Takacs 1996). Biodiversity is an attempt to unitize the subjective building blocks of "wilderness" or "nature," so that they may be approached objectively through the scientific method. It transforms vague ideas of nature into the specific players of genes, species, and ecosystems interacting on an eco-evolutionary stage. The concept of biodiversity permits the conservation ethic and its privileged realm of nature to be dissected and maintained through all the rigors of science. It has been forged as a scientific "weapon to be wielded" in pursuit of a normative "love" for the natural world (Takacs 1996, 3). With biodiversity, endangered species "stand as surrogates for wilderness itself" and tropical rainforests become "the most powerful modern icon for unfallen, sacred land" (Cronon 1995, 82). Biodiversity thus represents the latest plateau in the progressive mixing of scientific rationalities and conservation ethics.

Combining science and ethics is not inherently problematic. As discussed above, it is an unavoidable component of global dynamics – global forms articulating with situated elements. The problem emerges, however, when this combination then presents itself to the world as strictly science, ignoring the gaping differences in situated ethics the science must span. This is indeed the case with conservation.[6] While the discipline is "largely a product of U.S. institutions and individuals," it nonetheless seeks "to address a problem of global proportions" (Meine et al. 2006, 642). Indeed, most of the world's biodiversity is located not in the United States, nor in the West, but in the tropics. The global imposition of conservation science is thus required by its mission. By exporting biodiversity loss solutions to lower latitudes, conservationists often view themselves as "healers of broken places" (Meine et al. 2006). They typically fail to notice, however, that they are exporting not only a rigorous science, but also the situated ethic of protecting the non-human world – a category that does not even exist for many of the world's people (see, for example, Guha 1989, West and Brockington 2006, Mbaria and Ogada 2016).

The tendency to impose conservation as a universal project, when it in fact stems from very situated ethics, is part of a wider Western tradition of failing to see our own society in the terms we impose on others. The modern West, it claims of itself, is free of myth and magic, especially in the most purified realm of science. Fighting against this tradition, Bowker (2005) suggests we read biodiversity "just as we would read any other discourse in societies which have never been modern" – not as universal, but as situated and mythical (108). Biodiversity is firmly

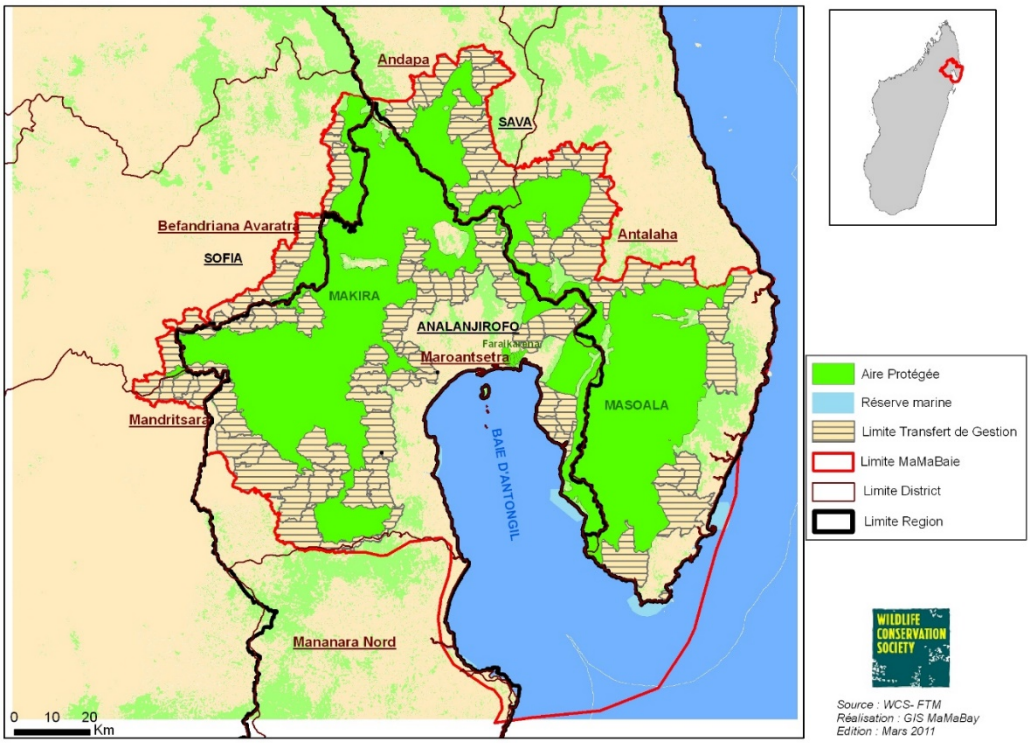
rooted within the Western distinction of the human and the non-human – the myth of the old nature/culture divide "torqued with modern technoscientific mythology" (114). The problem is not the existence of such a myth, but its treatment and inevitable imposition throughout the world as fact. To proceed as if biodiversity is an unquestionably global issue rather than a highly situated manifestation of one particular understanding of the nature/culture divide would be to confuse, as is often done, science with its mythological underpinnings. It would be to deny "the cultural rootedness of a philosophy that likes to present itself in universal terms" (Guha 1989, 93). Indeed, conservation remains a largely normative enterprise based on a dualist understanding of the human and the non-human that is extremely difficult to reconcile with non-Western conceptions of the environment (see West and Brockington 2006).

It is this combination of science and ethics that connects the United States and Madagascar. Containing "more genetic information per surface unit than any other place in the world" (Aymoz et al. 2013, 767), Madagascar provides the vital landscape for the transformation of conservation's edenic dreams into scientific realities. The country's remaining forests have been designated one of the world's top "biodiversity hotspots" (Mittermeier et al. 2011) – a highly scientific designation based on a normative worldview. Lemurs, periwinkles, chameleons, and now rosewood, circulate on the global conservation conveyor as images and ideas emanating from Madagascar, giving substance to the nature conservationists are intent to conserve.

In northeastern Madagascar, the consequences of mixing global rationalities and situated ethics becomes clear. Two of the country's largest protected areas – Masoala National Park and Makira Natural Park – have been established in the region to conserve its unique biota (Figure 2). Together containing more than one million hectares of land, half of all the country's plant species, and the greatest density of rosewood trees left on the island, these parks represent territorial mainstays of the global conservation assemblage. Both parks are administered with varying degrees of autonomy by the U.S.-based Wildlife Conservation Society (WCS). Through these conservation territories, Malagasy land is divided into zones of decreasing human penetration approaching an optimally diverse, yet humanless core. Communities are transformed into discrete and manageable units located at the peripheries of the park and their time is divided into annual management cycles punctuated by foreign evaluation.

The conservation assemblage that shapes these parks in northeastern Madagascar is a technoscientific governance institution. It contains all the features of community forestry assemblages outlined by Li (2007): a disparate array of actors from across the world are brought together, communities are rendered technical and made legible to bureaucratic management, deeply political questions are reframed as matters of technique, and new alignments are forged as the global context unfolds. At the same time, however, the conservation assemblage relies on the dissemination of a sentiment that is not at all scientific or technical. Often lost within the technoscience that comprises the bulk of the assemblage is the conservation ethic at that serves as its core. While community leaders may be taught to read a map and operate a GPS unit, instilling the conservation ethic that fuels this vast body of technoscientific practice is a much taller order. Indeed, the ethics of conservation remain persistently enigmatic to those Malagasy communities enlisted to actualize the assemblage.

(a)



(b)

Figure 2. Masoala National Park and Makira Natural Park in northeastern Madagascar, including (a) a WCS map delimiting the protected area (green) and the community managed areas (grey lines), and (b) an aerial image of the parks with arrows roughly indicating the path of rosewood transported from the parks (modified from Google Earth).

Masoala National Park offers a prime example. Masoala consists of a 210,000 hectare reserve surrounded by a 100,000 hectare multiple-use zone encompassing a number of small villages (Figure 3). The protected area was designed in the 1990s using state of the art geospatial data by a team led by WCS and established as a National Park in 1997 (Kremen et al. 1999). A diverse set of biological and socioeconomic data were integrated to achieve the final park boundaries.

Yet, from the vantage of those living near Masoala, the park has always been a bit of a mystery. Early on, many communities thought that its borders would be adjusted to allow increased resource use for future generations (Ormsby and Kaplan 2005). As time passed and it became clear that the park was to remain intact and unutilized, mystery gave way to trepidation. Masoala was increasingly recognized as the latest phase in a long line of foreign attempts to commandeer the Malagasy forest – "a new manifestation of a history of foreign control" (Keller 2015, 202). As noted in the introduction to this dissertation, communities all around the borders of Masoala see foreigners enter and exit the park with maps and gear. The possibility that these foreigners are "just looking" at trees and animals appears to be a poorly crafted guise (see also Walsh 2005, Keller 2015). Indeed, the much more likely explanation, many in the region assert, is that these foreigners are instead scouting for resources – timber, gold, precious stones – and that the park has been established to facilitate their extraction at some undetermined future date.

Figure 3. The village of Antanandavahely just outside of Masoala National Park. This village is a notorious site of rosewood trafficking (photo by author, June 2015).

The extreme difficulty in conveying conservation objectives to those living near Masoala and other conservation areas arises from the extreme difficulty in translating – both linguistically and conceptually – the situated ethic on which conservation is based. In Malagasy, endangered species roughly translates as *biby efa ho lany taranaka* ("an animal whose generation will soon run out"). It does not translate well for trees, as I found out while investigating the rosewood logging outbreak in Masoala. If I mentioned the possibility that rosewood might indeed "run out," people living near Masoala would occasionally laugh, insisting either *c'est une plante régénérée!* ("that tree grows back!") or *maniry fô!* ("it grows everywhere!"). Some individuals went so far as to suggest that the concept of "endangered species" was one of an array of foreign inventions meant to achieve domination through fear. Labeling rosewood as an "endangered species," a number of my informants observed, created the regulatory pretense for prohibiting the trade and confiscating existing timber stocks. For these individuals, stories of "endangered species" found their place with other stories from foreigners – including AIDS and birth control – that were (to my great surprise) considered by many of my informants to be created and disseminated as a technique of foreign control.

The prohibition on *tavy* (swidden agriculture) instituted by Masoala and other conservation areas evokes a similar sentiment. *Tavy* is widespread in the region (Figure 4), despite restrictions on the practice that date back to the creation of the Kingdom of Madagascar. Most rural Malagasy people consider these restrictions to be a long-standing source of oppression (Jarosz 1996, Kull 2004, Corson 2016). In identifying *tavy* as the primary threat to Madagascar's remaining forests, contemporary conservation recalls this history of oppression. Prohibitions on *tavy* ignore the fact that the practice is not only a widespread land management technique, but also a cultural mainstay in Malagasy communities living near the forest edge. *Tavy* is often performed as a ritual, connecting contemporary farmers with the ancestors thought to inhabit the land (Hume 2006). In general, the process of clearing forest land for agriculture is considered a process self-realization through descent – the vehicle through which land is claimed for future generations (Keller 2008, 2014). Thus, in many ways, the conversion – not conservation – of forestland embodies the quintessential ethos in rural Madagascar. Keller (2008) summarizes the difference:

> "In sharp contrast to the Malagasy ethos, which is based on the ideal of the fruitful continuation and growth of human life, the conservationist ethos is founded on the ideal of a perfect, but static, equilibrium among the different species present on the planet" (651).

The conservation ethic therefore not only presents itself as mysterious and foreign, but also stands in direct opposition to the Malagasy ethos of living on the land.

Makira Natural Park has attempted to remedy the shortcomings of Masoala, as will be discussed more in Chapter 4. Comprising a core protected area 372,470 hectares, Makira replaced Masoala as the largest conserved forest in the region after its formal establishment in 2012. Makira, however, is a semi-private reserve, not a national park. It is run by WCS on behalf of the Malagasy government, largely with money from the sale of carbon credits. The park is surrounded by nearly one hundred identified communities that have been designated to collectively manage 335,173 hectares of land surrounding the core conservation area. WCS is, for the most part, the governing authority to which these communities are held responsible, although communities do not typically distinguish between WCS and the Malagasy government, referring to both as *fanjakana* (government, authority) (see also Brimont et al. 2015). Communities sign a three to six year contract with WCS to manage their land. Every month they

execute a field survey and every six months they write a report on community activities and performance. Each community's performance is evaluated by WCS employees in conjunction with local forest authorities. If their evaluations are satisfactory, community contracts are renewed for six years. If they are unsatisfactory, the contract is renewed for only three years only and new community leadership is typically established.

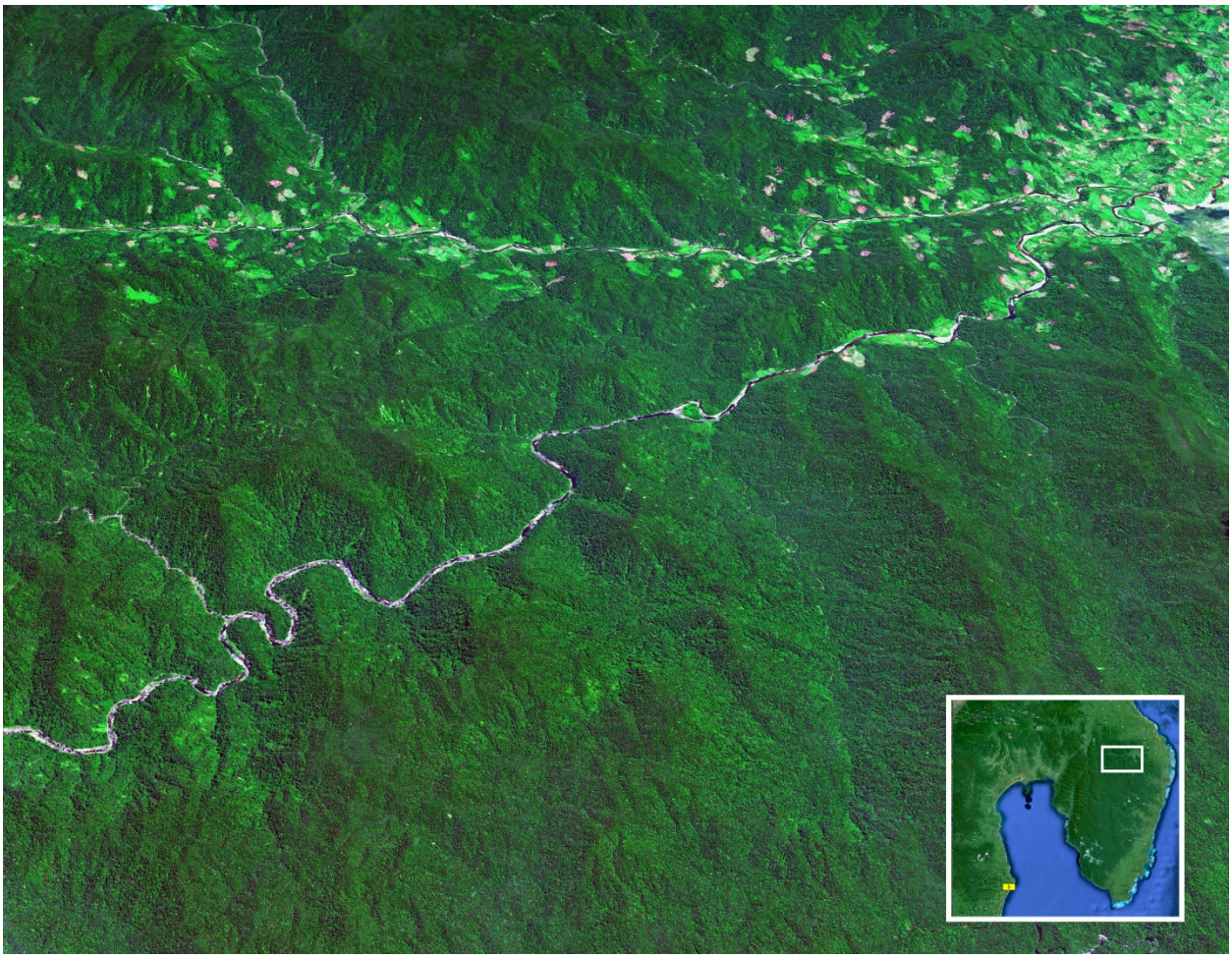


Figure 4. An aerial photo showing forest conversion along the river leading into Masoala National Park. The village of Antanandavahely is located in the top right corner. Light green patches within the forest are primarily a result of swidden agriculture (*tavy*) (modified from Google Earth).

Community involvement is indeed much more robust in Makira as opposed to Masoala. Trainings are held, community leaders are appointed, offices are built, maps are made, and a robust bureaucracy proliferates. "Makira is strong!" (*matanzaka*!), a local WCS employee assured me. Yet, he also noted a contradiction. While delimiting the park was a great success (all his communities have marked the park limit, he reported excitedly) and establishing an office for each COBA was also rather successful, most of the other missions of the park remain unfulfilled. Trainings have had little impact, *tavy* restrictions continue to recall a history of oppression, and "endangered species" remains a difficult concept to grasp. Communities continue to file their three month surveys and continue to receive (often abysmal) evaluations.

Another local WCS employee framed it more bluntly: "ninety percent of the people in the communities do not listen to what I say," he estimated with discouragement. But then, with a slight smile he continued, *zegny raha mahagasy atsika* – "that's what makes us Malagasy!"

Between Masoala and Makira, the global conservation assemblage lays claim to an area of land in northeastern Madagascar larger than Connecticut. Local villagers are enlisted by American organizations to manage this land in accordance with the most advanced techniques the global rationality of conservation science has to offer. Connecting disparate actors across the globe, the conservation assemblage is indeed "a masterful piece of assembly work" (Li 2007, 283). Yet, the situated conservation ethic at the core of the assemblage remains woefully inscrutable to the Malagasy communities that are its target.

The Commodity Assemblage

Mirroring the conservation assemblage, the rosewood commodity assemblage is also based on a core articulation between global forms and situated elements, as defined in Section III. Contemporary demand for classically-styled rosewood furniture represents the articulation of China's highly situated cultural history with a highly mobile and definitively global capitalist rationality. The commodity assemblage, however, functions in direct opposition to the conservation assemblage with which it overlaps. Efforts to conserve tropical rosewood in the forests of Madagascar are met by contradictory efforts to commoditize the species. As with ivory, rhino horn, and other Chinese cultural goods-turned-endangered species, the same rarity that drives conservation at one end of the world, simultaneously drives up price and intrigue at the other end.

Classical rosewood furniture has recently experienced an aesthetic revival in China, as will be discussed in depth in Chapter 5.[7] To provide a brief description here, the craft of rosewood furniture-making reached its apex from the mid-Ming to early-Qing Dynasties (late 16th to 18th Centuries). During this time, emperors commissioned the production of the furniture, advocated the craft as a mark of cultural sophistication, and even participated in the work themselves (Figure 5). Trickling down from the imperial family to the upper classes, classical rosewood furniture became associated with a wealthy social elite and Chinese imperial literati. It gradually became one of the foremost symbols of cultural sophistication and social status in dynastic China (Evarts 1999, Clunas 2004).

Since its dynastic apex, Chinese demand for rosewood has experienced extreme fluctuations. By the end of imperial China, due to domestic disorder and rapidly declining rosewood reserves throughout the region, the craft of classical furniture-making languished and furniture production deteriorated in all aspects – material, engraving, structure, and polishing (Beijing 2005). Although furniture production waned, classically-styled furniture continued to signify the highest levels of cultural sophistication. Up until the mid-20th Century, wealthy urban families continued to adorn their rooms with lavish rosewood dining sets and decorations, while even poorer families sharing crowded units often maintained small family heirlooms slotted between cramped mattresses and the chamber pot.

Figure 5. Ming Dynasty-era rosewood furniture in Beijing's Imperial Palace (photo by author, December 2014).

By the mid-20th Century, however, rosewood experienced a drastic devaluation. During China's Cultural Revolution beginning in 1966, precisely because of its imperial associations, rosewood furniture was one of the primary targets for eradication. Rosewood furniture, along with many other icons of traditional Chinese culture, comprised the foremost representatives of the "four olds" – old customs, culture, habits, and ideas – that the Communist Party was so intent on erasing. The dynastic craft of woodworking was entirely forbidden. Wealthy families hurried to jettison their rosewood possessions before Mao's Revolutionary Guard came knocking at their door to confiscate these signatures of a decadent life. Antique family heirlooms not burnt in heaping piles in the street were thrown haphazardly into large government warehouses for later redistribution to hardworking peasants throughout the countryside (Mazurkewich 2012). After the Cultural Revolution, one would not be surprised to find an antique Ming Dynasty table – a wanton bourgeois relic according to Mao – serving as a chopping block for a rural farmer (Imagawa 2015).

This drastic, yet temporary, inversion of the cultural value of rosewood is critical to understanding the wood's contemporary resurgence. As China now embraces capitalism and seeks to redefine its modernity with strong reference to its cultural past, individuals who endured the hardships of the Cultural Revolution are buying back iconic rosewood furniture. "Chinese traditional values were challenged but did not disappear," Zhang (2015) notes of China's Cultural Revolution, "and the impact of the Cultural Revolution had a profound influence on those who lived through it" (1). Memories of communist confiscations loom vividly as China's new consumer class turns to the market in an attempt to buy back the cultural heritage that was so violently ripped from them decades earlier. In the context of this cultural nostalgia, the

Chinese market for rosewood – along with ivory, rhino horn and other endangered species – has boomed.

But more than simply growing consumer demand, these endangered species-turned-cultural commodities are being purchased as speculative investments. Rosewood is foremost among them. Because of its scarcity, longevity, and potential for appreciation, rosewood increasingly serves as an investment buttressing against the throes of inflation. "They use it as a bank," one professor in Beijing explained to me, knocking on a nearby table to demonstrate the wood's durability. A rosewood furniture factory owner explains further:

> "Currently there are few attractive channels available to hot money. Given the doldrums in the housing market, the depressed stock market and the risky futures market, 'red wood' furniture has quite naturally become the target of many investors allured by its appreciation prospects" (Yuan 2011, 41).

Since 2005, the rosewood market has become "a playground for investors" in an on-again, off-again speculative trading "price heat" (China Daily 2011).

This wave of speculative investment reached its peak in 2013, just before I started conducting fieldwork. International trade bans implemented on a number of endangered rosewood species through the Convention on International Trade in Endangered Species (CITES) in 2013 – including all species from Madagascar – amplified the speculative climate. A group of importers I interviewed at Furen Timber market in Shanghai recalled the boost in value that these trade restrictions gave to their existing rosewood stocks. When I asked if the restrictions impeded their ability to continue to import endangered wood species, they replied that "there are ways of getting around the regulations."[8] Indeed, China's rosewood imports peaked in 2014 – the year after trade restrictions were imposed – almost doubling from 2013 levels (EIA 2016). In the same year, the rosewood industry generated over $25 billion in domestic revenues (China Redwood Committee 2015).

In order to satisfy this booming demand for rosewood, China has depleted resources on much of the Asian continent and now looks to Africa for substitutes. China's rosewood imports from Africa have increased by 700 percent since 2010 (Treanor 2015), with Malagasy rosewood being the most expensive variety among them. Rosewood from Madagascar (卢氏黑黄檀/大叶紫檀) can be found relatively easy in Furen timber market in Shanghai, as well as other timber markets in southern China and Hong Kong. Excited by my interest in this particular wood, the importers I interviewed at Furen drove me all over the market to inspect different stocks from Madagascar (Figure 6a). The logs they showed me were indeed the same type of wood I witnessed piled along the river and roadsides near Masoala National Park in northeastern Madagascar (Figure 6b). Many of the logs still contained markings indicating that they had been confiscated by the Malagasy government, or initials indicating their former Malagasy owners. A few of the logs still contained the deep carvings – two circumferential groves at either end – where ropes were once attached in order to drag them from the depths of the Malagasy forest.

In northeastern Madagascar, growing Chinese demand for rosewood has revitalized the local logging economy, which had otherwise remained rather subdued since the colonial period. Since 2000, and especially after the coup in 2009, massive logging operations have brought thousands of loggers to Masoala, Makira, and other protected areas in the region.[9] Rosewood grows at low densities, deep within the forest and often weeks away from the nearest village weighing stations where the logs can bought by kilogram and transported thereafter by canoe or car to the coast. Transporting the biggest logs (60-100 cm in diameter) from the forest requires a team of up to sixty men working for one to three months to move a single log. Smaller logs

(about 25 cm in diameter) are transported in batches with a minimum of two men working in the forest for a few weeks. From the forest, logs are dragged to surrounding local villages (Figure 7) and then onto the coastal villages and cities, where Chinese ships await with Malagasy currency on board.

(a)

(b)

Figure 6. Malagasy rosewood (大叶紫檀) **(a)** being sold at Furen Timber Market in Shanghai China (photo by author, December 2015), and **(b)** piled along the river just outside of Masoala National Park in northeastern Madagascar (photo by author, January 2011).

Figure 7. A logger stands amidst a pile of rosewood logs awaiting transportation by canoe inthe village of Antanandavahely (photo by author, January 2011).

In 2009 alone, approximately 100,000 trees were reportedly cut from the protected areas of northeastern Madagascar (Randriamalala and Liu 2010). In that same year, over 1,000 shipping containers holding at least 52,000 tons of precious wood was exported, earning a minimum of $220 million, likely much more.[10] All of the rosewood has been shipped overseas through the hands of an elite group of exporters operating in northeastern Madagascar (Anon. 2017, Remy 2017). Many of these exporters are ethnically Chinese-Malagasy with longstanding ties to China. As Chinese demand for rosewood began to grow at the beginning of the new millennium, exporters rekindled their ties to China, connecting with timber importers in Hong Kong, Southern China, and Shanghai in order to realize this budding global connection. While local loggers make $3-5 per day,[11] the rosewood trade has generated over $1 billion in profits for these elite exporters. Chinese importers make significantly more when distributing the logs to

furniture manufacturers throughout China. As final products – lavish dining sets, sitting chairs, wardrobes, and beds – the wood is then purchased at even more extravagant prices (up to $1 million for a single furnishing [Global Witness and EIA 2010]) by the country's rising consumer elite.

The forests of northeastern Madagascar have thus become the site of two elaborate global efforts to cut or to conserve rosewood. But this is not a simple conflict between conservation and capitalism. As I have demonstrated, the conservation assemblage is based on a strategic articulation between science and ethics, allowing a conservation ethic that originated in the United States to circulate across the globe under the guise of a universal science. In a congruent articulation of global forms and situated elements, the commodity assemblage mixes culture and capitalism. China's current demand for rosewood and other endangered species are the product not only of the country's centuries-old cultural history, but also of the imbrication of this situated history with a universal capitalist rationality. Classical rosewood furniture has been reinvented into a speculative investment, driving global demand for rosewood into uncharted territory. Mutually reinforcing as they are, these two values driving demand for rosewood – economic or cultural, global or situated – become impossible to disentangle. The booming rosewood market symbolizes Chinese cultural eminence just as much as the colonization of culture by a universal capitalist rationality. Imperial rosewood furniture continues to play a prominent role in the Chinese cultural imaginary, while simultaneously standing amongst stocks, bonds, and real estate as just another way to make money from money in an oversaturated investment economy. The conservation and commodity assemblages both reveal the often overlooked entanglements of the global and the situated.

V. Re-Assemblage

In northeastern Madagascar, two vibrant efforts stand side by side. The country's coup d'état in 2009 ushered in a logging boom referred to throughout northeastern Madagascar as *lera ny bois de rose* – "the time of the rosewood." Trucks with speakers drove around the region's cities announcing new work in the forest. Radio ads and posters solicited young men with a sense of responsibility and adventure. Masoala, Makira, and a number of other protected areas in northeastern Madagascar became flooded with loggers in search of rosewood.[12] Logging camps sprung up throughout the parks in blatant violation of their mandate. Cooks established impromptu stands serving rice and broth, vendors sold whatever they could haul with them into the forest, and music played day and night on the cell phones of the bosses who managed the logging effort. Small mattresses were ported in for these bosses, and loggers who were especially hardworking, clever, or amusing, were invited to sleep at the edge. Others constructed makeshift beds from delicately folded branches under a cover of sticks and leaves.

Also following the coup in 2009, the transitional Malagasy government nearly doubled the country's protected areas. In December 2010, the government codified 171 protected areas and sustainable forest management sites covering a total of 9.4 million hectares (Corson 2011). The formal creation of Makira Natural Park was one of these latest additions. WCS began finalizing this much anticipated park just as the rosewood boom engulfed the region. Communities were being integrated, their land management contracts signed, and their offices built, just in time to receive the new wave of rosewood loggers. The park's red limit markings signified little amidst the logging frenzy. Indeed, many community members participated in the

logging effort and few reported its transgressions. Following suit, federal police sent in to stop the logging set up stations around the parks, reportedly collecting 10,000 Ariary (around $3) per log that passed.[13]

In an attempt to mitigate the situation, the UNESCO Committee for World Heritage called on the Malagasy government take control of the logging in the northeast (recommendation F 35 COM 7A.10), and the World Bank conditioned a new $52 million grant on this stipulation (World Bank 2011). With specific reference to the logging outbreak, USAID asserted its commitment to "assist community based organizations in monitoring illegal activities" and to "encourage local organizations to fight these illegal practices" (cited in Corson 2016, 215). But more than stemming the trade, increased funding to conserve northeastern Madagascar's forests simply resulted in the intensification of conservation efforts alongside continued logging. Indeed, as conservation funding flowed into the region after 2010, logs continued to flow overseas (Anon. 2017, Ke and Zhi 2017). Hence, as noted above, trails for the tourists and trails for the loggers.

Why, one might ask, are logging efforts so successful within Masoala and Makira Parks, despite being sites of intensive conservation intervention? The explanations for this conservation failure are, of course, complex and varied. Political economic explanations first come to mind. The conservation assemblage lacks the profit motives offered by the commodity assemblage, particularly from the vantage of those living in northeastern Madagascar. While the lowest ranked logger may make $3-5 per day at the peak of the trade, the communities identified as the collective managers of the parks in northeastern Madagascar would consider themselves lucky to receive anything more than some GPS units, conservation trainings, and an office in which to store their monthly reports. Rosewood logging certainly appears to provide more lucrative opportunities on the ground in northeastern Madagascar, not to mention globally. But given the analysis presented above another explanation of conservation failure in northeastern Madagascar also becomes clear.

As the rosewood conservation and commodity assemblages reterritorialize the forests of Madagascar, a subtle difference in their dynamics emerges. While the commoditization of rosewood can be achieved with little change of ethics on the ground in Madagascar, rosewood conservation, in contrast, requires the emergence of a new ethical domain. Conservation science, as demonstrated above, proves largely futile without the situated conservation ethic through which it is constituted. This conservation ethic – in addition to conservation techniques and bureaucracy – must be transferred in order for the full rationality of conservation science to take root. The contemporary conservation dilemma thus conceived is not simply an issue of conserving the forest for the people, but of bestowing in these people an ethic conducive to conservation.[14]

By introducing a new ethical domain, conservation in Madagascar constitutes one instantiation of the many "technoethical interventions" intended to fulfill a "transnational sense of moral responsibility" (Ong 2006, 4) – the strategic blurring of global forms with situated ethics. As "some of the most powerful pacific weapons of the new world order" (Negri and Hardt 2000, 36), NGOs are specifically armed for spreading such ethical problematizations – and do so, increasingly, through calls for participation. Instead of confronting black and white sanctions, forest users face a medley of stipulations that they themselves are to devise. Malagasy communities must not only observe and adhere to, but also actively participate in, the situated ethics of conservation.

The purported urgency of the rosewood logging crisis in many ways obscures this ethical imperialism. Justification for the creation of protected areas requires a looming threat and the recent increase in illegal logging is now cited in place of more traditional critiques of local deforestation. As Sodikoff (2012) notes, "the current rosewood plunder in Madagascar has temporarily usurped tavy as the main scourge of the eastern forests" (4). The shifting villain from traditional management techniques to Chinese-backed logging is convenient for conservation discourse, adding more legitimacy to community conservation models. Empowering communities to carry out the conservation mission makes a great deal more sense when it is not their own shifting cultivation practices that comprise the bulk of the problem, but rather the looming external threat of demand from China. The exigency of illegal logging and the vilification of Chinese demand obscure the underlying ethical contradictions global conservation organizations face when imposing a situated conservation ethic on rural Malagasy communities that have their own (arguably antithetical) ethos of living on the land.

The point is not so much to bemoan the ethical imperialisms of the conservation assemblage, but rather to provide a potential explanation of conservation's limited success in the face of the commodity assemblage with which it overlaps. Conservation is such a robust ethical concept because it recalls the situated history of the West. But as robust as it is in the West, the conservation ethic does not seem to capture the environmental goals of many people living on the planet. For scientific rationalities to firmly take root in Madagascar, they may have to abandon their situated ethical underpinnings and adapt, as best they can, to the Malagasy ethos of living on the land. This requires a much more modest engagement that subjects global conservation objectives to radical revision as they are presented to the forest communities of Madagascar and other communities living throughout the world.

VI. Conclusion

This chapter has attempted to analyze rosewood rhizomatically – that is, to resist the strategic essentialisms that paint the tree in terms of pristine nature or superlative culture. Instead, I have argued that Malagasy rosewood embodies a moment of global connection made possible by two overlapping assemblages. American conservationists efficiently maximize remaining rosewood territories across northeastern Madagascar as pristine remnants of a ravaged globe. Meanwhile, rosewood circulating under the speculative whims of the global economy furnishes a constant reminder of a romanticized national past for a Chinese generation that has endured the hardships of the Cultural Revolution. Interrogating the divergent values ascribed to rosewood past the "realities" of conservation science or the contingencies of "exotic" tastes reveals crucial parallels that humiliate attempts from either side to vilify the other.

In the rosewood forests of Madagascar, global conservation and logging efforts proliferate side by side. Communities slated to be resource managers at the periphery of Masoala and Makira Parks surround massive logging efforts at its core. Trainings advising local residents of the demands of conservation are held alongside a wave of solicitations for new logging work in the forest. Many community members surrounding the parks engage in both conservation and logging activities. Trails for tourists run parallel to trails for loggers. And rosewood becomes a *kakazo malaza* – a tree made famous by its contrasting global demands.

Beyond the economic ties that span the globe, globalization is the connection of vastly different ecologies in time and space. Rosewood analyzed through the lens of assemblage

demonstrates the complexity of the connection. Through this rhizomatic global resource, Chinese imperial history torqued by capitalist rationality drives Malagasy loggers into conservation territories delimited at the desks of American practitioners. Instead of pointing to the political economic "context of contexts" – capitalism *writ large* or its various neoliberal instantiations *writ small* – an assemblage approach to rosewood accounts for a diversity of global rationalities and the situated cultural elements with which they articulate. This is not to neglect the immense role that capitalism plays in shaping demand for rosewood. Indeed, the case of rosewood demonstrates the degree to which capitalism penetrates deeply cultural realms. But analyzing rosewood in terms of assemblage requires that capitalism remains "the same size as other things" so to speak (see Collier 2012) – not bigger or background – and far from the only rationality circulating within the global milieu. The result is an understanding of rosewood that is multiple and emergent – an understanding that exposes the occidentalisms and orientalisms that have come to define this and other global conservation priorities.

The implications for conservation are profound. As conservation science recontextualizes across the globe, the situated ethic on which the science is based must be reexamined. It must be reconciled, as difficult as it may be, with the Malagasy ethos of living on the land. It must be reconciled, perhaps even more difficult still, with the cultural legacy of a country that is soon to introduce its own environmental ideas to the global agenda. While a unified global environmentalism is far from a lost cause, it cannot be distilled down to a geographically expanding conservationism of the West. A global environmentalism will benefit from all the knowledge and experience of the West, minus the presumption of hegemonic ethics.

[1] Only a small percentage of rosewood imported to China is exported after manufacture. For example, in 2012, exported rosewood products only accounted for 0.01% of total imported logs (Wenbin and Xiufang 2013, 13).

[2] The price in the timber markets of China is an estimate based on Wenbin and Xiufang (2013) and field interviews with timber traders in Shanghai in 2015. The price in the forests of Madagascar is a rough estimate based on the literature (Global Witness and EIA 2010, Randriamalala and Liu 2010) and field interviews with loggers conducted in 2014 and 2015.

[3] Deleuze and Guattari observe that "the multiple must be made, not by always adding a higher dimension, but rather in the simplest of ways, by dint of sobriety, with the number of dimensions one already has available—always n - 1 (the only way the one belongs to the multiple: always subtracted). Subtract the unique from the multiplicity to be constituted; write at n - 1 dimensions" (6).

[4] Both assemblage and political economic approaches acknowledge certain characterizing traits of global modernity. For political economic approaches, this characterizing trait is the "context of contexts" – capitalism writ large or its various neoliberal instantiations writ small. For assemblage approaches, the characterizing trait is what Ong and Collier refer to as "global forms" – technoscience, market efficiency, and other rationalities that aspire to universal significance, as described above. But rather than making these global forms bigger or background (i.e., the structuring "context of contexts"), assemblage approaches place them on the same analytical plane as those situated elements with which they articulate. Thus, instead of the global enveloping the local, global assemblages denote a heterogeneous assortment of global and situated elements articulating within a flattened field of inquiry.

[5] Soulé further suggests that valuing biotic diversity "may be as close to a universal norm as we can come," proposing a potential "genetic basis" for the norm (730). Either way, he assures us, we need not waste time speculating on the origins of the norm, as "the mechanisms by which such value judgements arise in consciousness are unknown" – they are simply accepted or rejected as "somehow valid or appropriate" (730). While social scientists balk, Soulé and many other conservationists aspire to universalize not only the science of conservation, but also the situated conservation ethic – the "preference for nature over artifice, for wilderness over gardens" (731) –

on which it is based.

[6] Take, for example, Dickman et al.'s (2007) supposedly "value-free" definition of biodiversity, which, by including all diversity at the gene, species, and ecosystem levels, is somehow thought to subvert the values underlying the term. Other conservationists, in contrast, caution against the field hiding behind "a false façade of value-free science" (Norton 1988, 238), and instead insist that conservation science is "inescapably normative" (Barry and Oelschlaeger 1996, 906) and should try to "illuminate rather than obscure the connection between science and values" (Maguire 1996, 915).

[7] As noted in the introduction to this dissertation, rosewood, as it translates in Mandarin (*hong mu*, 紅木), is an informal term referring to a group of hardwood species that are (usually) red in color and widely used for furniture-making in China. Original species comprising this group include *huali* (花梨, typically represented by *Dalbergia odorifera*) and *zitan* (紫檀, typically represented by *Pterocarpus santalinus*). These species have since become virtually extinct and largely replaced by other species of the *Dalbergia* and *Pterocarpus* genus (Wenbin and Xiufang 2013). Rosewood from Madagascar (卢氏黑黄檀 or 大叶紫檀, typically represented by *Dalbergia louvelli*, among others) is one of these replacements.

[8] The most prominent method of getting around the restrictions, I am told, is by declaring an imported shipment of endangered rosewood to be a similar-looking, non-endangered species from another country or region. For example, despite no records of Malagasy rosewood being imported in 2014, a number of shipments of this wood were nonetheless confiscated in route to China under a false label (Ranaivoson 2016, Ke and Zhi 2017).

[9] Makira contains rosewood habitat in only certain parts of the park (mostly in the east), while Masoala contains rosewood throughout the park and has been the site of the most intensive logging efforts. Marojejy National Park has also experienced significant logging.

[10] This information is reported in Randriamalala and Liu (2010). In rough corroboration, Global Witness and EIA (2009) estimate that the trade generated approximately $460,000 per day (amounting to an approximate total of $168 million for the year), and the World Bank (2010) estimates that over a similar time period, 1,211 containers of precious wood equating to approximately $175.8 million were exported.

[11] Considered a very respectable wage, despite the danger of the work involved.

[12] Again, Masoala was first and hardest hit, due to its geography and high density of rosewood trees.

[13] This information was reported to me by informants living around Masoala National Park, including a boatman who took me down one of the rivers where, as he and others claimed, police sat on chairs set up along the river collecting money for passing logs.

[14] As an alternative to community conservation models, the "ecosystem services" paradigm and other market-based conservation solutions circumvent the emphasis on instilling the conservation ethic. Rather than appealing to ethics, these approaches appeal to economics (e.g., payments for ecosystem services). In northeastern Madagascar, however, these payment schemes rarely deliver to individuals or families directly. Instead, they are channeled back into general funds for community conservation, which typically rely on conservation trainings and other means of instilling the conservation ethic.

Chapter 2
Rosewood Democracy

I. Introduction

The day I arrived in Madagascar to begin my second stint of fieldwork in 2015 was the same day the recent Presidential elect Hery Rajaonarimampianina was impeached by Parliament. When I reached my primary field site in northeastern Madagascar four days later, I found out why. The upside of the political unrest (*tombontsoa ny grève*), residents of the northeast told me, was the reopening of the rosewood trade (*misokatra andramena).* These residents insisted that not only would rosewood logging benefit from the recent political turmoil in the capital, but that money generated through the trade was in fact financing the unrest. Reporters investigating the trade make a deeper allegation – that rosewood money has been financing both the country's presidential elections and the political unrest that inevitably follows since at least 2000.[1] In reading through these reports and speaking to individuals close to the trade, it has become clear to me that the rosewood trade contributes to a certain brand of "rosewood democracy" – characterized by pre-electoral boom and post-electoral bust – that has become one of the defining features of the country's political scene for the past two decades.[2]

Taking readers from the hundreds of logging camps scattered throughout the protected areas of northeastern Madagascar to the upper echelons of a rosewood political economy that spans the highest powers in the capital city, this chapter tells the story of rosewood democracy since the beginning of the new millennium. It details the rise of an elite group of local rosewood traders (referred to herein as the "operators" or the "rosewood elite") from northeastern Madagascar, some of whom have leveraged their millions made from the trade to become elected as members of Madagascar's Fourth Republic in 2013. The chapter demonstrates that although the rosewood trade has been a part of the Malagasy economy since before the country's colonization in the late 19th Century, only since the collapse of the Malagasy government via a military-backed *coup d'état* in 2009 has there been such an outbreak of logging, dramatically changing the daily lives of the residents in northeastern Madagascar as well as the overall political geography of the country.

My data is ethnographic and textual. From the field, I have compiled maps of the shifting rosewood routes; prices and their changes over time; and stories of rosewood tragedies, fortunes, and fame. I have triangulated this information, to the extent possible, with Malagasy news chapters from the online archives of *L'Express, La Gazette, Madagascar Tribune*, among others. I demonstrate a series of alternating permissions and prohibitions on rosewood export that has come to be the hallmark of the trade since 2000. At the local level, the boom and bust generated from these alternating regulations has overwhelmed the region with successive waves of abundance and dearth. At the national level, contradictory regulations generate an atmosphere of legal confusion that facilitates a clandestine economy in which few at the top can be deemed culpable for their actions. Taken together, I argue that both the local and national dynamics of the trade contribute to a type of rosewood democracy that has permitted the highest economic

actors within this regional economy to enter the central government as a shadowy faction, reminiscent of Reno's "shadow state" (1995, 1998, 2000).

Rather than assuming power autocratically, Madagascar's rosewood elite have been voted in by their regional constituency in the northeast. As symbols of the potential prosperity the market may bring, they have gained support from constituents all along the rosewood trail, from the inland villages to the coastal cities. My analysis of rosewood democracy is thus approached broadly, in terms of not only the political ascendancy of a regional rosewood elite, but also the voting public that supported their ascent through democratic consensus. Analyzing both groups in unison, Madagascar's rosewood democracy reveals how democratic institutions can facilitate the rise of a profiteering local elite, given highly uneven geographies of power.

The following section briefly lays out the concepts of Peluso and Vandergeest's (2001) "political forest" and Reno's "shadow state" that will guide my account of rosewood democracy. Following this theoretical framing, the third section discusses the boom and bust dynamic that has defined everyday life along the rosewood trail. This section portrays the experience of workers and residents in the northeast who have come to serve as the democratic constituency of the rising rosewood elite. The fourth section then chronicles the rise of this group of elites through the recent history of the rosewood economy and its political perturbations since the new millennium. This section demonstrates that not only did elite rosewood operators in the northeast initially capture state leaders to secure the intermittent opening of the export market after the coup, but that also, since the latest election, the operators have themselves entered the government, securing direct involvement with national rosewood policies. Shifting from a position of external state capture to one of internal control – from part of a once marginal economy to a shadowy faction within the post-coup regime – the rosewood operators have thus set in motion a pivotal transformation in national politics that the international community has yet to fully appreciate.

II. Shadows in the Political Forest

The "political forest" provides fertile ground for understanding present day rosewood politics in Madagascar. In coining the term, Peluso and Vandergeest (2001) contest the "forest" as a universal or purely ecological category. They instead demonstrate how the designation of land as official forest is a deeply political process that *makes* the forest, both materially and discursively, as much as it finds it growing out there in the world. Whether as colonial era forest-making or bureaucratic "empires of forestry" instituted after independence (Vandergeest and Peluso 2006), state authority over forest land gradually became normalized in different countries throughout the world. Large swaths of land were transformed into political forests. Forest-making, thus conceived, is a form of state-making, an extension of state control.

This is, of course, not to say that such attempts at control are always, or even mostly, successful. State endeavors to commandeer the land and its resources have been met by disregard and downright sabotage by forest communities throughout the world.[3] Yet, in the most successful cases of politicization, the forest proves a great tool for nation-building. Initial awareness of this newly created political domain gradually escalates into a mutually reinforcing development of state and forest. Through the forest, the state transforms from a far-off appendage whose machinations remain aloof and inconsequential into a looming authority that lays claim to what might very well be understood as one's own backyard.

The forests of Madagascar have long been subject to such politicization. Prior to colonization, the Merina monarchy of the central highlands claimed certain ownership rights over forests in Madagascar, likely as a means of controlling resources and preventing rebellion (Kull 2004, Corson 2016). Around the time of colonization in the late nineteenth century, comprehensive forest regulations were established, progressively eroding local control and further establishing the forest as a political domain (Jarosz 1996, Corson 2016). In the northeastern forests, the colonial administration prioritized the export of rosewood and other precious hardwoods, exporting from the region tens of thousands of tons of hardwoods (Petit and Jacobson 1964, Kellar 2008).

Timber exports from the northeast gradually declined after Madagascar's independence in 1960 (Olson 1984) and loggers formerly working for the colonial regime returned to their villages (Kellar 2008). Post-colonial isolationist policies dominated the 1970s, further reducing export-oriented logging, until near economic collapse forced a severely weakened Malagasy government to accept an International Monetary Fund and World Bank-sponsored structural adjustment plan in the mid-1980s. This ushered in an era of what Corson (2011) refers to as "neoliberal territorialization," through which international conservation interests, in conjunction with the Malagasy state, asserted control over vast tracts of land via the creation of protected areas. In the northeast, this led to the establishment of Masoala and Marojejy National Parks (in 1997 and 1998, respectively) and Makira Natural Park (launched in 2001, formally established in 2012). These parks are the site of the majority of illicit rosewood logging today. While the creation of these Parks was intended to bolster local management of forest resources, in many ways their exclusionary policies have continued the colonial tradition of expropriating resources from local control (Marcus 2001, Sodikoff 2012, Kellar 2014).

From the Merina monarchy, to the French colonial regime, to the neoliberal administration operating in conjunction with international conservation interests, the history of forest politics in Madagascar demonstrates, in line with the political forest thesis, how the forest and its resources can be used as a means of expropriating local control and consolidating state power (see Chapter 4 for a more thorough discussion). But as Le Billon (2001, 2012) and others remind us, the control of resources is not always a politically stabilizing pursuit. On the contrary, forest resources can fuel insurgency and rebellion just as easily as they might help build the official state (Rustad et al. 2008). Peluso and Vandergeest (2011) show that, in response to Cold War threats of insurgency, states extended their political forests in order to strengthen territorial power as a counterinsurgency measure. Political forests can thus be used to fortify state control over resources by "taming the jungle" that rebel groups might inhabit and further increasing state control of resources (Ybarra 2012). Yet rather than fighting insurgency or building the state, as much of the literature on political forests discusses, the rosewood forests of Madagascar have contributed to a different type of forest politics.

Using Reno's (1998, 2000) concept of a "shadow state" – a type of individualistic, commercially-oriented governance "constructed behind the façade of laws and government institutions" (434) – this chapter demonstrates how shadow state politics have taken over the rosewood forests of northeastern Madagascar. Since as early as 2000, and especially after the coup in 2009, rosewood has provided a significant source of international investment to the country, all funneled through the exclusive connections of a small group of operators from the northeast. This group of rosewood elite – not quite insurgents, but in a precarious relationship with the state – has leveraged their earnings to gain popular support and secure offices within Madagascar's newly elected government. Rather than building the post-coup regime, however,

as the political forest thesis might suggest, this powerful new bloc destabilizes the government from within, forming what I refer to as a "shadowy faction" – a term used to denote shadow state politics deployed within a factious and divided regime.

In contrast to the potential state-building associated with Peluso and Vandergeest's political forest, shadow state politics, in many regards, have the opposite effect. Building on Bayart's (2009) concept of "elite accommodation" and the distinction between the *pays légal* and *pays réel*, Reno's shadow state represents an informal network of patronage operating in parallel to the formal bureaucratic state. As with Bayart's *pays réel*, shadow states derive their power from the private control of resources exercised through "clandestine commerce" and illicit market transactions, often via elite global connections (Reno 1998, 2000, see also Nordstrom 2004, Duffy 2010). Elite sites of resource control within Africa are connected to wider global networks through a type of "enclave extraction" (Ferguson 2006). At the expense of long term state-making, shadow states monopolize these networks to their exclusive benefit. Consequently, shadow states "generally forestall" the development of a "real state" (Reno 2000, 448). This is the flip side of the political forest discussed thus far – not the mutual state and forest-making of a nascent colonial regime, nor the bureaucratic extension of state control following independence, but the hollow politics of a state that has abandoned all pretense of nation building.

Shadow states have plagued many countries in sub-Saharan Africa since their independence. Reno (1995) analyzes the rise of the shadow state in Sierra Leone through Presidential consolidation of the informal diamond economy. He demonstrates similar shadow state tendencies through the political control of natural resources in Liberia, the Democratic Republic of Congo, and Nigeria (1998), and subsequently widens the term even further to include additional countries throughout sub-Saharan Africa (2000). Other scholars have extended Reno's concept of the shadow state to demonstrate shadow networks that informally tie African politicians to global economic interests through, for example, coltan in the Congo (Beswick 2009), gemstones in Madagascar (Duffy 2005, 2007), drugs in Mozambique and South Africa (Nordstrom 2004), and arms and other contraband in the Chad Basin (Roitman 2005). Together, these studies demonstrate the difficulty of imposing strict dichotomies between formal/informal, licit/illicit, and regulated/unregulated in resource markets.

Rosewood, in particular, has contributed to the blurring of formal boundaries both inside and outside the African context. Because of China's recent surge in demand for this particular group of hardwoods and the subsequent global price spike (Wenbing and Xiufang 2013), new rosewood shadow networks have cropped up across the globe. Elite traders in Myanmar, Laos, Cambodia, Thailand, and Vietnam all use illicit circuits to export endangered rosewood logs, gaining record profits (EIA 2014, 2015, Milne 2015). In many of these countries, shadowy ties between villagers, timber traders, and state officials permit the clandestine trafficking of rosewood logs despite bans on the trade (To et al. 2014, Singh 2014). While initially focused in Southeast Asia, Chinese rosewood importers have increasingly turned to Africa to substitute dwindling supplies (Treanor 2015). Gambia, Benin, Togo, Ghana, Mozambique, the Democratic Republic of Congo, among others, now export rosewood (EIA 2016). Rosewood from Madagascar, however, both highly endangered and considered to be of superior quality, provides the most valuable African alternative (Wenbin and Xiufang 2013) and thus the greatest opportunity for shadow state politics.

Shadow state politics inspired by Malagasy rosewood stand out amongst cases of rosewood booms across the globe. In Madagascar, not only do shadowy patronage networks tie

local rosewood traders to state officials, as has been thoroughly documented elsewhere, but also certain local traders have profited so greatly that they themselves have become central political figures. Through a mixture of shadow state politics and democratic elections, these local traders launched impressive campaigns to enter central offices during the country's return to electoral politics. Their political success – followed immediately by attempts to destabilize the government into which they have entered – demonstrates how the fusion of democracy and shadow state tendencies in Madagascar has contributed to a unique political transformation yet to be documented in other cases of rosewood export.

It is well-established that democratization may exacerbate shadow state politics. As Bayart (2009) observes, "democracy, or more precisely the discourse of democracy, is no more than yet another source of economic rents, but better adapted to the spirit of the age" (xxiv). It represents just another elite survival strategy (Villalón and VonDoepp 2005), another shadow cast by globalization (Ferguson 2006). Indeed, Reno (1995) recounts the strengthening of the shadow state following democratization in Sierra Leone (59). Less documented, however, is the way that democratic institutions not only strengthen shadowy networks between high-ranking politicians and elite economic actors, but also provide the institutional framework through which elite economic actors may enter office and *become* high ranking politicians themselves, now challenging their former allies from within. Here one sees not a unified shadow state with the President or warlord at the head, as Reno discusses in his seminal cases, but multiple shadowy factions within the formal state vying for control.

