Jalan Jati or ‘Teak Road’ is an interdisciplinary project, in collaboration with DoubleHelix Tracking Technologies, which traces the historic, genetic, material and poetic journeys of a 1950s teak bed, found in a Singapore karang guni junk store, back to a location in Southeast Asia where the original teak tree may have grown.

Recent applications of DNA technology have meant that it is possible to trace rainforest products such as timber back to the location of the original forest/plantation from which the wood originated. Each individual tree has a unique DNA identity, termed (with some anthropomorphic arrogance) a DNA ‘fingerprint’. This technology is being used by DoubleHelix Tracking Technologies in order to certify that timber purchased by consumers across the world comes from legal plantation as opposed to illegal rainforest sources.

Preliminary investigations suggested a potential match between a DNA sample from our bed and teak trees in Sulawesi. Members of the Migrant Ecologies team journeyed to the scant remains of century-year-old teak plantations on Muna Island in Southeast Sulawesi, and have recreated an ‘ecology’ of interdependent biological, social and magic-realist stories, traced out from the grain of this one teak bed.

The artistic media employed in this project are photography, stop-motion animation and woodprint collage. Both the stop-motion imagery and the collage are constructed from woodprints of the original teak bed. The exhibition works emerging from this research have been named Jalan Jati or ‘Teak Road’, which is the name of one the main streets in Raha, the central port town of Muna Island.

Jalan Jati is part of an ongoing inquiry into human relationships to trees, forests and forest products in Southeast Asia—explored in terms of materials, metaphors, magic, ecological resources, and historical agency under the auspices of the Migrant Ecologies Project.
JALAN JATI (TEAK ROAD)

COLLABORATORS

Art:
Lucy Davis, woodprint collage and stop-motion artist
Shannon Lee Castleman, photographer
Zuliani Kuning, composer/keyboard
Zai Tang, composer/keyboard

Science:
Dr Shawn Lum, plant biologist and president, Nature Society of Singapore
Shankar Iyerh, DoubleHelix Tracking Technologies (until 2011)
Darren Thomas, managing director, DoubleHelix Tracking Technologies
Dr Andrew Lowe, chair in plant conservation biology, University of Adelaide
Laksana Pelawi, country officer, DoubleHelix Tracking Indonesia (until 2011)

Editor:
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Song Ting Xi Jemima
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Student assistants (Jalan Jati film editors):
Tan Jie Min Benjamin
Edwina Ong Zhu Yi
Yip Su Zhen Michelle

Student assistant (website):
Farhana Jafaar
AWARDS
FOR THE MIGRANT ECOLOGIES TEAM

PRIZES & AWARD NOMINATIONS (ART):

**Jalan Jati (Teak Road)**
Nominated, Singapore Short Film Awards 2013
Winner, Promotional Award of the International Short Film Festival Oberhausen 2012, Germany

**Jalan Jati (the project)**
Finalist, Prix COAL, Art & Ecology Prize, France 2011

Together Again (Woodcuts) PART I & II
Singapore Shortlist for Lucy Davis for the Asia Pacific Breweries Signature Art Prize 2011, presented by the Singapore Art Museum

PRIZES FOR DOUBLEHELIX TRACKING TECHNOLOGIES:

Silver Medal in the International Green Awards UK 2011
Singapore Entrepreneur of the Year 2009 for founder Kevin Hill, presented by the Singapore British Chamber of Commerce

SCREENINGS & FESTIVALS FOR **JALAN JATI (FILM)**:

Official Selection
Rotterdam International Film Festival 2013
Singapore Short Film Awards 2013
International Short Film Festival Oberhausen 2012, Germany
Machine Wilderness International Symposium on Electronic Arts (ISEA) 2012, Albuquerque, New Mexico, USA
9th Singapore Short Cuts 2012, co-presented by the National Museum of Singapore Cinémathèque and The Substation Moving Images, Singapore

Screenings
“Best of Fest”, Hangzhou Asian Film Festival 2012
Singapore Selection, Nanjing Short Film Festival 2012
“Still Building”, Valentine Willie Fine Art/Selasar Sunaryo Art Space Rambung (curated by Jason Woo), 2012
“Still Building”, Indonesian Visual Art Archive (IVAA) 2012
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The following statement may sound paradoxical, but forests that are exploited for their timber, or some other forest product, may have a far higher chance of long-term survival than forests that produce no resources of common value to humans. This is not because forests need management to survive. They are mostly very capable of regenerating themselves and thriving with no input from man. But forests that yield timber and non-timber products, or that are used recreationally, or have a significant cultural or spiritual place within the community, are highly valued and therefore less likely to be replaced by some other form of land use, such as farming or housing.