What stands out in the case of Malagasy rosewood, therefore, is the unique role democracy has played in ushering elite economic actors to new political heights within the central regime and the subsequent attempts of these new actors to destabilize the state from within. While certainly not the sole provocateur of political tumult in Madagascar, rosewood has made it to the top of the list starting in the new millennium. Alongside minerals, metals, and precious stones (see Duffy 2005 on the latter), rosewood and its rapid price explosion over the past decade have bestowed upon an elite few operators in northeastern Madagascar profits that rival the state budget, allowing them – since 2013 specifically – to enter the government, destabilize the regime, and temporarily monopolize the trade. This set of circumstances – what I refer to as rosewood democracy – is unique to Madagascar's rosewood trade as compared to other cases of rosewood export, and indeed, most other cases of shadow state politics documented across the globe.

As a theoretical concept, rosewood democracy demonstrates neither an attempt at state-building at one extreme, nor a threat directly undermining the state at the other, but rather the shadowy politics through which an economic elite has entered a factious state, inciting mutiny from within. This political ascent cannot be understood, as shadow states often are, as simply an elite power takeover at the top. Rather, it requires an examination of both local and national level dynamics. In this sense, the concept of rosewood democracy brings together ethnographic approaches characteristic of the political forest literature with political economic analyses of shadow states. Looking only at the top, one might observe the shadowy political ascent of the rosewood elite, but would not quite understand how it was made possible through democracy. Indeed, as is true for even the most advanced democracies, political triumphs are often best understood refracted through the eyes of their constituents. Thus, the following sections analyze the rise of the rosewood elite in terms of both the local level dynamics of the trade as well as the political economic machinations at the top, in order to provide a multi-scalar account of Madagascar's rosewood democracy.

III. On the Rosewood Trail

Before chronicling the rise of the rosewood elite within the newly elected Malagasy state, this section portrays the lives of the core constituency that voted them into office. As Reno (1995) observes, a prime imperative of the shadow state under a democratic regime is to buy social order and electoral support (68). Shadow state leaders must therefore look past their elite network, to the constituents that support them. In the case of northeastern Madagascar, thousands of workers who have in their eyes made it big from the trade – even if by simply acquiring a proper bed on which to sleep (Kellar 2014, 141) – propel the politics of rosewood beyond the heights it might reach through only a handful of elite operators. Indeed, the rosewood trade has become a regional icon for those suffering a lifetime of poverty. These residents serve as *les troupes de population des bas quartiers* – so-called "slum troops" that remain a key feature in actualizing political turmoil in Madagascar (Patrick 2010). From the forest, to the camps and villages, and finally the coastal cities that send the logs overseas (Figure 1), the population of the northeast provides critical political support for the rising rosewood elite.

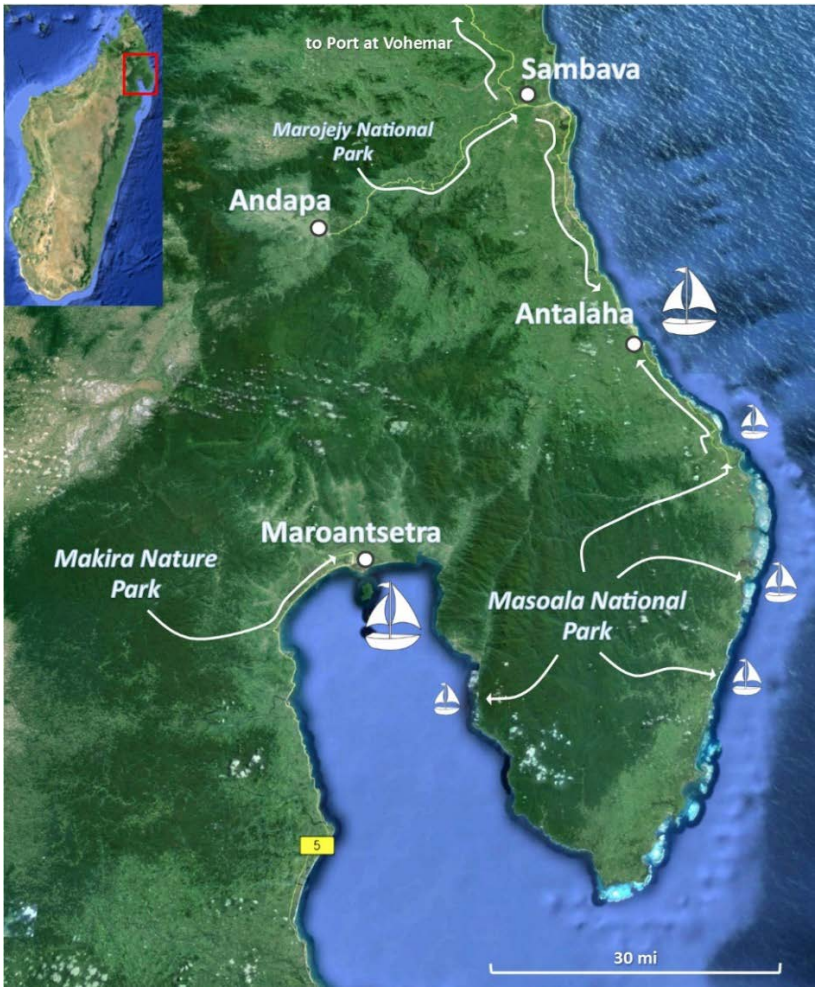


Figure 1. Overview of the rosewood trail. Trees are logged from their source in Masoala, Marojejy, and Makira Parks, and then dragged, driven, or taken by canoe to boats arriving at the coastal cities and villages (Modified from Google Earth 2016).

In the Forest

The work of rosewood begins when two scouters enter the forest in search of rosewood. In the early 2000s, these men could find nearly ten trees per day without having to enter any designated conservation areas. Now, rosewood in the region is limited to the three major parks – Masoala and Marojejy National Parks and Makira Natural Park – and only one or two trees amounts to a laudable daily find. After marking the trees, scouters return the next day to cut and prepare them for transport. This involves clearing vegetation surrounding the trunk, felling the tree with a remarkably dull axe, peeling the outer bark off of the fallen trunk, and dividing the length of the tree into two meter logs. Once prepared in this fashion, logs are deemed *en carton* (ready to go) and what is considered the real work begins. A team ranging from five to sixty men arrive to transport the logs on their long voyage to the coast.

Dragging logs from the forest is an arduous and dangerous task. The terrain is mountainous, slippery, and dense (Figure 2). Wages are typically 10,000 to 15,000 Ariary ($3 to $5 USD) per day, considered to be a very respectable wage despite the danger of the work involved. Men throughout the countryside make their way to the forest to participate. An average log on the steepest slopes requires eight people – three on each side and two alternating at the front – each pulling a rope tied to grooves carved at the far ends of the log. The lead, referred to as the *lampy* (flashlight), is the most dangerous position. Steep slopes or rushing rapids could easily deliver the log in a fatal blow to the man at the front. Workers hurry to the ropes to avoid this position. Latecomers cringe when they realize that this is the only rope left unmanned.

Figure 2. Mountainous terrain and river rapids in Masoala National Park. Rosewood logs are typically hauled through this terrain and sent to the river below for transport back to the coastal cities (Google Earth 2016).

Logs are hauled for days through the forest to the nearest river, typically too small and intermittent to harbor a canoe. At the river, transporters are reduced from eight to four, now dragging the logs by foot through alternating deep and shallow waters. As the river widens, truck tires or a make-shift raft can be used to float the logs down the river, and workers are again reduced from four to two. Small huts are erected at key locations along the river to provide limited rations of rice to passing workers. Those arriving too late find the pots empty and continue along hungrily. Occasionally, I have been told, workers are consumed by such extreme hunger that they search furiously in the forest for anything to ingest – a small raw cassava, a sour fruit – anything to fill their stomach instead of the dirt they might find themselves loathsomely considering.

In addition to hunger, a host of hazards plague the trail. River transport in particular enjoys a veritable lexicon of impending dangers. *Double voie* – a generic term for where the river splits into two parallel white water rapids before reuniting in a violent confluence – is the most feared. "Many people die there" (*tenga olo mamoly*), I am told in the same fearful words by more than one informant. Similarly, *lanternes noirs* – deep yet undetectable whirlpools which ingurgitate passing logs, retain them for a fated "five minutes" (*cinq minutes*), and then violently expel them at an indeterminate location downstream – have also been known to commandeer the lives of workers. Equally feared are crocodiles, mysterious forest sicknesses, and the infamous *veloma baba* (goodbye father), an especially steep ravine named for the remarks ceremoniously uttered before attempting passage.

The *Tribunal* – or "court of justice" – is what a group of informants referred to as the last dangerous passing along one of the trails, where steep slopes end in a vertical drop. In line with its name, it is here, they told me, where workers are inescapably judged with a sentence of life or death. "Life depends on luck" (*ny fiainana dia miankina amin'ny anjara*), many Malagasies proffer, and by indiscriminately ending or extending the life of its passers, the rosewood trail has become intimately connected with one's luck. The trail can be, at varying passages, a villain, trickster, or judge. Walking along it, loggers find themselves the protagonist to either outwit it or be outwitted by it accordingly. Those who survive the *Tribunal* – and their work in the forest more generally – pause to wipe the sweat from their brow and exhale a sigh of relief before continuing along to the camps.

In the Camps

Logging camps provide the nexus between the villages and the last remaining rosewood stands in the parks. Typically along navigable rivers, they occupy relatively accessible areas to which supplies can be transported. After one or many days work in the forest, loggers arrive at the camp hungry and tired. Depending on their working arrangements, food may or may not be provided by their bosses. If not, loggers rush to the nearest *mofogasy* (Malagasy bread) vendor – the one scoffed at days earlier for charging twice the going rate – and devour everything on the shelf without regard for price. Loggers might then sip some *betsa betsa* (Malagasy wine) before falling asleep on a pile of delicately folded branches under a makeshift cover of sticks and leaves.

After the coup in 2009, hundreds of camps were erected in and around the parks to accommodate the new migration of loggers searching for rosewood. Cooks established temporary stands serving rice and broth. Vendors sold whatever they could haul with them into the forest. Women who arrived made quite a killing as hordes of newly-paid men bid

extravagant prices. Music played day and night on the cell phones of the crew bosses who managed the logging effort. Small mattresses were ported in for these lower-level bosses, and loggers who were especially hardworking, clever, or amusing, were invited to sleep at the edge.

As with other resource booms in Madagascar, *vola mafana* – "hot money" that must be spent as quickly as it is earned – inundated the camps (see Walsh 2003). Exaggerated displays of abundance made clear the overwhelming prosperity the market could bring, no matter how fleeting.

As the trade ebbed for reasons of weather or politics, the camps shed their layers of excess. Stalls emptied, although their bamboo structures remained and reminded. The music stopped. Vendors disappeared. Rations were reduced as supplies dwindled and clothes were worn into rags. In a harrowing depiction provided by one of my informants, hungry men slept shirtless with tattered money stuffed in old plastic bottles tied at their necks. Only after enough logs had been cut and delivered to the camps could these men finally drag them on to the villages.

In the Villages

After enough logs have been cut and delivered to the camps, they are then dragged to the villages (*fokontany*). At the villages, logs are weighed and purchased by mid-level traders at the behest of the rosewood operators, to whom all the logs eventually flow. These traders (educated, urban, and scrawny compared to the muscular haulers) pay the crew bosses what is considered an enviable sum in the eyes of both the loggers they employ and idle onlookers too old or too weak to engage in the trade. Purchased logs are then commissioned to be sent by truck or canoe to the larger coastal villages and cities that serve as key nodes along the rosewood trail (Figure 3).

Figure 3. Bringing the logs to the villages. Loggers drag or carry rosewood logs into the village of Antanandavahely (left) and down the hill to the river (right) where boats are waiting to take the logs to the coastal village of Ambohitralanana (photos by author).

A number of villages along the Masoala Peninsula have been made famous by rosewood and many of their villagers are now considered rich from the trade. The village presidents (*chef fokontany)*, earning as I was told approximately 60,000 Ariary ($20, or close to a month's worth of sustenance) per batch of rosewood in transit, are most certainly among the richest.[4] With their wood houses, tin roofs, cold beer, and solar panels, these villages stand out from the others that have not managed to become hubs along the rosewood trail.

As with the camps, the villages are subject to the same oscillations of wealth and impoverishment. Small palm huts of those excluded from the trade butt against the crew bosses' larger tin-roofed houses with logs piled high in the backyard. Recently paid workers drink away their weekly wages in a single night's binge. Discotheques built and danced in during boom periods are abandoned soon after the money runs out. Impromptu casinos surrounded by hordes of loggers fresh from the forest disappear weeks later. Blankets spread out in the fields for migrant loggers are soon washed and folded and stored for future use. As has been documented in mining booms and busts throughout the country (Baker-Médard 2012, Walsh 2003, 2012), the peak of the trade is mirrored by its trough.

In the Cities

Historically wealthy from vanilla, the cities of northeastern Madagascar now receive a further influx of foreign exchange from the rosewood trade. Antalaha in particular has become known as "the heart of the rosewood trade" (*le cœur de l'exploitation du bois de rose*). The most notorious rosewood operators hail from Antalaha, with a few others residing in the nearby cities of Sambava, Maroantsetra, and Vohemar (see Figure 1). As the rosewood trade began to escalate in 2000, all logs dragged from the forest had to first pass through the city of Antalaha before continuing their journey overseas to China. After the 2009 coup, however, Chinese ships filled with Malagasy currency began arriving all along the coastline of the Masoala Peninsula to buy rosewood direct from the forest (Figure 4).

Rosewood money continues to envelop the northeastern cities in a complex mix of opportunity and despair. As the rosewood trade escalated, residents saw a change in the cities. Large concrete houses sprouted up, motorcycles buzzed along the main roads, and beachside gatherings hosted by rosewood traders became commonplace. Many residents – although certainly not all – benefited from the new prosperity. School fees were paid on time. Young men came back from the forest with more money than ever before. When not squandered in a single spending spree, as discussed in Chapter 3, rosewood money bought cows or computers, whatever goods that could be leveraged when the market inevitably came to a close. In just two months of work, some traders could raise enough money to purchase a motorcycle or build a house at the edge of the city. In a similar time period, loggers could buy a new bed or tin roof for their house, and the rosewood operators have become multi-millionaires.

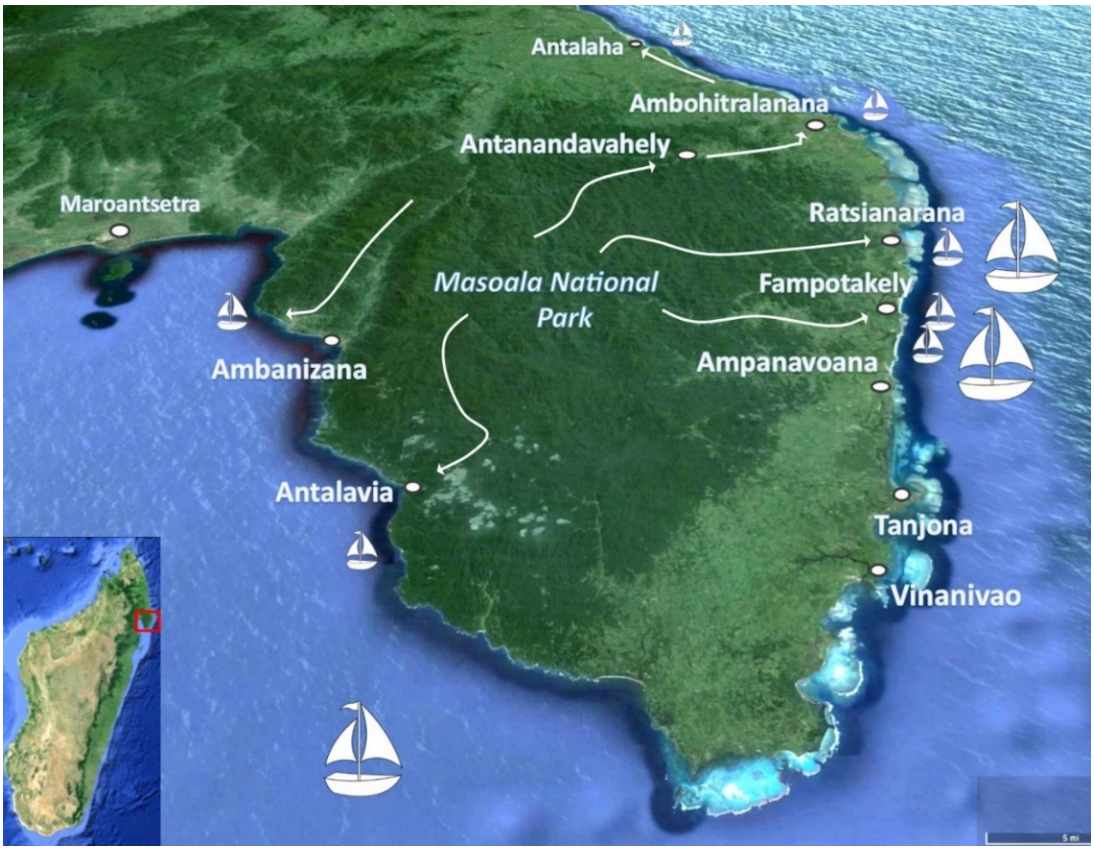


Figure 4. Map of the flow of logs from Masoala National Park. Rosewood logs travel from the park's interior, to the villages, and finally to the coastal boats for overseas shipment. By 2013, most logs were shipped directly from coastal villages to larger international boats waiting further offshore (modified from Google Earth 2016).

But the trade was a double-edged sword. Residents not directly involved saw little change in their own incomes, while the price of market goods soared. Taxi fare doubled. The city bus was reportedly repurposed into a truck for shipping rosewood. The region's ports became clogged with logs, creating a shortage of other domestically shipped commodities. Rosewood operators laundered their money through other industries in the region – most notably vanilla – causing undersupply and market instability (AFP 2016). Although school fees were now paid on time, many teachers deserted their students to profit as low-level traders. Just outside the city, agricultural labor also dwindled as young people in the countryside made their way to the forest in search of rosewood. Logging wages, although paling in comparison to the profits of traders and operators, nonetheless far surpass returns from agriculture. What are the youth to do, I have been asked many times, when the trade stops and the money dries up?

The Janus face that accompanies any great influx of money has been the experience of rosewood in the forest, camps, villages, and cities across northeastern Madagascar. While the rosewood operators have collectively made more than one US billion, others have spent their meager earnings in one egregious spree (again, as discussed in Chapter 3). It is this uneven dynamic that, as the following section will demonstrate, has created the conditions for a new power bloc to emerge within Madagascar's Fourth Republic – not through coup or dictatorship, but through democracy.

IV. The Rise of the Rosewood Shadow Elite

This section traces the reemergence of the rosewood trade in northeastern Madagascar, beginning with its gradual resurgence just before 2000, to its sudden explosion after the country's coup in 2009, and finally to its current stagnation as the region now collectively sits on the dormant munition of up to $2 billion[5] in cached logs, already cut and awaiting export. Throughout this time, the Malagasy government has instituted an unpredictable dynamic of opening (*misokatra*) and closure (*mifody*), luring thousands of loggers into the forest and driving them out just as quickly. The legal confusion generated by this series of contradictory regulations has greatly benefitted a small group of rosewood operators. Through a fusion of democratic elections and shadow state politics, members of this group of rosewood elite have managed to secure seats in Parliament following the country's return to electoral politics in 2013, and shortly thereafter, implement a complete market monopolization. Far from a stabilizing development, this monopolization has proven a riotous affair, as rosewood revenues can be made to finance both the state as well as the forces that oppose it.

The Resurgence of Rosewood

In the late 1990s, decades after the colonial logging initially responsible for Madagascar's precious hardwood endangerment waned (Jarosz 1996), China began experiencing intense economic and cultural shifts that jolted the country's demand for rosewood. A renewed interest in classical aesthetics dating back to the Ming and Qing Dynasties reinvented rosewood furniture into a booming investment commodity in new millennial China (as discussed in Chapter 5). Chinese rosewood imports from across the tropics soared, with Africa providing an increasing supply (Wenbin and Xiufang 2013). In northeastern Madagascar, a renaissance in the rosewood trade was about to take place.

The combination of a devastating cyclone and upcoming presidential election in the early 2000s set the stage for Madagascar's first major escalation in rosewood logging and exports in decades. In March 2000, Cyclone Hudah destroyed the majority of subsistence and cash crops covering prime rosewood territory. A flurry of salvage logging permits were issued in the wake of the cyclone and hundreds of aspiring loggers headed to the forest. The looming presidential election further facilitated the logging rush. Despite bans issued as logging surged in the aftermath of the cyclone (Order 11832/2000 and Order 12704/2000), a pre-electoral policy of strategic neglect to appease constituencies in the northeast, combined with a four month political stand-off due to contested elections, allowed the trade to continue. Finally, after Ravalomanana was declared by the High Constitutional Court to be the electoral victor in 2002, earlier trade restrictions were once again enforced.

This election cycle inaugurated what was to become a notorious sequence of pre-electoral trade permissions, followed by post-electoral prohibitions – the beginning stages of what was, by 2013, to develop into a full-fledged rosewood democracy. In 2004, another cyclone hit the region and the following year Ravalomanana faced re-election. More salvage permits were issued and workers returned to the forest. Despite some attempts to curb the logging (Decree 001 2005 REG/SAV, cited in Patel 2007), the Malagasy government capitulated to the "grievances" of the rosewood operators and authorized the export of existing precious wood stocks (Memorandum 923/2005). Export permissions interlaced with a number of prohibitions

demonstrated in their stark relief what has come to be the hallmark of the rosewood trade – a sequence of alternating enforcement and neglect that would last up until the complete dismembering of the government in 2009 (see Figure 5).

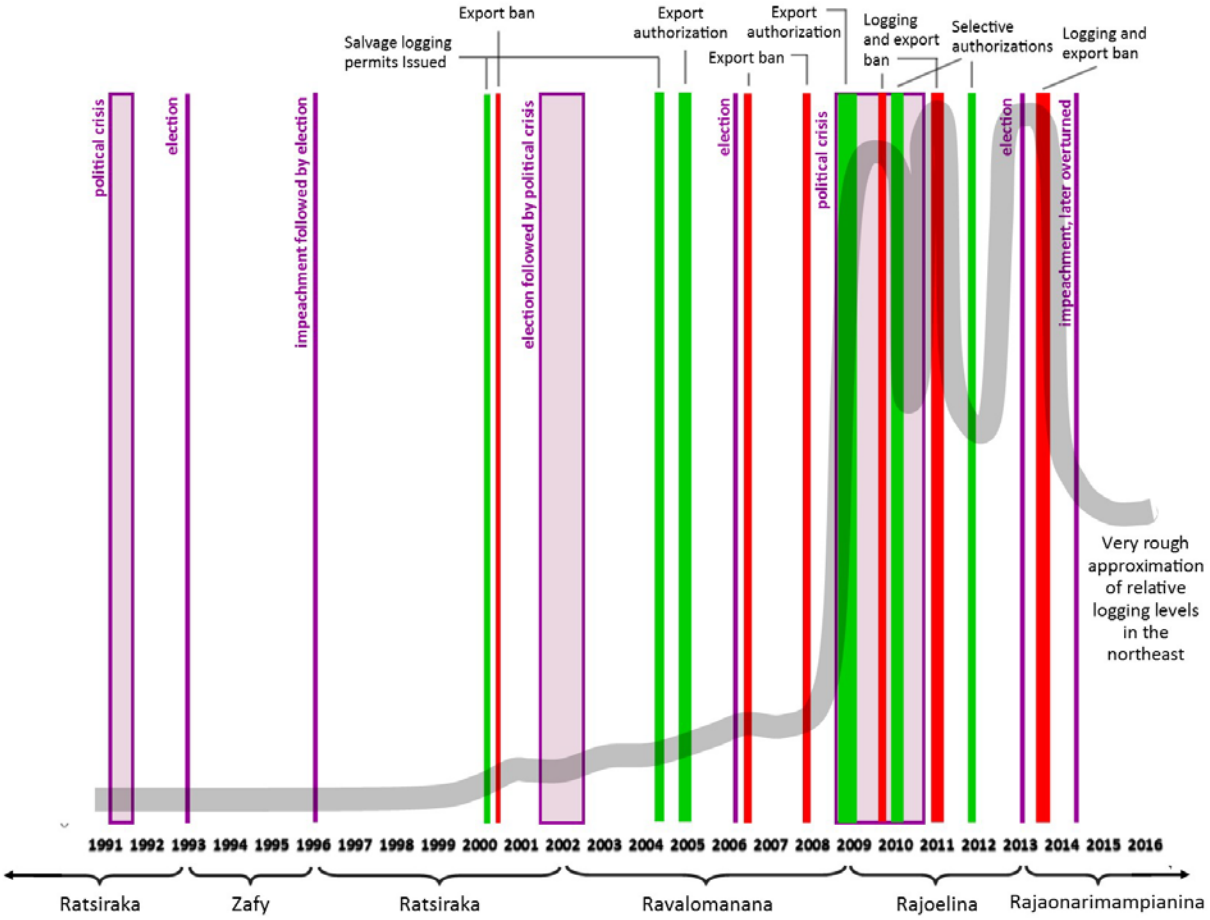


Figure 5. Timeline of events influencing the rosewood trade. Purple indicates political events, while red and green lines indicate governmental permissions and restrictions on the trade, respectively. The thick grey line provides a very rough estimate of relative levels of rosewood logging in Madagascar (it has no units and was compiled based on interviews and the literature; it is meant as a very general visual indicator of relative logging effort over time and is not intended to be read with scientific accuracy).

Rosewood Explosion

Clouds of black smoke loomed over the capital of Madagascar in a sudden outburst of political turmoil on January 26, 2009, later to be deemed 'Black Monday' (*lundi noir* or *alatsinainy mainty*). The tripartite "accumulation of darkness" in the capital – the rising black smoke from scattered arsons throughout the city, the moral depravity of the looting crowds, and the obscurity through which a small group of ringleaders puppeteered the scene – lent the day its ominous title (Patrick 2010). In northeastern Madagascar, rioters made their way to local offices of the Ministry of Environment and Forests, where hundreds of previously confiscated rosewood logs lay piled next to the building (Razafindramiadana 2009; Randriamalala 2011). The offices were

looted and the confiscated logs were reclaimed in a fervent demonstration allegedly orchestrated by key rosewood operators (Global Witness and EIA 2009; Randriamalala and Liu 2010; Randriamalala 2011).

Sensing impending unrest, President Ravalomanana began relaxing rosewood export restrictions at least a week before Black Monday in the January 19, 2009 *conseil du gouvernement*, likely as a means to garner allies and finance from the northeast (Global Witness and EIA 2009). Then, two days after the Black Monday protests, Ravalomanana passed Interministerial Decree 003/2009, opening the exportation flood gates for thirteen specified operators (listed in Global Witness and EIA 2009, 10) and officially sanctioning the rosewood bonanza that erupted in the wake of Black Monday. The political turmoil following Black Monday lasted just under two months, culminating in the military's seizure of the Presidential Palace and the forced installation of Andry Rajoelina – the opposition leader – as the new head of what was deemed the High Transitional Authority.

This series of export permissions, exacerbated by the atmosphere of national chaos that accompanied the coup, ushered in what would later come to be known in the northeast as *lera ny bois de rose* – "the time of the rosewood." The decrees made by Ravalomanana's crumbling administration and Rajoelina's newly installed regime facilitated a protracted logging frenzy of questionable legality that continued largely unrestrained for one year, resulting in the export of over 1,000 shipping containers holding at least 52,000 tons of precious wood. This earned the rosewood operators at least $220 million in 2009 alone, likely much more (Randriamalala and Liu 2010).[6] Loggers made their way to Marojejy and Masoala National Parks by the thousands to join the trade.

While logging and export continued apace in the northeast, making the thirteen sanctioned rosewood operators millions, the recently installed transitional regime sought to secure its slice of the profits. Crippled with cuts of nearly 90 percent of international budget support due to the cessation of aid after the coup, the transitional regime was in desperate need of finance. In an attempt at forest control reminiscent of Peluso and Vandergeest's political forest, the transitional regime permitted export to continue while benefitting from fines that amounted to thirty percent of the value of the trade (Interministerial Decrees 38244/2009 and 38409/2009). This move generated near-term revenues of up to $40 million (see Figure 6 for a diagram of the financial flows of the trade).[7]

Together, the decrees made by Ravalomanana's crumbling administration and Rajoelina's newly installed transitional regime facilitated a protracted logging frenzy of questionable legality that continued largely unrestrained for one year. While these legal developments did authorize the export of existing stocks for certain key operators, they did not permit the massive logging efforts that nonetheless occurred within Masoala and Marojejy National Parks as a result. Thus, what ensued has been referred to as a "revolving door" loophole, in which old stocks were replaced by newly cut logs, which could then be legally exported as "old" due to lack of documented inventory (Global Witness and EIA 2009: 8; Salava 2009). In 2009 alone, over 1,000 shipping containers yielding at least 52,000 tons of precious wood was exported at a collective price of at least USD 220 million, likely much more (Randriamalala and Liu 2010).[8] In rough corroboration, Global Witness and EIA (2009) estimate that the trade generated approximately USD 460,000 per day during this period of intensified logging and export (amounting to an approximate total of USD 168 million for the year), and the World Bank (2010) estimates that over a similar time period, 1,211 containers of precious wood equating to approximately USD 175.8 million were exported.

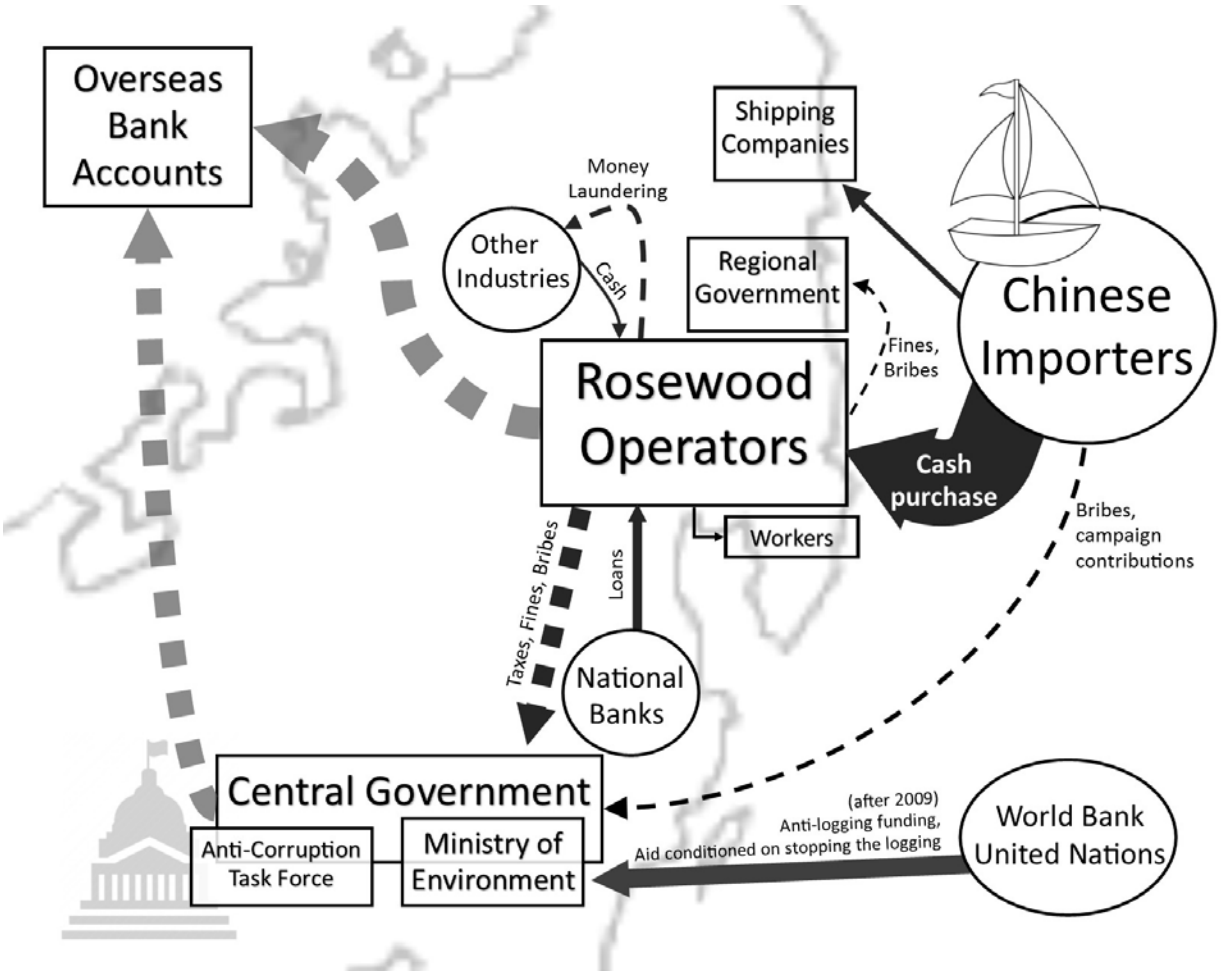


Figure 6. Map of financial flows and key players in the rosewood trade. Arrows approximate relative size and direction of financial flow. Dotted lines represent transactions of questionable legal status. Circles represent sources and squares represent sinks.

Although government revenues from rosewood helped offset the drastic international aid cuts imposed after the coup, they paled in comparison to the earnings of the rosewood operators from the northeast who had direct ties to a growing Chinese clientele. Given this disparity, the shadow state technique of consolidating resource control at the expense of all rivals proved to be a more likely pursuit than bureaucratic state-making through the political forest. After a flurry of chapters exposing the forest devastation were published and international outcry surged, the transitional regime made the first steps toward market consolidation – this time using, as Reno (1995, 68) notes, the guise of reform to deepen shadow state politics.

"Cleaning Up" the Trade

Pressured by growing international concern and donor conditionalities,9 the transitional regime promulgated a campagne d'assainissement (clean-up campaign) for the precious woods sector. In August 2011, Rajoelina instituted the transitional regime's most comprehensive anti-logging

laws yet (Order 2011/001), prohibiting all operations, canceling all prior licenses and legislation, imposing heavy fines, and permitting little legal recourse. For nearly six months following the decree, the conservation community released a tentative sigh of relief. But then, in complete contradiction to this groundbreaking legislation, the Minister of the Environment issued a separate ministerial decree (0741/2012) authorizing the ministry to distribute new export licenses at its own discretion (see Table 1).

Table 1. Contradictory Decrees to "clean up" the precious woods sector in Madagascar (modified from Randriamalala 2012).

President's Executive Order August 2011 (No. 2011/01)	**Minister of Environment's Ministerial Decree January 2012** (No. 0741/2012)
Prohibits the cutting, transportation, operation, marketing and export of rosewood and ebony (Art. 1).	Authorizes the export of rosewood and ebony in all forms (Art. 4).
Cancels all export licenses in force (Art. 3).	Grants export licenses to anyone who formally requests, at the discretion of officials (Art. 5, 6, 7).
Cancels all previous contradictory legislation (Art. 14).	Referring to earlier contradictory legislation in the Preamble, insists that the Decree will take effect "regardless of its publication in the Official Journal of the Republic of Madagascar" (Art. 15).

Through these contradictory decrees, the Malagasy government first appeased the international community by implementing draconian restrictions and briefly halting the trade entirely, and then, six months later, consigned another branch of government to selectively re-authorize export permits at its own discretion (Randriamalala 2012). Thus, while appearing to stop the trade entirely, the "clean up" served instead as a shadow state attempt to shore up the control of resources, ensuring that only certain operators could continue export while providing the aura of a complete cessation. Indeed, as Randriamalala (2012) notes in his editorial concerning these contradictory decrees, the Malagasy government "'cleaned up' the sector by taking full control."

To enforce this and other attempted "clean ups," national troops were sent to the northeast to halt the logging. Residents are familiar with the chain of events accompanying the military's arrival and have recounted them to me roughly as follows: pedestrians glance over as armed soldiers in large trucks drive down the main road toward the logging villages and know immediately that they are here for rosewood. They watch the procession, mumbling to one another as the trucks pass, *ihany no mitady vola* – "they look only for money." While I am told that some bosses are informed well in advance, the majority are notified of the military's arrival by radio broadcasts throughout the region. Messengers are sent to the forest to further publicize

the impending arrival. Loggers and traders work all night to bury any logs in their possession and then act as idle villagers. The military are not fooled by this mimicry, a group of ex-loggers recalling their specific encounter with the authorities informed me, but for a small fee they can be assuaged.

In protest, rosewood operators organized strikes against the military intervention. Over half a dozen strikes have been held in the northeast to varying effect. While I have not witnessed these strikes, they have been described to me by a number of informants who participated. A typical strike begins when key rosewood operators hold a meeting at the town hall in Antalaha. Strike organizers gather crowds from the city. Trucks are sent to the countryside and village leaders are paid to send their residents. Animated and entertaining, the rosewood operators speak of the government's abuse of power, its preposterous demand to halt the biggest source of revenue coming from the region. The town hall overflows. Protesters then march with signs of discontent. "Go home military, we are safe here" (*mody miaramila fa aminay aty milomina*), the protesters write on large sheets of paper and chant in unison. Loggers, paid participants, and idle bystanders all partake in the commotion, while the rosewood operators watch from afar, allegedly paying shop-owners at the center of town to close their businesses as further testament to regional solidarity against the military "intrusion."[10]

Given these strikes and the financial losses from reduced rosewood exports, the transitional government's attempt to "clean up" the trade – or rather to centralize it at the hands of only their allies – proved temporary. The gap between central politics and local power was simply too great to afford either side exclusive control for very long. But after the election in 2013, when shadow state politics converged with electoral democracy, that gap began to narrow.

Pre-Electoral Boom, Post-Electoral Bust

During the pre-electoral period leading up to the 2013 elections, all restrictions of the regime's previous 'clean ups' were abandoned. The number of rosewood operators swelled from thirteen to well over one hundred as anyone with spare cash hurried to join the trade (Randriamalala 2013). Logs were delivered straight from the forest to Chinese ships arriving along the coastline, ready for purchase with Malagasy Ariary on board. The price of Malagasy rosewood in China, which had been increasing for over a decade, happened to peak the same year as the elections, increasing from around 15,000 Chinese Yuan per ton in 2000 to over 220,000 Chinese Yuan per ton in 2013 (from around $2,400/ton to over $35,000/ton).[11] Exporters in the northeast with personal connections to China reaped the benefits, demonstrating precisely the type of foreign patronage integral to shadow state politics.

Leveraging their global connections and the upcoming elections, the rosewood operators began the transition from economic elites within the regional rosewood economy to a powerful bloc within the central regime. Operators from all over the northeast courted voters with their newfound millions in an attempt to gain coveted parliamentary seats from each of the region's districts. The pre-election "*propagande*" period in the northeast was by far the most extravagant yet. Candidates rented planes touting their names, threw weekly parties, gave handfuls of cash to strangers on the street, and set up stations in villages throughout the countryside distributing sheet metal and other building materials. They paid for students studying in the capitol city to return to the region and participate in the propaganda. After their victories, they paid for student to return once more to celebrate. The campaign promises were as fantastical as the tactics: free hospital access for all residents, a complete revamp of all public schools, and a road stretching

from Antalaha to Maroantsetra! In their exaggerated displays of wealth and abundance, these candidates reminded residents that they were the gatekeepers of a market that had revitalized the region and backed their promises of limitless prosperity.

For the most part, the tactics worked. Many of the elected parliamentarians from the northeastern districts are alleged to be involved in the rosewood trade – some quite deeply – and their favored presidential candidate, Hery Rajaonarimampianina, was elected President of Madagascar's Fourth Republic.[12] One of the most reported-on additions to the new government was a Member of Parliament from the northeast who has now admitted to be involved with the rosewood trade ever since its resurgence in the early 2000s.[13] Indeed, many residents of the northeast consider this newly elected parliamentarian to be the number one player in the rosewood business – one of the *first* traders initially involved and currently one of the *last* traders through whom all the rosewood circulates before leaving the country. In addition to financing his own campaign, he was reportedly one of President Hery's "principal sponsors" during the election, avidly campaigning for Hery and providing hefty financial contributions (Ravelontsalama 2014). Moreover, this particular rosewood operator-turned-parliamentarian, along with a few others from the northeast, formed a political party (the Union of Independent Deputies) with the newly appointed Minister of the Environment, who is alleged to have similar connections with the trade (EIA 2014, *TanaNews* 2014a). Together, these new members of government have transformed from local strongmen to central political figures, forming a powerful shadow coalition for clandestinely centralizing the rosewood trade.

Following the election was the largest consolidation the rosewood market has yet seen. Just months after his installation in office, President Hery sent troops to the northeast, shutting down all but a small subset of operations.[14] When I arrived in northeastern Madagascar a few months after that, thousands of loggers had returned from the forest. Rosewood exports, the returning loggers assured me, were now restricted to only those circuits of the newly-elected parliamentarians and their allies in the northeast. This extreme bottleneck caused the price of rosewood sold *within the region* to plummet,[15] while the price of rosewood *at export* was rumored to have soared.

As is often the case with shadow economies, both the operators' and the government's involvement in the rosewood trade remains in a legal gray area due to the series of alternating permissions and prohibitions that has characterized the trade for nearly the past two decades (Global Witness and EIA 2009). Indeed, the complexity of the law seems to serve as a technique of shadow state governance, creating a contradictory legal landscape in which assigning blame for export is nearly impossible.[16] While this legal confusion has been significantly reduced since 2013, when international trade in rosewood from Madagascar became prohibited under CITES Appendix II, various international rosewood seizures nonetheless demonstrate that shipments continue to flow overseas through clandestine circuits. Moreover, in 2014, the Minister of the Environment traveled to the largest seizure site (nearly 30,000 logs seized in Singapore) and confirmed to port authorities that these logs were in fact shipped legally – an impossible confirmation given the CITES ban.[17]

Although Malagasy news outlets frequently cite accusations ranging from the newly elected parliamentarians, to other members of government, to even the President (*TanaNews* 2014b), the accused all "seem to remain untouchable due to insufficient evidence" (Andriamarohasina 2016). Indeed, in a situation where, as I am told, Malagasy journalists come to the region in search of bribes *not* to write a story and would be "committing suicide" (*hamono tena*) if they partook in any actual reporting, there is little definitive proof of much anything.[18]

And given the informal market connections that define the trade, one must question whether "cleaning up" the sector can be achieved through any sort of legal revision at all, or if it rather requires a much deeper confrontation with the underlying disparity of power at the core of shadow state politics – a disparity that permits the law and the market to be so easily manipulated by the personal interests of a shadow elite.

Whispering Unrest

Piled high in backyards, buried underground, and idly confiscated at the side of the road, rosewood stocks scattered across northeastern Madagascar serve as a constant reminder of up to billions in foregone wealth (Figure 7). Aside from a small centralized stream of logs siphoned by the capital, the majority of the market remains stagnant. Loggers who have been out of work for nearly two years hustle for odd jobs at the same time that they eagerly recall "the time of the rosewood." They perk up, as I witnessed, when rumors of potentially destabilizing political developments spread – the return of former President Ravalomanana from exile, the strike of the national airline.

Figure 7. Rosewood logs cached throughout northeastern Madagascar. A single log in an individual's house (top left) and a stockpile of logs stored at the Port of Antalaha (top right), at the gendarme's office in Antalaha (bottom left), and in an individual's back yard in Antanandavahely (bottom right) (photos by author).

The impeachment of President Hery Rajaonarimampianina in 2015 seemed to provide a potentially explosive opportunity. Exactly why Parliament decided to impeach their newly elected President remains unclear. While rising inflation and gross negligence were cited as triggering conditions, it seems that deeper political transformations incited this mutiny. President Hery had allegedly experienced a falling out with his former alliances, some of which included the rosewood operators that recently entered office. Indeed, the most notorious rosewood operator-turned-parliamentarian described above reportedly not only voted for Hery's impeachment, but paid other members of parliament to do the same, using what has become known in Madagascar as *vola miodina* – "rebel money" (Ratsiazo 2014). Although Madagascar's High Constitutional Court overruled the impeachment as unconstitutional, Parliament deemed the court's ruling invalid and loggers in the northeast waited with anticipation. After the June 26th Independence Day celebration, a former trader warned me, there will be another *grève*, reminiscent of 2009. While he did not want to reproduce the chaos of the coup, he was nonetheless preparing to make the most of it.

Despite Parliament's machinations and loggers' predictions, there was no coup the summer the president was impeached and subsequently acquitted. The political situation nonetheless remains shaky as stagnant rosewood logs serve as a constant reminder of foregone wealth. Madagascar's rosewood elite, it seems, understand very well the shadow state dynamic wherein "unmet social demands and central government incapacity can be exploited for personal gain" (Reno 1995, 97). Rather than contributing to the creation of a strong state, the rising elite incite mutiny from within. Their provocations are aggravated by large timber reserves stockpiled throughout the region.

While these logs have become a part of the landscape – a makeshift playground or a place to dry laundry – at times their white noise seems to darken into a whisper. Indeed, through the mouths of disgruntled operators shut out from the trade, Chinese importers warning that "export will continue no matter what, because their money can go through even the most highly placed doors" (Randriamalala 2012), and thousands of loggers now out of a job, rosewood has been whispering unrest into the ears of anyone that can be made to listen for nearly two decades. Amplified by the hollow politics of a factious state, these whispers now resoundingly suggest that if President Hery does not comply, then perhaps he too can be replaced.

V. Conclusion

Since the new millennium, the rosewood economy in northeastern Madagascar has been increasingly imbricated with national politics. Through clandestine market connections with foreign clientele, rosewood operators have leveraged timber profits to gain offices in Madagascar's Fourth Republic and monopolize the rosewood trade to their exclusive benefit. Examining both the rise of the rosewood shadow elite and the everyday life of their constituencies in the northeast, this chapter has chronicled what I have termed Madagascar's "rosewood democracy." As the newly elected rosewood elite tighten controls over the market and its potential to produce record profits from the protected areas of Madagascar, the forest has increasingly become a site of contestation.

Rather than a bastion of state-making, the political forests of Madagascar have become a treasure chest pillaged by government malfeasance. In a political dynamic reminiscent of Le Billon's "conflict resources" or Reno's "shadow state," the rosewood elite strive only to secure

their personal fortunes and continued resource control while in office. They deny illicit participation in the market and siphon their profits to overseas accounts. As a volatile new power bloc, they not only destabilize the regime from within, allegedly buying impeachment votes and financing unrest with "rebel money," but also from the outside, through the mounting discontent of unemployed rosewood workers and disgruntled residents opposed to government interference.

Ironically, it is the rosewood operators currently monopolizing the trade who capture this growing agitation and redirect it toward the state of which they are now a part. Popular outrage is displaced onto the central government for smothering the trade. Rosewood operators depict themselves as saviors coming to the rescue of the unemployed majority waiting to work in a region that should simply be left to do as it wants with its resources; their participation in the very obstruction they claim to fight against is obscured as they redirect the population to push for the reopening of the trade. Just as the trade is consolidated to profit only an elite few, the population is simultaneously consolidated around this elite few and against whomever they claim to oppose – reinforcing the control of the operators at the expense of the state.

The rosewood trade in Madagascar and the type of rosewood democracy it has inspired offers a window into how the electoral process plays out in a landscape of vast inequity. In a single election cycle, an elite few leverage their earnings in order to step into the national political arena and control the market to make even more. Here, the electoral process does not so much level the playing field, but merely contours – even exaggerates – its highly uneven topography. The process is indeed characterized by corruption, but a form of corruption much less amenable to superficial reforms that target discrete practices such as bribery or favoritism. Instead, the democratic institutions that are themselves supposed to foster equality have been captured to sustain long-standing patterns of inequality.

The case of Malagasy rosewood thus reveals the potential consequences of imposing democratic institutions over a history of shadow state politics. As Reno (1995) warns, rather than the "flowering of a vibrant civil society…the more probable heirs to the shadow state are fragments of elite networks, strongmen striking out on their own" (188). Operating in the shadows themselves, these "entrepreneurs and their supporters," Reno predicts, "will exploit anarchy and anger as an opportunity to rob the countryside on their own behalf" (188). As rosewood logs are now siphoned from the forests by way of the capital, the shadowy faction of rosewood operators-turned-parliamentarians that have entered Madagascar's new regime seem to confirm this prediction.

But there is also something more behind the shadows. As Nordstrom's (2004) investigation of shadow networks across the globe reminds us, in addition to the illicit exploitation of resources for personal gain, shadow regimes "also offer a means of development to people with few alternate means of survival" (211). Despite the patronage, favoritism, and exploitation, shadow states connect out of the way places in Africa to the vast resources of the global economy. The rosewood elite of northeastern Madagascar have realized one such global connection through China's budding demand for precious hardwoods. They have brought legions of Chinese ships filled with Malagasy Ariary to the undeveloped shores of northeastern Madagascar. For better or worse, it is this tendency of shadow networks to develop through global connections – rather than remaining marginal to them – that gives shadow state politics such power in Madagascar's rosewood democracy.

[1] These reports, discussed throughout the paper, include Shuurman and Lowry (2009), Randriamalala and Liu (2010), Global Witness and EIA (2009 and 2010), World Bank (2010), Randriamalala (2012), Randriamalala (2013), and EIA (2014), along with a number of news chapters from the Malagasy press.

[2] Randriamalala and Liu (2010) make more or less this same observation when they write that, "we can already conclude that rosewood now regularly finances a type of Malagasy 'democracy'" (28, translated from French). Randriamalala (2012) refers to this as "*la bolabolacratie*," joining the French word "*démocratie*" and the regional word for rosewood logs, "*bolabola*." Shuurman and Lowry (2009) also allude to this phenomenon: "Given that logging of precious timber has been problematic for many decades in Madagascar, one could question whether political turmoil is the main spark that sets off pillaging of valuable timber from protected areas, or alternatively whether the drive to exploit valuable and sought-after resources such as rosewood on legally public land might contribute to political turmoil" (101).

[3] See Thompson (1975) for a seminal account and Kull (2002) for an account pertaining to Madagascar.

[4] Yet, villagers chuckle at the possibility that their leaders might be held accountable for redistributing the rosewood revenues they receive. Village presidents are in fact rarely viewed as having the responsibility of providing for the general village population any sort of material or monetary benefits that they themselves have acquired from their informal taxation on the trade. On the contrary, their perceived role is to extract value from villagers by compelling mandatory communal activities, such as road building (even though theirs might be the only car driven on the road).

[5] This figure is wildly speculative. It is based on estimates ranging from $600 million to $5 billion (the latter cited in an open letter signed by forty organizations, including a number of major NGOs).

[6] The report also estimates that up to $52 million of rosewood earnings have been delivered to overseas bank accounts and have yet to be repatriated to Madagascar. In rough corroboration, Global Witness and EIA (2009) estimate that the trade generated approximately $460,000 per day (amounting to an approximate total of USD 168 million for the year), and the World Bank (2010) estimates that over a similar time period, 1,211 containers of precious wood equating to approximately $175.8 million were exported.

[7] World Bank (2010) estimates that the transition government received $18 to $40 million in imposed fines between September 2009 and March 2010 alone (amounting to approximately 5 to 10% of the government's revenue in 2009).

[8] The report estimates that over 75% of this total has been kept as profit by the rosewood operators, while roughly 15% has been paid in taxes to the state, 6% paid to mid-level traders to purchase the wood, and less than 1% paid for transport and handling. The report also estimates that up to $52 million of rosewood earnings have been delivered to overseas bank accounts and have yet to be repatriated to Madagascar.

[9] For example, the World Bank's $52 million conservation grant given the explicit condition that rosewood logging legislation be enforced, and the UNESCO World Heritage Committee's recommendation F 35 COM 7A.10, calling on the Malagasy government take control of logging in the northeast.

[10] Payments from rosewood operators for business closure during the protests seemed to be common knowledge in Antalaha. One informant even remarked that one of the only two gas stations in town was closed because of this.

[11] Price figures come from Chinese rosewood importers interviewed in 2015 at Furen Timber Market in Shanghai, roughly confirmed by Wenbin and Xiufang 2013. Conversions were made using 2013 exchange rate.

[12] See *Midi* (2015) for an example.

[13] He discussed his involvement with the trade in an interview on a popular Malagasy program (available at: https://www.youtube.com/watch?v=44RlEJAXFj0).

[14] When I returned for field work in May 2014, I spoke with dozens of loggers and traders that had just returned from the forest since the military kicked them out in March. They affirmed that the trade continues, but only for those who control it from the capital. This remains the state of the market to date.