In Europe, the replacement of wood with plastic, aluminium or steel in our homes and transport has resulted in an abandonment of many timber-related crafts, and ultimately the decline in the management of broad-leaved woodlands, large and small. Once-productive forests became degraded to simply providing shelter for wild or domestic grazing animals, and the steady and unrelenting browsing of young trees that followed has led to a severe degeneration in the condition of our woodlands. At the same time the importation of tropical hardwoods has occurred on a grand scale, with a corresponding negative impact on the indigenous hardwood industry.

The import of tropical timber into Europe and America continues apace today, but since the 1970s some media and pressure groups have been raising public awareness of the ongoing destruction of forests caused by the logging of hardwood timber in the tropics. The tendency has been to label all tropical timber as ‘bad’, and some individuals and lobby groups have sought to boycott all imported hardwoods, for fear they may be contributing to the annihilation of that most diverse and iconic of ecosystems—the tropical rainforest.

However, based on the paradox identified in my opening paragraph, it might be argued that environmentally conscious persons should instead be seeking out products made from tropical hardwood, provided they can be assured that these are grown in a sustainable way that is not detrimental to the long-term survival of the ecosystem. This could be timber from plantations on previously unforested land or from mixed-age forests managed by a selective system. The latter mimics natural forest dynamics by removing only a proportion of mature stems, at a level of intensity that allows for recruitment from naturally regenerated seedlings. On the other hand, the timber...
to avoid would be from natural forests that are clear-cut and ultimately replaced by industrial plantation forestry, grazing, crop production or building development.

My brief career in tropical forestry taught me two things about teak or jati (Tectona grandis), the subject of this exhibition. First it does not naturally occur in the rainforest but is native to seasonally-dry, deciduous forest. Second it has adapted very well to cultivation in monocultures and can be successfully grown in plantations on previously deforested land.

Also, as an amateur wood-worker, I can add my experience of using reclaimed teak from the old laboratory benches at the Royal Botanic Garden Edinburgh. Teak timber is a real pleasure to work with, with a handsome colour and grain, and the ability to take on an excellent smooth satin finish when treated with teak oil rather than a polyurethane varnish.

My shelves of salvaged teak contain carbon molecules fixed by photosynthesis from carbon dioxide from the forest atmosphere in the early part of the 20th century. I hope this carbon will remain locked away in this benign form for some centuries to come. Tropical hardwoods have an inheritable quality that you don’t get with plastic-coated chipboard or medium-density fibreboard, and my shelves will have a longer ‘shelf life’ than their modern, mass-produced counterparts. This comparison is important in terms of the long-term fixation of atmospheric carbon. The manufacture of quality wooden furniture is one way of slowing down the increase in carbon dioxide in the air, which we now see as essential for the survival of all the world’s ecosystems.

The manufacture of quality wooden furniture is one way of slowing down the increase in carbon dioxide in the air, which we now see as essential for the survival of all the world’s ecosystems.

But having established that furniture or other items from tropical hardwood can lock up carbon for an age, how can we make sure that the timber is from a sustainable source—well-managed, selectively-cut forests or plantations?

This is where the new technology of genetic fingerprinting comes into play because not only does each tree species have a distinct genetic code, the individual populations within a species can also be differentiated, making it possible to track down the geographical origins of individual trees back to their ancestral population.

Any system for certifying (carrot) or regulating (stick) the supply of tropical timber from sustainable sources relies on good geographical information about the short-term impact and long-term viability of timber operations in any location. The timber must also be traceable through the supply chain so that customers and retailers can accurately follow the path the timber has travelled from its source. The aim of the pioneering work on decoding the genetic fingerprints of trees by DoubleHelix Tracking Technologies is to be able to take a sample of timber, and from its DNA profile follow it back to the forests from which it was harvested.