[15] The price of rosewood in the region was consistently cited by my informants to be an average of 2,000 Ariary per kilogram from 2014 to 2015, as opposed to more than four times that at the peak of the trade from 2009 to 2013.

[16] The President of the Courts of Justice in one northeastern city "affirmed that 'serious legal uncertainty' has resulted in several dismissals of charges brought against exporters and officials" (Global Witness and EIA 2009: 11).

[17] *L'Express* (2016) and Ranaivoson (2016) report on the issue. The new Minister of Environment has since denied the legality of the shipment, contradicting the former Minister's confirmation. The court case is in appeals.

[18] Indeed, the only prominent arrests concerning rosewood are of the few locals who have spoken out about the trade and facilitated its international exposure (Gerety 2015).

Chapter 3

Hot Money, Cold Beer

I. Introduction

Northeastern Madagascar has experienced a distinct development trajectory, driven most recently by the export of two luxury commodities—vanilla and rosewood (Figure 1). While the region has exported these commodities for over a century, their increased price volatility since 2000 has had an unprecedented effect on the local economy. Over the past two decades, structural-adjustment programs, compounded by acute shifts in local supply and global demand, have triggered a series of booms and busts in the region's vanilla and rosewood markets. The first among them was the vanilla boom. After 20 years of government price setting, the Malagasy government released the country's vanilla price to the whims of the free market in the late 1990s. Then, in 2000, the largest cyclone in half a century devastated the nation's prime vanilla territory, and because Madagascar dominated global market production, the price of vanilla spiked to double, triple, eventually 20 times its historic level. Rural villagers whose crops survived soon amassed previously unimaginable wealth.

After the vanilla price spike, strange things began to happen in northeastern Madagascar. A chameleon plastered with money might cross one's path at the edges of town. A passerby might notice a man joyously smashing a box of ripened mangoes purchased by the side of the road and then nonchalantly paying the vendor 10 times the price of the box. A few of the countryside's nouveaux riches went insane. Stories of bizarre spending behaviors began to pepper the landscape, and there came into full force what Malagasies call *vola mafana* (hot money): money that is spent as soon as it is earned with little consideration for long-term savings or investment. While most hot-money spending sprees consisted of the usual suspects—cold beer, wild nights, and taxi rides to the next town to do it all over again—they occasionally manifested in much more creative demonstrations of wealth, abundance, and even insanity. Across the region there was a wave of rumors, such as that of the newly paid vanilla farmer who boiled up all his money, ate it as soup, and was found dead the next day. Fabulous stories about how vanilla is actually used on the other side of the world—not as a delicate flavoring but as the vital ingredient in dynamite or tires—also began to inundate the region.

Figure 1. Northeastern Madagascar's two major export economies: vanilla (drying in a Coca-Cola bottle) and rosewood (logs covered by an old mattress hiding in the background). (Photo by author, June 2015)

By 2006 the price of vanilla had crashed. The previous years' rapid price hike drove importers to synthetic alternatives as a wave of new growers entered the market, triggering the crash by simultaneously lowering demand and increasing supply. Just as farmers who had rushed to join the market years earlier began harvesting their first crop, the global market price fell from over US$300 per kilogram to well under US$30. Weathering the crash, farmers sold their motorbikes and mattresses and went back to sleeping on straw beds. They still had cloves and coffee to sell—both of which had their ups and downs, albeit not as extreme. Although few knew it at the time, they would soon also have rosewood.

The region's vanilla boom and bust was mirrored in rosewood logging, which, by 2009, saw a similar price spike in the region and similar demonstrations of hot-money spending. Loggers entered the forests of northeastern Madagascar by the thousands and returned with more money than ever before. As the logging boom began to subside in 2014, the price of vanilla began another rapid ascent, this time dwarfing the price spike in the early 2000s. By 2016, in the wake of another devastating cyclone, the price of vanilla was already double its peak price during the millennial boom, and rising.

The vanilla and rosewood markets in northeastern Madagascar illustrate what Malagasy people refer to as *ny toe-tsaina amin'ny asa fanondranana vokatra*, "the mentality of working with export commodities"—or, more broadly, *la culture de l'exportation*, "export culture."[1] In referring to export culture, Malagasy people highlight the link between volatile export market dynamics and moments of hot-money spending. Building on this view, I use the concept of export culture to refer not only to volatile spending practices but also, more broadly, to the sense of disjuncture and mystery that stems from a profound reliance on trade in faraway spaces. Export culture arises from the tenuous connection between an advanced global economy and its underdeveloped margins. In northeastern Madagascar, export culture manifests in sporadic displays of waste and excess—hot money and cold beer—as well as elaborate fictions that reframe the vanilla and rosewood markets in a fabulous utopian space, revealing in the process a deep ambivalence to the outside world.

The practices and stories associated with northeastern Madagascar's export culture are not new to the region, nor to the country. Extravagant spending behaviors have been documented in Madagascar as early as the 17th century, when the island became a hub of global trade and the country's economy gradually became monetized through the introduction of foreign currency (Bloch 1989; Flaucourt 1661), and well into the colonial period through the vanilla, clove, and coffee cash-cropping markets (Cole 2001, 2005). More recent neoliberal policies, together with global price fluctuations in increasingly speculative luxury markets, have led more people to spend their earnings with unprecedented extravagance, creating not only a few outlying cases but a veritable culture of waste and excess.

The boom and bust of the vanilla and rosewood export markets demonstrate the erratic, nonlinear development that characterizes globalization today. Spaces of preindustrial extraction or agriculture on one end are connected with spaces of late-capitalist speculation on the other.[2] Rural vanilla farmers and rosewood loggers experience all the speculative boom and bust of a postindustrial economy while having developed few of the institutions (stabilizing economic policies, banks, credit, and so forth) that might buffer against the volatility. Consequently, money in northeastern Madagascar is not perceived as a straightforward interest-based sum accumulating over time in an orderly fashion—as a development economist might describe it—but rather a volatile material that comes and goes, imbuing the region with fantastical undertones of alternating abundance and dearth.

In this chapter, I discuss the experience of this type of global (dis)connection incites an array of responses that reveal the creative integration of global market dynamics into the fabric of everyday life. Rather than saving or investing, many export producers in northeastern Madagascar spend their windfalls in a single hot-money spree. When discussing the export economies that have made them so much money, they use rumor and storytelling to revise global demand for their products into more culturally relevant terms, often placing the Malagasy, not the foreign demand for their products, at the center of the story. These tactics—hot-money spending and fabulous storytelling—form the basis of an elaborate export culture that both embraces and undermines the extreme dynamics of money and the market. They are based on the tactical logic that often accompanies the experience of global connection amid extremely uneven development.

The following section provides a theoretical overview of magical practices in the marketplace, demonstrating how Malagasy hot-money spending fits in. Because of the millennial vanilla boom and the rosewood boom thereafter, the third section argues, rural export-producing communities that have developed few of the accoutrements of the global economy

nonetheless experience all the dramatic price fluctuations of an advanced capitalist market. Sections IV, V, and VI show how this has manifested culturally, in terms of hot-money spending, stories of global mystery markets, and rumors of bone theft and money-making magic. Analyzing the ethnographic data, section VII identifies these cultural practices as *tactics*. Far from being illogical or unproductive, hot-money spending and other practices associated with export economies, the section argues, help local communities navigate the volatility of global markets and domesticate foreign demands. Although these tactics come from the margins of global capitalism, they represent an acute cultural expression of some of the most sophisticated dynamics found at its core.

II. Magic in the Market

"Fantastical and magical reactions" to the global economy, as Michael Taussig (1980, 10) phrases it, have long been documented across the globe. From spirit possessions mediating the transition to factory labor in Southeast Asia (Ong 2010) to discourses of witchcraft animating encounters with modernity in Africa (Comaroff and Comaroff 1993; Geschiere 1997), magic appears to pervade responses to the market and modernity at the farthest corners of the world. The connection may at first seem puzzling, given popular conceptions of a supposed antinomy between tradition and modernity, exemplified par excellence by magic and the market, respectively. But magical responses are not a product of esoteric traditions stubbornly cropping up in the face of their modern antitheses; rather, they reflect and often resist the magicalities inherent in modern forms.

Fantastical responses to modernity "show the extent to which modernity—itself always an imaginary construction of the present in terms of a mythic past—has its own magicalities, its own enchantments" (Comaroff and Comaroff 1993, xiv). Rumors of the boundless power of witches, for example, mirror the opportunities for boundless abundance offered by modern politics (Geschiere 1997). Similarly, the fetishization of evil in the form of the devil reveals an analogous commodity fetishism intrinsic to the market model (Taussig 1980). The analytical objective in these accounts is to understand these seemingly exotic responses at the periphery not as backward or absurd but as reflections of the exotic fictions (the commodity fiction, phantom objectivity, the myth of modernity, etc.) hidden in everyday capitalist modernity. Studying fictions created at the periphery of global capitalism, in short, makes it easier to decipher those fictions that compose its core.

Madagascar's export economies, however, do not follow the development trajectory implicit in some of these classic accounts. Take, for example, the seminal cases of "proletarianization" in the mines of South America described by June Nash (1979) and Taussig (1980). In these cases,

> the mines are a synecdoche for the modern age of industrialization. Their history encompasses the rise of an international expansion of capitalism that exported capital and machinery from the metropolitan centers to the farthest corners of the world. (Nash 1979, 15)

The mines, in other words, embody the quintessential "precapitalist" to "capitalist" transition, an initial stage in capitalist development. In export economies surrounding cash crops, similar processes of capitalist transition and class formation have also been observed (Lyon and Moberg 2010; Mintz 1985; Roseberry and Kutschbach 1995; Striffler and Moberg 2003).

In contrast to these accounts, Madagascar's vanilla and rosewood export economies have instigated very little capitalist "development" or class formation in the traditional sense of the terms. These export economies are part of a wider network of informal export operations that persist and even proliferate within the new global economy (Ferguson 2006). They are characterized by precarity and indeterminacy rather than hopes of modernization or progress (Tsing 2015). Vanilla growers and rosewood loggers supplement subsistence-based lifestyles through fragmented networks of manual production that have changed little in over a century. At the consumption end, however, remote sites of rosewood logging and vanilla production are connected to the cosmopolitan luxury demands of a speculating global elite.[3]

Madagascar's export economies thus provide a unique example of David Harvey's (1989) time-space compression. Time-space compression is most commonly characterized by an unprecedented speeding up and spreading out of capitalist dynamics, resulting in "the simultaneous implosion of space and the speedup of all aspects of economic (and hence cultural) life" (Nonini and Ong 2005, 350). The compression of time and space, however, is not a universal experience. It has a "power geometry"—there are those who are "in charge" of it, those "simply on the receiving end," and those "who are effectively imprisoned by it" (Massey 1994, 149). Time-space compression is not the sanitized "connectivity" brought on by progressive technologies; rather, it is the brutal distortion inflicted by revolutions in the capitalist mode of production, and it is far from being evenly felt across the globe. Export economies thus serve as sites of global distortion—or, as James Ferguson (2006) notes, global (dis)connection—connecting persistently underdeveloped regions to the world's most elaborate locales of capitalist accumulation.

At these sites of global (dis)connection, one may witness a somewhat different type of magical thinking. Instead of fantastical fictions that mediate a linear transition—"the conflict between pre-capitalist and capitalist modes of objectifying the human condition" (Taussig 1980, xii), for example—these alternative fictions must mediate a folding of time and space that brings together supply and demand, along with little else. Under such circumstances, the cultural phenomenon of hot money, as well as the stories and rumors that circulate and document hot-money spending practices, becomes increasingly prevalent.

Hot-money spending has been documented at different times across the globe (Day 1999). Although occurring within a multitude of geographic and historical contexts, cases of such spending are particularly common in marginal areas of the global economy that intermittently experience large influxes of global capital. Mining booms provide classic examples, including the 1979 gold rush in the Brazilian Amazon (Cleary 1990), the ad hoc dollar economies in the diamond mines of Angola (De Boeck 1999), and the millennial boom of coltan in the Democratic Republic of Congo (Jackson 2003).

In Madagascar hot money is a cultural trademark of the more volatile export economies. The practice has been documented in the country's northern sapphire mines (Walsh 2003), the clove and vanilla regions of eastern Madagascar (Sodikoff 2012), and the illicit *biznesy* (business) of urban Tamatave (Cole 2004, 2005). A similar practice of rash spending has also been documented in the Vezo fishing communities of southwestern Madagascar, where fishers may spend their entire earnings from a good catch with little planning for the future (Astuti 1999).

It is challenging to explain the seemingly paradoxical phenomenon of hot money—the profligate spending that might be considered tantamount to throwing away one's money. Some explanations reduce extravagant spending practices to either a passive adaptation rooted in a

"culture of poverty" (Lewis 1966), at one extreme, or, at the other, a romantic tendency rooted in a lifestyle of the present (Meillassoux 1968; Woodburn 1998). Eschewing these two extremes, a more promising interpretation acknowledges that hot money is neither passive nor particularly romantic but rather an active response to an imposed marginality (Day, Papataxiarchis, and Stewart 1999). In this reading, extravagant bouts of spending powerfully symbolize autonomy. They perform a type of "semiotic 'magic'" (Newell 2012, 99), inverting the marginality of the spender in a "momentary realization of fantasy" (Walsh 2003, 299) and control. Like mushroom foragers conjuring a small sense of liberation from widespread conditions of precarity (Tsing 2015), profligate spenders attain momentary autonomy, a cathartic release from the uncertainty of the new global economy.

The hot-money spending associated with Madagascar's export markets certainly offers a great deal of momentary autonomy. Through consumptive displays, people also acquire a substantial amount of social capital, as Genese Sodikoff (2012) and others have noted, and this may also explain the practice. But, in its most extreme manifestations, hot-money spending may result in social stigma and a severe loss of control and autonomy—the recently paid farmer incapacitated by the sight of his earnings, for example, or the logger who has spent all his money in a single spree, ostracized and abandoned the next day. Of course, the diversity and complexity of hot money in Madagascar and elsewhere make it impossible to reduce the practice to a single cause or explanation. Yet there is a particular logic exercised in these creative and occasionally unsettling displays of hot-money spending, a logic that suggests an alternative interpretation. Such an interpretation understands hot-money spending and the other fantastical practices associated with northeastern Madagascar's vanilla and rosewood export markets in a similar vein as the diverse cultural phenomena that often come to mediate encounters with modernity and the market.

Like other fantastical reactions to the global economy, hot money is a creative cultural inflection of global market dynamics that provides a modest degree of pushback. Northeastern Madagascar's export culture—hot-money spending and the stories about it—both reflects and resists the volatile economic dynamics that Malagasy producers experience every day. Fantastical export culture, with all its ups and downs, its spectacular alternations of abundance and dearth, demonstrates not the backwardness of magical thinking in an area left behind by capital, but an acute cultural expression of some of the new global economy's most sophisticated dynamics.

III. Northeastern Madagascar's Export Culture

With no paved roads leading in or out of the region, northeastern Madagascar is a rather insular place (see Figure 2). Although some of the best paved roads in the country connect the region's coastal cities, northeastern Madagascar is dominated by rural villages that lack electricity and running water and that are reachable only by foot or canoe (Figure 3). These villages are days away from the nearest financial institution. Yet the region maintains global connections—and occasional influxes of large sums of paper money—through the vanilla and rosewood export economies. As *la capitale de la vanille* (the vanilla capital) and *le cœur de l'exploitation de bois de rose* (the heart of the rosewood trade), northeastern Madagascar connects tens of thousands of vanilla growers and rosewood loggers to the vast resources of the global economy.

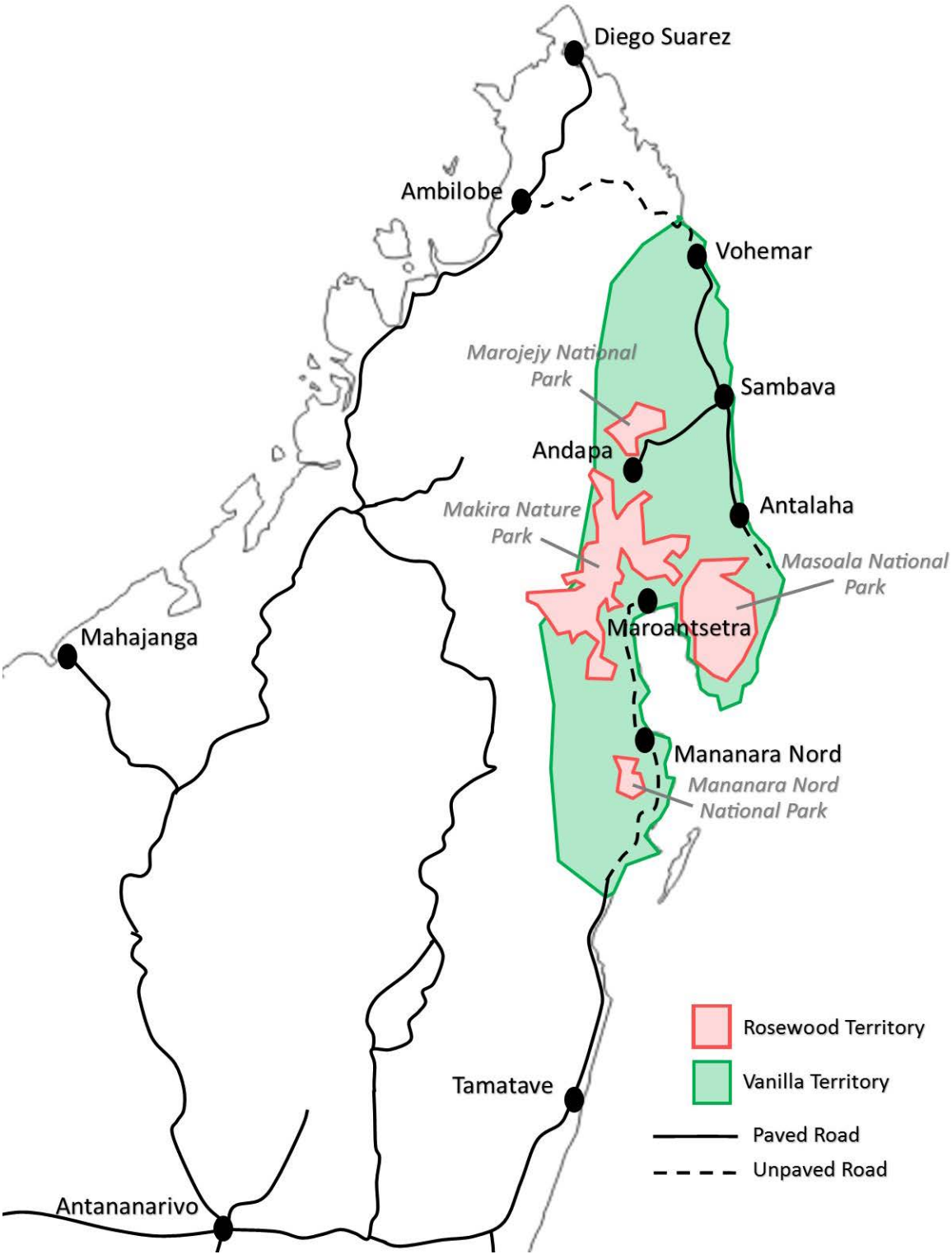


Figure 2. A map of northeastern Madagascar, with the areas devoted to producing rosewood marked with dots and those to producing vanilla marked with diagonal lines. Note that the only roads connecting this region to the rest of the island are unpaved roads (dotted lines) that require substantial travel.

Figure 3. A rural Malagasy village, which receives intermittent influxes of cash thanks to a booming market in vanilla and rosewood, despite few opportunities for investment. The nearest bank is days away.

Remarkably little has changed in both vanilla and rosewood production since these export economies were introduced to the island. Vanilla—produced from a vine endemic to Mexico but now cultivated across the tropics—was brought to northeastern Madagascar in the mid-19th century by French colonists. After its introduction, vanilla production was subject to strict controls by the colonial regime (Osterhoudt 2017; Randrianja and Ellis 2009). After the colonial regime, the Malagasy Republic took over the industry, but France continued to play a significant role in it and has maintained its position as a primary importer.

Although farmers tend not mention it, contemporary vanilla cultivation recalls the crop's colonial history (Cole 2001; Osterhoudt 2017). Vanilla, as one of the most labor-intensive cash crops, lacks economies of scale, so its cultivation continues on small family plots throughout the countryside. Growers still use basic techniques introduced by the colonial regime, planting vine by vine with basic shovels and pollinating flower by flower with no more than a splinter delicately bending the anther.

Rosewood, too, as discussed in Chapters 1 and 2, has deep colonial associations. It is considered "a tree with a hard history" and has become "coded to locals as trees of exploitation" (Osterhoudt 2017, 47). Before the colonial period, the Merina monarchy used forced-labor campaigns to transport logs down the eastern coast of the island (Campbell 2005, 129). Following suit, the colonial regime instituted similar forced-labor policies in the northeast, exporting tens of thousands of tons of hardwoods from the region (Keller 2008). Rosewood exports gradually declined after Madagascar's independence in 1960 (Olson 1984), remaining

comparatively low for decades (Jarosz 1996) and only beginning to pick up in the region again after 2000, as global demand from China began to rise (Anonymous 2018; Remy 2017).

While vanilla and rosewood production have changed little since colonization, the demand for these products and their producer prices have transformed dramatically. Specifically, neoliberal reforms of the late 1990s sent vanilla prices into uncharted territory (Figure 4). Vanilla in the early 2000s, Sodikoff (2012) observes, "brought eastern Madagascar into the compressed space-time of globalization" (137). Before the vanilla market reforms, "there was no need for intensive speculation"—the price was low, but predictably low and growing at a steady 2 to 3 percent a year (Rain 2004, 308). Modest price spikes periodically sent influxes of cash throughout the region, triggering occasional hot-money sprees, like those increasingly witnessed today, but rural farmers and loggers rarely saw such returns as would permit a culture of savings.

Along with the millennial price spike came a dizzying influx of money. Although still echoing its history of colonial oppression, vanilla also began to present unprecedented opportunities for capturing the wealth and abundance of the new global economy. Amid the hype, residents with no experience growing it joined the booming market. They gathered cuttings and watched their vines grow for the three requisite years, tending them eagerly. But just as the vine bore fruit, the market collapsed. Newly bought motorbikes and newly built houses were sold a few years later. The price of vanilla fell to below historic levels, and the crop came to symbolize, in yet another dimension, the exploitation associated with the outside world.

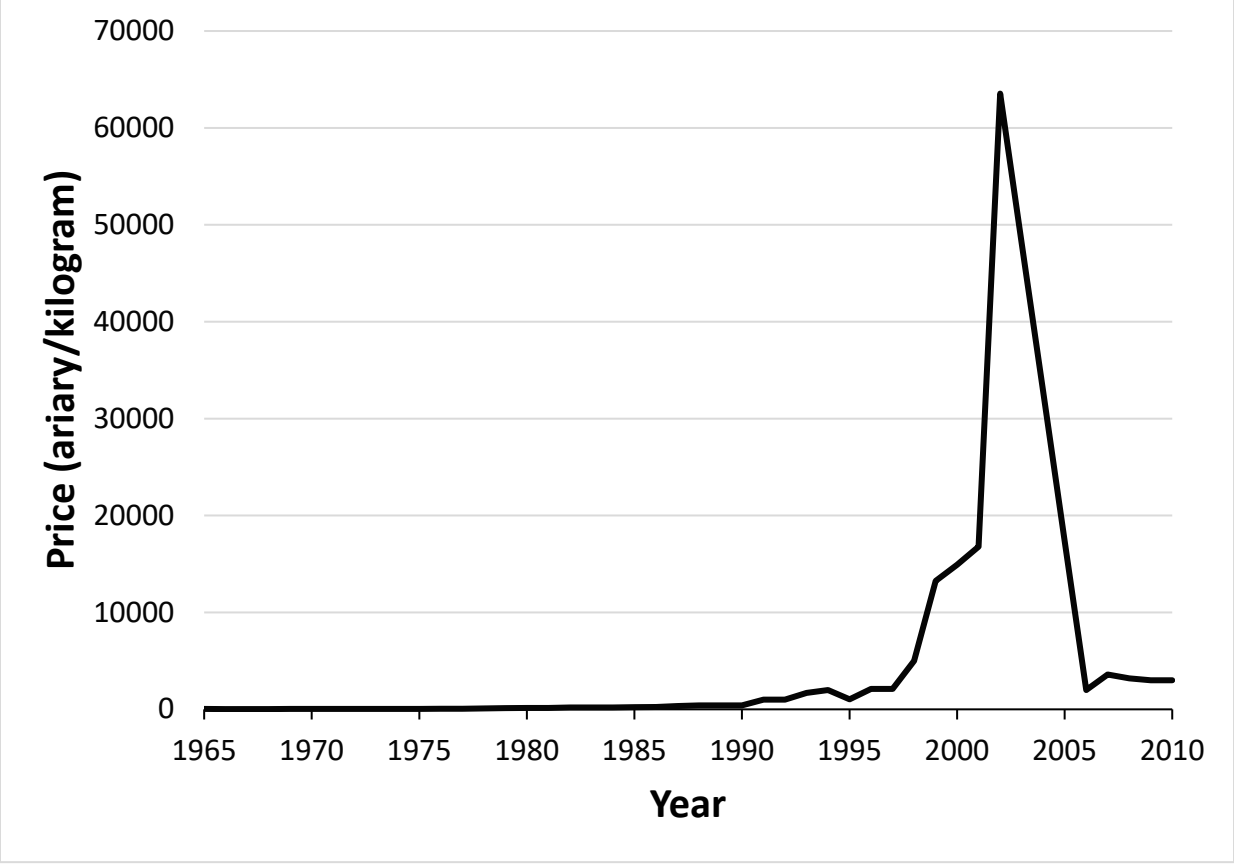


Figure 4. Producer prices for vanilla in Madagascar, 1966–2010. *Source:* FAOSTAT, Food and Agricultural Organization of the United Nations, http://www.fao.org/faostat/, accessed September 2017.

As the price of vanilla began its tragic descent (Figure 5a), however, the price of rosewood began climbing in a near mirror image (Figure 5b). Madagascar's 2009 coup d'état opened the floodgates for the export of thousands of containers of illegally harvested rosewood logs, ushering in what would later be known as *lera ny bois de rose*—"the time of the rosewood" (see Chapter 2). Villagers throughout the region abandoned their farming and entered the forests in search of rosewood. Hundreds of logging camps sprouted up throughout the region's national parks. Massive logging efforts involving up to 60 men moving a single log for months in the forest harkened back to similar colonial and precolonial operations using near identical methods (Osterhoudt 2017).

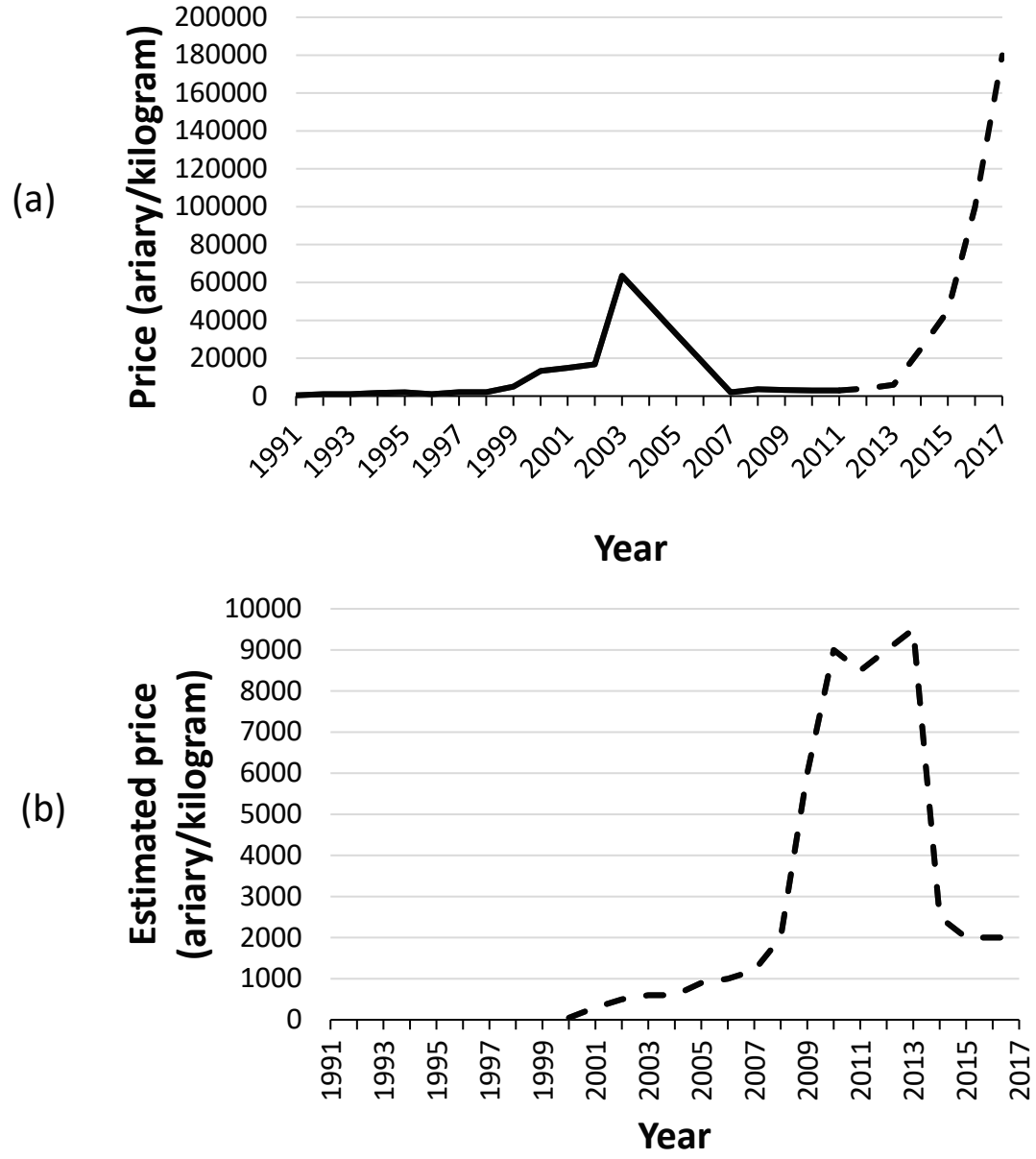


Figure 5. (a) Producer prices for vanilla in Madagascar, 1991–2017, and **(b)** Estimated price of rosewood in coastal Malagasy cities, 1991–2017. *Sources:* Food and Agriculture Organization of the United Nations from 1991 to 2011 (solid line) and estimates from the news and from fieldwork interlocutors from 2012 to 2017 (dotted line).

But unlike the colonial period, loggers and traders returned from their work in the forest with more money than ever before. As noted in chapter 2, legions of Chinese ships carrying Malagasy currency docked all along the shores of the Masoala Peninsula to collect rosewood shipments fresh from the forest. Because of rampant speculation over rosewood in China (see Chapter 5), these importers bought the wood for more than 100 times the market price before 2000.

By 2015 the export of rosewood logs from Madagascar and other tropical countries flooded Chinese markets (as discussed in Chapter 5). This, combined with export prohibitions imposed by the newly elected government (as discussed in Chapter 2), brought the market to a near standstill and drove down the price of rosewood to a fraction of its former level. But, yet again, just as the price of rosewood fell in 2015, the price of vanilla began to rise once more, reaching a record high. Rampant speculation and hoarding in the aftermath of cyclone Enawo in 2017 drove the global price of vanilla to over US$600 a kilogram—more than double its price during the millennial boom—and climbing.

While price instability is unavoidable in a scarcity-based capitalist market, neoliberal reforms and the financialization of the global economy associated with late capitalism have greatly exacerbated the problem. Since 2000 all the region's major cash crops (coffee, cloves, pepper, cocoa, and especially vanilla) have experienced an unprecedented price volatility that contrasts sharply with the relative stability of earlier years. Indeed, the past two decades have made irrefutably clear that drastic price volatility is now the norm, not the exception. From vanilla to rosewood and back again, northeastern Madagascar has seen ceaseless cycles of boom and bust, now coming from global market connections at either end of the world in rapid succession. Along with these extreme market dynamics have come a range of extreme spending practices.

IV. Hot Money, Cold Beer

Everyone who has lived through northeastern Madagascar's vanilla and rosewood booms has their favorite stories of hot-money spending. As one of my friends described it to me, hot money "means you have got such a lot of money, but you don't even want to think about saving it! All you want to do is just to find a way to spend it all!" In addition to newly rich vanilla farmers pasting money to chameleons or buying a stand's worth of fruit just to smash it by the side of the road, research participants recounted a wealth of other stories of hot-money spending that they either engaged in directly, witnessed, or heard about.

One respondent recalled the story of a farmer who went out and bought fancy shoes only to go around town stepping on feet, yelling enthusiastically, "Tsy zaho mandia anao fa la vanille" (I didn't do that, the vanilla did!). In perhaps the most transparent display of waste, another respondent told me of a recently paid farmer who came into the city for a festival, bought all the rings at a ring toss stall, and collectively threw them in the opposite direction of the pyramid of bottles that should have been their target. After this joyful performance, the man slapped his hands together and exclaimed, "Atao magnanigny misaoma vola" (That's how you play with money!).

No one knows how better to play with money than the vanilla and rosewood workers of northeastern Madagascar. Through these extravagant displays of waste and excess, they quickly spend egregious amounts of money with no regard for long-term investment. During market

booms, I am told, hot-money spending might consume anywhere from 15 to 50 percent of rural earnings from the vanilla and rosewood markets.[4] Even more pervasive than the hot-money sprees themselves, however, are the *stories* of hot-money sprees, vividly and enthusiastically recalled across the region. While I was living there during the rosewood boom in 2010, and engaging in fieldwork during the first stages of the vanilla boom in 2014 and 2015, I witnessed some hot-money sprees, but more than this, I heard stories excitedly depicting them. Indeed, it is hard to know whether hot-money spending is more rumor than reality. Regardless, it has become a notorious feature of northeastern Madagascar's social landscape, whether through firsthand displays or secondhand gossip.

Hot-money spending and the stories that surround it do not belong exclusively to the market booms of the last two decades. As a long-standing feature of Malagasy society, acts of profligate spending have been documented since the establishment of global trade routes in the 17th century and well into the colonial period (Bloch 1989; Flaucourt 1661). Stories of earlier spending practices now inspire residents who are experiencing more volatile price dynamics. The vanilla farmers' feet-stepping provocation, for example, follows a tradition established by early coffee farmers who benefited from a particularly good crop (Cole 2001, 201). But what was before an occasional outlier—a combination of exceptionally high yields and modest price increases—has increasingly become tuned to the erratic rhythms of the global market.

During the market booms since 2000, money throughout the region seems to overflow. Farmers who managed to grow any vanilla at all during these times could make previously unfathomable amounts of money. So too could anyone with a log or two of rosewood. In both cases, export profits are collected and wielded in large suitcases. The banking system is largely inaccessible and underused.[5] Cooperatives exist across the countryside, sharing techniques and social support, but they rarely pool their money or provide insurance, given the liability associated with holding large sums of cash.[6]

These market booms have created an entire demographic of hot-money spenders. First, it was the older vanilla farmers. During the millennial vanilla boom, elderly farmers bought fancy bicycles they had not yet learned to ride, only to walk them up and down the street on display (Ecott 2004). Years later, the rosewood boom has shifted the demographic of hot-money spenders from older farmers to younger loggers. Alongside this demographic shift has come a shift in spending. During the rosewood boom, in a similar display, young loggers bought motorbikes they had not yet learned to ride, only to park them outside their homes for neighbors to stop in and have a closer look. These loggers might then sell their motorbikes months later for half the price, as my friend explained:

> With hot money most of people buy a motorbike for 4 million ariary and sell it for 2 million ariary after three months. They do the same with phones, cars. [. . .] That's why I have never bought a phone in the shop because not only it's impossible for me to buy because [the] price [is] too expensive for me, but with hot money they buy it and sell it cheaper. Sometimes they don't even know how to use or ride it, then they ask another person to teach them. Sometimes I help them with [their] phone or computer.

In addition to consumer items, entertainment is another likely channel for hot-money spending. With the transition from older farmers to younger loggers, entertainment venues have also shifted. In the logging camps, makeshift casinos and discotheques were quickly erected to cater to younger logging crowds. Similar impromptu establishments sprouted up in logging villages throughout the region. In coastal cities, recently paid loggers invited their friends to a

night at the bar to proudly display the array of empty bottles their group had consumed.[7] One bar in particular—Discothèque Bois de Rose (Figure 6)—got its name, I am told, from the young rosewood workers who would arrive, ask how much to rent the bar for a night, pay the stated fee, and stay just long enough to down a shot of the bar's finest liquor. These younger hot-money spenders became known throughout the region for paying for drinks with their biggest bills and preemptively shouting, "Tsy malaka fanerina vola!" (Keep the change!).

Figure 6. A local establishment in northeastern Madagascar (*Discotheque Bois de Rose*) that serves as a popular spot for rosewood "hot money" spending. (Photo by author, June 2015)

Hot money is a highly gendered phenomenon. In the *biznesy* of Tamatave, men often hand their earnings over to their wives, who are thought to have "the power to domesticate savage spending" (Cole 2005, 900). Similarly, in the sapphire mines of Ambondromifehy, women are thought to *calcule* (calculate/reflect) more than men do, putting money to work rather than wasting it on frivolous spending (Walsh 2003). In the vanilla fields and rosewood forests of northeastern Madagascar, similar stereotypes prevail. Vanilla farmers often hand excess earnings over to their wives, and it is not uncommon for wives and sisters to accompany their family breadwinners into the logging camps to ensure that earnings remain cold. The boatman who took me to a notorious rosewood logging village, for example, insisted that I pay him only after our trip was over so that he did not overindulge in the interim.

This is not to say that women are not hot-money spenders. There are no social taboos against women participating in the vanilla and rosewood trades, and they do so quite often.

Although women do not typically grow vanilla or work as loggers, many work as midlevel traders and a few as exporters. I stayed in the house of one such trader(ess) during my trip to the rosewood logging village. Her house was among the nicest in the village, with rosewood logs piled high in the backyard. Entrepreneurial women like her certainly engage in consumptive displays, but these displays are considerably less dramatic, often involving the purchase of jewelry, clothing, and other ostentatious goods that may also be good investments.

On the flip side, women are also often the objects of hot-money spending. Impulsive loggers have been known to pay extraordinary sums to simply make the acquaintance of an alluring woman spotted on the street. Purchasing a woman's time in this way may be accompanied by counteroffers from other recently paid loggers, amounting to an auction-style bidding that demonstrates the public spectacle that hot-money spending often becomes. On top of these dramatic displays, hot-money spenders often solicit services from women, ranging from sex to laundry, for considerable fees.

Along with the thrill of hot-money spending, there is also a sort of madness that occasionally stirs when acquiring such unseemly sums of money. As with the phenomenon of hot money generally, the potential for such madness has been documented for quite some time. Early coffee farmers with exceptionally fruitful harvests were especially susceptible. As a research participant told Jennifer Cole (2001), "All of a sudden you'd go from not having to having. It was too much for their heads! Their heads would turn with the money!" (196). When being paid for their harvests, these farmers would occasionally interrupt their payment: "Stop, stop they would say! It is too much money" (196). Again, this story strongly resembles a story that was retold to me of a contemporary vanilla farmer getting paid in his home by a traveling trader. As the trader laid down each bill in counting, the farmer grew increasingly agitated. With only half his money paid, he suddenly exclaimed that the money was too much and politely asked the trader to return with the remainder a different day.

Along with this account came much more extreme tales of hot-money madness. As the price of vanilla began to rebound at the end of 2015, a friend messaged me a story circulating around town about a vanilla farmer who sold 500 kilos of vanilla and promptly went mad:

> And the boss came and bought all his vanilla and paid him there in his countryside and left. Then [the vanilla farmer] put all of the money on his bed and asks, Where have you been? And repeats the same question and repeats it many times, then screaming, [he] asks the people to come to spend his money. After screaming, he became crazy, and his son came in and tried to calm [him] down, but it's too late because now his father is crazy and until now his son tries to help him because he is crazy, I mean he is out of his mind!

The undertones of insanity that haunt this story find perhaps their most palpable expression in the story of the man who sneaked away from his wife and children in the middle of the night with all the money earned from his vanilla harvest so that he could boil it in a large metal pot and eat it as money soup.

Stories like these are common in the volatile export economies of northeastern Madagascar. Although I have recounted only the most vivid ones here, the region has a seemingly inexhaustible supply of tales of extravagant waste. Women are the first to laugh and roll their eyes at these bizarre stories, while men often pause and briefly reflect—as one who is closer to the absurdity in question might do—before laughing and shaking their heads along with the women. Hot-money spenders themselves are even less likely to partake in the gossip. They often regret their extravagant spending once the money is gone and care not to memorialize their

actions. While I was interviewing young rosewood loggers, respondents often shifted in their seat when I asked them what they spent their earnings on. Some had immediate responses—a bed, a computer, some cows, or a tin roof for their parents. Others sent their eyes wandering around the room awkwardly in search of an answer. My research assistant later told me that this was considered a sore subject and was perhaps not the most appropriate question to ask.

Despite the regrets they often evoke, stories of hot-money spending provide a welcome vehicle through which residents excluded from the trade may indirectly engage in its commotions. From consumer binges to near insanity, these stories reframe the export markets so that all members of the community may participate, even if only by rumor and gossip. "It makes people laugh because it's so crazy," my friend observed of these stories, "[but also] in another side it makes people sad." As a kind of dark comedy, these stories gain a certain autonomy, out-traveling the instances they refer to and becoming memorialized in local folklore. As they circulate throughout the region, they are shortened and generalized, acting almost as fables. People revisit them in times of market lull and draw on them for creative inspiration as the markets inevitably bring yet another influx of cash to the region, and yet another round of hot-money hysteria.

V. Market Mysteries

In addition to the stories of hot-money spending, northeastern Madagascar's export culture encompasses a wealth of other stories concerning the vanilla and rosewood markets. The mysteries surrounding the distant overseas demand for vanilla and rosewood provide particularly fertile ground for these stories. Despite over a century of trade in these commodities, the markets for vanilla and rosewood retain deep-seated mysteries on both the supply and demand ends. Vanilla growers and rosewood loggers know little about how their harvests are ultimately used, even though they understand with great clarity "the extent to which their fates [lie] in the hands of powerful, even mysterious, foreign others" (Mintz 1985, 109). On the flip side, rosewood and vanilla consumers have symmetrically little understanding of these luxury goods for which they may or may not, depending on the moment's frivolity, be willing to pay so much money.

Take, first, the mystery of rosewood. The rosewood logging boom has made Mandarin *la langue de l'argent* (the language of money) in the northeast and many young Malagasies are eager to learn it. Yet, while most residents know that rosewood is headed to China, neither loggers nor low-level traders know why this tree specifically is of such spectacular value and for what ultimate purpose their lives are being risked in the forest. When I asked loggers what the wood will be used for and why it costs so much, their answers varied widely: to build houses, for medicine, it's just a famous tree! As one *New York Times* article (somewhat misleadingly) remarks, "Francel, like others who carry axes into the mountains, finds it curious that rosewood is so valued. Other trees yield food—papaya, coconut, jackfruit" (Bearak 2010). Contrary to the implications of this quote, rosewood workers indeed appreciate the utility and aesthetics of wood. Malagasy residents often prefer, however, the light brown palisander over the dark violet rosewood (although rosewood has gained in popularity since the logging boom – see Figure 7). There is certainly a great deal of confusion as to why their preferred wood fetches, at times, less than a 10th of rosewood's price.

Figure 7. Wooden ornaments (*sary sokatra*) sold at a local market. The dark red ornaments are rosewood, which has gained in popularity since the logging boom in 2009. (Photo by author, June 2015)

Vanilla shares a similar mystery. Vanilla growers and driers have little idea how consumers use the spice, and they certainly do not use it themselves. Each farmer I asked shook his head with a smile, gesturing that he is not quite sure where his vanilla is going or for what it will be used, except that it goes *ivelany* (outside) to *vazaha* (foreigners) like me. Some offered vague possibilities—to add to coffee or rum? Later, I relayed my surprise to one of my friends. How could these workers whose sole income relies on vanilla not know what it will be used for?

"If one person knows, then I think everyone would know," my friend replied.

"So you don't think any of them know?" I asked.

"No, I don't think any of them know, only the bosses," he declared.

I pondered this for a moment. "Wait, do you know?"

Another moment passed before he admitted with a resounding laugh that even he did not know what the vanilla was used for. He then asked me to tell him. I explained that vanilla is used for taste and smell—cooking and perfumes—but I realized that this was a poor explanation. As I searched for a better explanation, I was reminded of a passage in Tim Ecott's (2004) book on vanilla concerning a similar exchange with a group of vanilla workers during peak prices in the

early 2000s. These workers did not believe that vanilla could earn so much for only its taste or smell. They guessed instead that it was used to make what they thought were much more consequential products—dynamite or tires. My friend expressed similar reservations about my explanation. Surely there was some greater purpose for this mysterious bean that employed, as he asserted, up to 70 percent of the population in certain cities during the drying season (see Figure 8).[8]

Figure 8. Vanilla production in northeastern Madagascar, July 2014. *Clockwise, from top left:* growing, heating, sorting, and drying.

Frustrated by my inability to convey the ultimate use of vanilla, I further confused things by introducing the concept of fake vanilla, and another disjointed exchange followed. I told my friend that it is actually quite easy and cheap to synthesize a version of the vanilla essence with almost exactly the same effect.

"Oh," he responded, becoming quite interested. "Can *you* make it?"

"Can *I* make it?" I laughed, almost appalled. "Of course not. I haven't the slightest idea how to make it!"

And here arises the other side of the mystery. Consumers, of course, have symmetrically little understanding of the distant source of these high-end goods. Few of those who are enticed

by its delicate flavor know that vanilla is the fruit of a Malagasy farmer's early-morning labor. They likely do not even know that it was once a fruit at all (myself included, at least until one of my Malagasy coworkers, surprised and amused by my own ignorance, introduced me to my kitchen by way of the forest). And, across the globe in China, the rising urban elite who adorn their houses with rosewood have equally little knowledge of the distant source of this immensely esteemed wood. Indeed, as I traveled to Shanghai after my trip to Madagascar, I found a number of rosewood-owning residents surprised to see a photo of the wood's bright red splinters lying at the hands of a Malagasy woodworker (Figure 9). Even rosewood importers whom I interviewed in Shanghai had very little idea of how they ultimately obtained their Malagasy rosewood.

Figure 9. A local craftsman preparing rosewood branches to make wooden ornaments (*sary sokatra*) sold at the local market. (Photo by George Zhu, July 2014)

What is, for the consumers, an indulgence of the most inconsequential kind is, for the producers, their lifework. Given this discrepancy, it becomes much easier to understand why farmers and loggers might circulate other tales regarding the commodities that compose the bulk of their livelihoods. Far from ignorant misconceptions, these stories—such as that vanilla is the vital ingredient in pivotal industrial products, as discussed above, or that rosewood exporters make money from bones rather than from rosewood, as discussed below—are ways to more meaningfully understand one's daily toils. They rewrite the export markets in more favorable terms, obscuring the somber fact that one's lifework is, in another world, but a niche luxury good tossed about by the turbulent seas of a late-capitalist market.

VI. Bones and Money-making Magic

Local rosewood and vanilla exporters often feature prominently as characters in the stories concerning northeastern Madagascar's export markets. One rosewood exporter in particular—unanimously considered the richest in the region—has been the subject of elaborate rumors. Surprisingly, in the rumors that were retold to me, the source of this exporter's vast wealth was not attributed to rosewood but to either the illicit trafficking of human bones or a Chinese-bought *machine manao vola* (money-making machine). Even after he was forced to declare the source of his earnings and admitted to being a "pioneer" in the rosewood industry on national television, people still spoke of bones and money machines. They gossiped that his machine had been confiscated, and they wondered if the bone theft would continue. Yes, apparently this multimillionaire had worked with rosewood, but that was of only minor interest to the people of the region.

Although it might seem perplexing that people revised the source of this exporter's wealth from rosewood to bones or a machine, it makes a great deal of sense—much more sense, in fact, than any explanations concerning rosewood or vanilla. How better to explain the region's intermittent influx of cash, for example, than by a machine? Residents throughout the northeast know that rosewood is bought along the coast by Chinese ships filled with Malagasy currency. That this money might be obtained in advance through a bank in China was a surprise to everyone I interviewed. A Chinese-made money machine that prints ariary is a much more compelling explanation, especially given that the region's most prominent exporter has been rumored to have acquired one for himself.

The trade in bones is another compelling explanation for such a lucrative businessman. Bones are by far the most important material substance in Malagasy culture, and rumors of their theft have been long-standing throughout the island of Madagascar, even though there is little evidence of such an export market. As one research participant noted, bones are treated with the same respect as people themselves, and any transgressions involving bones are considered very severe. In a periodic ritual exhumation called the *famadihana*, bones provide the material vehicle through which relations with the ancestors (*razana*) are conceptualized and performed (Bloch 1971; Graeber 1995). With such great cultural importance, what better an explanation for the wealth of the region's richest individual? Indeed, talk of bone theft around town has heightened since the vanilla and rosewood booms in the northeast, and a number of exporters have been accused of being involved in it.

By attributing the wealth of prominent exporters to bones and a machine rather than rosewood, residents of the northeast are, once again, participating in a mysterious global

economy, even if only through rumor and gossip. Such rumors effectively transform the ultimate source of power and wealth from rosewood or vanilla (both culturally inconsequential products used for who knows what on the other side of the world) to bones (the most profound symbol in Malagasy culture) or a machine (a much more sensible encapsulation of otherness). This revision makes the happenings around town more familiar and engaging. It renders the profound effects of an unpredictable economy logically more comprehensible and culturally more relevant. The Malagasy themselves—rather than the foreign demands for their products—are placed at the center of the story.

Residents suspect that rosewood exporters are doing something devious and deceitful. But rather than explaining this deception as the theft of a natural resource, which makes a great deal of sense to conservationists throughout the world, Malagasy people prefer to understand it in their own terms. Their stories critique what is perceived as the ill-gotten gains of the local elite, but they do so through a distinctly Malagasy register that does not rely on foreign notions of endangered species or natural wealth. As with hot money and other fabulous stories that navigate the mysteries of northeastern Madagascar's export markets, this story of bones and money-making magic creates a fictitious space in which residents may participate in the region's vital local economies. It brings the exotic into the realm of the everyday.

VII. Everyday Tactics

Northeastern Madagascar's export culture—hot-money spending and fabulous stories that surround the market and its major players—reflects, to a certain extent, the extreme market dynamics that penetrate the region. Hot-money spending mimics the volatility of the region's export markets. Similarly, fabulous stories that rewrite vanilla into dynamite or rosewood into bones reflect a parallel transformation within the global economy. Just as global markets transform luxury indulgences at capitalist centers into the principal livelihoods of those living at the margins, in an analogous transformation, fabulous stories reinvent these minor luxury commodities back into pivotal global products. Through fictitious transformation, fabulous stories bridge the global (dis)connect that matches inconsequential demands at one end of the world with primary economies at the other.

But more than innocent reflection, northeastern Madagascar's export culture retains a subversive potential. Both hot money and fabulous stories reinvent the established order, removing—albeit ever so slightly—the power of the market over daily existence. By bringing global market dynamics into the realm of the everyday, they perform a kind of minor resistance. Hot-money spenders and fabulous storytellers make an ally of everyday unpredictabilities that do not conform to the strategies of modernity. They are, in short, *tactical* rather than strategic.

Tactics are often opposed to strategies. Whereas strategy is an operation performed in a given space, over a specified period and according to certain rules, tactics follow a logic that cannot count on the predictability of an established order. This opposition is most commonly associated with Michel de Certeau's (1984) contrast of the rational, calculating strategies of modernity versus the ad hoc, everyday tactics that compose its "underside." The opposition has also been elaborated by Gilles Deleuze and Félix Guattari (1980), who define nomadic tactics as operating outside of, and persistently undermining, the sovereignty of the state apparatus. Both interpretations implicitly recall Claude Lévi-Strauss's (1966) seminal distinction between the goal-oriented engineer and the improvisational bricoleur. The bricoleur is unpredictable, using

whatever is at hand in creative repurposings that meet immediate needs and make one's surroundings more habitable. The bricoleur follows a coherent logic, but it is not the abstracted logic of the engineer. It is the logic of the moment, the logic, one might say, of tactics.

Through tactics, even an act as seemingly passive as consumption can serve as a weapon. Consumption—understood as a tactic—is not the reflexive use of another's products but rather their creative transformation into something more hospitable to the consumer. Hot-money spending, for example, does not reflexively respond to the ups and downs of the global economy, but rather creatively appropriates the power of the market over daily life. Hot-money spending subverts the power of money by spending it freely. While long-term savings represent a strategy of those who benefit from the stability of a "proper place"—a base to stockpile one's winnings, as phrased by de Certeau (1984, 37)—short-term spending, in contrast, represents a tactical weapon of those who do not.

Hot-money spending, thus conceived, is a tactical art of consumption. Hot money transforms what might otherwise be seen as the sacred lifeblood of the productive apparatus—money—into a fleeting binge or amusing spree. Acts of frivolous spending and the stories that depict them, while in certain ways demonstrating the power and hold money has over the region, also demonstrate the opposite. Through their lively and sometimes tragic show, creative displays of excess rid one of money as quickly as it has arrived. As Andrew Walsh (2003) notes, "*They consume money itself*" (299; italics in original), eating money (*mihina vola*)—sometimes literally—rather than seeing it eaten by someone else. Treating money so cavalierly—consuming it, throwing it away, or spending it freely—reduces its power. It subverts an economic order based on the strategic accumulation of money. It also softens the madness that occasionally stirs when one confronts, in moments of extreme market boom, the sheer magnitude of his or her earnings.

Fabulous stories also serve as an everyday tactic. Like hot-money spending, stories concerning the mysteries of northeastern Madagascar's export markets create a world insulated from the realities of the established order. Through these stories, vanilla is transformed into the vital essence of an explosive powder. Vanilla thus becomes a major player in the story of industrialization. Through a parallel fiction, the rosewood market is transformed from a market for an unremarkable wood into a market for human bones. Demand for rosewood thus becomes demand for the most consequential cultural material on the island. Both fictions rewrite the realities of an established order in terms that prioritize Malagasy people and their products.

The subversion performed through acts of hot-money spending and fabulous storytelling is in many ways symbolic. Through narratives that disrupt and reorganize meaning, fabulous stories reinvent trivial niche markets into powerful symbols of Malagasy culture (e.g., bones) or global industrialization (e.g., dynamite or tires). Hot-money spending performs a similar type of subversive symbolism. By spending money freely, consumers symbolically empty money of its function, thus evacuating its power. In displays of hot-money spending, the identity of money "as a symbol of economic dependence is inverted and defeated" (Day, Papataxiarchis, and Stewart 1999, 13). Taken together, fabulous stories and hot-money spending generate a subversive energy that resonates in undertones throughout the region, symbolically challenging the power of money and the market. This can be seen all too clearly, for example, in northeastern Madagascar's vanilla farmer who, in boiling up his earnings and eating it as soup, symbolically subverted the power of money in a poignant performance with tragic results.

But the subversion is also material. That vanilla farmer—ridding himself so quickly of so many bills—was also physically disposing of an extravagant sum of money that might otherwise

have gotten the best of him (although it ended up doing so anyway). This farmer and other hot-money spenders across the region free themselves of the materiality of money. They creatively navigate an unpredictable economy that sporadically materializes in suitcases of Malagasy currency wielded throughout the rural countryside. Rather than keeping the money under their mattress or lugging it to the bank, Malagasy people spend it freely. In the process, they transform money into a mere amusement, a toy. It becomes a material substance just like any other—a substance that comes and goes, a substance to eat or throw away. Hot-money spending thus embraces the absurdity of money—the overwhelming abundance of a resource that is otherwise quite scarce.

In northeastern Madagascar's boom-and-bust economies, it becomes tragically clear that money has a binary quality as something that is both highly sought after and something that can be carelessly thrown away as quickly as it is received. Yet this binary quality is not unique to money in Madagascar's export economies. Quite to the contrary, it is the hallmark of money circulating in a capitalist system. The duality of hot-money spending—extravagant spending that trivializes money, compounded by the unshakable awareness that money is far from trivial—reveals the global logic of money. It is only as this logic plays out across the material landscape in out-of-the-way places such as northeastern Madagascar, however, that its dynamics are made abundantly clear. The rural Malagasy farmer plastering money to chameleons is not "extreme behavior" or a misguided backlash, but simply an everyday tactical approach to the extreme volatility of the global economy. While coming from the margins of global capitalism, hot-money spending and fabulous storytelling express some of the most extreme dynamics found at its core.

VIII. Conclusion

Globalization, many now acknowledge, is characterized by disconnection as much as by connection. Capital "hops" between various hubs of development, bypassing the underdeveloped spaces in between. Networking in the realm of the virtual, regions of capital intensification short-circuit the stubbornly material expanses that surround them. Yet, between zones of intensive capitalist development and those areas "left behind" by capital, there are places that straddle the difference. Northeastern Madagascar provides a unique example.

Through its vanilla and rosewood export markets, northeastern Madagascar is inextricably tied to the global economy despite its extreme lack of development outside this basic connection. The speculative investment and luxury consumer impulses that fuel our late-capitalist modernity are met in northeastern Madagascar by a painfully manual production that enjoys few of the institutions required for capitalist development. Butting into this stubborn materiality, global capital must be translated back through a disjointed conversion that sends paper money spitting out into the material landscape as if by machine.

Navigating extreme market dynamics, northeastern Madagascar has developed a tactical export culture. Rather than the strategies of modernity, export culture follows the everyday tactical logic of those who confront late capitalism tangentially, not from its centers but from the stubbornly material terrain of some of its products. Money is spent as it is earned in acts of creative consumption that trivialize money and the market, reducing their power and hold over the region. Fabulous stories rewrite the global importance of local products in more familiar terms. Although these tactics have been around for centuries—especially during the colonial

period with the rise of cash cropping and large-scale logging—more and more people have deployed them since 2000. They have proliferated within the global spaces that connect northeastern Madagascar's export economies to the exaggerated boom and bust of late capitalism. Not at all primitive or backward, northeastern Madagascar's export culture reflects the situated, material experience of an otherwise dematerialized global economy.

Thinking strategically in export-oriented Madagascar during booms and busts, this chapter has demonstrated, is like keeping one's sails down in a storm. As headwinds scatter and intensify, the sails must come up if the boat is to have any hope of staying afloat. Development strategies (savings, interest, profit) break down, while tactical translations (those that reinvent vanilla as dynamite or rosewood as bones) proliferate. In northeastern Madagascar one must ride the waves rather than steer the ship. Those operating from the centers of the late-capitalist economy might well learn from its margins. As development strategists impose an abstracted tableau of space and time, uninterrupted by the triage of the everyday, they might consider the storm that frequently stirs in the rosewood- and vanilla-producing regions of northeastern Madagascar.

---

1. *La culture de l'exportation* is distinct from *les cultures d'exportation*; the latter refers to cash crops, while the former refers to the culture that surrounds their export.

2. *Late capitalism* refers to the latest stage in capitalist development, characterized by a more flexible regime of accumulation based on a dematerialized economy, instant communication, ephemeral desire, perpetual disposability, and outsourced labor (Jameson 1991). See Chapter 5 for more on late capitalism in the context of China's rosewood markets.

3. Global vanilla prices can double in a single day (Burn-Callander 2012), triggering a mad rush to wire money to the bosses and buy while supplies last. Similarly, through global timber markets, Chinese investors have transformed rosewood into a speculative commodity, periodically sending timber importers in another mad rush to secure the last of the supplies (see Chapter 5).

4. Earnings not spent in hot-money sprees, in contrast, are typically spent in a bit more predictable purchases, such as for business or household items (electronics, livestock, land, construction materials, furniture, etc.).

5. To provide a sense of bank usage, one respondent estimated that banks are used by only about 5 percent of vanilla farmers, 1 percent of rosewood loggers, and 10 percent of midlevel traders (in both vanilla and rosewood). Other respondents roughly confirmed these figures. Even urban rosewood traders who could more easily access banks are discouraged from using them because the trade is illegal.

6. There are two organizations that occasionally provide small loans to vanilla farmers and collectors in the region: Ombona Tahiry Ifampisamboranana Vola, a Malagasy microfinance bank, and Symrise, a German flavors and fragrances producer.

7. Sasha Newell (2012) describes a similar practice of displaying empty bottles as a public spectacle.

8. Andrew Walsh (2010, 98) describes a similar mystery surrounding the sapphire industry in Madagascar.

Chapter 4

Worst-Case Conservation

I. Introduction

It was World Environment Day in a notorious rosewood trafficking village just outside of Masoala National Park.[1] In addition to lively festivities in the next town over, villagers could also expect a visit from the *lehibe ny ala* – the foremost forest authority in the district (translated literally as "the chief of the forest"). Two of my colleagues and I were staying at the village during the time of his visit. We noticed that in anticipation of his arrival a few things changed. Lumberjacks along the river abandoned their work. Miners took the day off from gold mining in the park. Beer bottles were taken off store shelves and a number of resident environmental offenders absconded to the neighboring forests for the night. After the forest official and his men arrived, they held an impromptu meeting at the village center, discussing the repercussions of deforestation and soliciting two cups of rice and 2,000 Ariary per head (about 75 cents, or what many might make in a day or two of work). The following day, after the officials had left, everything went back to normal. Environmental offenders returned from hiding and beer bottles repopulated the shelves. Lumberjacks resumed their work at the river's edge and gold miners returned to the park.

For many residents of northeastern Madagascar, this is conservation – a fleeting transformation inspired by visiting authorities. Swidden agriculture, logging, and mining are for the most part illegal, which simply means that they garner a fine. The lumberjacks who resumed their work at the river after the forest official's departure, for example, were relieved to hear that my colleagues and I were not also looking to impose fines as we passed. Residents who engage in swidden agriculture for rice production are also subject to fines imposed by the visiting forest official and other authorities. To ensure fines are paid, authorities typically visit just before the rice harvest and threaten to burn the fields of those in hiding.

In villages that benefit from more lucrative commodities, such as rosewood and vanilla, fines are often imposed regardless of evidence of illicit activity. This explains the village-wide payment in made to the forest official on international environment day discussed above. All villagers, regardless of their participation in illicit practices, were compelled to pay. It also explains the village's hidden beer repository. The forest official and his men, we were told by villagers, not only notoriously demanded complimentary bottles during their visits, but also lurked at storefronts, seeking further compensation from passing customers who could afford to buy beer. Whether these impromptu rents went back into official coffers or their own pockets is unclear – although it seems likely to be a mixture of both. In general, knowing that villagers have rice to spare and money in their pockets means that fines will be imposed whether conservation restrictions are obeyed or ignored.

From the conservationist's perspective, this is the worst-case scenario. The widespread belief that villagers will be penalized regardless of their personal adherence to the law means that environmentally detrimental practices will continue despite regulation. In fact, the mere

existence of regulations attracts rent-seeking practices from any group with the authority to impose fines. Nowhere has this been more clearly demonstrated than in the rosewood trade. Federal police, for example, are eager to be stationed in the northeast where rosewood logs are trafficked. During peak trading periods between 2009 and 2014, these Federal agents allegedly set up stations all along the river, collecting 10,000 ariary ($3-5) per log that passed. In the cities, they demanded steep payments from elite rosewood traffickers and, in moments of extreme temper or inebriation, have been rumored to kill those who refuse.

Conservation organizations are well aware of the rent-seeking behavior environmental regulations often inspire. In an attempt to combat this dynamic, they have instituted an alternative approach. One can observe this approach in the recently created Makira Nature Park, not far away from Masoala National Park and the village described above. In Makira, the Wildlife Conservation Society (WCS) has established a number of communities designated to collectively manage the land surrounding the park's core conservation area. The regional forest official and other environmental authorities outside of WCS participate, but for the most part only to provide a three-year evaluation and always accompanied by a WCS employee. There are far fewer bribes solicited here, I am told by those working for the project.

Makira Nature Park is an iconic example of what many refer to as "community-based" or "participatory" conservation. This method attempts to achieve conservation goals through the inclusion of those people living in the vicinity of the area to be conserved. In a direct response to what has been deemed "protectionism," "fortress," or "fines and fences" conservation, community conservation maintains that those people living closest to natural resources are in the best position to assist with their conservation. But while including local villagers, community conservation models – perhaps more importantly and to the extent possible – exclude local and national power structures that might interfere with and undermine conservation efforts. Although less publicized, community conservation's arguably greater goal is not to decentralize conservation but to transnationalize it – to create a transnational space of intervention, insulated from the harsh realities of the developing country context. In this reading, both protectionist and participatory methods create a fortress, the question is what is being fortressed from what.

This chapter examines transitions from protectionism to more participatory conservation methods in Madagascar over the past few decades, with a specific focus on how the rosewood trade has influenced recent dynamics in three parks: Masoala National Park, Makira Nature Park, and Marojejy National Park. In each of these parks, different approaches to the challenges of increased rosewood logging and trafficking have been assumed, ranging from more participatory to more protectionist. Some of these parks are funded via payments for ecosystem services (PES) – such as voluntary carbon credits in Makira – but the majority of park activities are funded through a mixture of government finance and international aid. My purpose in analyzing various approaches to conservation – from protectionist to participatory, regardless of their funding sources – is to demonstrate not only their differences, but also their similarities.

In this chapter, I use the case of rosewood logging and conservation in northeastern Madagascar to examine how logging has impacted both protectionist and participatory conservation approaches. The second section of the chapter provides a theoretical discussion of what I refer to as "the protectionist-participation pendulum" – the shifting approaches to conservation in the tropics from fortress to participatory techniques and back again. While the concept of PES is typically associated with more participatory methods, as we will see in this section, it can be employed anywhere across the protectionist-participation spectrum. The third section provides a historical overview of the turn toward participation in northeastern

Madagascar, from imperial authority through to colonial fortresses, socialist isolationism, and neoliberal participation. The fourth section then examines participatory and protectionist approaches to conservation through the specific cases of Masoala, Makira, and Marojejy parks. The final section returns to the theory of participatory conservation, making explicit the argument of the chapter, namely, how the rent-seeking practices associated with rosewood logging have inspired a worst-case conservation scenario that participatory approaches attempt to circumvent through their own type of (transnational) fortress.

II. The Protectionism-Participation Pendulum

Any periodization of conservation typically begins with the notion of protected areas – one of the first and still one of the most common methods of achieving conservation goals. Established to maintain or restore natural resources and biodiversity within a given area, protected areas often require the re-designation of appropriate human uses within the area and/or comprehensive human exclusion.[2] The degree of exclusion ranges from strictly protected wilderness areas to resource areas managed for multiple use.

Protected areas became a prominent feature in approaches to conservation during the late 19th Century, at which time certain tracts of land in the United States and other parts of the world were set aside either to be preserved in their "natural" state or conserved for sustainable resource use. Today, protected areas around the world are most commonly classified in terms of IUCN categories I-VI, which range from a strict nature reserve with no human use other than scientific, to a multiple-use area permitting sustainable natural resource exploitation in line with biodiversity conservation goals. While having been a feature of approaches to conservation for centuries, since the 1980s in particular protected areas have proliferated across the globe.

In the developing country context, it has been proposed that PAs might contribute to development objectives in addition to biodiversity conservation – a dual approach typically implemented through integrated conservation and development projects (ICDPs). In the aftermath of a fury of ICDPs throughout the developing world, much of the literature found disheartening results, leading conservationists to (re)emphasize that protected areas, although potentially beneficial to those living nearby, should not be seen as a means of poverty reduction (Naughton-Treves et al. 2005). Indeed, the trade-offs between conservation and development goals may be largely irreconcilable (McShane et al. 2011). Yet, other evidence still suggests that protected areas may in fact have overall positive benefits for people living nearby (Wittemyer et al. 2008, Naughton-Treves 2011).[3] In either case, the debate remains hotly contested.

Increasingly, protected areas are not simply an area of human exclusion, but are established with multiple classifications – typically, various zones of acceptable human use surrounding a non-use core. This type of protected area "zoning" has paved the way for more inclusive approaches to conservation, in which multiple-use zones surround a protected core. The emphasis in such circumstances is placed not exclusively on protecting the land from the people, but rather on engaging community members through multiple-use zones in order to better protect the core. With the transition from a single exclusionary boundary to multiple-use zoning, conservation paradigms have shifted from strictly protectionist to more participatory in approach.

The idea of "participatory" or "community" conservation was proposed in response to critiques of a strictly protectionist conservation approach, as well as following a rising tide of rhetoric uniting conservation and development in the tropics. It stems from the ICDPs of the

1980s and 1990s, but goes well beyond them in its community focus. Community conservation, including community-based natural resource management (CBNRM) and community forest management, maintains that those people living closest to natural resources are in the best position to assist with their conservation. By actively engaging resource users through conservation projects, this approach aims to attain both better conservation outcomes and a more equal distribution of benefits.

Community conservation offers a "charismatic package" (Tsing et al. 2005) – a compelling theoretical basis softened by a "warm emotional pull" (Blakie 2006). Indeed, the approach is so attractive that it sometimes appears as if "(almost) all roads lead to CBNRM" (Blakie 2006). Yet the success of community conservation, as with protected areas exclusively or ICDPs, remains contested. Roe (2008) observes a phase of "disenchantment" with community conservation in the early 2000s, as its list of failures enlarged. Dressler et al. (2010) refer to this as the "crisis" of community-based management. As scholars and activists began to witness the deterioration of the ideals of community conservation when put in practice, they moved toward abandoning the approach altogether.

This led to a wave of "resurgent protectionism" (Wilshusen et al. 2002) or a "back to the barriers" mentality (Hutton et al. 2005). Conservationists lamented that their mission had enlarged too greatly. Epitomizing this view point, Michael Soulé (2013), considered to be a founder of conservation biology, noted that the goal of new forms of conservation "is to supplant the biological diversity-based model of traditional conservation with something entirely different, namely an economic growth-based or humanitarian movement, that does not deserve to be labelled conservation." From this vantage, conservation should be exclusively aimed at conserving biodiversity, and the best way known to achieve this is the protected area.

This type of resurgent protectionism ignores conservation as a social and political process. As Singh and Houtum (2002) propose, conservation should be examined in terms of "sets of human relationships rather than an ecological science based on irrefutable axioms" in order to "better understand its successes, failures and most importantly its societal impacts" (254). Indeed, many question the appropriateness of protected areas at all – with or without human involvement. These critics argue that protected areas have an overall negative impact on livelihoods by restricting resource use. They understand protected areas as a means through which the transnational community can gain access to land at the expense of the people living on or around it (West and Brockington 2006, Adams and Hutton 2007, Corson 2011). Moreover, they note that protected areas are based in a particularly Western binary understanding between nature and humans that has led to the impetus to create purely natural (and thus human-free) spaces. As many cultures don't share this binary thinking (as will be discussed further in Chapter 6), protected areas are often not well-received by local people. At best, protected areas are ignored by neighboring communities as a foreign nuissance, and at worst, they involve social displacement and an expropriation of resources considered to be the latest instantiation of neocolonialism (Mbaria and Ogada 2017).

Amidst this swinging pendulum, another dynamic in approaches to conservation is apparent. At either the protectionism or participatory end, as well as everywhere in between, conservation has become increasingly integrated with the capitalist economy. This phenomenon is what many refer to as "neoliberal conservation" (Igoe and Brockington 2007, Buscher et al. 2012), "neoliberal natures" (McCarthy and Prudham 2004), or "Nature Inc." (Buscher et al. 2014). Although neoliberalism can be defined in many ways, I use the term to refer to the latest phase of capitalist development in which the logic of the market is repurposed as a tool for

governance. In the case of neoliberal conservation, market logic is used to pursue – and deeply imbricates with – conservation goals. The connection between conservation and market logic is not initiated with neoliberalism, but extended and deepened (Castree 2008).

At the participatory end, the increasing imbrication between market logic and conservation governance is quite clear. Uniting conservation and development goals through integrated projects blurs the space between the two, creating an area of overlap in which conservation may be used as a means for achieving development and vice versa. This fusion is not necessarily neoliberal in so far as what is meant by "development" is simply an improvement in livelihoods not necessarily related to the market. Of course, in practice this is rarely the case. Through ecotourism, non-timber forest products, sustainable forestry, payment for ecosystem services, and many other market-based conservation schemes, community conservation projects are increasingly neoliberal in design and implementation.

At the protectionist end, too, one sees increasing imbrication of conservation with a market logic. Although perhaps created for purely conservationist motives, protected areas have become sites of intensive capital accumulation. Biodiversity itself has become a commodity to be bought and sold, replete with speculation and derivatives (Corson and Suarez 2016, Buscher et al. 2014). Bioprospecting, offsets, and ecotourism all serve as mechanisms through which these spaces may be capitalistically exploited while still – or perhaps better – serving conservation goals. Moreover, immaterial uses of the pristine landscape through imagery and experience allow protected areas to serve as a prime site of "spectacular accumulation" (Tsing 2004), assisting in marketing products and generating donor funding through spectacle (Brockington 2008, Igoe et al. 2010). With market-based solutions protected areas are a "win-win," simultaneously conserving biodiversity and promoting economic growth (Buscher 2009).

Conservation's neoliberal turn is not limited to the area of land being protected. Those who make conservation decisions – either for protectionist or participatory ends – are increasingly dominated by a "transnational conservation elite" that includes not only scientists and civil society leaders, but business (Holmes 2011). Corporate funding for conservation has been growing at the same time that corporations have come to dominate conservation NGO boards (Adams 2005, Bundell 2006, Holmes 2011). The corporate goal of exploiting natural resources has transformed into the equally corporatist goal of selling conservation success (Corson 2016).

Thus, as the pendulum swings back and forth, from protectionism to participation, to resurgent protectionism and back again, it is useful to keep an eye on what is *not* changing. First and foremost, that is the increasing imbrication of conservation and capitalism through neoliberal governance. Secondly, and less discussed, is the continuation of a fortress mentality no matter how participatory approaches to conservation claim to be. The next section examines the turn to participatory conservation in Madagascar in order to better understand how even the most participatory approaches retain a fortress mentality.

III. The Turn Toward Participation in Madagascar

This section provides a brief history of approaches to forest management in Madagascar since its imperial inception. The history of forest management in Madagascar follows four major periods, beginning with (1) the imperial authority of the Malagasy Imerina during the seventeenth to nineteenth Centuries, transitioning into (2) the colonial fortress mentality during the first half of

the twentieth century, then experiencing a brief period of (3) socialist isolationism in the 1970s and 1980s, followed lastly by (4) the most recent turn to neoliberal participation in an increasingly transnational space.

Imperial Authority

The primary form of subsistence in Madagascar is shifting cultivation through a process of forest burning and clearing known as tavy (swidden or "slash and burn" agriculture). Traditionally, converted forestland has been used for extensive rice production, the main Malagasy agricultural staple. Before outside authorities intervened, local cultural taboos dictated which forests were allowed to be brought under cultivation (Ramanatsoavina 1966). Elaborate customary traditions for when, where, and what to burn governed local practice. As long as these restrictions were followed, Malagasy people generally viewed the transformation of forested land into productive land in a positive light. Through forest conversion, one extends their family lineage, claiming land for future generations and achieving a type of self-realization through descent. In addition to being a widespread land management technique, swidden agriculture is also a cultural mainstay in Malagasy communities living near the forest edge. It is often performed as a ritual, connecting contemporary farmers with the ancestors thought to inhabit the land (Hume 2006). This positive association with pioneering new productive lands generally continues today, although it has become conflicted by centuries of outside authorities prohibiting the practice.

One of the earliest outside authorities to interfere with local Malagasy productive relations was the imperial Malagasy monarchy of the central highlands – referred to as the Merina.4 Merina King Andrianampoinimerina is typically credited with beginning the political unification of the country in the late eighteenth century. At this time, Madagascar was well integrated within Indian Ocean trade routes and the use of currency began to proliferate across the island (Flaucourt 1661, Bloch 1989). As a lucrative merchant slave-trader with initially no political authority of his own, Andrianampoinimerina benefited from the trade (Bloch 1989). He used his earnings to organize revolt against other local authorities, gradually amassing a considerable following. "The problem," as Bloch (1989) notes, "was that what had been possible for him was also possible for others...all accumulators of money were potential political threats" (184). Consequently, Andrianampoinimerina's first order of business upon securing rule was the monopolization of the most lucrative trades in his domain to cement his own fortune and preclude that of his rivals.

King Andrianampoinimerina was succeeded by his son, Radama I, who extended Merina authority to cover nearly the entire island. Both kings spent much of their rule monopolizing the island's export industries and instituting forced labor campaigns to assist with export operations. Precious hardwoods, including rosewood, palisander, and ebony, featured among the primary exports. Massive forced-labor campaigns were deployed to transport the logs from the interior of the forest to the ports (Campbell 2005, 129). Imperial authorities granted foreign traders the rights to exploit these timber resources (Evers et al. 2013).

The Merina monarchy also claimed ownership over all forests in Madagascar and instituted a set of forest prohibitions for local users. They prohibited tree-cutting, forest-burning, and fuelwood gathering, and forging arms in the forest, although it is unclear if the prohibitions applied to all forests or simply those they maintained control over (Corson 2016). In either case, this forest code was largely symbolic. It is likely that Merina authorities did little to intervene in forest practices far outside the capital (Montagne and Ramamonjisoa 2006). The deep forests

and forested plateaus were especially difficult to access and were considered "refuges of political resistance and ethnic hostilities" that permeated imperial Madagascar (Olson 1984). The use of the forest as both a source of power and authority, as well as a refuge against it, has become a longstanding feature of Malagasy forest relations throughout the ages.

Colonial Fortresses

After the country's colonization by France in 1896, comprehensive forest regulations were established according to the French forestry model.[5] The colonial forest service was created in 1900 and the forest codes, claiming all forests and trees for the state, were passed in 1913 (Corson 2016). Vast tracts of land were designated as concessionary land for export-driven mining, plantation agriculture, and logging.[6] In general, the colonial regime greatly prioritized trade over agricultural or other types of economic development (Randrianja and Ellis 2009). The export of precious hardwoods, including rosewood, palisander, and ebony, was the primary goal of colonial forestry in Madagascar. Pre-colonial timber export operations were greatly expanded and intensified, resulting in the export of tens of thousands of tons of hardwoods from the northeastern forests alone (Petit and Jacob 1964, Kellar 2008).

In light of such extensive timber export operations, the colonial regime grew increasingly concerned about the conservation of resources and the adverse effects of erosion. Forest plantations of eucalyptus, acacia, and pine were established by the colonial state, covering one million hectares by 1928 (Olson 1984). Alongside these plantations, the colonial state established land for pure conservation and scientific goals (*réserves intégrals*). By 1954, a total of ten million hectares of primary forest had been appropriated by the state, nine percent of which was designated specifically for conservation and open only to designated French scientists (Sodikoff 2012). The following year, the state introduced the idea of classified forests (*foréts classées*) to ensure even greater timber supplies. By 1959, classified forests added over three million hectares of forest to the ten million already appropriated by the state (Corson 2016).

The establishment of both logging concessions and conservation reserves by the colonial state can be understood as a type of "internal territorialization" – a process through which the state establishes control over people by controlling the land-based natural resources they use (Vandergeest and Peluso 1995). The control of natural resources through internal territorialization, in turn, paved the way for larger processes of primitive accumulation that were taking hold of the island at the time. As defined by Karl Marx (2011[1867]), primitive accumulation is the necessary precursor to capitalism. It is the "historic process of divorcing the producer from the means of production" in order to "free" both resources and people from the land so that they may enter the market as capital and wage labor, respectively (875). All regions that enter the capitalist world system must – to a certain extent – be freed their previous productive relations and primitive accumulation is the violent and rapacious process of this "freeing."

The state is often the main driver of processes of internal territorialization and primitive accumulation, and the colonial state in Madagascar was no exception. Territorialized enclosures, combined with taxation and forced labor (*corvée*), formed the basis of primitive accumulation in colonial Madagascar, ultimately contributing to the use of the colony as a site for capital accumulation via natural resources exploitation supported by local wage labor. The primary form of forest management prior to colonization – shifting cultivation through *tavy* – was banned without exception across the country and Malagasies garnered only the most basic subsistence

use-rights of forest resources. Taxes on all assets (rice fields, livestock, market transactions) were specifically designed to force farmers away from subsistence activities and toward export production and wage labor. Indeed, the colonization of Madagascar "freed" large tracts of land from the Malagasy people and most Malagasy people from the means of production, allowing the country's resources to enter the global economy under French control.

Colonial forest management was of course not viewed by the colonists as a process of primitive accumulation, but was rather portrayed as the *mise en valeur* (valorization) of Malagasy nature and labor (Jarosz 1996). In terms of the protectionist-participation pendulum, the colonial state promulgated a strictly protectionist approach. Conservation and development were in no way confused. "The French colonial government," Corson (2011) notes, "addressed the ongoing conflict between production and conservation objectives by spatially separating the two" (709), allowing either economic exploitation and conservation to exclusively define vast tracts of forest. Nature reserves were proposed to be "equivalent to the forest [timber] reserves, but with a completely different purpose" (Humbert 1933, 212). Their conservation and scientific goals required, from the colonial vantage, all usage rights by local communities to be prohibited (Corson 2016).

In general, forest management and conservation in colonial Madagascar was considered purely a state concern – a science fit for only those with a degree. Contact with the forest outside of waged labor was prohibited. Malagasy people were characterized as "behaviorally unfit for skilled forestry work but adequate as brute man power" (Sodikoff 2012, 93). From the vantage of the state, Malagasy management practices appeared "unplanned, aimless, nomadic, unproductive, and uneconomical in the utilization of land and labor and destructive of the environment" (Whittlesey 1937, cited in Jarosz 1996). Colonial impositions, in contrast, which prioritized the use of the forest for export, mass infrastructure, or conservation, respectively, represented unqualified "progress" as defined by the colonists.

While the goal of colonial forest management was allegedly "progress," the result was the alienation of Malagasy people and their deeper movement into the forest. Rights-based access was restricted, requiring the state to be the formal intermediary of all major forest acquisitions. In practice, however, previous access patterns continued as well, albeit illicitly in areas of weak state control. To maintain access, many Malagasy communities traveled deeper into the forest, some even performing swidden agriculture as a means of state protest (Kull 2002). Swidden agriculture as a form of subsistence continued, although now illegally in areas removed from the state. Alongside these older subsistence traditions, new forms of wage (and forced) labor emerged as the primary means of access to the forest. In the face of mounting friction between Malagasy people and the French colonists, the 1947 revolt led Malagasy villagers to burn and reappropriate lands across the country (Olson 1984). French colonists killed tens of thousands in retaliation (Brown 2000). This rebellion "symbolized the unity of the 'people of the forest' in their defiance of foreign control over their land and livelihoods" (Harper 2002, cited in Corson 2016)

By the end of the colonial period, the state had significantly alienated the majority of Malagasy people. Malagasy nationalists reclaimed control of the country in 1960, thus beginning Madagascar's First Republic. But throughout the First Republic, ties with France and colonial legislation remained strong. Land tenure laws remained the same and the state continued to claim ownership of the forest (Corson 2016). Madagascar was still received in the international order largely through its colonial link with France and not as an independent economy (Randrianja and Ellis 2009). Forest exploitation and conservation patterns also

remained largely the same, although export operations declined. Exports from the forests of the northeast in particular followed this trend, gradually declining after Madagascar's independence in 1960 (Olson 1984). In the region, loggers formerly working for the colonial regime returned to their villages (Kellar 2008). Decreases in exports became even more pronounced after socialist policies took hold of the country in the following decade.

Socialist Isolationism

Although more in rhetoric than reality, the Socialist Revolution in 1972 brought an end to the colonial status quo. Made possible by growing peasant agitation with continued colonial policies, socialist platforms steered away from the colonial mainstays of exports and conservation. The economic recession in the early 1970s paved the way for a new approach to development in Madagascar. The country's Second Republic began in 1975 with the elections following the 1972 Revolution. The socialist state continued to claim state control over land and resources, but with different development objectives in mind. Resource controls in rural areas were largely unenforced and villagers were encouraged to clear and develop land through agriculture.

The socialist period demonstrates not so much a movement toward or away from the protectionism or participation poles, but a sharp rejection and rhetorical movement away from the discourse of conservation and forest economics altogether. Western discourses surrounding conservation and export-driven economics so typical during the colonial era were sharply rejected (Sodikoff 2012). In practice, however, the strategic absence of an alternative approach to forestry allowed existing forest codes to remain unchanged despite their rhetorical attenuation. Forest policy in general was avoided because of the colonial tensions it revived. Instead, agriculture was upheld as the main development objective, an area that the colonial state had allowed trade to greatly overshadow (Randrianja and Ellis 2009). The separation of economic and conservation forest zones continued as a colonial era hold-over. The socialist state isolated "'the environment' in nature reserves, special reserves, and national parks rather than developing capacity to sustainably manage commercial extraction" (Corson 2016, 52-53).

Although issues of forest management specifically were often avoided, a general political trend of decentralization was embraced by the socialist state. The government's goal was to make the village assembly (*fokonolana*) into "the most basic organ of a socialist and democratic state with a view to putting development into the hands of the people" (Randrianja and Ellis 2009, p. 195). According to the Malagasy President in 1977, the *fokonolana* functioned as direct democracies in which "the citizen's views are solicited every single day …a decentralized society…[which] gives broad responsibilities to all." Hypothetically, general trends of political decentralization and the growth in power of the *fokonolana* allowed for a more participatory approach to forest management. There is little evidence, however, of forest access patterns changing during this time, except for a clear decline in export-based wage labor.

Ultimately, socialist reforms were expensive and reaped few financial returns. With the peasants still unappeased and agitation in the urban proletariat growing, the isolationist social state of Madagascar ended in the 1980s when near economic collapse forced a severely weakened Malagasy government to accept an International Monetary Fund and World Bank-sponsored structural adjustment plan.

Neoliberal Participation

With the acceptance of a new wave of neoliberal aid packages, post-socialist Madagascar was reintegrated into the world economy through the global trend of neoliberalism rather than colonial link with France (Randrianja and Ellis 2009, 12). Conservation and development were placed front and center in Madagascar's new neoliberal trajectory. The swinging pendulum from protectionism to participation was to be demonstrated very clearly in this neoliberal transition. Specifically, the transition marked two important shifts in Malagasy forest politics. First, forest governance objectives experienced a consolidation, in which formerly separate economic and conservation goals were united under a singular, integrated approach. This consolidation occurred simultaneously with a push to further decentralize forest governance, integrating local communities into conservation and development projects.

The reconciliation of economic and conservation goals, as well as their promulgation through more participatory methodologies, incited the development of a number of forest management projects, each reflecting the larger global trends of the moment. Participatory approaches to forest conservation were legislated through various mechanisms throughout the 1990s, primarily with the aid of the World Bank and global conservation NGOs. These donors have invested at least US$450 million in Madagascar's environmental sector since 1990, resulting in the expansion of terrestrial protected areas from 3.2 million to over 10 million hectares (Allnutt et al. 2013). The ensuing territorialization of these protected areas has generated a plethora of new local management structures bolstered by transnational support. Practically every wave of new participatory conservation technique developed at the international level has been reflected in Madagascar's domestic policies. ICDPs, community-based forest management, community managed sites (KoloAla), and *communauté de base* (COBA) have all been developed in an attempt to achieve more participatory conservation.

This neoliberal turn toward participation in the 1990s was vastly different than the socialist decentralization two decades before. While both involved a rhetorical delegation of management to local users, neoliberal participation often involved decentralizing both *down* to the local level and *out* to the transnational level. The state, while officially present, became somewhat of a vacated body, existing primarily as a vehicle through which the international community could claim land and organize those within it. Until the mid-1980s, the territorialization of Madagascar's forest was "primarily a project of rulers," but with revived support from the international community Madagascar has since experienced a specifically neoliberal territorialization under which access is determined across many scales (Corson 2011, p. 715). As international NGOs attempt to work with local Malagasy communities directly, the state has become increasingly marginalized.

Igoe and Brockington (2007) refer to such multi-party territorialization as the creation of "transnationalized spaces, governed according to the needs and agendas of transnational networks of actors and institutions" (p. 441). Madagascar – experiencing periodic *coup d'états*, and a notoriously nepotistic governance structure – has been particularly subject to such transnationalization (Duffy 2007, Pollini 2007: 410–16, Brockington et al. 2008: 167–70, cited in Keller 2015). There has been an increasing drive to circumvent what many conservation NGOs refer to (publicly) as state capacity constraints and (privately) as rampant corruption. The territorialization of the country's most recent protected areas, for example, was established through several working groups that involved a mixture of foreign aid donors, consultants, scientists, Malagasy government representatives, and NGOs. The management of these areas

was agreed to be pursued by NGOs, the private sector, and local communities, all in addition to the state (Commission SAPM 2006, Corson 2016). Moreover, after the latest *coup d'état* in 2009, the transitional government nearly doubled the country's protected areas, codifying 171 protected areas and sustainable forest management sites covering a total of 9.4 million hectares (Corson 2011). The timing of this drastic addition of conservation regions was surprising given that the country had not yet returned to electoral politics.

Madagascar's neoliberal territorializations and the coalescence of conservation and development objectives through forest management can be understood as a specifically neoliberal brand of on-going primitive accumulation. In contrast to delegating forest concessions, which represents the direct and immediate establishment of sites of primitive accumulation, isolating conservation territories represents a more gradual process of primitive accumulation, unfolding at a distance over a longer period of time (Kelly 2011). While perhaps created for purely conservationist motives, protected areas in a neoliberal global economy rarely escape capitalist accumulation. Bioprospecting, offsets, and ecotourism all serve as mechanisms through which these spaces may be capitalized while still serving conservation goals. Moreover, immaterial uses of the land through imagery and experience allow protected areas to serve as a prime site of "spectacular accumulation" (Tsing 2004), assisting in marketing products and generating donor funding through spectacle (Brockington et al. 2008, Igoe et al. 2010). With market-based solutions, protected areas are "win-win," simultaneously conserving biodiversity and promoting economic growth (Buscher 2009). These spaces of both conservation and capitalist accumulation are hybrid spaces – "neither fully private nor public, neither fully national nor fully global" (Sassen 2005).

The transition from colonial to neoliberal forest governance – the synthesis of conservation and development goals and the transnationalization of management approaches over time – was accompanied and enabled by this change in modes of accumulation. While colonial management prioritized logging for export as the primary means of capital accumulation, neoliberal accumulation patterns have rested on a synthesis of conservation and development goals, requiring a reconciliation of the same land to serve both ends. Capital accumulation must proceed *through* conservation. The forest will be made to conserve, meet local needs, and satisfy global capital demands, all at the same time.

With the introduction of transnational networks and transnationalized spaces – in short, with the transnationalization of the Malagasy forest – forest access has not been further limited, but further mediated. Local access has been increased and encouraged, albeit strategically. During colonialism, independent forest access was largely outlawed, requiring locals to enter the forest either licitly as wage laborers or illicitly outside of state control. Rights were the prime determiner of access. Neoliberalism has introduced more stakeholders to forest governance in Madagascar and complicated resource access. Rights, although still very important, have been enveloped by a proliferation of what Ribot and Peluso (2003) refer to as structural and relational mechanisms of access. Instead of confronting black and white sanctions at the forest edge, forest users now confront a medley of stipulations and terms of use that they themselves are to devise. Structures constraining and molding appropriate forest use are not so much rights and prohibitions – everyone has a "right" to the forest, from its direct inhabitants to the entire global community. Increasingly, the terms of access are multi-tiered management plans and sustainable use blueprints made to appease the full range of stakeholders from local forest users to the entire global community. These terms of access certainly involve local people in their establishment, but the legitimate authority over the land lies securely within the transnational arena.

III. Tackling Rosewood Logging

The proliferation of rosewood logging since 2000, and especially after the coup in 2009, has complicated the neoliberal turn to participatory conservation in northeastern Madagascar. Three parks in particular have suffered most from the logging: Masoala and Marojejy National Parks and Makira Nature Park. These parks are the site of the majority of illicit rosewood logging today. [7] While the creation of these parks was intended to bolster local management of forest resources, in many ways their exclusionary policies have continued the colonial tradition of expropriating resources from local control (Marcus 2001, Sodikoff 2012, Kellar 2014). Rosewood logging has brought these hidden dynamics to the fore. This section discusses how conservation has proceeded in each of these parks, and how increased rosewood logging has further complicated the dynamic. Through each of these case studies, it becomes clear that the more participatory approaches to conservation rely on fortressing not the forest, but the rent-seeking practices of the state and other environmental authorities.

Masoala National Park

Covering approximately two-thirds of the Masoala Peninsula in northeastern Madagascar, Masoala National Park contains the largest remaining contiguous block of tropical humid forest in Madagascar. As discussed in Chapter 1, It was established as Madagascar's eighth and largest national park in 1997 and is co-managed by WCS (formerly the New York Zoological Society) and Madagascar National Parks (MNP, formerly ANGAP). Masoala is a total of 2,300 km^2 – about half the size of Yellowstone National Park in the United States. The park is composed of a core protected area that travels from coastal forests at the edges of the peninsula to mountainous terrain at the interior, along with several smaller detached marine and terrestrial parcels. Surrounding the park, over 80,000 Malagasy residents share the Masoala Peninsula.[8] They engage in subsistence rice cultivation through permanent and shifting cultivation, and grow vanilla, coffee, and cloves for export. After the coup in 2009, many residents also either logged or provided services for loggers in and around the park.

Masoala was established as an integrated conservation and development project, meaning it was intended to achieve both conservation and development goals by creating a core protected area and also encouraging community-based management in a multiple-use buffer zone. The park was designed "in consultation with people at the local and national levels" and in an attempt to avoid conflict with village populations (Kremen et al. 1999, 1065). While priority was given to habitat protection for endangered species, local villages were mapped and excluded from the protected area borders where possible. Households were estimated to require 5 hectares for forest product collection and afforded no additional lands to practice swidden agriculture (1061). From the GPS units collected of current village territories and the estimation of future fuelwood use, the borders of the park were mapped via WCS offices in the United States. A total of 47 households were relocated to permanent villages to accommodate the boundary (1065). These permanent villages are now labeled as zones of controlled occupation (ZOC) within the park and are strictly regulated.

The "development" part of the Masoala integrated conservation and development project was very minimal, financed through a portion of visitor entrance fees to the park. Half of these fees were allocated to local management committees, called COGES (COmité de GEStion), to

fund development projects of their choice (Ormsby and Mannle 2006). For example, in 1999, COGES funding was used to improve roads, build school tables, construct wells and public toilets and rehabilitate buildings. This was all performed on a minimal budget of US$700. In 2001, there was only about US$500 to fund development projects. Compare these funds to the park's annual operating costs of US$300,000 to $400,000 (Keller 2015, p. 4). Also compare these funds to the loss of productive land experienced by villagers living at the park borders, discussed further below. Moreover, these funds are not typically used in peripheral villages that suffer most from the loss of productive land, but rather in areas of high ecotourism and comparatively higher wealth, such as the city of Maroantsetra (Ormsby and Mannle 2006).

The initial design of the park assessed the economic benefits of establishing sustainable forestry for timber export on over 1,300 hectares of the peninsula. An annual gain of $130 per household compared to the business as usual scenario was calculated (Kremen et al. 1999). This potential for sustainable forestry was used as justification for the core protected area. "Both biological and socioeconomic data therefore pointed to the same solution," the park designers note, "to include the large and environmentally heterogeneous core zone to protect the unique biodiversity of the area and to protect the forests of the peripheral zone through community-based economic incentives rather than legal mechanisms" (Kremen et al. 1999, 1064). Yet no actual plans for establishing community forestry for export or any other "community-based economic incentives" were actually discussed in the report. No assessment of the practical feasibility of establishing the sustainable forestry export market was made. Instead, the hypothetical potential was modeled in order to justify the park's borders, and that was that.

Within this context, it comes as little surprise that the creation of the Masoala has been met with both apathy and aggression by local communities. Stating the matter very clearly, Keller (2015) notes that communities near the southeast borders of the park "almost universally perceived the Masoala National Park as a threat to their livelihood, and only in the rarest of circumstances did anybody voice any opinion in favour of the park" (123). In contrast, Ormsby and Kaplin (2005) conducted a study of park perceptions in northeastern region of the park, finding that villagers sentiments ranged from general confusion over the park's existence to general support. Many of those in support, however, lived further from the park and believed that its boundaries were more prescriptive than permanent – that they could be adjusted for future use. They also believed that one of the park's main objectives was still development assistance, which actually ended in the early 2000s after the park was no longer considered an integrated conservation and development project, and became only a conservation project.

In some cases, antagonism toward the park has come from the further extension of park boundaries in the directions of the villages. Keller (2015) notes that in one village just south of the park, the boundary changed without local consultation (126-130). When questioned, MNP claimed that the first boundary was simply a proposition that was later rejected and replaced with a boundary that better matched the official design. The boundary relocation suddenly placed subsistence land within park boundaries. To address the situation, the park director drafted a hand-written, not legally valid "convention" that agreed to let residents continue to plant on those areas they had previously cultivated despite the fact that they were now technically inside the park. No compensation was provided, except in four cases.[9] Arrests were made, however, when new land within the recently delimited area was cleared. Sentences ranged from a month to five years, although they often could be reduced through "payments."

In the village discussed in the introduction to this chapter, where I visited while investigating the rosewood trade, the main complaint was not the park itself but the power the

park gave to passing officials to solicit fines. These officials consisted of MNP agents, but also the foremost forest official in the region – the *lehibe ny ala*, as discussed above. Every week or so, villagers could expect a visit from one of these conservation authorities, imposing fines in cash or in kind. The understanding was not so much that the authorities were being corrupt, but that this is simply how conservation works.

The rosewood trade, of course, intensifies the dynamic. Masoala has been hardest hit by rosewood logging (Figure 1). When the trade is open, villagers living along the borders of Masoala work in the trade – either directly logging and trading, or indirectly providing housing, goods, and services. A survey of villages in the region showed that 27% of village households were directly involved in the trade, while 31% worked indirectly for the trade (Ratsimbazafy 2016). In certain villages that manage to become key hubs along the rosewood trail, the numbers are much higher. In the rosewood village that I visited, I was told that at peak times during the trade, all the houses were filled with loggers and blankets were spread in the fields for additional loggers sleeping outside. Parties were held nightly. Logs were everywhere – backyards, riverbanks, canoes. Guardians were paid 5,000 ariary nightly to protect them. During slow periods, logs were buried in giant trenches, again with paid guardians standing by. At the peak of the trade, 200 to 300 boats per day traveled from the park along the Onive River out to the coast. Chinese ships came all along the Masoala Peninsula to pick up logs fresh from the forest (Figure 2).

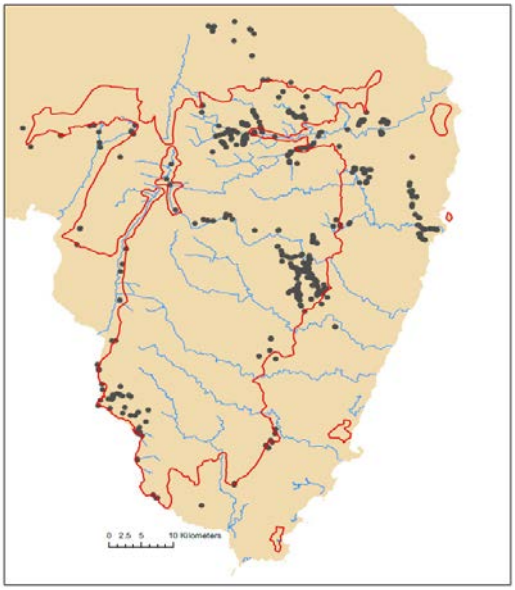


Figure 1. Sites of illegally logged rosewood and ebony in and around Masoala National Park. The red line indicates the park limit. *Source:* Burivalova et al. 2015, 272.

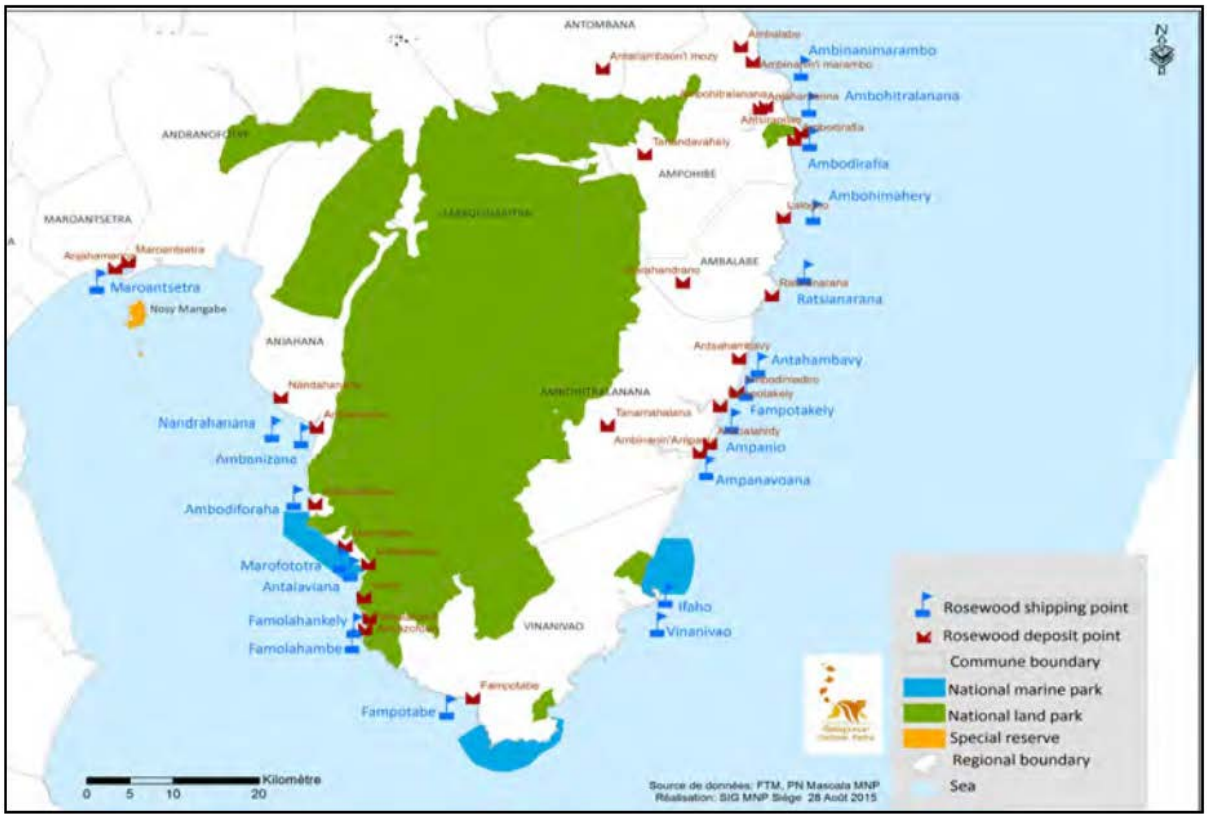


Figure 2. Shipping points and deposit locations for illegal rosewood and ebony between 2010 and 2015. *Source:* Ratsimbazafy 2016, 47.

Along with loggers and traders, the rosewood boom attracted anyone with authority who could make it to the region. Gendarmes and militia stationed in the region brought chairs to the river bank, collecting 10,000 Ariary per log that passed. The head forest official, I was told, was particularly strict, extracting fines from the entire village for any sort of environmental transgression performed – from rosewood to swidden agriculture. If not cash, they demanded rice, often selling it back to the same group of villagers from which they obtained it. The *chef fokantany* (village chief) is another key beneficiaries of the trade. In the rosewood village I visited, he allegedly received 60,000 ariary per batch of logs passing through and was said to have used none of this money toward the good of the community. A similar dynamic likely prevails in other villages that serve as hubs in the rosewood trade.

At higher levels, the fines are much greater. During boom times, gendarmes regularly demand large payments from higher level rosewood bosses. In one instance, a gendarme was rumored to have spent all his money earned from fines in a single night at the bar. Finding himself with no more money, the gendarme drunkenly returned to one of the rosewood bosses, demanding further payment. Trying to calm the gendarme, the boss told him he could have his money but after he had sobered. The gendarme was then said to have killed the man with twenty of his workers watching the entire incident. In a separate indcident, another gendarme allegedly broke into a rosewood boss's house with the help of his guard and stole 2 billion ariary. One of the workers staying in the house at the time was shot and killed in the process. In both cases, residents claim that the penalty for the gendarmes was a fine and relocation.

When the trade closes or slows, people in the region seek other economic activities. Gold mining in the park resumes. Swidden agriculture continues, probably at a more intensive rate to make up for rice that cannot be bought with wages (Burivalova et al. 2015). Less lucrative tree varieties are logged and sold domestically. As I encountered a group of loggers cutting a tree for the local market on the river bank leading from Masoala (Figure 3), they told me they were relieved to hear that the people I was traveling with and I would not collect a fine. They said that park agents come every week or so to collect fines and being caught next to this fallen tree would have cost them 200,000 ariary. We also encountered a man lugging a small piece of rosewood he claimed (probably truthfully from the looks of it) he had found in a stream (Figure 4). He too expressed his relief that we were not looking for payment.