The Migrant Ecologies Project has used the forensic evidence provided by DoubleHelix to determine the provenance of a mid-20th century teak bed found in a junk shop in Singapore and reverse the original path taken by the bed back to an island off Sulawesi, Indonesia. They have successfully used this technology to guide them to a community of woodcutters, dukun-dukun (shamans) and ordinary people whom they encountered in their research in Muna in Sulawesi. They cross successfully from a world in which science governs how people think and act, to one in which the forces of magic also have a deep, equal significance in people’s lives. Yet they show none of the arrogance often encountered with this type of project. Throughout their explorations they remain open to ideas and possibilities, which proves as exciting as they are revealing.
INTRODUCTION: DOUBLEHELIX TRACKING TECHNOLOGIES

DARREN THOMAS
Managing Director
DoubleHelix Tracking Technologies

The DNA of trees

Did you know that trees had DNA? Prior to meeting DoubleHelix founder Kevin Hill and getting involved in his company, I can’t say I really considered this question. Since then, I’ve discovered that trees actually have more DNA than humans do—from 60 to 100 times more, depending on the species.

Aside from such surprising snippets of information, the fact that trees have DNA has taken me on journeys to visit forests and forestry-concerned people from places as far afield as Gabon, Peru and Russia. It has been an inspiring experience to follow the transformation of wood from its natural living state into the wood-based products we use on a daily basis. Trees are surely one of the most complex, beautiful and useful natural resources we have in the world today, both in their natural state and as a material to make things out of.

Telling stories of wood

The intertwined stories of wood and timber products are equally complex. And yet on the whole, timber is a material that we, the consumer, take for granted.

My job at DoubleHelix gives me a chance to tell some of these stories by putting the latest scientific advances in plant genetics to practical use for more effective forest management. By studying the DNA found in trees, we can follow a timber supply chain from the tree to the consumer. We can also do the reverse, finding out from what part of the world a piece of wood came from—where the original tree was felled.

We have found an increasing number of commercial applications for this knowledge. As forest and timber sources are becoming scarcer, we are starting to appreciate the importance of maintaining and managing this resource in a sustainable way. To do so, we need to know more about the origin and species of the timber that we use, in order to prevent illegal logging of precious species and to help responsible users of wood—from forest peoples and harvesters, to sawmills and traders of wood products—make better informed decisions about the raw materials they work with.

Kevin Hill is one of those people. In the 1990s, Kevin came to Singapore and started a business specialising in design and construction projects using timber. As his business grew, he wanted to ensure that the wood
used in his projects came from well-managed sources. He wanted to avoid the mistake of using the lowest cost wood with no questions asked—the sort of wood that comes from illegally felled trees.

You might be familiar with some of Kevin’s work. You will find his timber structures all over Singapore, from the Henderson Waves bridge, to Changi Airport Terminal 3 and the Shangri-la Marina Bay Sands. If you’ve been lucky enough to holiday in the Maldives, chances are you might have stayed in a villa designed by Kevin and built by his skilled team.

Kevin’s original quest to verify the origin of the wood used in his projects led to the idea of using DNA as an identification tool, which in turn led to the formation of DoubleHelix. The company started by working with Indonesian wouls who wanted to demonstrate to buyers in Australia that the Merbau timber products they sold came from legally harvested forests in Papua. We now work with forest owners in Africa to thwart efforts by criminal organisations to launder illegal timber into global supply chains. We are active in similar efforts by criminal organisations to launder illegal timber into global supply chains. We are active in similar projects in Russia and South America, always working with local and international partners to improve forest management and tackle the criminal organisations that benefit from systematic illegal logging.

Jalan Jati

Wood with no questions asked —the sort of wood that otherwise never have been revealed.

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The Migrant Ecologies Project was an unexpected and unique opportunity to apply our work in a wholly new way. This was a chance for us to contribute to a real and complex story of everyday wood objects like the teak bed—an object that everyone could recognise but perhaps took for granted. We wanted to communicate this story to an audience that, like me, would otherwise never have thought about the matter.

Our role in the project was to shed light on the history of these objects using the very latest genetic techniques. These techniques allow us to determine the origin of wood by analysing the DNA found in the wood, using methods already familiar from use in human criminal forensics. (We’ve all watched those crime shows on TV!) The challenges involved in analysing wood DNA as opposed to human DNA are twofold. First, it is necessary to extract DNA from the wood—as an eco-take everything is incomplete and fragmented. Analysing this DNA is like trying to work out the whole picture of a jigsaw while having only a few random pieces of the puzzle.

When applied to the question of the teak bed, another challenge is the limited amount of teak genetic data already in existence. We need such references data against which to compare the degraded DNA extracted from the bed. After a detailed search among various plant-related scientific journals and numerous telephone calls to genetic institutes, we were able to find a number of simple data sets that had already been generated by other scientific teams and from previous projects.