Figure 3. Loggers by the Onive River, near Masoala National Park. (Photo by author, June 2015)

Figure 4. A villager carrying a piece of rosewood home, pointing to where he found it in the river. (Photo by author, June 2015)

As the rosewood trade began to intensify after the coup in 2009, the government organized an emergency task force to secure Masoala and the other protected areas in the region. Yet, those members of the task force sent to the region were largely complicit with the dynamics of the trade. They saw their mission not to stop the trade, but to impose fines. For example, at a town near the park, rather than stopping shipments of rosewood logs at a checkpoint station, but task force members instead charged 20,000 ariary per passing log as a non-negotiable "toll fee." Some members were reportedly "very proud" of their role within the task force, acknowledging as noted in the introduction to this dissertation that "everyone needs to get their slice of the cake in this business" (Ratsimbazafy 2016, 60).

This sums up the story of conservation and logging in Masoala National Park rather well – everyone getting their slice of the cake, except perhaps those living closest to it. Although established as an integrated conservation and development project, Masoala ultimately delivered minimal development benefits that were provided primarily to more wealthy residents rather than those living closest to the park. Villages were not particularly active in establishing park boundaries and community "consultations" typically meant conveying park boundaries after they had already been developed. In some cases, however, the boundary changed to further encroach on productive lands. Thus, productive activities now continue in certain areas of Masoala in a muddled, semi-legal manner. The rosewood trade, as discussed, further exacerbates the dynamic, transforming the national park into a hotbed of rent seeking behavior.

This is worst-case conservation. It is in fact, not conservation at all, but a situation that prevails when conservation restrictions exist alongside little else. Corruption here is not an aberration – it is intrinsic, simply the way of doing business. In this sense, "corruption" is not quite an accurate – or at least, useful – term for describing the situation. Fines are not intended to prevent activities, but instead serve as an informal tax system. This situation likely prevails in most protected areas that harbor lucrative export commodities such as rosewood. But it has been prevented, to a certain extent and with certain trade-offs in the two other protected areas of northeastern Madagascar discussed below.

Marojejy National Park

Marojejy National Park covers 55,500 hectares of land surrounding the Marojejy Massif, about 80 kilometers north of Masoala. The park is much smaller than Masoala, but contains greater altitudinal variation, transitioning quickly from lower elevation rainforest to mountain peaks reaching an elevation of 2,132 meters. The park began as a strict nature reserve in 1952 after an eminent French botanist devoted a book to describing the region's natural beauty (Humbert 1955). In 1998 it became a national park, managed by MNP with partial assistance from the World Wildlife Fund (WWF) and the Duke Lemur Center.

Marojejy is very different than Masoala in geography and management. As a much smaller park, Marojejy has a single entrance just off the main road traveling from the coast to Andapa. The park has 52 communities (referred to as COBAs or VOIs) living at its edges. Before becoming a park, two household lived within the interior of the reserve, but were evicted when WWF became involved in 1993. In general, from the 1980s until WWF involvement, local villages engaged in land clearing activities within the borders of the park in order to develop coffee and vanilla plantations. WWF began campaigns to mark the edges of the park and establish forest surveillance programs, which helped maintain the parks integrity. When

Marojejy became a national park, the boundaries were renegotiated, giving villages in the west more land, but removing land from villages in the northwest.

When compared to Masoala, park relations with villagers in Marojejy are typically portrayed in a more positive light. This is in part likely because there are fewer ethnographic studies of people living around the park and my own conversations were limited mainly to park and NGO employees rather than villagers. This is also in part due to the size and more centralized management. Marojejy has a more robust system of associations: guides' association, porters' association, cooks' association, women's association. "Mafy ny fiaramiasa" (strong partnerships), one employee noted when describing the park's relationship with surrounding villagers. The park has purchased school kits for local students and every 2 to 3 weeks the best students from the villages are invited to visit Marojejy. The Duke Lemur Center also plays an active role, establishing a community-based initiative in the region in 2012. Activities include environmental education through student trips to Marojejy, park border demarcation and monitoring, reforestation of fast-growing endemics and fruit trees, fish farming, and restocking local rivers with endangered species (Austin and Bradt 2017).

This is not to say Marojejy is not without its controversies. Limiting swidden agriculture both in and outside the park is a constant struggle. Park boundaries have been (illicitly) moved physically inward by villagers, sometimes with the help of park employees. In one case, a park agent sold nine hectares of parkland to a local farmer who then cleared the land for rice cultivation. In addition to swidden agriculture, bushmeat hunting, honey extraction, and selective logging illegally occur within the park.

Rosewood logging has also proceeded quite differently in Marojejy than in Masoala. Because of its proximity to a paved road, Marojejy was hit first by the wave of loggers that surfaced after the coup in 2009. Loggers combed the park in search of rosewood and threatened to burn the house of the park director if he impeded with the operations (Randriamalala 2012). Marojejy was shut down for three months amidst the violence. When certain villagers mobilized against the logging, armed traders fired automatic weapons above their heads to disperse the crowd or threatened specific protesters with beheading.[10] The road to Marojejy was streaked red from a constant procession of logs dragged from the Park to trucks waiting nearby. During these three months, six to eight trucks per day transported two to three tons of rosewood each, amounting to about 50 to 100 logs transported per day.[11] Trees were cut primarily in the northeastern region of the park, where rosewood grows more frequently due to the humid climate (Figure 5). By May 2009, the park director with the help of the military and local authorities finally stifled the majority of the logging and Marojejy reopened.

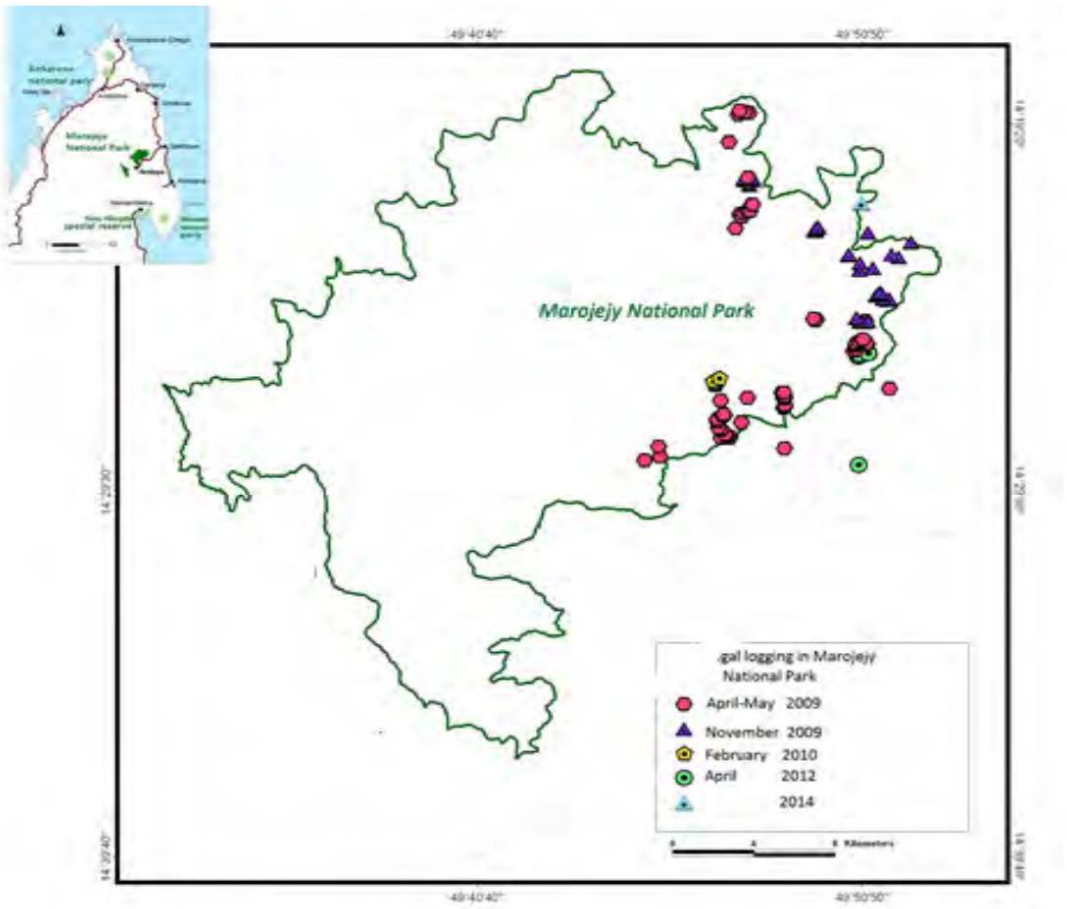


Figure 5. Map of rosewood logs harvested in and around Marojejy National Park (Ratsimbazafy 2016).

After the park closure, rosewood logging continued but at a much reduced level. Unlike in Masoala, rosewood in Marojejy does not grow far from the main road.[12] This, combined with village monitoring for logging in the sectors where rosewood grows, has made the logging much easier to control. As one park employee told me, the park has arrested loggers more than 10 times since 2009, typically in groups of more than 8 loggers at a time. On almost all of these occasions, a report from a villager triggered the arrest. Having received the report of logging activities, park employees (guides, porters, whoever is available) seek the help of villagers to gather a search group of nearly one hundred individuals. They wait until nightfall and enter the park in smaller groups in search of the loggers. Just before leaving, park employees may notify the gendarmes. They wait until as late as possible, I am told, so that the gendarmes cannot warn the loggers in advance, as has been known to happen, spoiling the search.

The loggers are apprehended and removed from the park. If the gendarmes are present, they take the loggers to jail in a nearby city and confiscate the rosewood logs. “They do their formality and leave,” the park employee I spoke to told me of the local and federal authorities. “The police and military are just a formality and always for the money,” he continued, “you know how it is here in Madagascar.” If found guilty, the loggers will be incarcerated for six months to five years, I am told by another conservation agent. “If they pay,” he then added, “maybe one to six months.” Others pay immediately and do not go to jail at all. Protesting this behavior, the new director of Marojejy is rumored to have spent two weeks sitting next to a jail

in which loggers had been recently taken, ensuring that they would not be able pay their way out. The management at the jail told him to leave, but he refused.

If park employees have not informed the gendarmes in advance, they act on their own. After apprehending the loggers, conservation agents cut the confiscated rosewood logs into small pieces to burn as firewood, not trusting the gendarme's confiscation. They punish the loggers by taking off their shirts, covering them in mud from the rice fields, and parading them down the main road. Following this display, the gendarmes take over.

Village surveillance seems to work well in Marojejy. Unlike in Masoala, I am told there are still a large number of rosewood trees as large as 60 centimeters in diameter. "People are afraid to cut rosewood," the park employee noted, "we are in collaboration with even the children... everyone comes here to tell us when there are loggers." The gendarme and police have a smaller hold on things here, they do not ask for as many bribes in the villages. Their connections, I am told, are limited to only a few families who have young men who work as rosewood loggers. All the big actors in the rosewood trade – the exporters and the higher-level traders – are not from around Marojejy. They are from the coast. Another conservation agent at WWF attributed this to ethnic differences. A bit more inland, residents around Marojejy are mostly Tsimihety, while those on the coast are Betsimasaraka. He recited the stereotype that the Tsimehety respect rules and traditional customs better than Betsimasaraka. WWF helps them, he observed, and they get many advantages. The Betsimasaraka, in contrast, are coastal, more educated, more connected, less in need.

When I tell coastal residents what I have heard at Marojejy they have a slightly different take on the matter. Yes, they agree there is more collaboration with villagers around the park in Marojejy. Unlike Masoala, villagers surveil the park and report transgressions. But they do this because there are much less opportunities for themselves to log. The real reason that Marojejy is not the same logging hub as Masoala, they insist, is not less corruption or more collaboration, but simply geography. In order to get the logs from the park to the boats at the coast, they must use the road. And it is a long road. Bosses would have to pay many, many gendarmes stationed along the road in the process of getting their logs to the coast. Why bother when Chinese boats can come straight to the undeveloped shores of the Masoala Peninsula and buy rosewood straight from the forest?

Makira Nature Park

Comprising a core protected area 372,470 hectares, Makira replaced Masoala as the largest conserved forest in Madagascar after its establishment in 2012 (launched in 2001). The two parks are very close together and nearly touch in some areas. As with Masoala, Makira is a joint venture between WCS and the Malagasy government, but in the case of Makira WCS does the managing on behalf of the Malagasy government and MNP is not involved. Rather than a national park, Makira is a semi-private reserve that was established as a REDD (reduced emissions from deforestation and forest degradation) pilot project and receives funding by generating carbon credits through avoided deforestation.[13] The park consists of dozens of communities (also referred to as COBAs or VOIs, as with Marojejy) that have been designated to collectively manage 335,173 hectares of land surrounding the core conservation area.

In many ways, Makira has tried to remedy the shortcomings of Masoala. As a large number of people live within the park boundaries, community involvement is one of the main tenets of the park. WCS establishes contracts to manage land between the communities and the

forest administration. Communities sign a three to six year contract to manage their land – a contract they themselves are encouraged to devise with the help of WCS employees. The main WCS employee who interacts with the villages is the "animateur." The animateur is usually an educated Malagasy person living in the nearby cities of Antalaha or Maroantsetra, who travels to its assigned communities for 2 weeks out of the month in order to evaluate and train the villagers. Each animateur is ideally in charge of 3 communities, but those animateurs I interviewed were in charge of five.

With the help of the animateur, every month communities execute a field survey and every six months they write a report to WCS on their activities and performance. Each community's performance is evaluated by the animateur, and each animateur's performance is evaluated by the WCS employee that serves as his superior. If community evaluations are satisfactory, community contracts are renewed for six years. If they are unsatisfactory, the contract is renewed for only another three years and elections are typically held to establish new community leadership.

As with Masoala and Marojejy, community responses to Makira vary. According to one study, nearly half of respondents held a positive attitude toward the park, while those more dependent on the forest to generate income remained reluctant and unsupportive (Rastimbazafy et al. 2012). Those who do and do not support the park are likely to fall along the lines of what the animateurs refer to as "good" and "bad" communities. The good communities have fewer transgressions and the bad communties basically do what they please without regard for park restrictions. There are significantly more bad communities than good. One animateur estimated that "ninety percent of the people in the communities do not listen to what I say." The especially bad communities receive "*pression*" (punishment). First, animateurs stop trainings and projects. If behaviors are not remedied they bring in the *lehibe ny ala* (forest chief) with supervision from an animateur. For particularly severe transgressions, such as growing *rongony* (marijuana) in the park, an animateur accompanies the *lehibe ny ala* and a gendarme to the village site in order to arrest the offending villagers and send them to court in the nearest city. In general, the fines and taxes of conservation agents and officials that pervade Masoala are not as pervasive in Makira. Any forest officials that accompany WCS employees get paid per diem by WCS for their trips and are specifically monitored to reduce the likelihood of bribes. By design, nearly all interactions between villagers and forest officials are mediated through the presence of a WCS employee.

Because of its support from carbon credit finance, Makira has more money to devote to community development projects than Masoala or Marojejy. Much of this money goes toward building community offices, which house field reports and evaluations, or toward paying for community patrols. The animateurs also perform what they refer to as "sensibilization" – education and trainings. Animateurs hold trainings on raising rabbits, pigs, and chickens; growing rice; keeping bees; farming fish; and farming silkworms. They also explain the environmental laws (*dina*) villagers are subject to and help assist with demarcating park limits.

"Makira is strong!" (*matanzaka*!), one animateur assured me, as discussed in Chapter 1. The park had already transferred 333,100 hectares to 82 communities, he noted in June 2015. Only a few villages had refused to participate. Yet, he also noted a contradiction. While delimiting the park was a great success – all his communities have marked the park limit (*manao limite*) he reported excitedly – and establishing an office for each COBA was also rather successful, most of the other missions of the park remain unfulfilled. Trainings have had little impact. Many are not appropriate to the local context. A poultry project in one village with no

experience raising chickens, for example, resulted in a 70 percent mortality rate due to bacterial disease (Ratsimbazafy 2016, 75). Yet trainings continue and a robust bureaucracy proliferates. Communities continue to file their three month surveys and continue to receive (often abysmal) evaluations.

Rosewood logging has complicated the sensibilization process. Makira has been subject to similar logging patterns as Masoala, although less intense because the terrain is more rugged and less accessible. Since 2009 logging in Makira increased into 2011, with 300 to 500 people loggers transporting an average of three shipments per day (Ratsimbazafy 2016). The logging continued periodically until at least 2015, with operations moving deeper into the forest and requiring a minimum three-day hike into the forest from the closest village. Logs were sent down the Ambanizana River to informal beach ports set up in the Bay of Antongil.

Illegal logging has affected all sectors of Makira, particularly at the park's boundaries (Figure 6), while rosewood logging in particular has been primarily restricted to the eastern sectors of the park. As in Masoala, villagers in Makira often participate in the rosewood trade directly through logging and trading or indirectly by providing services to loggers and traders. During the hungry period in April and March just before the rice is ready for harvest, even more people join the trade. Also in Masoala, but to an even greater extent in Makira, villagers surrounding the park play a special role as "forest owners." Because of their local knowledge, villagers may be hired by loggers as guides to help loggers find trees. They are paid 20,000-50,000 ($7-10) ariary per day and, if considered "forest owners," they earn around 50,000 ariary ($18) per tree that is found (Ratsimbazafy 2016, 53). These wages are of course small compared to the price of the timber as it travels down the supply chain. But they are much larger than anything Makira – or any of the other parks in the region – offers to local villagers. In Makira in particular, due to the park's rugged and unexplored terrain, the role of "forest owner" and guide becomes increasingly important. Yet, at the same time, the question of who actually *owns* the forest – local villagers, global conservation organizations such as WCS, the Malagasy state, or traveling loggers and traders – becomes increasingly contested.

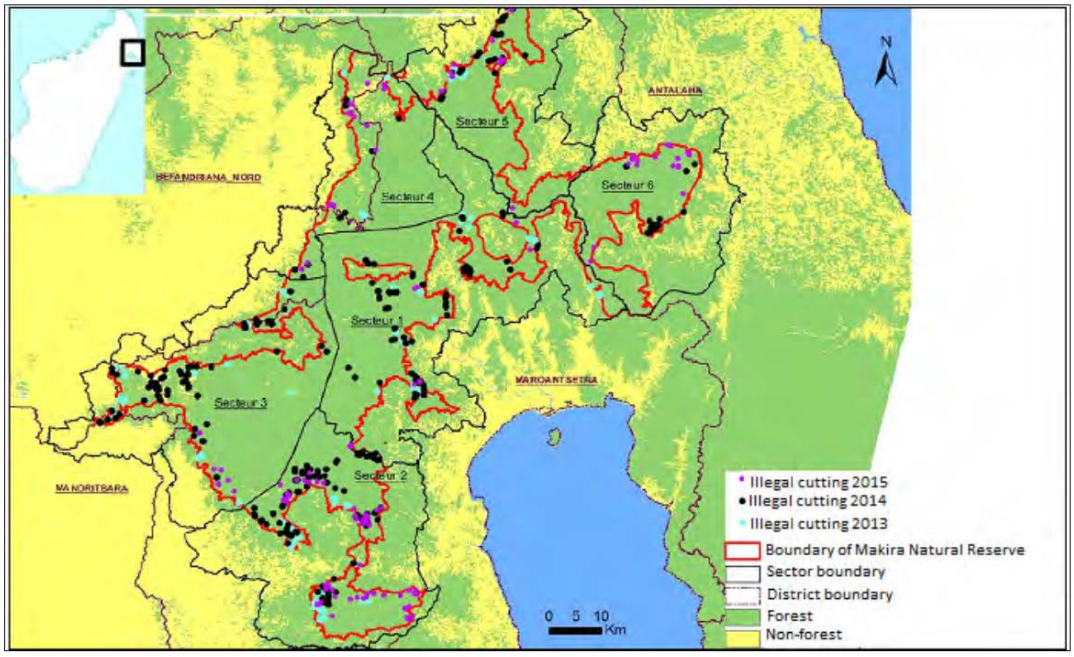


Figure 6. Illegal logging sites in Makira Natural Park from 2013 to 2015 (Ratsimbazafy 2013).

IV. The Elusive Quest for Participation

Community conservation efforts in northeastern Madagascar – as with participatory conservation efforts across the tropics – have not been particularly successful. This is likely putting it mildly and not from the perspective of those on the "receiving" end. As Keller (2015) notes of her interlocutors around Masoala National Park, "the most sympathetic view of the park was that the development projects offered by the park were utterly insufficient to make up for the losses and that the way forward was to enhance and multiply such projects." The least sympathetic view, in contrast, was the perception of blatant theft of land and livelihood.

Regardless of its practical failures, total abandonment of a community-based approach to conservation seems unlikely. Aside from the more extreme critics (Kramer et al. 1997, Oates 1999, Terborgh and Soule 1999), few conservationists are ready to surrender the community approach. Instead, two partial fixes have been advanced:

- *Limit its application.* Emphasizing key successes of the approach, this revision argues that "community" is a vague term, often imposed on heterogeneous groups with incomplete or fragmented tenure rights. In these cases, a community-based approach is likely to fail. Thus, the solution is to determine the set of initial conditions in which community conservation can thrive and limit the approach to those cases that best meet the criteria (Ostrom 1990, Roe et al. 2000).
- *Ensure its more genuine implementation.* Emphasizing the resistance to truly devolve authority, this revision argues that community conservation has rarely been implemented as it was originally intended. Proponents of this critique insist that the approach requires a deeper more genuine implementation, with a more significant and influential role for participating communities. Not only responsibilities, but also rights must be devolved in order to secure "real decision-making power" for communities (Kull 2002). Conservation must not be "privileged" at the expense of community empowerment (Dressler et al. 2010).

These proposals to "fix" community conservation imply, but ultimately circumvent, a crucial contradiction at the core of the practice. Li (2007) summarizes this contradiction: community conservation "carries within it a will to govern that sits uneasily with an argument that communities are capable of governing themselves" (267). In other words, at the same time outsiders acknowledge a community's ability to self-govern, they undermine it through intervention. Blakie (2006) phrases the contradiction somewhat differently, but with the same general thrust: "the label CBNRM implies that the communities are supposed to be able to deliver on scientifically specified NRM principles (which are by definition seldom, if ever, community-constructed and local)" (1944). This contradiction is easily obfuscated by adherence to "facilitation" and "assistance," and rejection of "imposition" and "coercion." But the separation of these binaries is not so easily maintained. At both extremes, one sees a tenuous understanding of the role of the community – at most, driver; at least, passenger – but never of their own car. The paradigm rarely extends into that murky place of revising one's own fundamental assumptions in light of those they seek to assist, or, even more to the point, simple non-intervention.

It is, in part, this contradiction that keeps many conservationists coming back to community-based approaches. Communities might not perform as expected, but there is always room to improve – to tip the scales this way or that, toward empowerment or education. As Li (2007) acknowledges, "critique gives way to a reassertion of the will to govern and improve…

[it] revitalizes the charge" (276). Dressler et al. (2010) exemplify exactly this revitalization when they ask us to simply "try again" – to renew the community conservation mentality with essentially no revision at all. Describing this scholastic stubbornness, Blakie (2006) notes that roads initially leading to CBNRM, despite their failure, all "lead back again" in the persistent attempt to mold "what *actually* happens" into "what *should* happen" (1947). "In this sense," Blakie writes, "CBNRM succeeds!" (1944).

Whether we agree with Blakie's assertion that community conservation succeeds even in its failure – or whether we agree with the more general claim that communities should in fact be the target of conservation efforts – we must at least concede a modest point: the dichotomy between "pro-nature" and "pro-people" approaches to conservation is definitively false; conservation is a "human organizational process" and thus "entirely a product of social action" (Brechin et al. 2002, 45). Thus, we must understand conservation socially, whether it is intended to further goals of social justice or not.

And when we understand conservation socially – especially in the context of its participatory turn – we begin to see that even participatory approaches erect a fortress, but a fortress of a different kind. Muttenzer's work on conservation in Madagascar is enlightening in this regard. His main argument is that integrated conservation involves a procedural not substantive shift. The goal of integrated conservation is to "establish procedures to guarantee the legitimacy of public policy by involving stakeholders who used to be excluded from the decision-making process." This is "procedural justice," yet "the expected outcome of integrated conservation is known from the outset." People will be relocated from within protected areas and devolved control over resource use in the buffer area. Participatory conservation is a quest for legitimacy, not any substantive change in outcomes.

No matter how inclusive, participatory approaches still impose a non-negotiable global environmental agenda (Pollini and Lassoie 2011). In fact, in the case of community conservation, the imposition of this agenda is often streamlined through the removal or minimization of the governmental intermediary. Rather than a physical fortress demarcating "in" or "out," participatory approaches attempt to create a transnational fortress, buffering a space of transnational intervention from the harsh realities of the world outside. This is often unsuccessful, but offers a promising new trend in promoting conservation in the developing world nonetheless. It demonstrates that, while having transitioned from fortress to participatory techniques, conservation efforts in Madagascar and across the tropics nevertheless strive to erect yet another fortress.

V. Conclusion

Rosewood logging in Madagascar has added a new layer complicating conservation efforts in northeastern Madagascar. After a precipitous drop in logging following the colonial period, new demand for rosewood in China has revitalized the hardwood logging economy in northeastern Madagascar. Far more lucrative than before, rosewood loggers and traders are eager to enter protected areas in search of rosewood. Authorities commissioned to curtail the logging instead solicit their slice of the "cake," while letting the logs pass freely. Villagers living around the parks in Masoala, Marojejy, and Makira must decide where they stand amidst these two global systems of commoditizing and conserving rosewood. The rent-seeking practices of environmental authorities do little to help the situation. These practices ensure that fines will be

imposed whether environmental restrictions are obeyed or ignored. They contribute to a "worst-case conservation" scenario, where all villagers along the rosewood trail expect to be penalized regardless of their individual participation in the trade.

Whether referred to as the "politics of the belly" (Bayart 2009), "rotten institutions" (Robbins 2000), "shadow states" (Reno 2000), or given the terribly oversimplified label of "corruption," this relationship between authority figures and their subjects is a common stumbling block for conservation efforts across the tropics. Conservation efforts in Masoala, Marojejy, and Makira parks have enlisted different measures to circumvent the dynamic. While Masoala remains a hotbed for rent-seeking practices, international conservation organizations in Marojejy and Makira have been somewhat more successful at limiting the interference. This has been achieved by developing close relationships with villagers living in and around the parks and closely monitoring any interactions these villagers might have with outside authorities. This has been done, in other words, through participatory conservation.

The present day conservation dilemma is not simply a dilemma of preserving the forest from the people, but of bestowing in these people an ethic conducive to preservation. The dilemma goes beyond the simple issue of "paper parks" – land designated for conservation but lacking the means to enforce it. The dilemma, increasingly, is one of translating the language and sentiment of conservation on the ground in Madagascar so that enforcement is internal and fences need not be erected at all. Conservation in Madagascar – and indeed throughout the world – has transitioned from more direct forms of population control to indirect forms of shaping ethical subjectivities so that conservation objectives are internalized rather than merely obeyed.

Conservation failures thus conceived are not an issue of misplaced bodies, but of misshapen minds. Similar to Foucault's (1990) "incitement to discourse" and the realization of power through positive mechanisms – "talk," not "be silent" – one sees in Madagascar's conservation an incitement to participation – "manage," not "stay out." Instead of confronting black and white sanctions, forest users face a medley of stipulations that they themselves are to devise. Structures constraining and molding appropriate forest use are not so much sovereign rights or prohibitions – everyone has a "right" to the forest, from its direct inhabitants to the entire global community. Increasingly, the terms of access are multi-tiered management plans and sustainable use blueprints, to be drafted, approved, and obeyed by emerging ethical subjects – the forest users themselves. These plans are to appease the full range of ethical stakeholders from local forest users to the entire global community.

As the pendulum swings back and forth from protectionism to participation over time and across space, it is useful to keep an eye on what is *not* changing. This enables a clearer vantage of the core values that drive conservation, regardless of the methods imposed to achieve them. Despite difference in technique, I have argued in this chapter that protectionism and participatory conservation in Madagascar retain a core analogy – they both create a fortress. Under participatory approaches to conservation, it is not people *per se* that are the problem, but rather subjectivities that do not prioritize conservation compounded by an institutional context rife with what is often referred to as "corruption." Creating an insulated space to both mold environmental subjects and circumvent an exploitative institutional framework is, I argue, the most common goal of conservation approaches that place themselves in contrast to protectionist approaches.

The goal of community conservation, in other words, is to erect *another* fortress – but a fortress of a different kind. Rather than fortressing nature from culture as protectionist

conservation often attempts, community conservation fortresses (or rather attempts to fortress) a transnational space of intervention from the mindset of life outside – whether it be neopatrimonial politics, rent-seeking practices, or simply an ethic of living on the land that does not conform to Western conservation. Yet, if participation is in fact the goal, then conservation's most basic assumptions – the concept of pristine nature and the value of a human-free landscape – must be put on the table for questioning, not fortressed through a transnational space of intervention. Participation is not an issue of including more voices, but of being able to revise one's own assumptions according to what those voices say. It is the potential for this fundamental revision, and its power to alter the very question of conservation itself, that remains elusive in the conservationist mentality.

[1] World Environment Day is a United Nations-sponsored environmental awareness campaign, held June 5 of every year beginning in 1974.

[2] While the efficacy of PAs as a method for biodiversity loss is contested, it is generally agreed that PAs do tend to reduce vegetation cover loss within their borders. For example, Bruner et al. 2001 find that most PAs in the tropics have experienced no net clearing or increased vegetation cover. Similarly, Naughton-Treves et al. (2005) find that deforestation levels within PA borders is generally lower than deforestation levels immediately outside the PA (although this might be due to displacement of deforestation activities, as opposed to an overall reduction). Reductions in PA vegetation loss, however, is difficult to translate into impacts to biodiversity, especially for larger carnivores and animals hunted as bush meat (hence the "empty forest" hypothesis). Due to potential edge effects, it has been suggested that PAs must be at least 10,000 hectares to prevent long-term biodiversity loss.

[3] Naughton-Treves (2011) show that people living within 1 km of Kibale National Park in Uganda, although generally poorer than those living 1-5 km away, have been less likely to sell or abandon their land. The authors reason that, by providing a source of NTFPs to communities living nearby, the Park serves as a buffer during times of economic hardship. They conclude that PAs do not cause a poverty trap and may in fact prevent people living nearby from entering more extreme forms of impoverishment. Similarly, Wittemyer et al. (2008) find that population growth rates within PA buffer areas are nearly twice as high as those in rural areas with similar ecological characteristics, indicating that people are migrating toward PAs, not away.

[4] "Merina" refers to the people ruling, while "Imerina" refers to the kingdom itself.

[5] Which was itself based largely off of the German model, considered to be one of the first instantiations of western scientific forestry (Scott 1998, Vandergeest and Peluso 2006).

[6] Forest concessions reached 101,630 hectares five years after colonization (Bertrand 2004) and 600,000 hectares by 1921 (Olson 1984).

[7] Mananara Nord is the only other park in Madagascar that has experienced similar levels of intensive rosewood logging. This park is further south and outside of the study area.

[8] This number is contested and depends on whether or not the cities of Antalaha and Maroantsetra are included (Keller 2015, 150 footnote 2).

[9] In three of the four cases, the compensation villagers recalled receiving was less than that officially recorded.

[10] See for example: http://www.marojejy.com/Breves_e.htm#Apr09 and http://news.mongabay.com/2009/08/destruction-worsens-in-madagascar/

[11] Interview with MNP official in Andapa, 6/11/15 (assuming one log weighs approximately 196 kg, as estimated by Randriamalala and Liu 2009).

[12] Interview with MNP official in Andapa, 6/11/15.

[13] Credits are certified through the Climate, Community, and Biodiversity Alliance (CCBA standards).

Chapter 5

China's Rosewood Boom

I. Introduction

Zhongshan is a "small" city of three million located at the outskirts of Southern China's sprawling megalopolis. By most estimations, it is a city of little consequence. It lacks the booming technology centers of nearby Shenzhen and the global cosmopolitan sheen of neighboring Guangzhou. But one thing Zhongshan does have is rosewood. Hundreds of years ago, during the cultural zenith of the Ming Dynasty, the craft of rosewood furniture-making swept across imperial China, with Zhongshan at its center. Today, Zhongshan is considered the rosewood capital of the world, with eighty percent of China's rosewood imports, I am told, processed in this district. This quaint town has become the center of a $26 billion market for furniture made from endangered precious hardwoods imported from across Southeast Asia, Africa, and South America.

Rosewood – *hong mu* in Mandarin – refers to a group of 33 species of very expensive tropical hardwoods, many of which are also endangered species. In Zhongshan and other manufacturing centers across China, millions of cubic meters of imported tropical rosewood logs are transformed into classically-styled rosewood furniture to be purchased in mass by the rising *nouveau riche*. Prices now reach thousands of dollars for an ornate chair, hundreds of thousands of dollars for an elaborate dining set, or nearly $5 million for a single bed-frame (Jing Daily 2012). The demand is largely Chinese, but extends beyond China. I recently came across a Ming Dynasty era rosewood stool selling on eBay with an asking bid of $3 million. With such extravagant prices, rosewood has become the world's most trafficked group of endangered species, accounting for a third of all seizures by value – amounting to more than ivory, rhino horn, lions, and tigers put together (UNODC 2016). Upward market trends have transformed this particular group of tropical hardwoods into a lucrative financial investment, increasingly purchased not for consumption but for pure speculation. The result has been a dramatic boom in rosewood demand, sending importers to the furthest corners of the world in search of new supplies.

Zhongshan sits at the center of China's rosewood boom. Emerging from the city's train station in the spring of 2018, my husband, translator, and I saw a sign for the annual Rosewood Furniture Exposition that was our final destination. In the taxi ride over, still miles from the exposition grounds, we passed block upon block of rosewood dealerships. Their open doors lined the streets, beckoning potential buyers who had traveled from all over the country to step onto their thickly polished showroom floors and regard their elaborate collection. We would have been wise to film this endless procession, if only we had not been so certain that each block we passed must surely be the last. Rather than ending, however, the procession culminated in a five-story luxury shopping mall exclusively dedicated to the sale of rosewood furniture. Fashioned in the image of a classical Chinese temple on steroids, Zhongshan's rosewood mall towered over a small village of satellite rosewood retail centers, a rosewood museum, and China's first university devoted to the craft of rosewood furniture making (Figure 1). Climbing

to the top story of this rosewood mega-mall, we finally found the exposition – an open floor plan stationed with grandiose furnishings made from endangered rosewood imported across three continents.

Figure 1. A model of China's largest commercial center for rosewood and also the location of the annual Rosewood Furniture Exposition, Zhongshan, China. (Photo by author, March 2018.)

China's rosewood boom, as evidenced by the sudden reinvigoration of Zhongshan and other townships historically dedicated to rosewood furniture production, parallels the country's boom in endangered ivory, rhino horn, and other exotic species. Demand for these resources has emerged from a diverse assemblage of cultural and economic elements recontextualizing the contemporary Chinese milieu. Commissioned by emperors in the late Ming and early Qing Dynasties (16th to 18th Centuries), rosewood furniture quickly became one of the foremost symbols of social status in dynastic China. Similar to rosewood, ornate ivory decorations carved from Asian elephant tusks also came to signify the Chinese social elite of the era. Centuries later, however, during the country's mid-twentieth century Cultural Revolution, the same rosewood and ivory heirlooms that adorned the imperial palaces were violently confiscated and vilified as a symbol of bourgeois oppression. In a complete inversion of their economic and cultural value, these elite cultural goods became almost worthless.

Today, as China embraces capitalism and seeks to redefine its modernity with strong reference to its cultural past, rosewood furniture and other cultural goods are being bought back by individuals who endured the hardships of the Cultural Revolution. Classically-styled dining sets manufactured from endangered tropical rosewood adorn the homes of China's new urban elite. Sitting awkwardly amidst an array of disposable plastics and flat screen TVs, these ornate imperial furnishing signify more rupture than continuity as their cultural values become transformed and repurposed within the context of the new global economy. Although harkening

to China's dynastic past, rosewood, ivory, and other endangered resources now represent a ready buying opportunity for investors interested in their financial prospects much more than their cultural esteem. Indeed, the market for Chinese traditional objects has been flooded by a deluge of global capital in search of new productive outlets. Much to the chagrin of conservationists around the world, endangered species such as rosewood – with their increasing scarcity and mounting cultural prestige – provide a compelling new financial opportunity in the face of waning returns from more conventional investment avenues.

Given these booming markets, China's demand for endangered species has become an iconic point of contention for conservationists in their struggle to save biodiversity the world over. Yet, as much as a fallen tropical hardwood or dying elephant may symbolize the fight to preserve species in the 21st Century, the contemporary cultural conjuncture that brings rosewood and ivory to the market in such great quantities and at such great prices is dealt with in these conservation narratives superficially at best – often chalked up to a particular brand of Chinese conspicuous consumption that exemplifies orientalism *par excellence*. The cultural history of rosewood in China is tokenized and its current subjugation to capitalist dynamics is ignored. In global conservation battles, the "exotic" tastes of Chinese consumers contrast against the "realities" of conservation science in what amounts to a contrived demonstration of the need to educate the former in light of the latter. On the ground, this discursive battle has materialized in out-of-the-way places across the tropics, often in an extreme type of "militarized conservation" that risks lives in the service of fighting for one side or the other (Lunstrum 2014, 2018; Duffy 2014, 2016; Buscher and Ramutsindela 2015).

In contrast to mainstream accounts, I demonstrate that the current escalation in Chinese demand for rosewood and other endangered species cannot be reduced to burgeoning "exotic tastes" or wanton "conspicuous consumption" on the part of the Chinese. Rather, this escalation is the result of a convergence of traditional aesthetics and a frenzied economic growth that have, together, turned classical rosewood furniture and other endangered resources into speculative cultural commodities. Drawing theoretical conclusions, I argue that this form of speculative investment serves as a type of "cultural fix" to capital overaccumulation in China. More precisely, China's growing reverence for rosewood and other elite cultural goods offers a novel opportunity for capital accumulation in an otherwise oversaturated investment economy.

Connecting the work of Bourdieu (2011, 2013) on cultural capital, taste, and distinction and Harvey (2006) on "fixes" to capital overaccumulation, this chapter demonstrates how the current merger of culture and capitalism in China, as embodied in rosewood and other markets for cultural goods, provides a new cultural frontier for capital expansion – or a new "fix," in the words of Harvey. Although far from unprecedented (culture and the arts have been used to absorb surplus value throughout history), China's investments in cultural goods has reached new heights within the past decade. Markets in rosewood and other endangered species absorb China's excess capital flows, artificially driving up the price of rosewood at the expense of the forest, with devastating effects for endangered species across the globe.

II. Forms of Capital

Capital for Bourdieu is not, as it is for Marx, value in motion in the strictly economic sense. Rather, capital may be cultural or economic; it represents a broader type of power that circulates in many different forms. The knowledge of distinguished cultural goods, for example, is just as

powerful as the money that buys them. Bourdieu uses this broad understanding of capital – and the various forms it takes – in order to unite the world of cultural and economic exchanges. His aim is not so much to reduce culture to economic terms, but to bring both social phenomenon under "a general science of an economy of practices" (1986). In this view, cultural capital serves to motivate action and accumulation just as much as economic.

Together, these forms of capital – cultural and economic – define the social order. They comprise the "fundamental guises" through which power, according to Bourdieu, circulates and accrues. Rosewood furniture – its circulation and use throughout China – embodies both forms of capital. The drastic price oscillations of this particular hardwood over the centuries can only be properly understood in relation to its analogous oscillations in cultural value. Indeed, it is impossible to understand the role of rosewood and other endangered species in Chinese society without such a broad analysis that captures both the economic and cultural dimensions of its circulation – and most importantly, how these forms of capital can be converted from one to another.

The degree of convertibility between economic and cultural capital is a ripe topic of debate (Studemeyer 2015, Wu et al. 2016, Zhong 2016). Indeed, one of Bourdieu's explicit aims is "to establish the laws whereby the different types of capital...change into one another" (243). It is generally accepted that economic capital, with its inherent properties of fungibility, can be more easily converted into cultural capital than vice versa. But as capitalism advances – and along with it, its "logic of increasing contravertability" – the reverse also becomes possible. "Where capitalist relations enter," Dreyfus and Rabinow (1993) observe, "traditional barriers to the conversion of forms of capital are undermined" (68). As capitalism advances, economic capital – defined as "the most efficient form of capital" and "a characterizing trait of capitalism" – gains a particular type of ascendency, weaving in and out of the cultural realm with increasing ease (*ibid*).

This has undoubtedly been the case with rosewood. As the following section will demonstrate, Chinese merchants from the Ming Dynasty used the growing social prestige of rosewood to convert their burgeoning economic capital into cultural distinction in order to ascend the social hierarchy in the 15th and 16th Centuries. As the cultural value of rosewood plummeted during the country's mid-20th Century Cultural Revolution, the wood's economic value plunged as well, becoming almost worthless in China's collectivist economy. Since the late 1990s, however, China's new consumer class has engaged in a renewed round of distinction-making, transforming the country's growing share of global economic capital into this rejuvenated form of cultural capital from the dynasties.

Although mirroring to a certain extent the economic investments in social prestige during the dynasties, present day rosewood purchasing is characterized by a new dynamic. Through a new form of speculative investment, the cultural value of rosewood is being converted back into the economic. Once prized for its timeless cultural craft, rosewood now simultaneously stands amongst real estate, stocks, and futures as just another way to make money from money in an oversaturated investment economy. Thus, while Ming Dynasty mercantilism transformed rosewood into a common conduit for converting economic into cultural capital, present day capitalism – with its "logic of increasing contravertibility" – converts once more the revived cultural value of rosewood *back* into an economic asset.

In order to fully understand this new form of capital convertibility – not only economic into cultural, but also cultural back into economic through speculative investment – it is necessary to step outside of Bourdieu's analysis of capital. While useful because of its broad

applicability to a range of societies throughout history, Bourdieu's conception of economic capital fails to account for the fundamental dynamic of perpetual surplus value accumulation within capitalist societies. In particular, his notion of capital as a store of social power overlooks the impetus to accumulate made necessary under advanced capitalism. "Quite in contradiction to Marx's argument," Postone et al. (1993) observe, Bourdieu "tends to reduce capital to power or a complex notion of wealth defined as resources for power" (84). In doing so, "he stays away from...addressing the special role that capital accumulation plays" in advanced capitalist societies (*ibid*). As we will see in the following sections, that "special role" of accumulation – or overaccumulation, rather – is key for understanding the current boom in rosewood and other cultural goods.

III. Dynastic Rosewood and Late Capitalism

Rosewood furniture salesmen and women in Zhongshan, and throughout China, relentlessly evoke the past. No matter how recently the furniture they are selling was made, nor how advanced the engineering techniques used for manufacture, all potential buyers on the sales floor will hear the story of the ancient craftsmanship that makes rosewood furniture what it is today. Despite now utilizing elaborate machines that produce hundreds of engravings in a single day, the rosewood furniture industry still manages to recall the laborious and esteemed cultural work of the dynasties (Figure 2). It is this age-old story of hand carving the wood, and hand engraving Chinese cultural symbols and talismans on its polished surface, that give these late capitalist commodities such strong cultural resonance in contemporary China.

Figure 2. Unfinished rosewood chairs in a factory in Zhongshan, China. These chairs were manufactured using modern techniques and equipment, but copy a style that dates back to the Ming and Qing Dynasties. (Photo by George Zhu, March 2018.)

Dynastic Rosewood

The story of rosewood, as vendors on the sales floor in Zhongshan and other commercial centers will inevitably tell it, dates back to the Ming Dynasty when furniture became a critical household investment. As houses became more elaborate, table legs grew, and chairs replaced mats on the floor, furniture began to feature as one of the defining elements of the traditional Chinese home. Rosewood furniture in particular came to signify the highest levels of cultural sophistication and economic wealth. Characterized by a deep hot wax polish and intricate engravings on rosewood material, classical rosewood furniture originated in Zhongshan and other rural townships throughout southern China in an attempt by timber-rich but otherwise poor areas to achieve maximal value added given limited resources. From these rural beginnings, rosewood furniture gradually gained imperial attention. During the late Ming Dynasty and continuing well into the Qing Dynasty, this style of furniture came to dominate the royal scene.

Listening to this classic story, it becomes clear that rosewood from the dynasties embodied certain characteristics of capital. Based on its mercantile value in the market and symbolic value as a growing signifier of social status, rosewood served as a site of accumulating both economic and cultural capital in the Bourdieusian sense. Emperors commissioned the production of the furniture, advocated the craft as a mark of cultural sophistication, and even participated in the work themselves. Trickling down through these elite capillaries, rosewood furniture increasingly became associated with a wealthy social elite and Chinese imperial literati. Furniture-making became so revered, in fact, that the furniture itself was considered "to have a soul, epitomizing the cultural or even moral height of its designer and the taste of its user" (Yuan 2011, 39). The arduous process of chiseling raw logs into exquisite furnishings was thought to liberate the soul contained in each piece of wood, freeing it within the homes of the imperial elite.

Although rosewood was one of the foremost cultural goods in imperial China, it was by no means the only. The Ming Dynasty (15th to early 17th centuries) marked what might be considered China's first great embrace of consumer culture – indeed, one of the earliest in the world. Widely characterized as a period of "boundless extravagance" and "extraordinary prosperity," the Ming Dynasty is considered both a golden age in Chinese history as well as the birth of a corrupting cultural decadence (Clunas 2012, 49). Of particular concern during this period is the transition from an agricultural to a mercantile economy. As the dynasty progressed, the "sedate certainty" of early Ming agriculture gradually gave way to "the hotter speculative world of commerce" (Brook 1999, 1). The result was a new – and arguably globally unprecedented – wealth of *things*. Ming material culture ensured that, by 1500, China likely had "more stuff to think about, or even to think with, than the rest of the world" (Clunas 2012, 49).

Rosewood furniture featured prominently amidst this great new wealth of things. Social distinctions in early Ming society were quite stark and rosewood, at least initially, contributed to the demarcation. Sumptuary laws regulated dress and domicile in order to ensure that class membership remained static. The Ming Code rigidly codified the social hierarchy of the previous centuries – gentry and officials at the top, followed by peasants, artisans, and the much-degraded merchants at the bottom. Rosewood furniture fit neatly within the social hierarchy, demarcating in very clear material terms who resided at the top. But as the furniture style became increasingly popular throughout Ming society – along with the rise of consumer culture more generally – this new wealth of things gradually began to engender the reverse. Rosewood

and other elite cultural goods became such powerful symbols that their eventual acquisition by the lower merchant classes began blurring social boundaries.

As Ming consumer culture progressed, the rigidly codified social hierarchy deteriorated. This inversion of the social order, while not unique to China, did hit the country particularly early, and rosewood and other esteemed cultural goods played a pivotal role. Social relations were increasingly weighed in silver, and it seemed the scales were tipping. Despite comprising the lowliest class, merchants gained increasing purchasing power. With unprecedented earnings, merchants now found themselves in a paradoxical position: culturally, still quite disadvantaged, but nonetheless economically powerful in a way that rivaled the gentry. Given such vast merchant wealth, the rigid controls on social mobility presented during the Ming Dynasty were increasingly defied and eventually deteriorated.[1] Sumptuary laws were shamelessly flaunted as the rising merchant class gained possessions formerly reserved for the elite. Foremost among them was rosewood.

Initially reserved as an exclusive possession of the Chinese social elite, rosewood furniture began to trickle down the social ladder. By 1600, there were very few barriers to the downward spread of elite culture and the homes of even the illiterate *nouveau riche* often contained elaborate studies furnished with finely crafted rosewood furniture (Evarts 1998, 33; see Figure 3). Previously limited to only the highest social echelons, rosewood furniture became by late Ming a common feature of many wealthy households and a notorious signifier of status. Through their acquisition of rosewood and other elite cultural goods, the merchant class – despite centuries of social oppression – began participating in "high-cultural circles," ultimately "crossing the status barrier between commerce and gentility" (Brook 1999). The cultural and economic hierarchies of Ming China appeared to be "collapsing into each other" (Clunas 2004, 171).

Figure 3. A model Ming Dynasty-era study furnished with rosewood tables, chairs, and shelves, displayed at the Shanghai Museum in China. (Photo by author, December 2014).

The gradual conflation of cultural and economic power in late Ming society, according to Clunas (2004), triggered the "invention of taste" – in the Bourdieusian sense – in an attempt to preserve the separate hierarchies. Taste – i.e., the importance of not only wealth, but the things possessed and the manner of possessing them – became a defining feature of high society. The "elegant gentlemen" was opposed to the "vulgar commoner" not by his wealth, but by the specifics of the things he owned and the manner of using them. Detailed consumer guidebooks – unique to China at the time – were published instructing the nouveau riche on "gentlemanly" possessions.[2] Such guidebooks distinguished between economic and cultural power, vulgarity and elegance, while simultaneously demonstrating the opportunity to transform the former into the latter. They alluded to, and paradoxically enabled, the social fluidity of late Ming society at the same time they attempted to prevent it.

As one of the most expensive investments for the household, rosewood furniture featured heavily in these texts. Finely crafted rosewood was the ultimate embodiment of elegance over vulgarity. In a recurrent theme of privileging the natural over the artificial, noted Ming cultural authority Wen Zhenheng, for example, praised the elegance of hardwood furniture with exposed grain over the vulgarity of similar furnishings painted in gold or overly decorated (Ho 1998). The apparent "naturalness" of the wood grain and its durability over the centuries made hardwood implements the foremost candidates for elegant living, as prescribed in Ming guidebooks. Combining what were considered to be the two main criteria of elegance – the "cultural" (antiquity and durability as opposed to modern) and the "cosmological" (natural as opposed to artificial) – rosewood possessions offered a sure route to social status in late Ming society. "One only needed to see the furniture in a family's main hall," a Ming scholar observes, "to appreciate the household's social position, economic power, and cultural level" (Qijun 1998, 96).

In the pursuit to transform economic into cultural capital, rosewood thus served as the first stop. This was of course no simple endeavor. "To change vulgarity to elegance," a common saying of the time observed, "is as difficult as turning metal to gold; only one with the ability as vast as the hill or forest may achieve the transformation" (Ho 1998, 57). Indeed, forests across China were systematically decimated in the increasingly popular pursuit of transforming vulgarity into elegance via the acquisition of rosewood furniture. As with elephants, rhinoceroses, and tigers (populations of which were either extinct or greatly reduced in China by the early 15th Century), precious hardwoods also experienced early endangerment. Beginning as early as the 14th Century, hardwood reserves were in decline due to imperial wood production. As the country opened to international trade with the installation of a new emperor in the early 15th Century, tropical hardwoods from Southeast Asia destined for the imperial wood workshops comprised a primary import. The dynasty's relative closure and "anti-maritime attitude" from the mid-15th to mid-16th Centuries placed renewed pressure on China's hardwoods, causing the near extinction of a number of species (Brook 1999, 119). A renewed loosening of maritime trade restrictions in the 1560s once again eased pressure on domestic reserves, triggering an increase in rosewood imports from the rest of Asia.

The overexploitation of hardwood reserves both in China and throughout the trading region lasted well into the Qing Dynasty (1644-1912). Emperor Qianlong, for example, is said to have almost single-handedly caused the extinction of a once abundant local hardwood species (*nan mu*) in constructing his ironically christened "Hall of Simplicity and Sincerity" during the mid-18th Century (Ang 1998, 67; see Figure 4). By this time, the harvesting of many hardwood species was completely monopolized by the emperor. Imports of hardwoods from across

Southeast Asia, referred to generically as *hong mu* (literally "red wood," the common name for rosewood in China today), continued to replace domestic production of more traditional species, such as *zitan*, *huang hauli*, and *nan mu*, which have since become commercially extinct as raw timber.

Figure 4. One of Emperor Qianlong (1736-1795) many rosewood thrones, displayed at the Long Museum in Shanghai, China. (Photo by author, December 2015.)

The story of dynastic rosewood furniture as told through China's commercial folklore ends with the fall of the Qing Dynasty. In part due to domestic disorder and a depleted national treasury, and in part due to rapidly declining hardwood reserves throughout the region, the craft of rosewood furniture-making deteriorated in all aspects (Beijing 2005). Yet, rosewood retained its iconic value. Along with many other cultural goods established during the Ming "cultural bloom," rosewood furniture continued to signify the highest levels of cultural sophistication long after the fall of imperial China. Consequently, classically-styled rosewood continued to furnish the homes of Chinese urbanites well into the 20th Century. Wealthy residents adorned their homes with lavish sets of rosewood furniture and decorations, while poorer families sharing crowded units maintained small family heirlooms slotted between cramped mattresses and the chamber pot. By the mid-20th Century, however, the story of rosewood in China takes a sharp turn.

Cultural Revolution Rosewood

While the imperial heritage of rosewood furniture is paraded without fail, its early modern history is often obscured. Specifically, what the rosewood salesmen and women will not care to

mention in their appeals to the cultural history of the craft is its tragic fate during the country's Cultural Revolution. Indeed, contemporary vendors, crafters, and investors all seem to brush over this pivotal moment in the history of the industry. Although few rosewood enthusiasts dare to mention it, this drastic, yet temporary, inversion of the cultural and economic value of rosewood is critical to understanding the wood's present-day resurgence, decades after the chaos of the revolution has subsided.

Beginning in 1949, China's Communist Revolution initiated a nearly three-decade campaign of abolishing class distinctions and drastically reinventing the economic and cultural foundations of the country. The Communist Party, led by Mao Zedung, ushered in a series of campaigns aimed at radically redistributing both economic and cultural capital from the hands of the former elite.[3] The movement culminated in the country's decade-long Cultural Revolution from 1966 to 1976. After centuries of acting as a growing reserve of both economic and cultural capital, rosewood and other traditional icons were abruptly devalued. Classically-styled rosewood implements – along with many other traditional cultural goods – were suddenly considered wanton emblems of bourgeois oppression and public scorn.

China's revolutionary class leveling project was both economic and cultural. Economically, the first major redistribution of capital was pioneered in the countryside. In one of the most rapid and violent land reforms in history, rural elites were expropriated of their vast land holdings, paraded around in humiliating public rituals, and in some cases, summarily executed. Urban redistribution followed. Urban workers were mobilized and the means of production were gradually transformed from private into state and collective property. Former elites, now working alongside members of the rising Communist cadres, were gradually stripped of their salaries and treated with general suspicion. By the 1950s, as resources throughout China were brought under state control, economic capital as it formerly circulated was completely abolished. Private markets were replaced by state production, procurement, and rationing.

Those I interviewed who lived through the Cultural Revolution recalled the tumult of the time. More than losing their income, families lost their place in society. At any moment, members of Mao's revolutionary guard could ransack their homes in search of signs of a decadent life. Rosewood furniture was first on the list for expropriation. If not already confiscated, rosewood furniture was often sold due to drastic salary cuts imposed on the former elite. The price of rosewood furniture plummeted as antique family heirlooms were surrendered for a fraction of their former value. Consignment stores swelled with rosewood and other cultural goods.[4] One interviewee described the gradual pawning of his family's rosewood furniture to make up for salary cuts. When the revolutionaries ransacked his house in search of rosewood and other elite possessions, they were surprised to find no rosewood furniture remaining. "They could not believe it was all gone," the Shanghai resident recalled, "they searched the house, took what they wanted, and left."

In order to avoid confiscation, families sometimes painted or altered their rosewood possessions so that they would not be recognized. Those items that were properly identified as rosewood were typically confiscated and burned or disfigured. Rosewood furniture and other traditional items were burned in large conflagrations in the middle of the street (Figure 5) or thrown into warehouses for later redistribution. After the Cultural Revolution, it was not uncommon to find antique rosewood furniture worth millions of dollars in today's market serving as a chopping block for rural farmers (Imagawa 2015). To this day, it is possible to find rosewood tables and chairs once engraved with faces of Ancient Chinese figures now de-faced and disfigured in an attempt to erase the elite associations (Schwendeman 2013).

The rosewood furniture massacre was part of Mao's nationwide campaign to level the cultural field. The redistribution of financial assets was not enough, Mao realized, to ensure the Party's vision of the abolition of class distinction. By 1966, he instituted the country's most drastic campaign to not only abolish elite wealth, but – perhaps more importantly – to abolish its cultural advantage. By targeting both old money and old culture – the "four olds" of ideas, culture, custom, and habits – the Cultural Revolution waged an unprecedented strike against class distinction across the board. In a complete inversion of reverence for antiquity and refinement, elite cultural icons were transformed into shameful relics. Reverence for traditional icons was replaced by reverence for products of the revolution: pictures of Mao, red badges, and army attire (Zhang 2015). The dynastic craft of woodworking was in many places throughout China forbidden and replaced with utilitarian construction of the most basic furniture styles.

Figure 5. Burning antiques during the Cultural Revolution. *Source:* Schwendeman 2013.

But the devaluation was only temporary. With Mao's death in 1976, the Cultural Revolution ended and the Party took a reformist turn. Denouncing the former program of eliminating class distinctions, China's Communist Party turned to an entirely new program of economic development. Those who managed to hold onto their rosewood furniture – or who purchased it for cheap from a consignment shop during the revolution – would once again see the cultural and economic value of the wood grow. "To get rich," the Party's new reformist leader

Deng Xiaoping is said to have declared, "is glorious."[5] Just as with Ming consumer society, rosewood was to play a prominent role in the new found wealth.

Late Capitalist Rosewood

Economic prosperity has not made the Chinese into carbon copy Western-style consumers. With now more billionaires that the United States, China features prominently on the world stage as a major source of luxury consumption, and the trends do not always conform to Western ideals. Although urban China is providing booming retail centers for Western luxury brands, a large portion of Chinese spending is dedicated to the purchase of categorically Chinese products – with traditional Chinese objects harboring an increasing share. All across China – even across the globe – Chinese traditional culture is experiencing an economic reinvigoration. As families try to rebuild a legacy of class distinction, or evade the stereotype of the uncultured *nouveau riche*, cultural goods play a decisive role. Classical icons formerly scorned by the Communist Party now feature prominently as a source of national pride in a country that has found itself increasingly adrift within the new global economy. In the context of this mounting traditional reverie alongside capitalist integration, the market for rosewood has boomed.

Consumer preference alone is not the primary driver of China's rosewood boom. While elite consumers transform their newfound economic capital into cultural distinction through the purchase of rosewood, investors are paying close attention. Lasting for generations, endangered rosewood finished in the form of furniture provides an unparalleled investment in contemporary China. "With such rare wood," one salesman assured me, "the price is sure to grow." Because of its scarcity, longevity, and potential for appreciation, rosewood furniture is now purchased more as a financial investment than cultural memento. Given the oversaturation of more conventional investment avenues, rosewood provides a promising alternative:

> "Currently there are few attractive channels available to hot money. Given the doldrums in the housing market, the depressed stock market and the risky futures market, 'red wood' furniture has quite naturally become the target of many investors allured by its appreciation prospects" (Yuan 2011, 41).

Indeed, the new millennial rosewood boom is, at this point, much more a consequence of capitalist speculation than cultural esteem.

The timeless cultural icon of rosewood furniture has also become a very timely investment opportunity. Many of the family members I interviewed who had their rosewood possessions confiscated during the revolution had since bought new rosewood furnishings as a replacement. But as of late, prices have become too extreme. "For the best wood, now you must be very rich," one interviewee observed, rationalizing his purchase of a lesser-valued rosewood. Starting around 2005, as returns on other more conventional forms of investment in China waned, the rosewood market became "a playground for investors rather than a regulated market for the collectors or homeowners who admire it" (China Daily 2011). After a small downturn in 2008, by 2010 the market was again in a "price heat," and again, "largely due to speculative trading" as opposed to personal purchases (Xu 2010). "Too much hot money rushed into the market when investors could not find other places for their money," the head of a wood trading company explained (China Daily 2011).

By 2013, prices had increased by over 500 percent per year since 2005 for the most expensive rosewood species (Wenbin and Xiufang 2013) and annual market sales reached more

than $25 billion in 2014 (EIA 2016). Meeting this booming demand has required a dramatic acceleration of rosewood logs imported from across the tropics. China's rosewood imports have recently averaged 180 percent growth per year, with much of this growth coming from Africa (Figure 6). Rosewood imports from Africa have experienced an overall increase of 700 percent since 2010 (Treanor 2015).

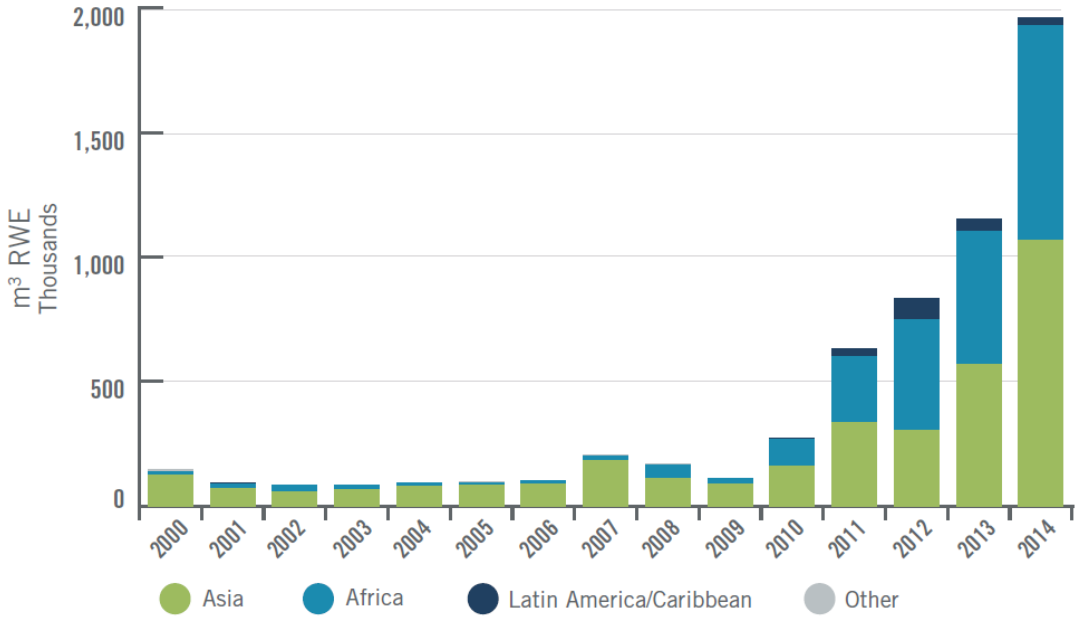


Figure 6. China's rosewood imports (roundwood equivalents [RWE] in meters cubed) from 2000 to 2014. *Source:* Treanor 2015.

Environmental restrictions only exacerbate the market boom. The majority of rosewood species are considered rare, with almost half listed as threatened or endangered and many experiencing international trade restrictions (EIA 2016). Artificially inflating the scarcity of the wood, the announcement of international trade restrictions often drive subsequent price spikes. Further increases on trade prohibitions of a number of valuable species in 2013, for example, contributed to subsequent price spikes later that year and into 2014, as reported by industry news outlets and the importers I interviewed.[6] These restrictions ensure the rarity that drives the intensive speculation. As one rosewood market analyst noted in partial explanation of the drastic price increases witnessed by the market, "scarcity of resources often promises the greatest investment potential with the least risk" (Xu 2010).

When I began my fieldwork at the end of 2014, the market experienced a modest downturn, but remained inflated well beyond 2005 levels. "There is price, but no market," a number of interviewees at one of the country's largest rosewood markets observed of the current market downturn.[7] At the time of my interviews in 2015, the price of the wood was still quite high, but few were selling. As traders held onto their stock, confidence that the market would rebound was palpable. "These markets go through cycles," one interviewee noted nonchalantly over a glass of tea, surrounded by piles of logs that he was not yet prepared to sell given current market conditions. During the remainder of 2015, the market continued its modest decline, along with China's subtly waning economy. But since 2016, rosewood prices have again begun to climb. When I visited furniture manufacturers in Zhongshan and Shenzhen in the spring of

2018, production continued with the hope that prices – still quite high – were only going to get higher (Figure 7).

Figure 7. The entrance to a rosewood furniture manufacturing site, filled with unfinished furniture and boards, Shenzhen, China. (Photo by George Zhu, March 2018.)

IV. A Cultural "Fix"

Since the dynasties, rosewood in China has a served as a popular conduit for transforming wealth into social prestige. More recently, however, not only is the economic capital of China's new consumer class being transformed into cultural capital via rosewood, but the reverse is happening as well. The cultural value of rosewood, its durability and scarcity, have all combined to transform the rosewood market into a "playground" for speculative investment. This conversion – not only of economic capital into cultural capital, but of cultural capital back into economic capital through speculative investment – is key to understanding China's booming rosewood market. By investing in rosewood and other markets in Chinese cultural goods, China's financiers reinvent and repurpose ancient cultural symbols to meet the demands of a late capitalist economy. Exploiting burgeoning cultural trends, they pioneering new productive outlets for capitalist expansion through cultural values rather than economic. In this sense, China's rosewood market exemplifies what I refer to as a "cultural fix" for capital overaccumulation in China.

"Fixing" Overaccumulation

Unlike Bourdieu's concept of capital, which serves as a store of value or social power, capital as described by Marx (i.e., value in motion) must always expand. It is this ever-expanding nature of capitalism that forces capital to constantly seek its own reproduction. In other words, capitalism forces economic capital to serve not only as a store of value and class distinction (as Bourdieu sees it), but also as a type of value in motion (as Marx sees it), constantly absorbed in an endless and expanding cycle. The imperative to accumulate increases the potential convertibility of economic capital, as it seeks its own reproduction in cultural and other realms.

If economic capital fails to accumulate, a saturation of the system – or, as Harvey (2006) phrases it, a state of "overaccumulation" – is reached. The consequences of overaccumulation are devastating, ultimately engendering the "crisis of capitalism" to which Marx refers. Returns on investment diminish, capital fails to be absorbed in the continuing cycle, and massive devaluation ensues. In order to avoid overaccumulation, new productive outlets for the circulation of economic capital must be pioneered. Thus, Harvey introduces the concept of a "spatial fix" to capital overaccumulation. By securing new labor and markets abroad through which to absorb capital surpluses, expanding geographies provide new productive outlets for capital. Frontiers of the region are "rolled back" or blurred by export in an "absolute expansion of space" ultimately intended to reinvigorate waning returns from overaccumulation (Harvey 2006, 427).

In addition to geographic expansion, a spatial fix may take the form of geographic restructuring. This refers to spatial fixes that have "a more in-situ character, intensifying investment and production within a given region in order to absorb surplus capital" (Ekers and Prudham 2017, 1375). Fixes that occur within a given geography need not only focus on the built environment. There are a number of "regulatory," "environmental," and "biophysical fixes" that use neoliberal governance to open new environmental goods, services, and natural resources to circuits of capital accumulation (Castree 2008, Cohen and Bakker 2014). The concept of "nature as accumulation strategy" or "green investment" demonstrates the degree to which the environment can serve as a novel domain for the reproduction of capital (Castree and Christophers 2015, Bryant 2018). Likewise, the concept of a "socioecological fix" has been advanced to acknowledge that spatial fixes remake not only the built environment, but the entire socionatural metabolism that governs everyday life (Ekers and Prudham 2017). The unifying feature of all these "fixes" is that they provide new productive outlets for surplus capital and, in doing so, restructure the conditions of human existence. The socioecology (or biophysical environment, or regulatory climate, and so forth) is transformed such that it is more amenable to capitalist reproduction – at least for the moment.

In general, geography and the environment provide a convenient fix. They introduce continents worth of land and labor into capital's great cycle. "Geographical inertia," however, in the form of fixed capital and long turn-over times, checks global expansion and geographic intensification. The very space that facilitated accumulation, Harvey notes, eventually undermines it. New competitive pressures develop as "some regions boom while others decline" (Harvey 2006, 427). Increasingly inscribed in the globe are a series of "compensating oscillations" of rapid accumulation and devaluation in different areas that momentarily sustain the whole, but not without a lingering threat of global collapse if these rhythms become misaligned. The problem of overaccumulation, as it turns out, is not "fixed" at all, but merely displaced. New productive outlets for the accumulation of capital must once again be pioneered.

Cultural Fixes

In addition to geography, socioecology, and the biophysical environment, capital seeks its continued reproduction through a multitude of other productive outlets. Cultural capital, in particular, provides a promising, yet currently undertheorized, realm. The potential for a "cultural fix" using cultural or creative circuits to generate new productive outlets for surplus capital has been acknowledged by Harvey and others. Harvey (1989) refers to a cultural fix in terms of renewed urbanization, specifically as the attempt to revitalize postindustrial city spaces though creative and artistic accumulation. In a different interpretation of the term, Shapiro (2014) refers to a cultural fix in terms of the development of an enduring reserve of laboring subjects amenable to capitalist exploitation. My usage of the term, in contrast, refers to a cultural fix as the process of pioneering new productive outlets via investment in "cultural capital," as defined by Bourdieu. This is similar to Harvey's usage of the term, but also much broader. Through a cultural fix, economic capital exploits values based in social awareness, taste, and distinction. In the process, cultural capital is converted back into economic capital through speculative investment and appreciation, thereby pioneering a new cultural terrain for the accumulation of surplus value.

Rather than geographic space, a cultural fix as I define it plays out in *social space*. According to Bourdieu (2013), social space maps the world of social positions and cultural goods within a given society. It is defined by the volume and composition of cultural and economic capital laid out on a coordinate plane (Figure 8): the overall volume of capital (ranging from less to more total capital) comprises the y-axis, and its composition (ranging from a higher proportion of cultural capital on the left, to a higher proportion of economic capital on the right) comprises the x-axis.[8] The upper left quadrant – or "northwest" – of social space is dominated by cultural capital. This is the terrain of artistic producers, advanced educators, and the cultural goods they create and consume. In contrast, the upper right quadrant – or "northeast" – of social space is the terrain of industrialists, executives, and their expensive (albeit less culturally sophisticated) world of luxury consumption.

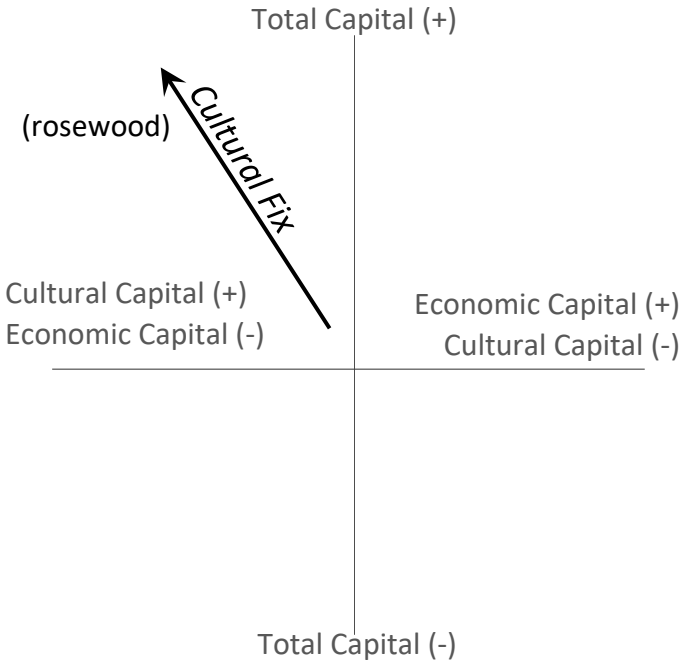


Figure 8. Social space, as defined by Bourdieu (2013). With a high proportion of cultural capital, rosewood occupies the "northwest" of social space. A cultural fix represents the expansion of this region of social space through speculative economic investment.

Social Space According to Capital

Social space, as it turns out, is a useful thing for capital accumulation. Just as geographic space is produced and reproduced by capital's spatial fix, social space is subject to the same reshaping through a cultural fix. Similarly, just as capitalism has looked to the global south for a geographic terrain of unexploited use values and labor power, so too it looks to the social northwest for a social terrain of unexploited cultural values. A cultural fix brings to market new forms of distinction that have not yet been properly commodified – or in the case of rosewood, financialized. This occurs through the marketization and financialization of "priceless" cultural products that can only ever be realized through the upper-most echelons of northwest social space. The task of commodification and financialization is not always easy, as those with cultural capital invest much to prevent its capture by the economic. New more elite forms of cultural capital are constantly being invented to assert the cultural sphere's autonomy from the economic. But the further westward these inventions push social space, the more ground is paved over which capital can follow.

In advancing the potential of a cultural fix based in cultural capital and played out in social space, I must acknowledge that Bourdieu does not cast his cultural analyses as responses to overaccumulation, nor does he consider the phenomenon at all. But when examining the convertibility of economic and cultural capital – which *is* one of Bourdieu's explicit aims – the crisis dynamics of capitalism cannot be ignored. If cultural capital can be converted back to economic capital – and we have seen through rosewood and other cultural goods that it can – then crises of overaccumulation indeed have implications for cultural capital. Cultural capital provides a wealth of new productive outlets for renewed accumulation. Indeed, because

distinction-making "attaches to all those activities which, like artistic consumption, demand pure, pointless expenditure," economic capital has much to gain (Bourdieu 2013, 281). The game of distinctions builds on itself; cultural capital is bought by the economic in such a way that the narrative is lost in the price, which becomes its sole distinction. Prices attached to cultural values – not arbitrary but flexible – may be whatever the state of overaccumulation requires, whatever surplus values are in need of mopping.

Most importantly, unlike geographic space, social space is not finite, but defined by the coordinate plane of economic and cultural capital. The goods, services, and distinctions which comprise it do not have to fit on any real surface, but rather on the infinitely divisible and expandable coordinate plane of social space. The finer grain and larger extent of the *global* world, it turns out, is even more so that of the *social* world and of social space. As awareness of social space increases, so does the space itself. Consumer squabbles in taste and distinction push the boundaries of social space outward, and along with it, the frontiers of capitalist expansion. Social space is both highly manipulatable and effectively unbounded and capital stands to benefit. This is social space according to capital: infinitely wrinkling within and infinitely advancing outward.

Of course, there are limits to capital. A cultural fix, like the spatial, does not address the root issue; instead, displacing it to other domains throughout the social world. The same problem arises in the social sphere as in the geographic: how can capitalism realize an inequality through an exchange process that presupposes equivalence? The M of Marx's M-C-M' still does not equal the M'. As has always been the case, crises of realizing this (in)equality will not cease regardless of which domain – social or geographic – is conquered by capital.

Rosewood Reinvented

As a source of cultural distinction, rosewood furniture increasingly occupies the northwest of social space. Indeed, it is one of the foremost cultural goods currently advancing the northwestern borders of social space through its burgeoning cultural and economic values. These values, however, have become increasingly blurred. Contemporary investment in rosewood – not only by the aspiring cultural elite, but increasingly by financiers interested only in mounting returns – represents the colonization of northwest social space by economic capital. The point of these investments is not to secure cultural distinction, but to exploit the upward market trends generated by those who do. This is the hallmark of a cultural fix.

But in order for culture to truly be considered a fix – in the analogous sense of Harvey's spatial fix – speculative investment in cultural capital (*ie*., the colonization of the northwest regions of social space by economic capital) must be a direct response to impending crises of overaccumulation. As such, one could tie moments of waning returns on more conventional forms of investment to subsequent moments of drastic cultural investment and speculation. In China, this has indeed been the case for rosewood, along with a number of other cultural goods.

It is no coincidence that the rosewood market has, to a large extent, mirrored the market for Chinese contemporary art – rising in the early 2000s, bubbling by 2007, with a significant downturn after the global financial crisis, but also a fairly rapid recovery thereafter. Both markets have faced intense speculation due to an oversaturation of other more conventional forms of investment in China. In this sense, both markets have thus served as a type of cultural fix to capital overaccumulation in China.

The case of Chinese contemporary art is particularly illustrative as an extreme case of speculative cultural investment because, at the time of its initial boom, the genre had very little cultural appeal in China. Indeed, most investors regarded the genre – with its ridiculous mixing of Mao and Marilyn Monroe or re-caricaturization of communist cadres with violent laughter – as an absurd anomaly, comprised of artworks barely worth the canvas on which they were painted. Yet despite their palpable disdain for the genre, China's financial elite swallowed their "cultural prejudices in order to embrace Chinese contemporary art as an alternative mode of investment" – solely because of its appreciation prospects (Buchholz 2016). It was on account of this speculative investment, much more than the cultural value of the work within China, that Chinese contemporary art reached record sales and eventually grew to dominate the global market in contemporary art.[9]

A similar dynamic characterizes historical Chinese art and antiques. In an iconic example, a Chinese taxi-driver-turned-billionaire spent $36 million on a tea cup once looted from the imperial Summer Palace, only to drink from it in front of a stunned crowd (Palmer 2018). In another example, a Chinese vase sold in London for over $69 million despite its meager initial asking price of $800,000. Indeed, there has been a growing trend of Chinese cultural goods apprised in the hundreds of thousands of dollars but ending up selling for millions at auction – antique rosewood furniture included. While these particular investments provide examples of eccentric billionaires commemorating the excellence of Chinese antiquity, they nonetheless create a climate ripe for speculation. "The market for historical Chinese art is so frenzied," writes one reporter, "that even seemingly mundane pieces of Chinese art can electrify the scene at auction homes" (Palmer 2018).

This, too, is the case with rosewood. Either through antique items or newly manufactured furnishings, the rosewood market represents a ready "buying opportunity" for financiers looking to store value, hedge inflation, and diversify their portfolios. Through this merger of culture and capitalism, rosewood and other Chinese traditional objects have been reinvented to serve the speculative economy. Described in more theoretical terms, the cultural value of rosewood has been captured by the economic, resulting in a type of "cultural fix" that has sent the mutual convertibility of cultural and economic capital to new heights. Each warped by the existence of the other, it is unclear where the cultural ends and the economic begins. Cultural and economic values collapse within the object itself, deconstructing and reconfiguring this ancient symbol.

As one of China's most notable contemporary artists has metaphorically demonstrated, the chiseled frame of the rosewood market has warped under the pressures of a late capitalist economy (Figure 9). Despite the dynastic associations that rosewood dealers are so intent on emphasizing, the contemporary rosewood market has little to do with revived imperial history or a modern-day rosewood renaissance. More than tradition, rosewood now signifies an "invented traditon" (Hobsbawm and Ranger 1983) – or rather, reinvented tradition. Conjuring fragmented memories of an imagined antiquity torqued by global financial flows and the impetus to accumulate, the rosewood market is not old, but rather very new indeed.

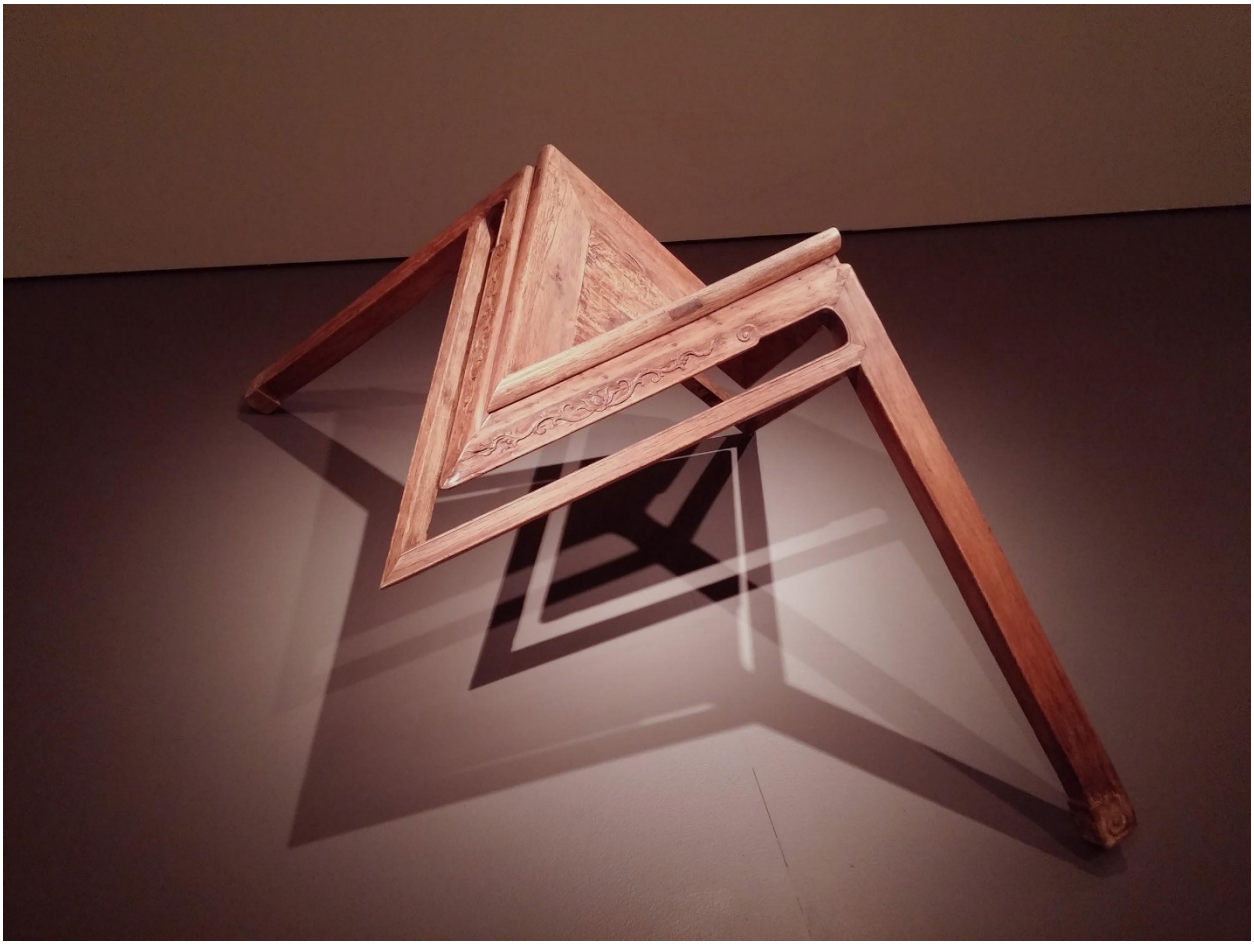


Figure 9. A reconfigured Qing Dynasty rosewood table, "Table with Two Legs" by Chinese contemporary artist Ai Weiwei, demonstrates the distortion of traditional values in contemporary China. San Francisco's Asian Art Museum exhibit, *28 Chinese*. (Photo by author, Summer 2015.)

The environmental consequences of the contemporary market distortion have been profound. Along with markets for ivory and rhino horn, speculators have bombarded rosewood and other markets for environmentally sensitive cultural goods "with an eye to [their] economic values as an investment alternative" (Gao and Clark 2014, 28). Adding to their speculative allure, these markets are described as *bao jia* (inflation-proof) and *zeng zhi* (value appreciating). In the ivory market, for example, "speculators care little about the cultural and aesthetic aspects of ivory carvings...they support the ivory trade because they profit from the business" (Gao 2014). Similarly, rhino horn represents "an excellent investment opportunity whose value is tied more to the rarity of the raw materials rather than the artistic nature of the item" (Gao and Clark 2014, 346). Like a mirror into China's transformation generally, rosewood, ivory, rhino horn, and many other cultural goods have been reinvented by late capitalist speculation that now defines Chinese demand for endangered species throughout the world.

But instead of acknowledging this capitalist reinvention of traditional culture, conservation groups characterize Chinese demand for environmentally sensitive resources as purely (and superficially) cultural – traditional tastes in desperate need of revision. The situated history of the market and current merger with late capitalist speculation is ignored. Regarding rhino horn, for example, western media outlets almost unanimously allege medicinal values to be

the main culprit of Chinese demand, whereas Chinese media outlets, in contrast, discuss the investment value of rhino horn far more than its medicinal value (Gao et al. 2016). The authors reporting this finding suggest that such western misperceptions of Chinese demand stem from a "lack of Chinese participation in addressing the China-bound illegal wildlife trade" (347). Going further, I argue that western misperceptions are symptomatic of a broader failure to seriously consider the situated history of Chinese demand and its contemporary capitalist revitalization in any systematic way.

V. Conclusion

Scholars have long demonstrated the consequences of capitalism for the environment. Most notably, capital's maxim of perpetual accumulation requires the continuous and expanding exploitation of finite natural resources. Similarly, scholars have also acknowledged that certain cultural phenomenon have divisive environmental repercussions. This has been most notorious in China's expansion of cultural markets in endangered species. What is less recognized, however, is the connection between these two drivers of environmental change. China's booming markets in environmentally sensitive resources are the product not only of the country's centuries-old cultural history, but also of the imbrication of this situated history with the present-day dictates of capital. Through this merger of culture and capitalism, Chinese markets in certain endangered species have ballooned to new heights.

The market for rosewood furniture is a prime example. Valued for both its cultural prestige and financial appreciation, rosewood offers a unique perspective on China's booming cultural economies. Economic wealth is converted into cultural distinction through the purchase of rosewood and other elite cultural goods by China's rising *nouveau riche*. Jumping on this growing consumer demand, however, aspiring financiers are also purchasing rosewood and other cultural goods – not because of their cultural value, but rather because of their prospects for appreciation that stem from their cultural value. These financiers thus convert cultural distinction once again back into economic wealth through speculative investment. Because of its longevity, durability, increasing scarcity, and rich cultural history, rosewood in particular provides a compelling new investment opportunity given waning returns from other more conventional forms of investment.

The turn toward investment in cultural goods is, of course, not new. Art has long been used as a vehicle for storing and accumulating economic value via cultural prestige. Yet, the contemporary dynamic in China demonstrates this trend with surprising intensity. Cultural goods that were practically worthless mere decades ago are now in some cases worth more than their weight in gold. As noted above, in an act that was unimaginable a generation earlier, a Chinese taxi-driver turned millionaire purchased a small antique cup once looted from China's summer palace for $36 million – a price that far surpassed the auctioneers' appraisal value. Investors are paying attention to these shocking purchases. All things particularly "Chinese" are on the radar of aspiring financiers looking for new investment opportunities. Not only antiques, but a $26 billion-dollar industry of newly manufactured rosewood furniture has become a focal point of speculation. A thriving rosewood-opolis now invigorates a "town" of three million in southern China with many other satellite manufacturing centers across the country, all importing endangered rosewood from forests across the tropics. A resource that was once burned in the street or pawned for almost nothing is now driving importers the furthest corners of the world.

This drastic inversion of the cultural and economic value of rosewood and other cultural goods, I have argued, can be understood as a type of "fix" to a particular crisis of capital overaccumulation in China. Unlike Harvey's (2006) *spatial* fix, however, which introduces new sources of labor and resources into the capitalist cycle through geographic expansion and intensification, rosewood suggests a *cultural* fix that uses cultural values as a source of new productive outlets for capital accumulation. Through a cultural fix, the accumulation of surplus value is pioneered via the expansion and intensification of *social* space – rather than geographic. The upper boundaries of social space as defined by Bourdieu – the terrain of elite artistic producers on the left and high-earning CEOs on the right – are intensified within and advanced outward, advancing along with it the frontiers of capitalist expansion.

Rosewood is unique among other cultural goods, however, because it demonstrates not only the mutual convertibility of cultural and economic capital, but also the implications for the environment. China's rosewood boom reveals the imbrication of culture and capitalism in the largest economy of the 21st Century,[10] as well as the impact on the global environment. Indeed, it seems that many of today's conservation issues might be best read in the context of this imbrication. Recent increases in China's imports of ivory, rhino horn, tiger parts, exotic pets, and other environmentally sensitive resources are best understood in terms of the situated cultural heritage of these demands throughout the ages and how they have mutated under contemporary capitalism, rather than dismissed offhand as cases of conspicuous consumption driven by exotic tastes.

The cultural history of the rosewood market and its present day expansion, as discussed in this chapter, offer a mirror into China's historical transformation more generally. Amidst the country's rapid global integration, rosewood has in its own small way come to represent what it means to be Chinese in history and Chinese in the world. The market's reinvention of traditional values in light of late capitalist dynamics is characteristic not only of rosewood, but of the contemporary Chinese experience *writ large*. The current demand for rosewood furniture and other environmentally sensitive resources cannot be understood outside of this experience. Just as tropical deforestation symbolizes one of the greatest planetary threats within the conservation imaginary, the cultural history of rosewood and its contemporary revitalization symbolizes a continued cultural eminence and national cohesion within the Chinese imaginary. If conservationists were to engage in a more honest evaluation of the situated cultural history of Chinese demand for many endangered species, not only might they gain a deeper appreciation of the range of divergent values placed on global resources, but also a more accurate assessment of how these values have been reinvented within the context of capitalism.

[1] These controls were codified primarily in the *Ming Code*, which provided regulations for personal possessions and appearance according to class, as well as regulations for movement and migration within the dynastic boundaries.

[2] Most seminal among them is Wen Zhenheng's *Treatise on Superfluous Things* (c. 1620-1627), but see also Gao Lian's *Eight Discourses on the Art of Living* (1591), Tu Long's *Desultory Remarks on Furnishing* (1590), and Zhang Ying Wen's *Pure and Arcane Collecting* (1595). As Clunas (2004) notes, "What is distinctive about China, however, is not that there was an uneven distribution of knowledge about how to deploy consumption to achieve social ends… the Chinese distinction lies in the very early reduction of this type of [elite consumer] knowledge to a commodity published in a book and hence available in a marketplace to any player wanting to enter the search for ways of transforming economic power into cultural power" (12-13)

[3] Andreas (2009) makes this argument, applying a Bourdieuian analysis of the forms of capital to revolutionary and post-revolutionary China. This section's discussion of the redistribution of economic and cultural capital relies heavily on his analysis, as well as that of other scholars who apply Bourdieu to China's revolutionary period.

[4] At the time I was interviewing in 2014 and 2015, the few families that did purchase (very cheap) rosewood furniture during the Cultural Revolution found the price of their possessions to increase by many orders of magnitude after 2005.

[5] This rather controversial quote (致富光荣 zhìfù guāngróng), which translates better into "wealth [to be interpreted broadly] is glorious," cannot actually be proved to be from Deng (see Iritani 2004). It does, however, foreshadow very nicely the transition toward luxury consumption on which China was about to embark -- the topic of the next section.

[6] When I asked these importers if the restrictions impeded their ability to continue to import endangered wood species, they replied that "there are ways of getting around the regulations." The most prominent method of getting around the restrictions, I am told, is by declaring an imported shipment of endangered rosewood as a similar-looking, non-endangered species from another country or region.

[7] Five interviewees working at Furen Timber Market in Shanghai commented on this trend (December 2015). The same exact phrase (有价无市, yǒu jià wú shì) was used by traders to describe the rhino horn market, which suffered from a similar slowdown in market turn-over, but nonetheless retains a high price. As Gao et al. (2016) notes of the market, "collectors, investors, and speculators are holding onto their collections, refusing to sell at a low price and waiting for the policy to change" (346).

[8] Social space, as defined by Bourdieu (2013), is based in three dimensions: the overall *volume* of capital, "understood as the set of actually usable resources and power," comprising the y-axis; its *composition*, ranging from a higher proportion of cultural capital on the left to a higher proportion of economic capital on the right, comprising the x-axis; and the change in these two dimensions over *time*, comprising the z-axis (114). The various layers of this space consist of (1) the social conditions of the people comprising it, (2) their lifestyles, and (3) the theoretical space of the habitus, defined as "the generative formulae which underlie each of the classes of practices and properties" (126).

[9] Although the cynical realism and political pop of Chinese contemporary art struck a note of discord with the emergent investor class, by 2007, five of the world's ten best-selling living artists at auction were from China (Barboza 2008) and 35 of the 100 globally ranked contemporary artists were Chinese (Buchholz 2013). This global trend would not have been possible if it were not for the intensive speculation of Chinese investors who, as it turned out, actively opposed the genre.

[10] China has recently superseded the United States as the world's largest economy, at least in terms of GDP measured by purchasing power parity (PPP). Using this measurement, the IMF now ranks China as the world's largest economy.

Chapter 6
Agro(Cultural) Forestry

I. Introduction

After making his fortune establishing a textile factory in Guangzhou, a Chinese businessman – not unlike many of China's *nouveau riche* in the region – decided to invest in forestry. He initially considered starting another eucalyptus plantation, which currently dominate the rural landscape surrounding Guangzhou through their six-year harvest cycles. He decided against this investment, however, in part because of a recent government policy discouraging the species due to environmental concerns, but also in part because he wanted to make a more permanent – and in his eyes, more positive – mark on the landscape. With the wealth he had secured over the last two decades, this businessman now wanted to secure his legacy. So instead of planting a six-year eucalyptus rotation for cardboard pulp, he decided to invest in slow-growing precious hardwoods that require upwards of fifty years to mature.

Since around 2007, thousands of hectares of endangered rosewood trees have been planted across southern China. Some have been established by the state in a demonstration of more promising forms of plantation agriculture, while others have been established by wealthy businessmen or communist party officials looking for a new way to invest their earnings. All of these plantations are the product of the revitalization of rosewood as a booming cultural commodity in contemporary China, as discussed in Chapter 5. As the price of rosewood furniture grows, so does the value of the trees in the ground. Thus, while China's booming rosewood market has triggered the devastation of forest resources across the globe, it has also triggered the proliferation of rosewood plantations as a related form of investment. Long-term investments in precious hardwoods have become increasingly common across southern China. More than just endless rows of trees waiting to grow, these planted forests mix niche markets in booming cultural goods with a growing ecological awareness in China.

China's new wave of rosewood plantations, this chapter argues, provides a new model for environmental efforts in China and potentially across the world. Premised upon a type of large-scale ecological engineering that valorizes Chinese cultural values within an artificially forested landscape, this model stands in contrast to the model of the nature reserve that often forms the basis of Western conservation approaches. The opposition can be seen quite clearly in China's Beiling Mountain rosewood plantation (Figure 1), established in 2009 comprising over 5,000 acres of land directly adjacent to Dinghu Shan National Nature Reserve (China's first nature reserve, established 1956 and modeled after Western scientific influences). As with the nature reserve, the more recent rosewood plantation models a specific approach to environmental protection in Chinese society. It is intended to steer agriculturalists away from short-rotation agroforestry and toward longer-term environmental health. Unlike the nature reserve, however, the rosewood plantation is not focused on the protection of nature from humans, but rather the productive integration of the two. It assumes a much more fluid boundary between the human and the natural in a way that challenges Western conservation approaches modeled after their separation.

China's burgeoning rosewood plantations perfectly exemplify the theme of harmonious integration of human production and environmental health that has become one of the primary modes of conceptualizing the environment in Chinese popular culture. This theme is captured in the commonly used term, "ecological culture" (*shengtai wenhua*). Initially coined by the famous Chinese ecologist Ye Qianji in the 1980s, ecological culture describes a "harmonious relationship where humans and nature are mutually supportive...where humans exploit nature but protect it as well" (1987). Through its focus on the productive integration of humanity within the environment, ecological culture diverges from Western conceptions of "pristine nature" as embodied in the nature reserve. Although nature reserves modeled after Western influences exist across China, the increasingly popular concept of ecological culture – based around productive harmony much more than the preservation of nature – provides an alternative approach to environmental practice in an emerging modern China.

Figure 1. Beiling Mountain hardwood plantation covering over 2,000 hectares in Guangdong Province, China.

There is no clearer demonstration of "ecological culture" than China's planted rosewood forests. The trees protect soil and water quality while also providing esteemed cultural products. The slow-growing woods are further supported by vibrant "understory economies" (*linxia jingji*), which provide short-term returns to fund long-term growth. Understory economies rely on the

price premiums of the cultural goods they provide – shade-grown teas, honey and waxes, organic free-range chickens, herbs for Chinese medicine, essential oils for fragrance and health, branches for incense, and of course the rosewoods themselves, including their saplings and eventually their highly-valued heartwood. China's rosewood plantations thus model not a step backward to a pristine wilderness devoid of human intervention, but a step forward to a human-engineered "ecological culture" that valorizes Chinese cultural history through productive agricultural integration within a wider ecology.

The rosewood plantation is, in short, a diverse assemblage of techno-scientific, cultural, and natural elements articulating within a distinctly Chinese milieu. It is more than agro-forestry and more than agricultural: it is a type of *agro(cultural) forestry* that directly opposes the isolation of nature and culture inherent in Western conservation models based around the nature reserve. Although these two approaches can be found right next door (as with Beiling Mountain rosewood plantation and Dinghu Shan National Nature Reserve), China's agro(cultural) forestry is nonetheless a long way off from the "pristine nature" embodied in the nature reserve.

This chapter traces the emergence of China's agro(cultural) forestry to better understand growing environmental awareness in China. To a certain extent, China's environmentalism follows a parallel trajectory to the country's development efforts. In the aftermath of intensive capitalist development, China is now pivoting toward more selective growth models that prioritize long-term development over short-term gains. This is true for both the country's capitalist and ecological development. After nearly three decades of large-scale urbanization accompanied by large-scale, indiscriminate tree-planting, the Chinese government and Chinese investors are beginning to refine such momentous endeavors. Development initiatives are pushing for more innovation and sustained growth, just as environmental practices are turning from indiscriminate tree-planting in quick-growing varieties (e.g., eucalyptus) toward long-term investments in slow-growing hardwoods (e.g., rosewood). Ecological practices in China are becoming more refined, with longer-term growth in mind, but they nonetheless remain distinct from Western models.

The remainder of this chapter examines the rise of China's agro(cultural) forestry within the past two decades. Section II discusses the "capitalist ruins" created by China's rapid economic development and Section III discusses the arboreal ecologies that have emerged from these ruins. Contrasting against Tsing's (2015) salvage mushroom ecologies, this section argues that, rather than fleeting fungi, China's capitalist ruins suggest another ecology – one based much more on the promise of future growth. Section IV demonstrates the refinement of this emerging ecology: a shift away from fast-growing tree species toward longer-term ecological investments in rosewood. The rosewood plantation, as discussed in Sections V and VI, exemplifies the concept of "ecological culture" and stands in opposition to conservation models based on the concept of pristine wilderness. Through the rosewood plantation, China engages in a type of environmentalism that circumvents a Western conservation ethic, even as it attempts to save species. China's emerging environmentalism, the chapter concludes, may in the not too distant future provide an alternative model for global environmental governance.

II. Capitalist Ruins

Capitalist development invariably creates ruins – both economic and ecological. For those living in languishing post-industrial economies, the "ruins" that typically come to mind are spaces of

capitalist abandonment. Tsing (2015) characterizes these ruinous spaces – salvaged forests, old factories – as the "damaged landscapes, beyond the call of industrial promise" that remain after the search for assets resumes elsewhere (18). Such landscapes are defined by a type of ecological indeterminacy that holds no promise of future growth. Tsing uses the mushroom to exemplify this ecology. Like the precarious worker-entrepreneur that might find herself traversing former logging sites, collecting fleeting fungi for lack of a more stable livelihood, mushrooms demonstrate the precarity that characterizes a post-industrial economy. Capitalist ruins thus breed flexible ecologies that model the collaborative survival necessary for living amidst economic and ecological devastation.

Spaces of post-industrial abandonment, however, are not the only "capitalist ruins" to which one might refer. China's capitalist ruins, for example, stand in stark contrast to the post-industrial atrophy that Tsing's mushrooms bring to mind. The ruins of contemporary China are not those of passive abandon but of active transformation. By the early 2000s, Chinese cities across the country had been completely leveled and rebuilt (Ren 2013, Zhao 2016). Older structures were reduced to rubble and replaced by rows upon rows of high-rise buildings radiating outwards from urban centers across the eastern seaboard. This "great urban transformation" (Hsing 2010) is unprecedented in history and stands in sharp contrast to the de-urbanization and sluggish development experienced in certain parts of the United States and Europe. What type of ecology, one cannot help but wonder, might emerge from China's transformative rubble?

Shenzhen provides a good location to begin answering this question. No other city represents China's development catapult within the global imaginary more than Shenzhen. From fishing village to "world's factory," to the now proposed "next Silicon Valley of Asia" (Land and Yeung 2016), Shenzhen iconically depicts the reified stages of urban development to which planners so deeply aspire. Designated as China's first Special Economic Zone, Shenzhen quickly became famous for manufacturing the world's leading electronic brands. The rise of manufacturing reduced the former fishing village to rubble, paving the way for giant industrial campuses within a newly repurposed Shenzhen.[1] The result has been the transformation of this former fishing village into the largest manufacturing base in the world.

In addition to electronics, Shenzhen manufactures rosewood furniture. One rosewood factory heiress who I interviewed noted the drastic transformation the city had undergone in the first decade of the new millennium:

> "I was gone for not more than 4 months in 2008 to attend my first semester of university and when I returned it was totally unrecognizable…It was like a war zone. Everything torn down. […] Shortly after I came back, I agreed to meet my friend by a tree we always used to meet at. But when I went, I could not meet my friend because the tree was gone, and I had no idea where it used to be."

Mimicking the transformation of the city, the rosewood furniture industry transformed also. Her parent's factory transitioned from manufacturing bargain furniture from cheap wood to crafting luxury furniture sets from endangered rosewood logs imported from across the tropics.

The transition from manufacturing utilitarian furnishings with marginal returns to engaging in a luxury market charging tens of thousands of dollars per furnishing, demonstrates the rapid inversions that characterizes Chinese development more broadly. Just as Shenzhen was slated to transform from a fishing village into a manufacturing center three decades ago, the city is now slated to become a global center for design and innovation, with high-skilled workers predicted to outnumber low-skilled workers by 2020.[2] As quickly as they moved in, large-scale

factories are now moving out, making room for services and more specialized manufacturing. Abandoned factory buildings populate the outskirts of the city, awaiting repurposing into high-end apartments or office space, or demolition and reconstruction. Such capitalist ruins are not of passive abandon, but active transformation.

As Shenzhen's development trajectory reveals, what makes China such a formidable competitor within the global economy is not simply its current record, as impressive as it is, but its prospects for future growth. This does not mean sustained growth in GDP (which is slowing down and planned to slow further), but rather the type of balanced and innovative growth toward which China now aspires. The country's development model is shifting from growth in manufactures to growth in services, with a higher proportion derived from consumption and innovation-driven development.[3] As forecasted in the latest Five-Year Plan, China is slated to take the leading role among innovation-oriented countries by 2020 and to become the world's innovation powerhouse by 2050. Along with such grand aspirations, China has reformulated its model for growth accordingly: slower, balanced growth focused on more innovative industries.[4]

In Shanghai, the push for innovation and more sustained growth is perhaps most pronounced. In less than a decade, Shanghai has transformed from the global capital of peddling knock-off luxury brands to Western tourists into the global capital of elite consumption. In 2006, the largest counterfeit market in Shanghai, covering blocks of prime real estate in the city center with fake merchandise, was closed and torn down, only to be replaced by one of the largest luxury shopping malls in the world. The brands stayed the same, but now they were *real* and not intended for Western tourists, but rather a rising Chinese elite. Representing the transformation of the city more broadly, this small enclave within Shanghai transitioned from a center of cheap Chinese knock-offs leaching European and American distinction, to a center of elite Chinese consumption that puts Western shopping sprees to shame.[5]

The very different "capitalist ruins" of post-industrial America, Japan, or Europe – versus emerging global China – breed very different ecologies. One ecology exploits the resources of the moment, while the other feeds off the promise of future growth. In keeping with Tsing's seasonal metaphor, one ecology salvages autumn's detritus, while the other embraces spring growth and summer's nearing bounty. Rather than fleeting fungi emerging from the autumn of Western progress, China's capitalist ruins are the fodder for the country's slow-growing rosewood plantations. The booming investment climate of contemporary China contrasts against the patchy salvage accumulation of de-industrializing spaces within the developed world. Amidst such transformative ruins, China's nouveau riche scout longer-term investments – places to store their mounting returns in a world defined by future speculation. Unlike the haphazard mushroom and mushroom pickers exploiting the moment, rosewood requires this promise of future growth.

III. Emerging Ecologies

Amidst China's capitalist ruins, the country is now planting trees. China is in fact planting more trees than any other country and has been for some time (Figure 2). Nearly every new large-scale construction project is accompanied by large-scale tree planting. In most regions, at least a third of the footprint of all development projects must be green space. Trees are part of the country's massive building effort – a spectacular feat of ecological engineering that has left

China with nearly 80 million hectares of planted forest, accounting for a quarter of the country's total forest area and just under 10% of the country's total land area (Figure 3).

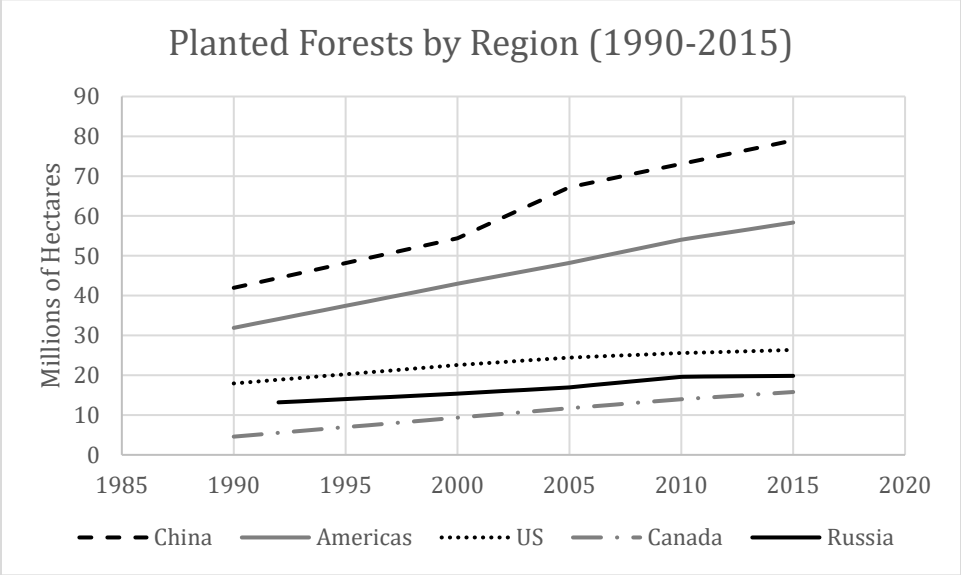


Figure 2. Millions of hectares of planted forests in China, and other countries (including the total for North and South America) for comparison, from 1990 to 2015. Source: FAOSTAT.

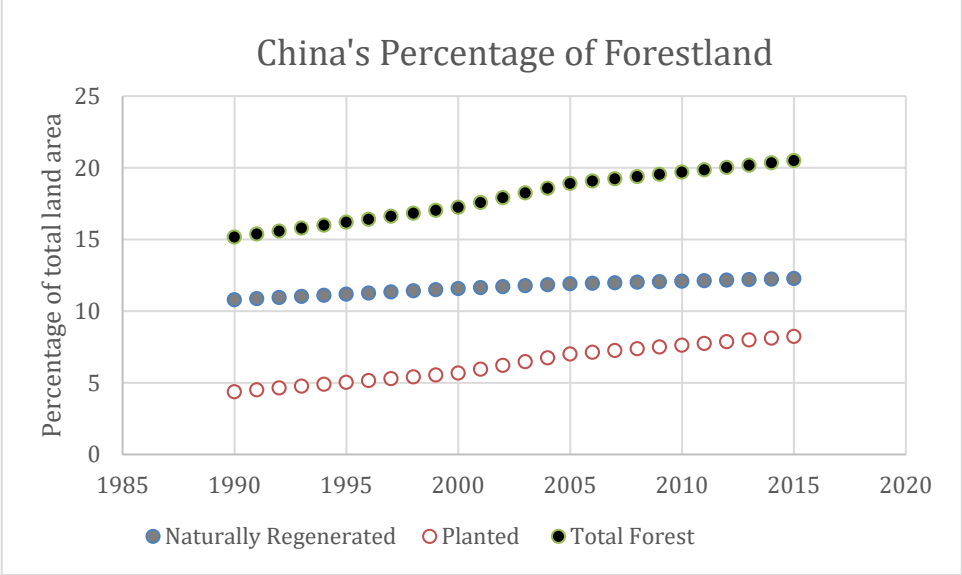


Figure 3. China's percentage of forestland (planted, naturally regenerated, and total), from 1990 to 2015. Source: FAOSTAT.

Planting trees is, of course, not new to China. People have been engaging in large-scale deforestation and reforestation within the borders of contemporary China for thousands of years. As early as the 13th Century, an elaborate system of speculative trading over timber market futures was developed in various parts of southern China to ease the barriers of delayed returns

(McDermott 2013, Miler 2015, Zhang 2017). This was mostly for Chinese fur (*Cunninghamia lanceolata*) in specific areas of significant deforestation. During Maoist communist rule in the 1950s, nationwide tree-planting campaigns became a prominent feature of state policy.[6] Through the "greenification" of China program (绿化祖国, *lühua zuguo*), Mao called for massive tree-planting campaigns primarily involving fast-growing timber species to be used as pulp or fuelwood (cite).

The largest among Mao's reforestation projects was China's "Great Green Wall," also referred to as the "Three-North Shelterbelt Project." This massive ecological engineering effort was initiated in 1978 in northern China in an attempt to stave off the encroaching Gobi Desert. Planned to conclude in 2050, this project will span more than 70 years, providing one of the most extreme examples of long-term state planning – even by Chinese standards. With already 60 billion trees planted across a 2,800-mile desert border region in northern China, this project represents the largest artificial forest in the world.

Following Mao, Deng Xiaoping was a notorious proponent of tree planting, inaugurating China's official tree-planting campaign in 1981 and formalizing March 12 as the country's arbor day.[7] Deng promulgated legislation requng that every Chinese citizen with the ability to work plant three to five trees per year. As with Mao, Deng's goal was not to restore a natural ecology, but to prevent environmental catastrophes (flooding, sandstorms, etc.) associated with rampant deforestation and to provide materials for production. Deng's Capital Greening Committee, in charge of enacting the legislation, further mandated "if you plant trees, you must choose those that grow fast and can be made into materials" (*Guang'an Daily* 2017). Alluding to the various layers of forest production, Deng noted that the forest should be "dressed" like a human: "not only must it have clothes, but also shoes and accessories." He advised planting understory tea and other products to provide further economic benefits (*ibid*).

More recently, President Xi Jinping has re-emphasized the importance of tree planting, along with environmental protection more generally. Most recently, China's 13th Five-Year Plan (2016-2020) reports that the country's forest coverage goal of over 21 percent by 2015 has be met, while the forest stock goal has been exceeded by nearly a billion meters cubed. By 2020, total forest coverage is expected to reach 23 percent and growing. In order to reach these goals, Xi has reassigned 60,000 military troops from northern border security to planting trees, with the goal of planting 6.66 million hectares of new forest (an area the size of Ireland) in 2018 alone (Oliver 2018). Most of these troops will be reassigned to the heavily polluted Hebei Province, in order to "build" three new state forests in the new Xiongan development zone (Stanway 2018).

Such massive tree-planting endeavors have received understandable criticism. The first critique that comes to mind is their debatable success. Namely, how many of these trees actually survive? Or are they planted and then remain stunted or die off from lack of proper maintenance? It has been estimated that less than 30 percent of China's planted trees actually survived (Smil 2015). During the Mao-era tree planting campaigns in particular, official statistics from the Communist Party claimed survival rates of more than 70 percent, while suspicious Westerners using dubious techniques have estimated survival rates to be less than 10 percent (Richardson 1990). Overall, official statistics from the Communist Party indicate consistent growth in forest cover since 1950 and many Westerners have cast doubt on these numbers (Marks 2017).

The second critique leveled at China's re- and afforestation efforts questions not necessarily their longevity, but their ecological suitability. Do these newly planted trees contribute to the "natural" ecology? In other words, these trees may reduce erosion and enhance

water quality – they may, in short, *survive* – but do they support the biodiversity of the natural landscape that preceded them? This question of supporting a pre-disturbance ecosystem arises frequently when considering China's forestry. Can we call such rampant tree planting of fast-growing species *environmental*? Or is it a type of large-scale ecological engineering that has little regard for pre-disturbance ecosystems and biodiversity?

Take, for example, China's "Great Green Wall," mentioned above. By the time of its planned termination in 2050, the project is anticipated to increase the world's forest cover by more than 10 percent (Petri 2017). Despite such grand aspirations, the project has been criticized heavily in the West as a general failure (Steffen 2003). Tree mortality, stunting, and lowering of the water table resoundingly point to the project's shortcomings. Trees planted in many parts of the project remain stunted due to lack of water or die quickly after being planted. More than this, the trees being planted – fast-growing varieties that can be harvested for wood pulp – do not contribute to restoring local biodiversity and often harmfully lower the water table. "Such plantations," affirms one famous (American) environmental historian of China, "cannot be considered 'forests' in the sense of preserving biodiversity" (Marks 2017, 340). All this tree-planting is labeled as a "mask," "expensive band aid," or blatant "propaganda," ultimately covering the deeper impacts to biodiversity that China's development is inflicting (Ratliff 2003).

China's State Forestry Administration, in contrast, declares the project an overwhelming success. Acknowledging initial shortcomings, the Administration nonetheless reports that the project has reduced sandstorms by 20 percent and desertification by nearly 5,000 miles in recent years (Mallonee 2017). By 2050, it is projected much of the arid land can be restored to a productive and sustainable state (Ratliff 2003). In the Beijing region in particular, although some trees remain stunted or have died, forest cover has nonetheless reportedly increased from around 3 percent at the start of the People's Republic of China to over 40 percent today (Guofang 2013). In a recent report to the United Nations, Chinese officials optimistically predicted that the effort will "terminate expansion of new desertification caused by human factors" within a decade.

China's large-scale experiments with tree planting clearly diverge from visions of pristine nature and a pre-disturbance ecology. In many ways, such large-scale tree planting is no different than the country's large-scale urbanization – impressive feats of engineering the landscape to Chinese standards. But just as urbanization in China is changing, so is tree planting. While on some level, China's contemporary tree planting is a continuation of a historic trends to address longstanding environmental threats, on another level, it is very new indeed. Large-scale plantation agriculture has transitioned to become something much greater than simply planting trees. Like China's urban growth, the focus is shifting from quantity to quality, from reproduction to innovation. Rampant and undiscriminating tree-planting is shifting to a refined sense of ecology and environment.

IV. From Plantations to Agro(Culture)

Outside of Guangzhou, China, there is no lack of trees. Eucalyptus cover the landscape, planted in orderly rows (Figure 4). With the third highest land coverage of eucalyptus plantations in the world (after Brazil and India), it is estimated that 4.5 million hectares of eucalyptus plantations have been planted in China (over 6% of China's total planted forests; Xie et al. 2017). These trees typically grow for five to eight years and then are cut and processed into pulp for cardboard

(Figure 5). As cardboard boxes, the wood pulp will eventually make its way back to Guangzhou and other urban centers across China. With such short rotations, trees such as eucalyptus often result in more negative environmental consequences than positive. They contribute to soil degradation and poor water quality, while providing marginal returns. Eucalyptus plantations earn considerably lower returns than agro-forestry enterprises based on more lucrative species. Yet, they still represent a large economy in southern China, with a combined value of $430 million in 2015.

Figure 4. Eucalyptus plantations in Guangdong Province, just outside of Guangzhou. This species dominates the rural landscape in the region.

In an effort to dissuade further eucalyptus plantations, the provincial governments of Guangdong and Guangxi have recently established incentives for planting non-eucalyptus species. Growers who buy permits for cutting their trees (all tree cutting in the province requires a permit), for example, can now get money back if, afterwards, they plant non-eucalyptus species as a replacement. This policy – combined with a broader shift in longer-term development planning – is expected to trigger a considerable shift in the landscape. It stands in stark contrast to China's earlier policies promoting afforestation of the species. As early as the 1950s, large-scale eucalyptus plantations were established throughout China in attempt to afforest barren landscapes. Since this time, more than 300 species of eucaplytus have been introduced in China, and more than 200 species have been cultivated for afforestation (Xie 2011). Considered some sort of miracle tree with rapid growth and substantial environmental benefits, eucalyptus was promoted through afforestation policies well into the 1990s.[8]

After 2000, however, it gradually became clear that eucalyptus forests were not as environmentally beneficial as once thought. Eucalyptus leaches nutrients from the soil, returning little from its biomass (Xie et al. 2012). The root system is also not conducive to water retention, causing increased erosion (*ibid*). Given the environmental consequences of such large-scale

eucalyptus plantations, and more specifically their short-rotation harvest cycles, the government has been looking for other tree species to take its place.

Figure 5. Pulp from eucalyptus trees to be made into cardboard.

Chinese Fir (*Cunninghamia lanceolata*) is one option. This wood is a highly durable softwood that requires at least two decades before harvesting. As mentioned above, Chinese fir was planted throughout southern China during the Ming and Qing Dynasties to replace forests that had already been exploited. These plantations were so prevalent in fact that robust shareholder systems were developed in as early as the 13th Century in various locations throughout southern China to enable flexible adjustment of ownership over time (McDermott 2013, Miller 2015, Zhang 2017). Plantation properties were divided into independently tradable shares that gave owners the right to a certain portion of the monetary proceeds to be accrued from the sale of the wood.[9] Because of their longevity, indigeneity, and the superior quality of the wood, Chinese fir provide a preferable alternative to eucalyptus.

For those interested in an even more lucrative, albeit longer-term investment, there is yet another option. The provincial governments' anti-eucalyptus policies have encouraged not only a shift back to China's century-long tradition of Chinese fir plantations, but also a push forward toward the more recent practice of establishing rosewood plantations. Rosewood species native to China – most notably *Hainan huanghuali* and *Zitan* – have been used for centuries in the construction of palaces and furniture in elite circles. In a revival of the cultural tradition of rosewood furniture-making since 2000, the price of rosewood in China has become so extreme that the tree is now quite valuable both in and out of the ground. Even – or perhaps especially – as a young sapling, rosewood serves as a speculative investment. After only twenty years of growth, *Hainan huanghuali* can be worth nearly $3,000 per kilogram. A hundred year old tree of the species (which no longer exists in the wild nor under cultivation), would be worth more than its weight in gold.[10] With such extravagant prices, a young rosewood forest is worth a future fortune

It is within this economic, policy, and cultural context that the Chinese businessman discussed in the introduction to this chapter contacted the Research Institute of Tropical Forestry to guide him with his plantation investment. In 2005, he leased land just outside of Guangzhou from a local collective for a thirty three-year lease. The land was previously planted with fruit trees and not intensely worked. His initial plan was to plant eucalyptus, but learning of the environmental consequences of the tree and seeking to differentiate his investment from the pack, he decided upon other slower-growing, higher-return species. He was in it for the long haul – not simply to make money, but to transform the local ecology.

At first, he decided to plant sandalwood (*Santalum album*), native to Australia and India. Like rosewood, this type of sandalwood is an endangered precious hardwood earning record returns in the past decade. The sandalwood essential oil industry, like the rosewood furniture industry, was booming due to Chinese demand.[11] In twenty years, the wood could be made into essential oils that sell for about $3,000 per kilogram – or about five times the price of silver, with prices rising by at least 20 to 25 percent a year.[12] For their oils alone, each tree could earn at least US$1,500. In the meantime, the smaller branches would be sold to make incense and the dried buds would be sold to make tea. Organic free-range chickens would be raised in the understory.[13] And, lastly, *Dendrobium nobile* – a decorative and medicinal orchid that has been used in Chinese culture for centuries[14] – could be grafted onto the growing trees, earning him another US$16 per kilogram.

Planning on returns from both the precious hardwoods and their understory economies, this Chinese businessman used his newly acquired land to plant row upon row of sandalwood sapplings. Yet, after two to three years of promising growth, all the trees mysteriously died. After some investigation to determine what went wrong, a doctoral student working on his plantation and affiliated with the research institute made a promising discovery. Sandalwood planted by itself soon depleted soil nutrients, but with a particular companion crop the tree could grow quicker and for a longer period of time. This companion crop turned out to be *Hainan huanghuali*, one of China's most famous rosewood species, as discussed above, and far more lucrative than sandalwood. Native to the island of Hainan, the tree has been used for centuries to build furniture and palaces for Chinese emperors and social elite. With both trees currently benefiting from booming cultural markets in China, sandalwood and rosewood made the perfect agro(cultural) match.

When I visited his planation in April 2018, I was greeted by one thousand acres of rolling hills with intercropped sandalwood and rosewood, planted at around eighty trees per acre (Figure 6). This, I was told, was China's first large-scale plantation to contain sandalwood.[15] At ten years old, both species of tree were around the same height, but the rosewood is expected to grow quite tall, and the sandalwood does not mind growing in its shade. The medicinal orchid (*Dendrobium nobile*) was also growing on a number of the trees, with an intravenous drip attached to some, providing a steroid to fortify the herb's growth. Chickens scurried throughout the understory and "sandalwood butterfly" (*Delias aglaia*, a species that allegedly only spins its cocoons on sandalwood) fluttered through the canopy.

Figure 6. A private rosewood and sandalwood plantation. Black bands on trees are for growing *Dendrobium nobile*, an epiphyte native to southern China and famous Chinese herb selling for US$16 per kilogram (fresh) in Chinese markets.

This particular rosewood-sandalwood planted forest is just one of a wave of precious hardwood plantations sprouting up across southern China. They are not state-mandated environmental efforts, but rather private investments that have been shaped by state policies and cultural practice. They are intended to be profitable, but also intended to fulfill their investors' vision of an ecological future. At about ten years old, the first plantation I visited was doing quite well. Three years ago, the owner told me, a company from Hong Kong offered to buy the plantation for over US$23 million – more than five times the initial price of his investment. The owner declined, asserting that it was in fact worth well over US$30 million, but that he was not afterall interested in selling. Having earned a great deal from his textile factory, he was already a wealthy man. Besides, with a 30-year lease costing about US$16 per acre, the price of a single kilogram of the medicinal orchid he was growing would cover his rent. On generous terms by today's standards, now the same lease would be worth considerably more, and much more difficult to obtain.

The same goes for the second plantation owner I met – a retired Communist Party official who was even more wealthy than the factory owner, although you would never guess it from his work attire modest demeanor. Slowly, he walked with us through his budding rosewood forest, intercropped with tea and bordered by sandalwood. At only 330 acres, this plantation earns over

US$300,000 per year from the tea crop alone, including the sale of tea saplings, leaves, and mature trees (Figure 7). In 2015, the owner was offered more than US$3 million for the purchase of his plantation. He declined the offer, insisting that his rosewood trees alone were worth closer to US$5 million at the time, and likely much more in the future. This plantation also benefitted from a surprisingly low lease price. He started his lease twenty years ago for around $11 per acre over a fifty-year period, with the final leasing price reaching no more than $21 per acre. Today, a similar lease would cost nearly US$80 per acre – expensive, but certainly not a deal-breaker for a plantation earning over US$900 per acre for its tea crop alone.

Figure 7. Tea saplings growing to be planted and sold at a private rosewood plantation in Guangdong Province. Shade-grown tea is planted between rosewood species to provide short-term returns.

When I asked the owner when he planned on harvesting his rosewood, he looked a bit surprised. It was not evidently something he was particularly eager to talk about. After some hesitation, he replied that he supposed he would have to harvest some trees when his initial lease expired, in order to pay for the inevitable rent escalation. Like the other plantation owner I had met, he contacted RITF to assist with his investment. Alluding to the irony, the researchers at RITF with whom I spoke joked that, as a retired forester for the Communist Party, he in fact knew much more than them about cultivating rosewood. He was much more interested in having his trees grow than cutting them down.

In order to encourage these types of forestry investments, the Chinese government (through the management of RITF) has established a number of demonstration plantations throughout southern China. The largest among them – the more than 2,000 hectare demonstration plantation discussed above (Figure 1) – contains rosewoods, sandalwoods, Chinese fir, among others. As noted, this demonstration plantation stands adjacent to the much older Dinghu Shan Nature Reserve – China's first nature reserve, established over six decades

ago in 1956. The Dinghu Shan Nature Reserve was created as a monument to the region's unique ecology. Running along the tropic of cancer, this region benefits from heavy monsoons and the particular area demarcated for the reserve contains a unique ecological transition from coniferous, to deciduous broadleaf, to evergreen broadleaf trees. As such, the nature reserve demonstrates a meeting point for diverse ecologies.

Right next door, the Beiling Mountain rosewood plantation, in contrast, demonstrates what humans can do within these broad ecological constraints. This massive government-sponsored rosewood plantation uses the region's unique ecology, not to show it in its pristine, pre-human state, but rather to show what it can become with a little help from humanity. In contrast to the nature reserve, the rosewood plantation demonstrates how to live off the land in an era of booming markets in niche luxury goods, where certain agricultural products have become a type of hyper-commodity through their speculative future returns. Rather than gazing back at an ideal state of nature, the rosewood plantation embraces China's unique cultural ecology – or what many in China refer to as "ecological culture."

V. Ecological Culture

If China's new agro(cultural) forests do not follow the typical model of Western conservation based around the preservation of native ecology, what model do they follow? In what terms can we best conceive of this particular brand of Chinese environmentalism – or "environmentalism with Chinese characteristics"? The concept of ecological culture (*shengtai wenhua*), and more broadly the vision of an ecological civilization (*shengtai wenming*), provides a growing foundation for environmental discourse in China. These concepts have become so influential in fact, in 2012, "the construction of an ecological culture" was written in as an amendment to the Constitution of the People's Republic of China. The implication was that China was transitioning from an industrial civilization onward and the next step was ecological.[16]

The genealogy of the terms "ecological culture" and "ecological civilization" can be traced to the former Soviet Union, as an emerging Marxist-Leninist concept which posed ecology as part of a mature socialist future. The term quickly caught on in China, where it would end up becoming much more influential. In its contemporary manifestation, the terms dates back to 1987, when the famous ecologist Ye Qianji called for the need to "pioneer the construction of an ecological culture." For Ye, ecological culture referred to a mutually supportive relationship between humans and their wider ecology, or, in his words, "a harmonious relationship where humans and nature are mutually supportive." He maintained that, "from the perspective of an ecological culture, a truly civilized era has only begun." More recently, the economist Mai Yining has described ecological culture as a type of development "built on a positive foundation of the cycles of the ecosystem" – in other words, a holistic development that rethinks civilization as deeply engrained within ecology.

Both ecological culture and ecological civilization have become quite popular in contemporary China, now holding "particular sway in China's environmental discourse" (Lo 2014). They are used by politicians, scholars, and planners to define their visions of an appropriate future. The most recent (13th) Five-Year Plan, for example, asserts the need to "bring about a new model of modernization whereby humankind develops in harmony with nature," and is dominated by references to harmonious and balanced development. Ecological culture firmly grounds this type of development in Chinese terms. According to a recently

translated volume on Chinese conceptions of the environment, ecological culture "will undoubtedly be the theme of the 21st Century" (197).

At first, Chinese notions of ecological culture and ecological civilization may not strike one as very different from many types of environmentalism discussed and practiced in a Western context. In certain ways, for example, ecological culture is reminiscent of American "deep ecology," which understands human life within its broader ecology in order to step beyond anthropocentric environmentalism. Rather than prescribing to a type of anthropocentrism that demands environmental protection only in so far as it meets human needs, deep ecology ascribes inherent worth to all parts of the ecosystem regardless of their anthropological utility. Yet, in other ways, ecological culture more closely resembles textbook anthropocentric environmentalism, where nature is utilized for human gain but only in such a way that over-exploitation or degradation does not occur.

The fundamental difference between ecological culture and Western environmentalism is that the former is not very much concerned with the anthropocentric/non-anthropocentric divide that dominates the latter. Read any summary of American environmentalism over the past century and this divide becomes quite clear. On one hand, there is the *preservationist* mentality, that of Emerson, Thoreau, and Muir, which emphasizes the transcendental value of nature outside of human use. On the other hand, there is the utilitarian *conservationist* mentality, that of Pinchot, which emphasizes the utilitarian conservation of resources for human use.[17] Contemporary environmentalism in the West is often dominated by heated debates about which is the proper ethos – anthropocentric or non-anthropocentric – to situate the practice. The result has been the incorporation of both views in a rather muddled amalgamation that values the preservation of pristine, human-less nature alongside the conservation of resources for future human use.

Environmentalism in China does not suffer from the same preoccupation. While there is certainly debate over what constitutes a healthy environment, this debate is not structured around the presence or absence of humans. The focus is instead on the relationship between the two – maintaining a balanced ecology. Thus, what distinguishes the concept of ecological culture is that it goes beyond the dichotomy of exploitation or protection which dominates Western environmentalism. Ecological culture is rather about developing a civilization in harmony with its surroundings.

In theory, the difference may be subtle, but in effect, the difference is quite large. Through the concept of ecological culture, as Liu (2013) maintains, "the ideas of *humanizing nature* and *naturalizing humanity* should be combined into an organically dialectical process" (190). Liu speaks of building a Chinese ecological civilization based around an ecological culture, yet maintains that "this new idea of civilization's properties in not anthropocentric" (172). At the same time, one must admit it is certainly not *not* anthropocentric. Rather, casting the concept of ecological culture in terms of anthropocentrism or its opposite simply does not make sense. As Xu Chun observes,

> "Neither social development that neglects nature nor a natural environment devoid of people should be the deeper meaning of sustainable development. Since sustainable development is development for people as well as nature, it is the development of man in nature and nature in man" (quoted by Liu on p. 178).

From this perspective, preserving nature outside of the human or conserving resources only within the context of some pre-defined human use do not make sense.

When considering China's planted rosewood forests, the distinction becomes quite clear. From the perspective of Western conservation that values biodiversity prior to human disturbance, China's rosewood plantations do not really count as forests. The natural ecology is not being restored, but rather engineered. From the perspective of ecological culture, however, China's rosewood plantations provide an ecology that is in many ways preferable to whatever natural forest existed long ago. The rosewood plantation reveals what ecologies are possible with the help of humanity; the valorization of human culture can be witnessed within this newly engineered ecology. Bearing esteemed cultural goods, these forests demonstrate the harmonious interdependence toward which ecological culture aspires. As much as it is rooted in China's cultural history, such agro(cultural) forestry is not a step backward to a pristine, human-less state, but rather a step forward toward an ecological civilization. Understanding this difference is key to understanding the future of global environmental governance in a world in which China increasingly orients the global agenda.

VI. China's Global Ecologies

China, no one will dispute, is quickly becoming the largest player on the global environmental scene. With the global withdrawal and environmental reactionary of the Trump administration and others across Europe, the international community increasingly looks toward China to set the global environmental agenda. Sitting at the forefront of pollution-reduction and renewable technologies, the largest proposed national carbon-trading regime, and now the largest economy within the global climate agreement, China has paradoxically become both one of the greatest global environmental threats, but also an emerging global environmental leader.

This is true for forestry as well. China is the world's largest deforester by far, but also, as we have seen above, the world's largest tree planter. Increases in forest coverage has become inextricably tied to an emerging environmentalism that is now strategically deployed throughout China. And, increasingly, China is exporting their model of agro(cultural) forestry abroad. President Xi asserts that China will "promote afforestation via multilateral cooperation mechanism, such as the Belt and Road Initiative, so as to cope with global challenges, such as climate change, and to contribute its due share to global ecological security" (China Daily 2016). Following their own green wall project, for example, China has recently agreed to assist with the planting of Africa's "Great Green Wall" – a massive reforestation project spanning more than eleven countries at the southern border of the Sahara Desert. The Chinese government is also assisting neighboring Southeast Asian countries in establishing rosewood plantations similar to those cropping up across southern China.

In many ways, these international forestry projects mirror projects for sustainable agriculture sponsored by Western governments. But as conservation projects, they depart from the norm. The focus is not biodiversity conservation or wilderness preservation, but a working landscape. Even though these projects, in some cases, clearly conserve biodiversity by planting threatened and endangered species, they do so in an unconventional way. Environmentalists that lament the wholesale slaughter of endangered trees at the hands of Chinese consumers ignore the plantation agriculture that is also keeping these species alive. As with plantation agriculture, this type of conservation is not typically accepted as the proper response to a dwindling species.

The difference between Chinese and Western (in particular, American) approaches to conservation are exemplified by their divergent approaches to giant panda conservation – an

iconic species for both Chinese culture and the American-led global conservation movement. By many measures, China has been wildly successful at conserving the giant panda. In 1963, the Beijing Zoo was the first to breed a giant panda in captivity. It took 36 years after this for the United States to boast the same accomplishment. Following China's initial success, panda captive breeding programs have been wildly successful. In the wild, panda poplulations remain quite low, although the species was downgraded from "endangered" to "vulnerable" by the IUCN in 2016. Overall, the species has experienced a seventeen percent rise in population during the decade leading up to 2014, when a nationwide census estimated 1,864 wild giant pandas.

Despite its dramatic successes, China's largely *ex situ* conservation continues to receive heavy critiques, and again, mainly from American conservationists. Lingering in the sub-text of these critiques is the sneaking suspicion that China is not interested in protecting any sort of universal "nature," but only a particularly "Chinese nature." To the American critic, panda conservation in China comes off as inappropriately cultural – not for the protection of nature, but for the valorization of Chinese culture (see Songster 2018 for a discussion). For those who agree nature conservation is in many ways a cultural pursuit, this is quite obvious and unproblematic. But for others who see nature conservation as part of a universal science, China's panda conservation – and the ecological culture that inspires it – sits uneasily. It sits much better within the framework of an ecological culture, in which preserving biodiversity is not as important as establishing a working landscape – for both humans and nature.

The takeaway from this giant panda example – as well as from the case of agro(cultural) forestry as outlined in this chapter – is not to declare an insurmountable difference between Chinese and Western environmentalism, but rather to acknowledge subtle differences that will most definitely arise as Chinese environmentalism increasingly orients the global agenda. As environmentalists look toward China to fulfill a global environmental agenda left on the table by those countries currently withdrawing from prior commitments, it is important to remember that notions of ecology and environment are situated, not universal. There is no singular, universal approach to the environment or environmentalism. And as China assumes more power globally, a particularly Chinese brand of environmentalism – for better or for worse – will as well.

VII. Conclusion

From a Western perspective, China's environmental policies surrounding rosewood and other endangered hardwoods seem paradoxical. On one hand, the country has done very little to promote the conservation of the species outside of China. China is by far the biggest consumer of tropical hardwoods globally and demonstrates little interest in curbing its imports of the most endangered woods. In fact, the predominant national policies related to rosewood actually encourage trade in endangered species by allowing only the highest quality (typically the rarest) species to be labeled and sold as "rosewood." Moreover, amidst Western efforts to curb illegal logging in the tropics, there remains no timber legality requirement for wood products consumed in China.

On the other hand, China is one of the few countries planting rosewood (or any trees for that matter) on a massive scale. China is by far the largest tree-planter globally, as indicated in Figure 2. These tree-planting efforts date all the way back to the Ming Dynasty, during which time elaborate systems of finacializing timber shares were developed (McDermott 2013, Miller

2015, Zhang 2017). Despite (or rather because of) massive deforestation during the Communist Revolution, China's largest tree planting project in history was commenced in 1978 and continues to this day. While many of these trees ended up stunted or dead, this more than five-decade experiment has left China's environmental authorities with some of the best tree-planting skills on the planet and a vision for the future. Rather than quick growing species with meager returns, the country is increasingly turning toward slower-growing, higher-value species, with endangered rosewood featured prominently among them.

While China's rosewood forests are far from "pristine nature," they nonetheless embody a particular approach to nature and the environment. More than agro-forestry and more than agricultural, these agro(cultural) forests integrate ecological, cultural, and economic concerns in a type of environmentalism that does not conform to Western conservation proper. They offer a window into a working landscape that looks toward a sustainable future rather than an idyllic past. While these engineered forests are deeply Chinese in both a natural and cultural sense, to many across the globe they might nonetheless provide a welcome model for living on the land and living within nature, rather than in isolation of it.

[1] Most famously, this includes Foxconn's largest factory, employing hundreds of thousands of workers over 15 factories and worker dormatories contained in a walled campus "city" (Duhigg and Bradsher 2012).

2 In 2008, Shenzhen became the first Chinese city to be named a UNESCO City of Design.

3 This transition began in 2004, when Chinese leadership announced a growth path that relied more on expanding domestic consumption (Lardy 2016) and continued in the 2016 National Innovation-driven Development Strategy Outline (Zilibotti 2017).

4 As the chief China economist at SocGen in Paris emphasized, "modestly slower growth will be a necessary sacrifice for maintaining social stability over the medium term" (Bloomberg 2017).

[5] Accentuating the irony, the mall's first annual Christmas display featured a group of blonde European women, garishly dressed and walking on stilts, welcoming Chinese visitors to spend hundreds if not thousands of dollars on the high-end brands that were sold for just a few dollars in the same location years before.

[6] This occurred alongside massive deforestation that occurred during the Great Leap Forward (1958-1960), at which time forests were cut to fuel backyard furnaces for highly inefficient industrial production, and during the Cultural Revolution (1966-1976), at which time forests were cleared to make way for increased grain production (Marks 2017). See further discussion in Shapiro (2001).

[7] This also occurred alongside massive deforestation, which was an unintended consequence of dismantling collectivized agriculture and additional building campaigns (Marks 2017).

[8] The tree can grow 3-5 cm in a day and more than 1 meter per month. The average rotation is 5-8 years, but in some places in China it can be 3-4 years. See: http://www.fao.org/docrep/005/AC772E/ac772e04.htm.

[9] The right was not to the land or the trees, but to the revenue. In this sense, it was not a physical demarcation at the present moment, but a financial demarcation for the future that happened to have value in the present moment because of the contracts that ensure it (Zhang 2017).

[10] The price of rosewood depends primarily on species and diameter of the tree when harvested. For example, *Huanghauli* (*Dalbergia odorifera*) that is from a tree 65 cm diameter at breast height can be worth over $3 million per kilogram (primarily because trees of that species of that size are effectively extinct) (EIA 2013).

[11] Acoording to Bloomberg, “global demand for sandalwood is set to gain five-fold to 20,000 tons of wood a year in the decade to 2025, according to TFS, the largest plantation operator in Australia. China will account for half of the increase, where it’s used in traditional medicines, handicrafts and fragrances” (Keenan and Parija 2017).

[12] These growth estimates are provided by the South India Sandalwood Products Dealers & Exporters Association (Keenan and Parija 2017). According to the scientist I interviewed at RITF, Australia is the only place that has the capability of extracting oils from this type of wood.

[13] To ensure finicky consumers that they are in fact “free range,” these chickens could even be tracked using with a small device, encoding their movements with the same block chain digital leger used in cryptocurrency transactions. (See: https://www.fastcompany.com/40515999/in-china-you-can-track-your-chicken-on-you-guessed-it-the-blockchain).

[14] The evidence is the related record in “Shen Nong’s Herbal Classic,” which was written 2300 to 2780 years ago (the Warring States Period) (see: https://www.orchidcambodia.com/dendrobium-nobile.html).

[15] Except for one other plantation that began in 2002

[16] In 2013, the United Nations Environment Program adopted a draft decision to promote the concept of ecological civilization in China, marking the recognition and support of the theory and practice of China’s ecological civilization in the international community (Xinhuanet 2015).

[17] See Groom et al. 2006, for example. Leopold’s evolutionary-ecological land ethic, which emphasizes conservation of the ecological whole, not just specific resources, has been thought to provide some sort of middle ground, but in practice is most often used to justify the contemporary deep ecology movement.

Conclusion

Global "Discoveries"

At some point in the late 1980s or early 1990s, as rosewood stocks began to diminish throughout Asia, an enterprising Chinese trader stumbled upon an imperial reserve that had been hidden for centuries – at least, so goes the story circulated among contemporary dealers. Dozens of logs of the famous *zitan* (紫檀) – the most prized rosewood of the Ming Dynasty and commercially extinct in the world today – were brought into circulation. Graciously, the trader donated a portion of his discovery to the Shanghai Museum so that all people might benefit from his find. Sometime afterward, the wood was found out to be not *zitan* at all, but an entirely new type of rosewood that most Chinese people had yet to encounter. The wood was, as it turned out, rosewood from Madagascar. The clever trader had "discovered" this wood not from an imperial cache, but from his worldly travels in search of new commercial supplies. He then passed it off as a centuries-old stockpile, exponentially increasing its value and maintaining the secret of his real discovery. In an attempt to save face, the wood was later renamed "big-leaf" *zitan* (大叶紫檀) – despite not even being of the same genus as *zitan*.[1] This is how, according to the story, Malagasy rosewood received its Chinese name.

Seeming to be centuries old rather than a mere two or three decades, this story demonstrates the new-found global frontier mentality that China has inspired. It is just one of a barrage of stories of the global "discoveries" made after the country's reform and opening toward the end of the 20th Century. First with China's "going out" policy in the late 1990s and now through the Belt and Road Initiative and Asian Infrastructure Investment Bank, China increasingly turns to the global community to meet its development goals and resource needs. As global circuits realign and resettle, more and more resources are brought under China's reach. But this geographic expansion is only part of the story. Related to, but arguably even more important than China's geographic expansion via state and private capital investment, is the country's emerging ability to reshape what does and does not count as "global" in the world today.

When speaking of "global China," scholars often speak quite literally. Chinese firms operating over here, Chinese people living over there. Of course the geographic displacement of Chinese people and Chinese economies has been occurring as long as there has been a "China" to speak of. Since the end of the 20th Century, however, China's geographic displacements – primarily through state and private capital – have been occurring on an unprecedented scale. Yet, the concept of "global China" is not simply an extended geographic presence or intensified capital investment. It is the emergence of a new orientation – or re-orientation, as Frank (1998) would phrase it – on the global scene. Not only does China as a government and collective have an increasing global presence, but this global presence irrefutably "matters." That is, ideas of China – as well as Chinese ideas – now orient what we refer to as the "global" in a fundamental way. The clever Chinese trader featured in the story above, for example, did not "discover" Malagasy rosewood any more than Columbus "discovered" America. Yet when these two explorers encountered new lands and resources, both of their encounters somehow counted as

"discoveries." Having such encounters count as discoveries is in many ways more important than the discovery itself.

Global China, to summarize, is a new orientation in which Chinese worldly encounters now very much matter and thus count as "discoveries." The importance of the concept of global China is not so much the increasing acquisition of resources scattered across the globe, but rather the ability to "discover" and redefine these resources at the global level.

Regarding Malagasy rosewood, China's somewhat recent discovery was of course not the first – not even for China. Rosewood has in fact been traded between China and Madagascar for centuries. The first recorded timber trade between these countries dates back to the early Ming Dynasty, during the explorer Zheng He's visit to Africa. Since his visit, at various times throughout the Ming and Qing Dynasty, rosewood was considered a special gift sent to China from Madagascar, and rosewood utensils were given to emperors by dignitaries (Ratsimbazafy 2016). During the mid-Qing, rosewood was one of many global resources in particularly high demand due to its elite status as the critical building material for palaces and furniture. The imperial court sent explorers in search of new rosewood supplies throughout Asia, Africa, and South America. Rosewood from Madagascar was one of many rosewood species that made it back to China.

Looking beyond the obvious, China's dynastic search for rosewood was much more than a search for physical wood. Enrolled in this global search for rosewood was a search for global identity. For the ruling elite, this meant not only gaining physical access to far-off resources, but having a hand at reframing them and redefining their import at the global level. It meant not only being a part of global flows, but reshaping how they were understood and experienced. It meant, in short, transforming a mere encounter into a "discovery."

Consider, for example, the work of Lang Shining – an Italian artist who lived and worked in China (known more commonly by his given name Giuseppe Castiglione). Lang was one of the highest artists commissioned by three emperors, most notably Emperor Qianlong who ruled from 1735 to 1796. Emperor Qianlong ruled during the Qing's cultural and economic zenith – an era (along with the golden age of the Ming, as discussed in Chapter 5) in which one might also speak of a "global China." As one of the emperor's favored artists, Lang's work represented a unique blend of Western and Chinese traditions.[2] He was sent on expeditions to paint exotic animals "discovered" across the world. Lang's travels to Madagascar resulted in his famous *Cochin Lemur*, which likely constituted the only work of art in the world at the time combining elements originating from Europe, China, and Madagascar in a single canvas (Figure 1).[3]

In commissioning Lang to depict this and other exotic species across the globe, Emperor Qianlong was not simply attempting to learn what these species looked like. Rather, he was attempting to have a say in their worldly representation. That is, he was attempting to establish some degree of cultural hegemony over representations of the global "exotic." Surely, the Emperor knew very well that the ability to iconically depict exotic species in far-away places can be far more powerful than simply acquiring or faithfully representing the physicality of these species. *Cochin Lemur* is not an act of faithful representation but rather a strategic making of the global. Lang's work borrows from Western representational forms in order to give greater legitimacy to the traditional Chinese backdrop. By commissioning artistic renderings of worldly encounters in this fashion, the Emperor was representing the "exotic" in a style that could be recognized as both global and Chinese. He was, in other words, securing a place for China in shaping what one might call "the global." The piece resoundingly announces the global

"discovery" (not mere encounter) of an exotic species through a distinctly Chinese register and, in doing so, reads almost as a manifesto of the "global China" of that particular era.

Figure 1. *Cochin Lemur* by Lang Shining (Giuseppe Castiglione), painted in 1761 for Emperor Quianlong. Currently on display in the National Palace Museum, Taipei, Taiwan.

The same is true for contemporary global China. More than physically controlling global resources, the greater challenge is to control their representation and reception at the global level. Indeed, it is through such strategic representations that mere encounters are consecrated as "discoveries." For China in particular, establishing a global presence – or being able to frame and re-frame the global – is not only about looking forward, but also about looking back.

Traditional narratives of China as a global powerhouse play a prominent role in the country's contemporary global presence. The Belt and Road Initiative – China's "modern-day silk road" – is just one of many examples of traditional icons legitimizing the country's contemporary global unfolding. Planned to account for nearly $1 trillion in investments spread across more than 60 countries, mostly within the geography of the Afro-Eurasian historic silk road, this initiative has been referred to as "the new WTO," "globalization 2.0," "global commerce on China's terms," and a grand departure "from an America-centered world order."[4] Alluding to a deeper historic Chinese continuity, the Belt and Road Initiative glosses over post-World War II American hegemony in order to unite global Chinas of past and present.

The consequence of this simultaneously forward- and backward-looking global China is the emergence of traditional Chinese cultural elements on the global scene. Through the Belt and Road Initiative, for example, a space potentially considered at odds with traditional Chinese culture – the space of the contemporary cosmopolitan global – has been recontextualized in terms that now strongly resonate with traditional Chinese themes. A global space long-considered synonymous with contemporary Western hegemony has thus been reclaimed in the name of an idealized global past via Chinese leadership. As President Xi Jinping historically announced, "exchange will replace estrangement, mutual learning will replace clashes, and co-existence will replace a sense of superiority."[5] All of this will occur through state and private Chinese capital flows that harken back to ancient times.

This reformulation of the global in terms that resonate with Chinese interests can be witnessed on a much smaller scale in the installation of traditionally-styled rosewood furniture in the modern Chinese home. Traditional rosewood furniture is (unsurprisingly) designed specifically for the traditional Chinese home. The "main hall" in the traditional Chinese home – where elaborate rosewood furniture sets are most prominently featured – is for formal display. It borders on a public space, where visitors are received and a family's fine tastes are accented. "One only needed to see the furniture in a family's main hall," we recall from a scholar of the Ming Dynasty discussed in Chapter 5, "to appreciate the household's social position, economic power, and cultural level." Rosewood furniture is not for lounging; rather, it is to fill a deeply symbolic space with the first and most prominent demonstration of familial power.

The modern Chinese home, in contrast, is problematically Western. The traditional main hall has been usurped by the living room – a private space of relaxation, rather than a formal space of display. The installation of traditional Chinese furniture into the modern Chinese home provides a way to take back that space – to imbue meaning and familiarity in an otherwise sterile space. At a larger scale, the popularity of rosewood furniture provides an appeal to traditional values in an era in which China is becoming increasingly "global." Amidst the country's rapid global integration, rosewood furniture demonstrates not only the wealth and status of the family, but also the transformation of a Western space into something more familiar and habitable. In this sense, as with the Belt and Road Initiative but on a much smaller scale, rosewood furniture provides the ability to reshape global spaces in a way that is distinctly Chinese. It enables both a move forward, but also a step back.

This is the seemingly contradictory movement of "global China" – a spreading out, while simultaneously drawing inward; a steady forward gaze while simultaneously looking back; an agreement to both join the global community, but also to remain steadfastly Chinese. Contemporary global China is not simply an outward expansion – the acquisition of land and resources from abroad. It is a reconciliation of situated practices with global logics – the reconciliation, for example, of Chinese traditions with the rationalities of global capitalism. This

reconciliation can also be seen, by way of another example, in Deng Xiaoping's "Socialism with Chinese Characteristics," or more recently, Xi Jinping's "Socialism with Chinese Characteristics for a New Era." Traditional Chinese values are not lost in these doctrines, but repurposed and transformed.

The concept of global China thus presents readers with yet another paradox. To be properly understood as a global force, both the "global" and the "China" must be considered together – the simultaneous look forward and backward, expanding yet drawing in. And here, again, Chinese art is helpful for teasing out this hidden paradox. In fundamental ways, Contemporary Chinese art mirrors the work of Lang Shining in the Qing Dynasty. Drawing on both Chinese traditional culture and Western 20th Century art, Contemporary Chinese art requires a basic fluency in both to be fully understood. The work of Ai Weiwei, one of China's most famous contemporary artists, demonstrates this profoundly. Take, for example, Ai's *Moon Chests* (Figure 2), constructed of one of the rarest rosewoods according to traditional Chinese methods that require no jointing or joinery. These chests are iconic symbols instantly recognizable to anyone remotely familiar with traditional Chinese culture. But as contemporary art forms, they have been punctured by large holes, rendering them effectively useless and the traditional icon disfigured, except when viewed from a certain angle, at which point another powerful Chinese icon emerges – the phases of a lunar eclipse.

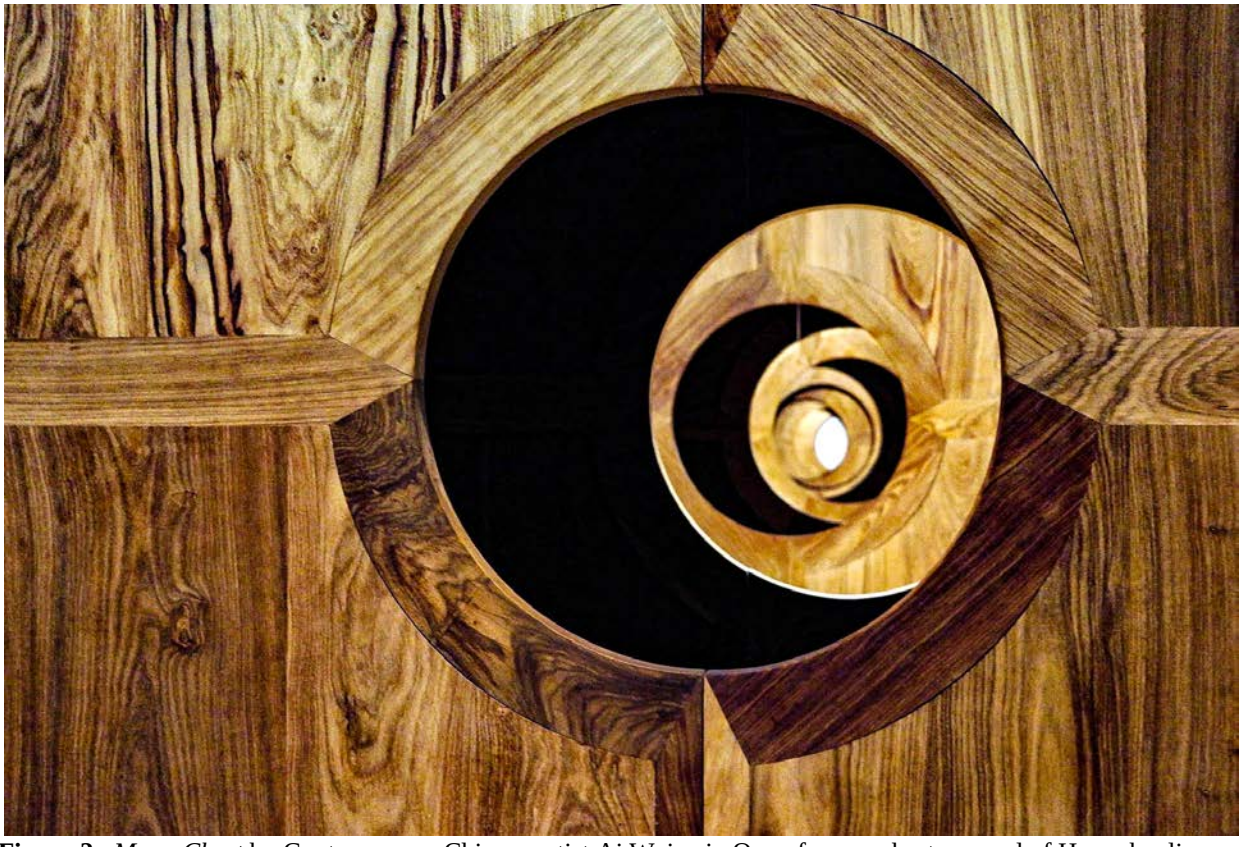


Figure 2. *Moon Chest* by Contemporary Chinese artist Ai Weiwei. One of seven chests carved of Huanghuali rosewood with a whole puncturing the chest to reveal the cycles of a lunar eclipse. Photo by George Zhu, from the *According to What?* exhibition at the Brooklyn Museum, 2014.

Contemporary Chinese art, like rosewood (sometimes *through* rosewood), introduces Chinese traditional values to the global arena.[6] In true paradoxical fashion, this art looks both forward and backward. Each value subverts the other, while simultaneously relying on its meaning. As with Lang Shining's *Cochin Lemur*, disparate elements are forced to occupy the same incommensurate space – East, West, Rest. The result is a prismatic effect, as the viewer slides from one side to another, forcing the synthesis of multiple artistic traditions in a single piece. In Ai's *Moon Chests*, traditional Chinese craftsmanship is effectively destroyed by negative holes that are then, through a Western 20th Century artistic maneuver that turns absences into images, transformed once more into yet another Chinese cultural symbol – the moon. In the disfiguration of these cultural values – holes in traditional rosewood chests or the warping of traditional rosewood chairs (Figure 3) – a new value emerges. This is its value as a piece of contemporary art, now worth exponentially more than the already hyper-inflated rosewood material with which it has been made. Thus, the viewer is forced to see all of these values – cultural values, commodity values, resource values – juxtaposed together in a single conceptual piece, readable in different ways by different people.

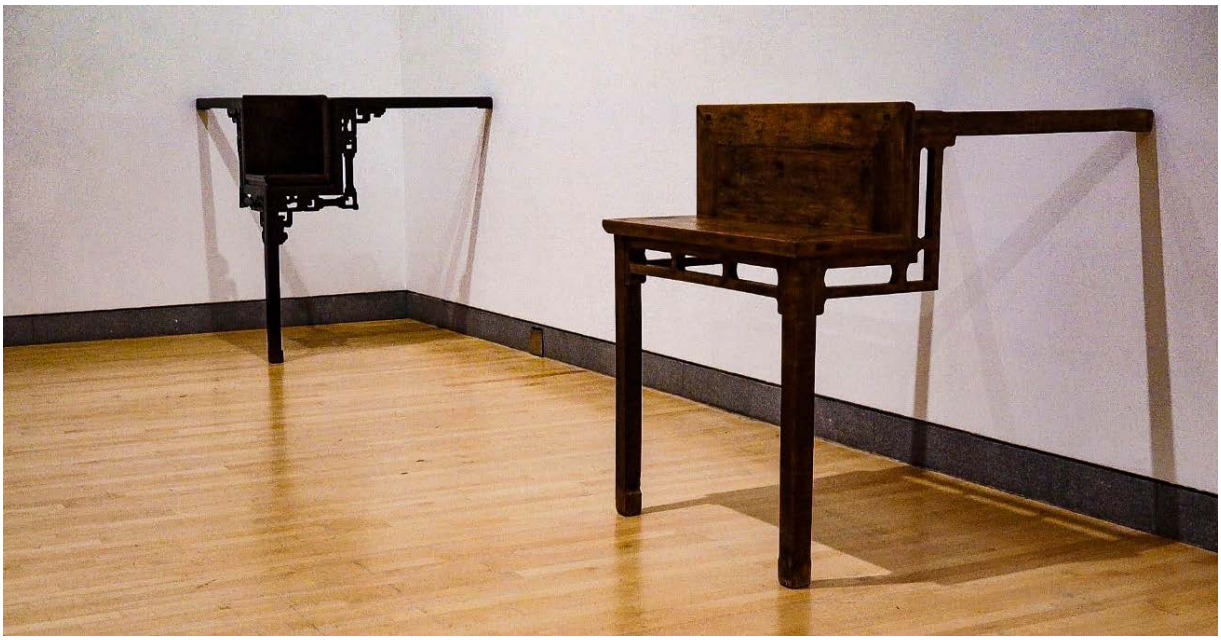


Figure 3. *Chair with two legs on the wall* by Contemporary Chinese artist Ai Weiwei. Reconfigured Ming-Dynasty styled rosewood furniture. Photo by George Zhu, from the *According to What?* exhibition at the Brooklyn Museum, 2014.

The juxtaposition is not seamless, but rather anxious and fragile. Much like dynastic rosewood furniture occupying the modern Chinese home or the traditional icon of the Silk Road occupying the contemporary space of the global, contemporary Chinese art highlights a certain rupture that comes along with disparate elements inhabiting the same space. As Aihwa Ong (2012, 473) observes, contemporary art is "a distinctive mode of space rupturing and conceptual reconfiguration"[7] – not unlike the rebranding of the contemporary global in the ancient terms, or the installation of traditional rosewood furniture in the modern Chinese home. Each reveals a certain rupture associated with the contemporary global. Recall the mountain of toys and flat screen TVs discussed in Chapter 5 that often crowd traditional rosewood furniture sets as they adorn the modern Chinese living room. Amidst an array of electronics and disposables from

another era, there is a certain ridiculousness that comes along with sitting in such fanciful chairs – thrones repurposed for the modern consumer. As much as dynastic rosewood furniture may reclaim the global space of the living room through a distinctly Chinese register, it nonetheless sits awkwardly in a space designed for lounging.

The uselessness of a Ming Dynasty throne in one's modern-day living room is comparable to the uselessness of Ai's distorted tables or punctured moon chests. They both underscore a certain incommensurability – a haphazard throwing together of elements that would otherwise never cohere. In contrast to Lang's *Cochin Lemur*, which strives to portray a seamless amalgamation of East, West, and Rest, ignoring the fragile juxtaposition that dominates the canvas, Ai's rosewood chairs instead emphasize the rupture and uncertainty that comes along with combining such disparate elements. While *Cochin Lemur* uses the canvas to conjure a unified global terrain consonant with Chinese interests, ultimately pointing to the incontrovertibility of global China, *Moon Chests*, in contrast, forces one to consider the absurdity of traditional Chinese craftsmanship circulating in a global capitalist market – the incongruity of traditional Chinese values on the global scene. The former glosses over a paradoxical space of global juxtaposition, while the latter emphasizes it. Yet, in either case, global China emerges as an undeniable reality of contemporary life in the era.

The concept of global China – as with Contemporary Chinese art, as with rosewood – forces one to confront the paradoxical space of the global. This space is not a seamless "world system" where – uneven as it may be – there is a greater totality to speak of, in which one power usurps the place of another. More than a global "structure," we are living in a space of global juxtaposition and rupture, where incommensurate values cohere. As Michel Foucault (1984) notes, "We are in the epoch of simultaneity: we are in the epoch of juxtaposition, the epoch of the near and far, of the side-by-side, of the dispersed."[8] In this paradoxical space, we are forced to consider not one side or the other – global, situated; forward, backward; traditional, modern – but both in tandem. Global China is not simply Chinese investment reshaping the future of global capitalism or Chinese people assuming the cultural hegemony of the West as it moves forward. It is not a shifting center of gravity from one side of the globe to the other, but rather a new source of global rupture. Global China, as noted above, is a new orientation where Chinese ideas and investment – past and present – force yet another juxtaposition into the paradoxical space of the global.

Thus, as much as China reorients the global, and as much as Chinese encounters now count as "discoveries" at the global level, one cannot simply look to China to understand global dynamics. Redirecting old analytical framings toward a new Chinese superpower is counterproductive. Rather, we must consider the global in terms of the paradoxical near and far. This means examining global dynamics not only at the densely connected cosmopolitan centers of East or West, but – even more importantly – at those marginal places of *least* connection. Only then can one properly grasp the profound inversion that is the hallmark of global dynamics. This is not the inversion of replacing one superpower with another, but rather it is the inversion – as discussed in the introduction to this dissertation and demonstrated throughout – through which that which is not at all important, which seemingly matters least, can become the most important thing and the biggest driver of change. It is the inversion, for example, through which a seemingly insignificant resource such as rosewood becomes so "famous" – a *kakazo malaza* – that it ends up capturing world powers from either end of the globe. As a consequence of this inversion, the project of orienting the global is less a question of controlling the cosmopolitan

centers and more a question of navigating the juxtaposition that brings such disparate milieus in close proximity – even if thousands of miles away.

The global is not a state of heightened connectivity, but rather brutal distortions in space and time that bring together some of the most advanced locales of capitalist development with some of the least. Given the rupture and juxtaposition that characterize the global, it comes as no surprise that those closest to resources benefit least from their exploitation and that that which seemingly matters least in a region ends up becoming the biggest driver of change. In such a ruptured space, it further comes as no surprise that, despite having little say over global resource battles, remote geographies can become the primary site of their unfolding. Through a paradoxical inversion, remote margins of least connection become, instead, central locations where strategic representations of the global are made. After all, it is only within these places of least connection that one can "discover" a resource that has been widely known and used for centuries.

In the paradoxical space of the global, marginal spaces of least connection end up becoming the sites that reveal the extremes of global dynamics most profoundly. As discussed in Chapter 3, remote Malagasy rosewood loggers feel the most intense dynamics of a late capitalist economy. Their experience of the boom and bust dynamics of the rosewood market is not capitalism gone wrong or some incipient stage of capitalist matriculation, but rather the purest phases of successive scarcity and excess characteristic of global capitalism. Hot money spending – where rural farmers and loggers spend all their money in fanciful sprees – is not primitive behavior or misguided backlash, but simply one of an infinite variety of ways to deal with the abundance of a capitalist economy. The Malagasy farmer plastering money to chameleons at the side of the road during the region's commodity boom might as well be an *avant garde* artist performing the excesses of capitalism. From one vantage this practice can be read as pure lunacy, but from another vantage it represents an acute cultural expression of the most sophisticated dynamics of the new global economy.

And so it is with rosewood conservation as well. As we learned in Chapter 4, global efforts to conserve rosewood have inspired in Madagascar rent-seeking practices that tend to worsen conservation outcomes rather than alleviate them. Global conservation finance specifically designated for rosewood protection, for example, has commissioned an entire "task-force" of officials and militia intended to control the trade. Rather than stopping the trade, however, the authorities merely impose fines, soliciting their slice of the "cake." One might call this practice "corrupt" if it were not simply the way of doing business in Madagascar. Indeed, as we learned in Chapter 2, this system of so-called corruption extends all the way to the highest levels of the Malagasy government, with rosewood exporters having direct ties to the President of Madagascar. It has culminated in a type of "rosewood democracy," installing the most notorious rosewood exporters in some of the highest positions of power within the central government – not through dictatorial decree but democratic consensus. From one vantage, this entire system can be read as pure lunacy, easily cast aside as aberrant "corruption," yet from another vantage it simply exposes how conservation and democracy work in Madagascar and many other parts of the world. It is not an aberration, but rather an extreme version of political dynamics that can be found in even the most developed countries.

The experience of capitalism, conservation, and democracy in Madagascar is not adolescent or inchoate. Madagascar is not sitting in some nascent stage of capitalist or democratic development, patiently awaiting its turn to advance and join the global community. Madagascar's export markets and dealings with conservation and democracy are in fact quite

advanced. Rosewood and other export economies in Madagascar bring to the surface the most intense dynamics found at the core of the capitalist economy, just as the country's rosewood democracy brings to the surface political dynamics found at the core of even the most advanced democracies. Democracy in Madagascar underscores the fragility of democracy across the globe – democratic principles are not inherent or uncovered, but must be painfully constructed and reconstructed, even in countries that boast a more than two hundred year history. Similarly, the experience of market capitalism in Madagascar underscores the banality of erratic capital flows that are elsewhere experienced as exceptional. Only in areas that lack the institutional capacity necessary to subdue these erratic flows of global capital, such as northeastern Madagascar, does it become quite clear they represent the norm not the exception. And lastly, Madagascar's experience with conservation underscores the highly situated ethic that drives this global practice. Conservation is not a universal science put in the service of making the world a better place, but a highly situated approach to nature and culture that appears increasingly absurd as it is championed at the farthest corners of the globe with little regard for local context.

Madagascar, as we have learned throughout this dissertation, reveals much more about the global than anyone cares to admit. The people of northeastern Madagascar have arguably experienced "the global" more than the cosmopolitan elite of any American or Chinese city. Malagasy lands and resources are carved by global forces on a daily basis – with little regard for the situated practices or desires of the Malagasy people themselves. What is more global than a Malagasy tree made famous by two conflicting demands that have absolutely nothing to do with Madagascar? What is more global than two different trails, running side by side in the forest, but ultimately carved by forces originating from opposite ends of the earth? When thinking in terms of the "global," it is the marginal – rather than central – spaces toward which we must direct our thoughts. For it is only here at the margins where the paradoxes that are the hallmark of global dynamics come to the fore…where mere encounters become "discoveries" felt across the globe.

[1] Malagasy rosewood is from the genus *Dalbergia*, while zitan is from the genus *Pterocarpus*. Of course, the category "genus" itself and the division of life accordingly is largely arbitrary. In fact, due to the discovered similarity between these two genuses, the scientific community has created the "tribe" (the taxonomic category above genus and below family) named *Dalbergiaea* to unite the *Dalbergia* and *Pterocarpus* genuses.

[2] On top of this, he was commissioned to add a novelty Western-styled mansion within one of Emperor Qianlong's many rosewood palaces.

[3] Interestingly, the poem inscription on the painting (written by Emperor Qianlong himself) indicates that the creature depicted is incorrectly thought to be from Cochin (contemporary Vietnam) rather than Madagascar. But where exactly this creature is from is of little import to the Emperor. The lemur need not signify anything more than the very generalizable "global exotic" in order for this piece of artwork to symbolize a manifesto of global China. The inscription on the painting is of a poem written by Emperor Qianlong and roughly translated as follows:

> A lemur is born and lives in Vietnam and call himself "Guaran"
> He is still enjoying a cheerful life, but it is difficult to return to his normal life with the group of lemurs.
> He used to live with the group of lemurs, who are kind to each other and help each other with respect to the order of seniority.
> The willow grove is different now than it used to be, and the prince of the palace will tease him.
> The king is a virtuous man in a tall building.
> If not because his beautiful fur is suitable for making a blanket,
> how can he die in the woods for no reason?
> (translation provided by Banglong Zhu).

[4] Cited in Bradsher 2018, Meyers 2017, Millward 2018, and Perlez and Huang 2017, respectively.

[5] For the full text of the keynote speech of the Belt and Road Forum for International Cooperation, see: http://www.xinhuanet.com/english/2017-05/14/c_136282982.htm

[6] Chinese contemporary art has arguably been one of the most successful vehicles for introducing Chinese traditional values on the global scene. As noted in Chapter 5, by 2007, five of the world's ten best-selling living artists at auction were from China (Barboza 2008) and 35 of the 100 globally ranked contemporary artists were Chinese (Buchholz 2015).

[7] She further concludes that, "By assembling and juxtaposing disparate elements (West-East, past and present, culture and technology, etc.) in global spaces of encounter, modern Chinese art is anticipatory of a new global, one that embraces inevitable heterogeneity, subversion, and uncertainty" (475).

[8] Ong (2012) uses this quote to highlight the importance of thinking in terms of rupture and juxtaposition rather than global structures (capitalist world systems, transnational regimes of virtue and new humanitarianism) that impose a certain fixity to complex global flows (471-473).

Bibliography

Adams, W.M. and Hutton, J., 2007. People, parks and poverty: political ecology and biodiversity conservation. *Conservation and society*, 5(2), pp.147-183.

AFP. 2016. A Madagascar, le prix de la vanille flambe, sa qualité se dégrade. *AFP* May 8. Available at: < https://www.liberation.fr/futurs/2016/05/08/a-madagascar-le-prix-de-la-vanille-flambe-sa-qualite-se-degrade_1451194>.

Anderson, B., Kearnes, M., McFarlane, C. and Swanton, D. 2012. On assemblages and geography. *Dialogues in Human Geography* 2(2):171-189.

Andreas, J. 2009. Rise of the red engineers: the Cultural Revolution and the origins of China's new class. Stanford University Press.

Andriamarohasina, S. 2016. "Trafic de bois rose – Le verrouillage aux ports amplifie la sortie clandestine des rondins." *L'Express de Madagascar* April 13.

Ang, J. K. 1998. Further studies of furniture in alternative woods: Reflections on aspects of Chinese culture. In Classical and Vernacular Chinese Furniture in the Living Environment, ed. K. Lo, 62-77. Art Media Resources Ltd.

Anonymous. 2018. Rosewood Democracy in the Political Forests of Madagascar. *Political Geography* 62 (January): 170–83. http://dx.doi.org/10.1016/j.polgeo.2017.06.014.

Astuti, R. 1999. "At the Center of the Market: A Vezo Woman." In *Lilies of the Field: Marginal People Who Live for the Moment*, edited by Evthymios Papataxiarchis, M. S. Stewart, and Sophie Day, 83–95. Boulder, CO: Westview.

Aymoz, B., Randrianjafy, V., Randrianjafy Z., and Khasa, D., 2013. Community Management of Natural Resources: A Case Study from Ankarafantsika National Park, Madagascar. *AMBIO* 42:767-775.

Baker-Médard, M. (2012). "Conflicting treasures: contrasting resource use governance in two artisanal gemstone mining sites in Madagascar." *Journal of Political Ecology*. 19:221-237.

Barboza, D. 2008. Schooling the Artist's Republic of China. *New York Times* March 30.

Bayart, J.F. 2009. *The State in Africa: The Politics of the Belly*. Cambridge Malden, MA: Polity.

Bearak, B. 2010. Shaky Rule in Madagascar Threatens Trees. *New York Times*, May 24.

Beswick, D. 2009. The challenge of warlordism to post-conflict state-building: the case of Laurent Nkunda in Eastern Congo. *The Round Table* 98(402): 333-346.

Blakie, P., 2006. Is small really beautiful. Community-based natural resource.

Bloch, Maurice, and Parry, Jonathan, eds. 1989. *Money and the Morality of Exchange*. Cambridge: Cambridge University Press.

Bloch, Maurice. 1971. *Placing the Dead: Tombs, Ancestral Villages and Kinship Organization in Madagascar*. London: Seminar.

Bloomberg. 2017. China's Pollution Curbs May Start Slowing Growth Within Months. *BloombergNEF* October 2.

Bourdieu, P. 2011 (1986). The forms of capital. Cultural Theory: An anthology, pp. 81-93.

Bourdieu, P. 2013 (1984). *Distinction: A social critique of the judgement of taste.* Routledge.

Bowker, G., 2005 Time, Money, and Biodiversity in A. Ong and S. Collier (eds.) *Global Assemblages* pp.107-123

Bradsher, K. 2018. At Davos, the Real Star May Have Been China, Not Trump. *The New York Times* January 28.

Brenner, N., Madden, D.J. and Wachsmuth, D. 2011. Assemblage urbanism and the challenges

of critical urban theory. *City* 15(2):225-240.
Brenner, N., Peck, J. and Theodore, N. 2010. Variegated neoliberalization: geographies, modalities, pathways. *Global networks* 10(2):182-222.
Brimont, L., Ezzine-de-Blas, D., Karsenty, A. and Toulon, A. 2015. Achieving conservation and equity amidst extreme poverty and climate risk: the Makira REDD+ project in Madagascar. *Forests* 6(3):748-768.
Brockington, D., 2008. Powerful environmentalisms: conservation, celebrity and capitalism. *Media, culture & society*, 30(4), pp.551-568.
Brook, T. 1999. *The confusions of pleasure: Commerce and culture in Ming China.* University of California Press.
Bruner, A.G., Gullison, R.E., Rice, R.E. and Da Fonseca, G.A., 2001. Effectiveness of parks in protecting tropical biodiversity. *Science*, 291(5501), pp.125-128.
Bryant, G. 2018. Nature as Accumulation Strategy? Finance, Nature, and Value in Carbon Markets. *Annals of the American Association of Geographers* 108(3):605-619.
Buchholz, L. 2013. *The global rules of art.* PhD. diss., Columbia University.
Buchholz, L. 2016. What is a global field? Theorizing fields beyond the nation-state. *The Sociological Review* 64(2):31-60.
Burivalova, Z., Bauert, M.R., Hassold, S., Fatroandrianjafinonjasolomiovazo, N.T. and Koh, L.P., 2015. Relevance of global forest change data set to local conservation: case study of forest degradation in Masoala National Park, Madagascar. Biotropica, 47(2), pp.267-274.
Burn-Callander, Rebecca. 2012. "Vanilla Shortage Hits Ice Cream Makers." *Management Today*, April 3. Available at: <https://www.managementtoday.co.uk/vanilla-shortage-hits-ice-cream-makers/article/1125372>.
Büscher, B. and M. Ramutsindela. 2015. Green violence: Rhino poaching and the war to save Southern Africa's peace parks. African Affairs 115(458):1-22.
Büscher, B., 2009. Letters of gold: Enabling primitive accumulation through neoliberal conservation. Human Geography, 2(3), pp.91-93.
Büscher, B., Dressler, W. and Fletcher, R. eds., 2014. *Nature Inc.: environmental conservation in the neoliberal age.* University of Arizona Press.
Büscher, B., Sullivan, S., Neves, K., Igoe, J. and Brockington, D., 2012. Towards a synthesized critique of neoliberal biodiversity conservation. Capitalism nature socialism, 23(2), pp.4-30.
Campbell, Gwyn. 2005. *An Economic History of Imperial Madagascar, 1750–1895: The Rise and Fall of an Island Empire*. Vol. 106. Cambridge: Cambridge University Press.
Castree, N. 2008. Neoliberalising nature: the logics of deregulation and reregulation. *Environment and planning A* 40(1):131-152.
Castree, N. and B. Christophers. 2015. Banking spatially on the future: Capital switching, infrastructure, and the ecological fix. *Annals of the association of American geographers* 105(2):378-386.
Castree, N. 2001. Socializing nature: Theory, practice, and politics. In: *Social nature: Theory, practice, and politics*, pp.1-21.
China Daily. 2011. Rosy times ahead for rosewood furniture. China Daily January 17.
China Daily. 2016. President Xi plants trees, urges forestry development. *China Daily* April 5. Available at: http://www.chinadaily.com.cn/china/2016-04/05/content_24301364.htm.
China Redwood Committee. 2015. China Hung Mu Industry Development Plan for 2015-2025.
CITES (Convention on International Trade in Endangered Species). 2013. Report to the 16th meeting of the Conference of the Parties in Bangkok, 3-14 March. Consideration of

proposals for amendment of Appendices I and II. Available at: https://cites.org/sites/default/files/eng/cop/16/prop/E-CoP16-Prop-63.pdf .
Cleary, D. 1990. *Anatomy of the Amazon Gold Rush*. Iowa City: University of Iowa Press.
Clunas, C. 2004. Superfluous things: material culture and social status in early modern China. University of Hawaii Press.
Clunas, C., 2012. Things in between: splendour and excess in Ming China. *The Oxford Handbook of the History of Consumption*.
Cohen, A. and K. Bakker. 2014. The eco-scalar fix: Rescaling environmental governance and the politics of ecological boundaries in Alberta, Canada. *Environment and Planning D: Society and Space* 32(1):128-146.
Cole, J. 2001. *Forget Colonialism? Sacrifice and the Art of Memory in Madagascar*. Berkeley: University of California Press.
Cole, J. 2004. Fresh Contact in Tamatave, Madagascar: Sex, Money, and Intergenerational Transformation. *American Ethnologist* 31(4): 573–88.
Cole, J. 2005. The Jaombilo of Tamatave (Madagascar), 1992–2004: Reflections on Youth and Globalization. *Journal of Social History* 38(4): 891–914.
Collier, S. 2006. Global Assemblages. *Theory, Culture & Society* 23: 399-401.
Comaroff, Jean, and Comaroff, John (eds). 1993. *Modernity and Its Malcontents: Ritual and Power in Postcolonial Africa*. Chicago: University of Chicago Press.
Corson, C. 2011. Territorialization, enclosure and neoliberalism: non-state influence in struggles over Madagascar's forests. *Journal of Peasant Studies* 38(4): 703-726.
Corson, C. 2016. *Corridors of Power: The Politics of Environmental Aid to Madagascar*. Yale University Press.
Cronon, W. 1995. The trouble with wilderness; or, getting back to the wrong nature. In William Cronon, ed., *Uncommon Ground: Rethinking the Human Place in Nature*, New York: W. W. Norton & Co.
Davis, D.K. and Burke, E., 2011. *Environmental Imaginaries of the Middle East and North Africa.* Ohio University Press.
Day, Sophie, Evthymios Papataxiarchis, and Michael Stewart. 1999. Consider the Lilies of the Field. In *Lilies of the Field: Marginal People Who Live for the Moment*, edited by Evthymios Papataxiarchis, M. S. Stewart, and Sophie Day, 1–24. Boulder, CO: Westview.
De Boeck, Filip. 1999. Domesticating Diamonds and Dollars: Identity, Expenditure and Sharing in Southwestern Zaire. In *Globalization and Identity: Dialectics of Flow and Closure*, edited by Peter Geschiere and Birgit Meyer, 96–127. Oxford: Blackwell.
de Certeau, Michel. 1984. *The Practice of Everyday Life*. Translated by Steven Rendall. Berkeley: University of California Press.
DeLanda, M., 2006. *A New Philosophy of Society*. Continuum: London and New York.
Deleuze, G. and Guattari, F. 1980[2004]. *A Thousand Plateaus*. Trans. Brian Massumi. Continuum. Vol. 2 of *Capitalism and Schizophrenia*. 1972-1980.
Deleuze, Gilles, and Félix Guattari. 1980. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi. Minneapolis: University of Minnesota Press.
Dreyfus, H. and P. Rabinow. 1993. Can there be a science of existential structure and social meaning. In Bourdieu: Critical perspectives, ed. Calhoun, C., E. LiPuma, and M. Postone, 35-44.
Duffy, R. 2005. Global environmental governance and the challenge of shadow states: the impact of illicit sapphire mining in Madagascar. *Development and Change* 36(5): 825-843.

Duffy, R. 2007. Gemstone mining in Madagascar: transnational networks, criminalisation and global integration. *The Journal of Modern African Studies* 45(02): 185-206.
Duffy, R. 2010. Shadow states: Globalization, criminalization, and environmental change. In *Organized Crime and States* (pp. 97-116). Palgrave Macmillan.
Duffy, R. 2014. Waging a war to save biodiversity: the rise of militarized conservation. *International Affairs* 90(4):819-834.
Duffy, R. 2016. War, by conservation. *Geoforum* 69:238-248.
Duhigg, C. and Bradsher, K., 2012. How the US lost out on iPhone work. *The New York Times*, 21.
Ecott, Tim. 2004. *Vanilla: Travels in Search of the Ice Cream Orchid*. New York: Grove.
EIA. 2013. Corruption, bloodshed and death – the curse of rosewood. *Environmental Investigation Agency* August 16.
EIA. 2014a. The Ongoing Illegal Logging Crisis in Madagascar. An EIA briefing for CITES SC65.
EIA. 2014b. Routes of Extinction: The corruption and violence destroying Siamese Rosewood in the Mekong. London, UK.
EIA. 2015. Organized Chaos: The illicit timber trade between Myanmar and China. London.
EIA. 2016. The Hongmu Challenge: A briefing for the 66th meeting of the CITES Standing Committee.
EIA. 2016. The Hongmu challenge: A briefing for the 66th meeting of the CITES standing committee.
Ekers, M. and S. Prudham. 2017. The metabolism of socioecological fixes: Capital switching, spatial fixes, and the production of nature. *Annals of the American Association of Geographers* 107(6):1370-1388.
Evarts, C. 1998. Traditional Chinese furniture: Sumptuous palaces to courtyard dwellings. In *Classical and Vernacular Chinese Furniture in the Living Environment*, ed. K. Lo, 62-77. Art Media Resources Ltd.
Evarts, C., 1999. Traditional Chinese furniture from the greater Shanxi region. *CL Ma Antiques*, Hong Kong.
Evers, S.J.T.M., Campbell, G. and Lambek, M., 2013. Land competition and human-environment relations in Madagascar. In: *Contest for Land Madagascar–Environment, Ancestors and Development*. SJT M Evers, G. Campbell and M. Lambek (eds.) pp.1-20.
Fairhead, J., M. Leach, and I. Scoones. 2012. Green grabbing: a new appropriation of nature? *Journal of Peasant Studies* 39(2):237-261.
Ferguson, J. 2006. *Global shadows: Africa in the neoliberal world order*. Duke University Press.
Flaucourt, Étienne. 1661. *Histoire de la Grand Île de Madagascar*. Available at: <http://gallica.bnf.fr/ark:/12148/bpt6k1047463.image.f2>.
Foucault, M., 1990[1979]. *The history of sexuality: An introduction, Volume I.* Trans. Robert Hurley. New York: Vintage.
Gao, Y. and S.G. Clark. 2014. Elephant ivory trade in China: Trends and drivers. *Biological conservation* 180:23-30.
Gao, Y., K.J Stoner, A.T. Lee and S.G. Clark. 2016. Rhino horn trade in China: An analysis of the art and antiques market. *Biological conservation* 201:343-347.
Gaung'an Daily. 2017. 邓小平的植树情结. *Guang'an Daily* March 10. Available at: http://cpc.people.com.cn/n1/2017/0310/c69113-29137054.html.
Gerety. 2015. Activist arrested while illegal loggers chop away at Madagascar's forests.

Mongabay September 15.
Geschiere, P. 1997. *The Modernity of Witchcraft: Politics and the Occult in Postcolonial Africa*. Charlottesville: University of Virginia Press.
Giddens, A. 1994. Living in a Post-Traditional Society. In Ulrech Beck, Anthony Giddens, and Scott Lash, eds. *Reflexive Modernization*. Cambridge: Polity.
Global Witness and EIA. 2009. *Investigation into the illegal felling, transport, and export of precious wood in SAVA region Madagascar*. London, UK.
Global Witness and EIA. 2010. *Investigation into the Global Trade in Malagasy Precious Woods: Rosewood, Ebony and Pallisander*. London, UK. Available at: <https://www.globalwitness.org/documents/13152/mada_report_261010.pdf>.
Graeber, D. 1995. Dancing with Corpses Reconsidered: An Interpretation of Famadihana. *American Ethnologist* 22(2): 258–78.
Groom, M.J., Meffe, G.K. and Carroll, C.R. 2006. *Principles of conservation biology*. Sunderland: Sinauer Associates.
Guha, R. 1989. Radical American environmentalism and wilderness preservation: A third world critique. *Environmental ethics* 11(1):71-83.
Guofang, S. 2013. The harmonious development of humans and nature. In: *Chinese Perspectives on the Environment and Sustainable Development*, edited by Ye Wenhu.
Haraway, D. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature.*
Haraway, D. 2013(1989). *Primate visions: Gender, race, and nature in the world of modern science.* Routledge.
Harvey, D. 1989. *The Condition of Postmodernity*. Oxford: Blackwell.
Harvey, D. 1996. *Justice, nature and the geography of difference.* Oxford: Blackwell.
Harvey, D. 2006 (1984). *The Limits to Capital.* London and New York: Verso.
Havice, E. and Iles, A., 2015. Shaping the aquaculture sustainability assemblage: Revealing the rule-making behind the rules. *Geoforum* 58:27-37.
Ho, P. 1998. The seventeenth century house: the dialectic of the living environment. In Classical and Vernacular Chinese Furniture in the Living Environment, ed. K. Lo, 62-77. Art Media Resources Ltd.
Hobsbawm, E. and T. Ranger (eds). 2012. *The invention of tradition.* Cambridge University Press.
Holmes, G., 2011. Conservation's friends in high places: neoliberalism, networks, and the transnational conservation elite. *Global Environmental Politics*, 11(4), pp.1-21.
Humbert. 1955. Une merveille de la nature à Madagascar. Première exploration botanique du massif du Marojejy et de ses satellites. Série B, Biologie Végétale 6 (in French). Mémoires de l'Institut Scientifique de Madagascar. pp. 1–210.
Hume, D.W., 2006. Swidden agriculture and conservation in eastern Madagascar: stakeholder perspectives and cultural belief systems. *Conservation and Society* 4(2):287.
Hutton, J., Adams, W. M. and Murombedzi, J. C. 2005. Back to the Barriers? Changing Narratives in Biodiversity Conservation. *Forum for Development Studies*, 2:341–370.
Igoe, J. and Brockington, D., 2007. Neoliberal conservation: a brief introduction. *Conservation and society*, 5(4), pp.432-449.
Igoe, J., Neves, K. and Brockington, D., 2010. A spectacular eco-tour around the historic bloc: Theorising the convergence of biodiversity conservation and capitalist expansion. *Antipode*, 42(3), pp.486-512.
Imagawa, M. 2015. Now you see it, now you don’t – the disappearance of Chinese antique

furniture. *Primitive Living and Collecting.* May 15.
Innes, J.L. 2010. Madagascar rosewood, illegal logging and the tropical timber trade. *Madagascar Conservation & Development* 5(1).
Iritani, E. 2004. Great idea, but don't quote him. *Los Angeles Times* September 9.
Jackson, S. 2003. Fortunes of War: The Coltan Trade in the Kivus. Overseas Development Institute Working Paper. Background research for HPG Report 13 (February).
Jameson, F. 1991. *Postmodernism, or, the Cultural Logic of Late Capitalism*. Durham, NC: Duke University Press.
Jarosz, Lucy. 1996. "Defining deforestation in Madagascar." In *Liberation Ecologies: Environment, Development, Social Movements*, edited by Michael Watts and Richard Peet, 148–64. London: Routledge.
Jing Daily. 2012. China Extravagance Of The Week: A $4.6 Million Bed In Xi'an. *Jing Daily* January 6, 2012.
Ke, Z. and Zhi, Z., 2017. The Trade of Malagasy Rosewood and Ebony in China. *TRAFFIC Bulletin* 29(1):23.
Keenan, R. and P. Parija. 2017. This Sandalwood Plantation Is About to Make Its Owners a Lot of Money. *Bloomberg* February 21.
Keller, E. 2008. The banana plant and the moon: Conservation and the Malagasy ethos of life in Masoala, Madagascar. *American Ethnologist* 35(4): 650-664.
Keller, E. 2015. *Beyond the lens of conservation: Malagasy and Swiss imaginations of one another* (Vol. 20). Berghahn Books.
Kierkegaard, S. 1962. *Philosophical Fragments or a Fragment of Philosophy.* Translated by David F. Swenson. New Jersey: Princeton University Press.
Kosek, J. 2006. *Understories: The political life of forests in northern New Mexico.* Durham: Duke University Press.
Kramer, R., van Schaik, C. and Johnson, J. eds., 1997. *Last stand: protected areas and the defense of tropical biodiversity.* Oxford University Press.
Kremen, C., Razafimahatratra, V., Guillery, R.P., Rakotomalala, J., Weiss, A. and Ratsisompatrarivo, J.S., 1999. Designing the Masoala National Park in Madagascar based on biological and socioeconomic data. *Conservation Biology* 13(5):1055-1068.
Kull, C.A. 2002. Madagascar aflame: landscape burning as peasant protest, resistance, or a resource management tool? *Political Geography* 21(7): 927-953.
Kull, C.A., 2004. *Isle of fire: the political ecology of landscape burning in Madagascar.* University of Chicago Press.
L'Express. 2016. Le périple illicite des bois de rose de Singapour. *L'Express de Madagascar* February 26.
Lardy, N.R. 2016. China: Toward a consumption-driven growth path. In *Seeking Changes: The Economic Development in Contemporary China* (pp. 85-111).
Latour, B. 1993. *The Pasteurization of France.* Harvard University Press.
Latour, B. 2012(1993). We have never been modern. Harvard university press.
Le Billon, P. 2001. The political ecology of war: natural resources and armed conflicts. *Political Geography* 20(5): 561-584.
Le Billon, P. 2012. *Wars of plunder: Conflicts, profits and the politics of resources.* Columbia University Press.
Le Billon, P. and Sommerville, M., 2016. Landing capital and assembling 'investable land' in the extractive and agricultural sectors. *Geoforum* 82:212-24.

Lévi-Strauss, Claude. 1966. *The Savage Mind*. Chicago: University of Chicago Press.
Lewis, Oscar. 1966. “The Culture of Poverty.” *Scientific American* 215 (4): 19–25.
Li, T. 2007. Practices of assemblage and community forest management. *Economy and Society* 36(2):263-293.
Liu, S. 2013. A discussion of the problems of ecological culture and sustainable development. In: *Chinese Perspectives on the Environment and Sustainable Development*, edited by Ye Wenhu.
Lo, K. 2014. Review of *Chinese Perspectives on the Environment and Sustainable Development*. *Asian Studies Review* 38:4.
Lunstrum, E. 2014. Green militarization: anti-poaching efforts and the spatial contours of Kruger National Park. *Annals of the Association of American Geographers* 104(4):816-832.
Lunstrum, E., 2018. Capitalism, Wealth, and Conservation in the Age of Security: The Vitalization of the State. *Annals of the American Association of Geographers* 1-16.
Lyon, Sarah, and Mark Moberg. 2010. *Fair Trade and Social Justice: Global Ethnographies*. New York: New York University Press.
Mallonee, L. 2017. The lush billion-tree spectacle of China’s Great Green Wall. *Wired* October 10.
Marcus, R. 2001. Seeing the forest for the trees: integrated conservation and development projects and local perceptions of conservation in Madagascar. *Human Ecology* 29(4): 381-397.
Marks, R.B., 2017. *China: an environmental history*. Rowman & Littlefield.
Marx, K., 2011(1867). *Capital, volume one: A critique of political economy.* Trans. Samuel Moore and Edward Aveling. Ed. Freidrich Engels. Mineola, NY: Dover Publications.
Massey, Doreen. 1994. “A Global Sense of Place.” In *Space, Place and Gender*, 146–54. Minneapolis: University of Minnesota Press.
Mazurkewich, K. 2012. *Chinese Furniture: A Guide to Collecting Antiques.* Tuttle Publishing.
Mbaria, J. and Ogada, M. 2016. *The big conservation lie: the untold story of wildlife conservation in Kenya.*
McCarthy, J. and Prudham, S. 2004. Neoliberal nature and the nature of neoliberalism. *Geoforum*, 35(3), pp.275-283.
McFarlane, C. 2009. Translocal assemblages: space, power and social movements. *Geoforum* 40(4):561-567.
McShane, T.O., Hirsch, P.D., Trung, T.C., Songorwa, A.N., Kinzig, A., Monteferri, B., Mutekanga, D., Van Thang, H., Dammert, J.L., Pulgar-Vidal, M. and Welch-Devine, M., 2011. Hard choices: making trade-offs between biodiversity conservation and human well-being. Biological Conservation, 144(3), pp.966-972.
Meillassoux, C. 1968. Ostentation, Destruction, Reproduction. *Economies et Sociétés II*, no. 4: 760–72.
Meine, C., Soule, M., and Noss, R., 2006. A Mission-Driven Discipline: the Growth of Conservation Biology. *Conservation Biology* 20(3): 631-651.
Meyers, J. 2017. China's Belt and Road Forum lays groundwork for a new global order. *LA Times* May 15.
Midi. 2015. Omer Beriziky: Des candidats HVM dans la liste des trafiquants de bois de rose. *Midi-Madagasikara*, November 27.
Miller, I. 2015. *Roots and Branches: Woodland Institutions in South China, 800-1600.* Doctoral dissertation, Harvard University, Graduate School of Arts & Sciences.

Millward, J. 2018. Is China a Colonial Power? *The New York Times* May 4.
Milne, S. 2015. Cambodia's unofficial regime of extraction: illicit logging in the shadow of transnational governance and investment. *Critical Asian Studies* 47(2): 200-228.
Mintz, Sydney. 1985. *Sweetness and Power: The Place of Sugar in Modern History*. New York: Viking.
Mittermeier, R.A., Turner, W.R., Larsen, F.W., Brooks, T.M. and Gascon, C. 2011. Global biodiversity conservation: the critical role of hotspots. *Biodiversity Hotspots*. Springer Berlin Heidelberg.
Montagne, P. and Ramamonjisoa, B., 2006. Politiques forestières à Madagascar entre répression et autonomie des acteurs. In: *Économie rurale. Agricultures, alimentations, territoires*, (294-295), pp.9-26.
Muttenzer, F., 2006. The folk conceptualisation of property and forest-related going concerns in Madagascar. In: *Changing Properties of Property*. F. von Benda-Beckmann, K. von Benda-Beckmann and MG Wiber (eds.), pp.269-292.
Nash, June. 1979. *We Eat the Mines and the Mines Eat Us: Dependency and Exploitation in Bolivian Tin Mines*. New York: Columbia University Press.
Naughton-Treves, L., Alix-Garcia, J. and Chapman, C.A., 2011. Lessons about parks and poverty from a decade of forest loss and economic growth around Kibale National Park, Uganda. *Proceedings of the National Academy of Sciences*, 108(34), pp.13919-13924.
Naughton-Treves, L., Holland, M.B. and Brandon, K., 2005. The role of protected areas in conserving biodiversity and sustaining local livelihoods. *Annu. Rev. Environ. Resour*., 30, pp.219-252.
Nel, A. 2017. Contested carbon: Carbon forestry as a speculatively virtual, falteringly material and disputed territorial assemblage. *Geoforum* 81:144-152.
Newell, S. 2012. *The Modernity Bluff: Crime, Consumption, and Citizenship in Côte d'Ivoire*. Chicago: University of Chicago Press.
Nonini, D. and A. Ong. 2005. Chinese Transnationalism as an Alternative Modernity. In *The Chinese Overseas*, edited by Hong Liu, 344–65. London: Routledge.
Nordstrom, C. 2004. *Shadows of war: Violence, power, and international profiteering in the twenty-first century* (Vol. 10). University of California Press.
Noss, R.F. 1999. Assessing and monitoring forest biodiversity: a suggested framework and indicators. *Forest Ecology and Management* 115(2):135-146.
Oates, J.F., 1999. *Myth and reality in the rain forest: how conservation strategies are failing in West Africa*. Univ of California Press.
Oliver, L. 2018. China has sent 60,000 soldiers to plant trees. *World Economic Forum* February 16. Available at: https://www.weforum.org/agenda/2018/02/china-army-soldiers-plant-trees/.
Olson, Sherry H. 1984. "The Robe of the Ancestors: Forests in the History of Madagascar." *Journal of Forest History* 28 (4): 174–86.
Ong, A. 2006. *Neoliberalism as Exception.* Duke University Press: Durham and London.
Ong, A. 2010 (1987). *Spirits of Resistance and Capitalist Discipline: Factory Women in Malaysia*. 2nd ed. Albany: State University of New York Press.
Ong, A. and Collier, S. (eds.). 2005. *Global Assemblages: technology, politics, and ethics as anthropological problems.* John Wiley & Sons.
Ong, A. 2012. "What Marco Polo Forgot" Contemporary Chinese Art Reconfigures the Global. *Current Anthropology*, 53(4).
Ormsby, A. and Kaplin, B.A. 2005. A framework for understanding community resident

perceptions of Masoala National Park, Madagascar. *Environmental Conservation* 32(2):156-164.
Ormsby, A. and Mannle, K. 2006. Ecotourism benefits and the role of local guides at Masoala National Park, Madagascar. *Journal of Sustainable Tourism*, 14(3), pp.271-287.
Osterhoudt, S. 2017. *Vanilla Landscapes: Meaning, Memory, and the Cultivation of Place in Madagascar*. New York: New York Botanical Garden Press.
Patel, E. 2007. "Logging of rare rosewood and palisandre within Marojejy National Park, Madagascar." *Madagascar Conservation and Development* 2(1): 11–16.
Patrick, A. 2010. "Un an de désastres." *Madagascar Tribune* January 26.
Peluso, N.L. 2012. What's nature got to do with it? A situated historical perspective on socio-natural commodities. *Development and Change* 43(1):79-104.
Peluso, N.L. and Vandergeest, P. 2001. Genealogies of the political forest and customary rights in Indonesia, Malaysia, and Thailand. *The Journal of Asian Studies* 60(03):761-812.
Perlez, J. and Y. Huang. 2017. Behind China's $1 trillion plan to shake up the economic order. *The New York Times* May 13.
Petit, M. and Jacob, G. 1964. Un essai de colonisation dans la baie d'Antongil, (1885-vers 1926). Annales de l'Université de Madagascar, Lettres 4:33–56.
Petri, A. 2017. China's 'Great Green Wall' fights expanding desert. *National Geographic* April 21.
Pollini, J. 2007. Deforestation and slash-and-burn cultivation in Madagascar: representations and realities. Doctoral dissertation, Cornell University.
Pollini, J. and Lassoie, J.P., 2011. Trapping farmer communities within global environmental regimes: the case of the GELOSE legislation in Madagascar. Society & Natural Resources, 24(8), pp.814-830.
Postone, M., E. LiPuma and C.J. Calhoun, 1993. Introduction: Bourdieu and social theory. In *Bourdieu: Critical perspectives*, eds. Calhoun, C., E. LiPuma, and M. Postone.
Qianji, Y., 1987. *Ecological agriculture.* Sichuan: Chongqing Publishing House, 49.
Qijun, W. 1998. The main hall: Nucleus of the Chinese home. In Classical and Vernacular Chinese Furniture in the Living Environment, ed. K. Lo, 62-77. Art Media Resources Ltd.
Rain, Patricia. 2004. *Vanilla: The Cultural History of the World's Most Popular Flavor and Fragrance*. London: Penguin.
Ranaivoson, G. 2016. "Dossier Singapour – Ramparany tait les questions sensibles." *L'Express de Madagascar* March 11.
Randriamalala, H and Z. Liu 2010. "Bois de rose de Madagascar: entre démocratie et protection de la nature." *Madagascar Conservation and Development* 5(1): 11–22.
Randriamalala, H. 2011. "Rosewood chronicles." *Illegal Logging Portal*, August 22.
Randriamalala, H. 2012. "La 'bolabolacratie'." *Madagascar Tribune*, March 1.
Randriamalala, H. 2013. "Étude de la sociologie des exploitants de bois de rose malgaches." *Madagascar Conservation and Development* 8(1): 39–44.
Randrianja, S. and S. Ellis. 2009. *Madagascar: A Short History*. University of Chicago Press.
Ratliff, E. 2003. The Green Wall of China. *Wired* April 1. Available at: https://www.wired.com/2003/04/greenwall/.
Ratsiazo, L. 2014. Les députés ignorent leur véritable role. *Madagascar Tribune* October 28.
Ratsimbazafy, C., D. Newton and S. Ringuet. 2016. Timber Island: The Rosewood and Ebony Trade of Madagascar. TRAFFIC Report. November.
Ravelontsalama, S. 2014. Bois de rose: 62 conteneurs saisis au Kenya et au Sri Lanka. *La*

Gazette May 30.
Razafimamonjy, N.A.N. 2011. Dynamique des populations de trois espèces de Dalbergia dans la forêt dense sèche de Kirindy-Morondava (Doctoral dissertation, Thèse de Doctorat en Sciences de la Vie, spécialité Ecologie Végétale. Université d'Antananarivo. 200p.
Razafindramiadana, L. 2009. "Abus dans l'exportation de bois." *L'Express de Madagascar* January 24.
Remy, Oliver. 2017. "Rosewood Democracy." In *Corruption, Natural Resources and Development: From Resource Curse to Political Ecology*, edited by Aled Williams and Philippe Le Billon, 142–53. Cheltenham, UK: Edward Elgar.
Reno, W. 1995. *Corruption and state politics in Sierra Leone.* Cambridge University Press.
Reno, W. 1998. *Warlord Politics and African States.* Boulder, Lynne Rienner.
Reno, W. 2000. Clandestine economies, violence and states in Africa. *Journal of International Affairs* 433-459.
Ribot, J.C. and Peluso, N.L. 2003. A theory of access. Rural sociology, 68(2), pp.153-181.
Richardson, S.D., 1990. *Forests and forestry in China: changing patterns of resource development.* Island Press.
Robbins, P. 2000. The rotten institution: corruption in natural resource management. *Political Geography* 19(4): 423-443.
Robbins, P. and Marks, B., 2010. Assemblage geographies. *The Sage handbook of social geographies*, p.176.
Roe, D., 2008. The origins and evolution of the conservation-poverty debate: a review of key literature, events and policy processes. *Oryx*, 42(4), pp.491-503.
Roitman, J. 2005. *Fiscal disobedience: An anthropology of economic regulation in Central Africa.* Princeton University Press.
Roseberry, William, and Lowell Kutschbach. 1995. *Coffee, Society, and Power in Latin America*. Baltimore: Johns Hopkins University Press.
Rustad, S., Rød, J., Larsen, W. and Gleditsch, N. 2008. Foliage and fighting: Forest resources and the onset, duration, and location of civil war. *Political Geography* 27(7): 761-782.
Said, E.W. 1995(1978). *Orientalism: western conceptions of the Orient.* Harmondsworth, Eng.: Penguin.
Saldanha, A., 2012. Assemblage, materiality, race, capital. *Dialogues in Human Geography* 2(2):194-197.
Sassen, S., 2005. The repositioning of citizenship and alienage: Emergent subjects and spaces for politics. *Globalizations*, 2(1), pp.79-94.
Schwendeman, R. 2013. Burn, loot and pillage! Destruction of antiques during China's Cultural Revolution. *ACF China* February 10, 2013.
Scott, J.C., 1998. *Seeing like a state: How certain schemes to improve the human condition have failed.* Yale University Press.
Shapiro, J., 2001. *Mao's war against nature: Politics and the environment in revolutionary China.* Cambridge University Press.
Shuurman, D. and Lowry, P. 2009. The Madagascar rosewood massacre. *Madagascar Conservation and Development* 4(2).
Singh, J. and Van Houtum, H., 2002. Post-colonial nature conservation in Southern Africa: same emperors, new clothes?. GeoJournal, 58(4), pp.253-263.
Singh, S. 2014. Borderland practices and narratives: Illegal cross-border logging in northeastern Cambodia. *Ethnography* 15(2): 135-159.

Smil, V. 2015. *The bad earth: Environmental degradation in China.* Routledge.
Smith, N. 1984. *Uneven Development: Nature. Capital, and the Production of Space.*
Sodikoff, G. M. 2012. *Forest and Labor in Madagascar: From Colonial Concession to Global Biosphere*. Indiana University Press.
Songster, E.E., 2018. *Panda Nation: The Construction and Conservation of China's Modern Icon.* Oxford University Press.
Soulé, M.E., 1985. What is conservation biology?. *BioScience* 35(11):727-734.
Stanway, D. 2018. China to create new forests covering area size of Ireland: China Daily. *Reuters Environment* January 4. Available at: https://uk.reuters.com/article/us-china-environment-forest/china-to-create-new-forests-covering-area-size-of-ireland-china-daily-idUKKBN1EU02L.
Steffen, A. 2003. The Fall of the Green Wall of China. *World Changing* December 29. Available at:https://web.archive.org/web/20100719173709/http://worldchanging.com/archives/000252.html.
Striffler, Steve, and Mark Moberg, eds. 2003. *Banana Wars: Power, Production, and History in the Americas*. Durham, NC: Duke University Press.
Studemeyer, C.C. 2015. Geographies of flexible citizenship. *Geography Compass* 9(10):565-576.
Suarez, D. and Corson, C. 2013. Seizing center stage: ecosystem services, live, at the Convention on Biological Diversity. *Human geography*, 6(1), pp.64-79.
Swanton, D. 2013. The steel plant as assemblage. *Geoforum* 44:282-291.
Swyngedouw, E. 2013. Into the sea: desalination as hydro-social fix in Spain. *Annals of the Association of American Geographers* 103(2): 261-270.
Swyngedouw, E. 2006. Circulations and metabolisms:(hybrid) natures and (cyborg) cities. *Science as culture*, 15(2), pp.105-121.
TanaNews. 2014a. Anthelme Ramparany: une ministre de trafic du bois de rose? *TanaNews* April 22.
TanaNews. 2014b. “Trafiquants de bois de rose: que fabrique Hery Rajaonarimampianina?” *TanaNews* May 9.
Taussig, Michael. 1980. *The Devil and Commodity Fetishism in South America*. University of North Carolina Press.
Terborgh, J. and Soule, M.E., 1999. Why we need megareserves: large-scale reserve networks and how to design them. In: *Continental conservation: scientific foundations of regional reserve networks*. Island Press, Washington, DC, USA, pp.199-209.
Thompson, E.P. 1975. *Whigs and hunters: the origin of the Black Act.* London: Allen Lane.
To, P., Mahanty, S., and Dressler, W. 2014. Social networks of corruption in the Vietnamese and Lao cross-border timber trade. *Anthropological Forum* 24(2): 154-174.
Treanor, N.B. 2015. China’s Hongmu consumption boom. *Forest Trends Report Series*, December.
Treanor, N.B., 2015. *China’s Hongmu Consumption Boom.*
Tsing, A. 2005. Introduction. In *Communities and Conservation*. AltaMira Press.
Tsing, A. 2011. *Friction: An ethnography of global connection.* Princeton University Press.
Tsing, A. 2015. *The mushroom at the end of the world: On the possibility of life in capitalist ruins*. Princeton University Press.
UNODC (United Nations Office on Drugs and Crime). 2016. *World Wildlife Crime Report.* United Nations, New York.

Vandergeest, P. and Peluso, N.L. 1995. Territorialization and state power in Thailand. *Theory and society*, 24(3), pp.385-426.
Vandergeest, P. and Peluso, N.L. 2006. Empires of forestry: Professional forestry and state power in Southeast Asia, Part 1. *Environment and History* 31-64.
Villalón, L., and VonDoepp, P. 2005. *The fate of Africa's democratic experiments: elites and institutions*. Indiana University Press.
Walder, A.G. 2015. *China Under Mao*. Harvard University Press.
Walsh, A. 2003. 'Hot money' and daring consumption in a northern Malagasy sapphire-mining town. *American Ethnologist 30*(2):290-305.
Walsh, A. 2005. The obvious aspects of ecological underprivilege in Ankarana, northern Madagascar. *American Anthropologist* 107(4):654-665.
Walsh, A. 2010. "The Commodification of Fetishes: Telling the Difference between Natural and Synthetic Sapphires." *American Ethnologist* 37(1): 98–114.
Walsh, A. 2012. *Made in Madagascar: Sapphires, ecotourism, and the global bazaar*. University of Toronto Press.
Weber, M. 1930[2004]. *The Protestant ethic and the spirit of capitalism*. London New York: Routledge.
Wenbin, H. and Xiufang, S. 2013. *Tropical Hardwood Flows in China: Case Studies of Rosewood and Okoumé*. CIFOR Paper.
West, P. and D. Brockington. 2006. An anthropological perspective on some unexpected consequences of protected areas. *Conservation Biology* 20(3):609-616.
Wilshusen, P.R., Brechin, S.R., Fortwangler, C.L. and West, P.C. 2002. Reinventing a square wheel: Critique of a "resurgent protection paradigm" in international biodiversity conservation. *Society &Natural Resources*, 15(1), pp.17-40.
Wittemyer, G., Elsen, P., Bean, W.T., Burton, A.C.O. and Brashares, J.S. 2008. Accelerated human population growth at protected area edges. *Science*, 321(5885), pp.123-126.
Wood, D.M. 2013. What is global surveillance? Towards a relational political economy of the global surveillant assemblage. *Geoforum* 49:317-326.
Woodburn, J. 1998. Egalitarian Societies. In *Limited Wants, Unlimited Means: A Reader on Hunter-Gatherer Economics and the Environment*, edited by John Gowdy, 93–131. Washington, DC: Island.
World Bank. 2010. *Governance and Development Effectiveness Review: A Political Economy Analysis of Governance in Madagascar*. Report No. 54277-MG.
World Bank. 2011. *Supporting Urgent Biodiversity Conservation in Madagascar*. Available at: http://www.worldbank.org/en/news/feature/2011/06/23/supporting-urgent-biodiversity-conservation-in-madagascar .
Wu, Q., X. Zhang, and P. Waley. 2017. When Neil Smith met Pierre Bourdieu in Nanjing, China: bringing cultural capital into rent gap theory. *Housing Studies* 32(5):659-677.
Xie, Y. 2011. Research progress on Eucalyptus breeding and its strategy in China. *World Forestry Research* 24(4).
Xie, Y., Arnold, R.J., Wu, Z., Chen, S., Du, A. and Luo, J., 2017. Advances in eucalypt research in China. *Frontiers of Agricultural Science and Engineering*, 4(4), pp.380-390.
Xie, Z. 2012. Inspiration of Australian experiences in Eucalyptus spp. cultivation on sustainable management of Eucalyptus spp. in China. *World Forestry Research* 25(2).
Xinhuanet. 2015. Xi Jinping has talked about ecological civilization more than 60 times since the 18th National Congress. March 10. Available at:

http://politics.people.com.cn/n/2015/0310/c1001-26666629.html.
Xu, L. 2010. Rosewood furniture in price heat – report from China international rosewood classical furniture exhibition 2010. September 30.
Ybarra, M. 2012. Taming the jungle, saving the Maya Forest: sedimented counterinsurgency practices in contemporary Guatemalan conservation. *Journal of Peasant Studies* 39(2): 479-502.
Ye, W. 2013. *Chinese Perspectives on the Environment and Sustainable Development*. Translated by Christopher Heselton. Brill, Leiden and Boston.
Yuan, L. 2011. "Everything Old is New Again: Classical Chinese Furniture." *China Today* November 17, pp. 38-41.
Zhang, M., 2017. Financing Market-Oriented Reforestation: Securitization of Timberlands and Shareholding Practices in Southwest China, 1750–1900. *Late Imperial China*, 38(2), pp.109-151.McDermott, J.P., 2013. *The Making of a New Rural Order in South China: Volume 1: I. Village, Land, and Lineage in Huizhou, 900–1600 (Vol. 1).* Cambridge University Press.
Zhang, W. 2015. No cultural revolution? Continuity and change in consumption patterns in contemporary China. *Journal of Consumer Culture* 17(3):639-658.
Zhong, S. 2016. Artists and Shanghai's culture-led urban regeneration. *Cities* 56:165-171.
Zhu, A. 2017. Rosewood Occidentalism and Orientalism in Madagascar. *Geoforum* 86: 1–12.
Zhu, A. 2018. Hot money, cold beer: Navigating the vanilla and rosewood export economies in northeastern Madagascar. *American Ethnologist*, 45(2), pp.253-267.
Zhu, A. *forthcoming*. China's Rosewood Boom: a cultural fix of capital overaccumulation in China. *Annals of the American Association of Geographers*.
Zilibotti, F. 2017. Growing and Slowing Down Like China. *Journal of the European Economic Association*, 15(5), pp.943-988.