No single data set was able to point us to the likely origin of the bed, so instead we overlaid the results of several different data sets together (rather like a Venn diagram). While this generated a number of different options, by consulting local timber traders and historical records, it became apparent that old, now exhausted teak plantations in the Sulawesi province of Indonesia were a likely location.

We can’t be 100 percent certain about this conclusion of course. The teak in Sulawesi was harvested from plantations and the genetic profile of those plantations could therefore be similar to the genetic profile of the original seed source, which could have been natural forest sources elsewhere in Asia. We do not yet have the data for all of Asia’s natural forest sources of teak. Generating that data is actually part of the work proposed for a larger, more ambitious follow-up research collaboration between us and the Migrant Ecologies Project.

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A complete genetic picture of teak across its natural geographic range would have huge benefits for both the conservation of forests where natural teak grows, and the rights of forest peoples, alongside the commercial sector that deal in teak plantations.

Resonating with this project, teak has migrated all over the world in the form of plantations established through human propagation. A map of natural teak will help the managers of these plantations find out where the original seeds came from. This knowledge is important, as different sources of teak are suited differently to the new conditions in which they are grown. With better knowledge of which teak seed sources have adapted better to different plantation environments, the quality and yield of teak plantations can be improved over time, reducing the pressure to harvest the remaining natural teak forests.

DoubleHelix is proud to have contributed to such an innovative and well-received art project. The combi- nation of art and cutting-edge genetic science has been able to convey the man-made and natural history of an everyday piece of furniture, one that might otherwise never have been revealed.
Teak is one of the most valuable timber trees in the world. Carl Linnaeus the Younger first described it under the scientific name *Tectona grandis*. Teak has been classified within the family Verbenaceae for a long time, but was more recently placed in the family Lamiaceae. It is a tropical Asian hardwood, highly appreciated for its technical and decorative properties, and commonly used to make furniture and for boat building.

The characteristics of the timber, including colour, grain and texture, can vary greatly between populations and regions. For example, trees from the Western Ghats region of India, which has a high rainfall, are preferred for their structural qualities in shipbuilding and construction. Teak from Central India is famous for its colour (ranging from golden yellow to pale pink heartwood) and decorative grain, and is sought after for furniture. ‘Moulmein teak’ from Mawlamyine in Myanmar is also famous for its quality, originating from teak forests growing in the Thalnwin (Salween) River watershed in central eastern Myanmar and northwestern Thailand.

The natural range of the teak is broad but discontinuous, from India (below 23°30’N) across to Myanmar, Thailand, Laos and Java (Indonesia). Teak is also planted in many tropical regions around the world, including Latin America, Africa, Southeast Asia and Australia.

The genetic resources of teak have been dramatically altered over the last 50 to 100 years, due to logging and the establishment of plantations within and outside the natural range. Habitat destruction and fragmentation have further restricted an increasing number of trees to...
small and isolated natural populations, most of which are still under threat from illegal logging and other forms of forest destruction.

Several interesting questions arise for teak. How genetically similar are the two main ranges of its disjunct distribution? What is the centre of origin and diversity of teak? Are populations of teak in Indonesia natural or planted?

Two major studies funded by the European Union (Volkaert et al., 2007 and Fofana et al., 2009), have examined the genetic diversity of teak across its natural and planted ranges. The application of such markers allows an assessment of the evolutionary history of the species, the conservation status of remnant stands, and the source of origin of global plantations. For both studies the majority of genetic variation with the species was found to be in India, which according to an outgroup analysis (Volkaert et al., 2007), is also the likely centre of origin of the species.

Based on these genetic studies, southwestern Indian populations of teak could be easily distinguished from all other regions of the species (also see Madan et al., 2009). The genetic diversity of teak populations is highest around Kerala (southwestern India), intermediate in populations from central India, and further declining in Orissa (southern India) and Thailand, with only a small number of very similar genetic types (or genotypes) found in populations from Java. It thus seems likely that the Southeast Asian range of teak is a relatively recent range expansion of the species from its area of origin in southwestern India.

A further study by Verhaegen et al. (2010) used the genetic map of natural populations, established by Fofana et al. (2009), to identify the likely source of origin of teak plantations established in Africa and Indonesia. They concluded that teak plantations on Java were genetically most similar to teak from Laos, though this could be an artefact since both Javanese and Laotian teak have low genetic diversity. The first introduction of teak to Africa and Central America (Timandali) happened in the 19th century, but records of the source of planting stocks for both these regions is extremely unreliable.

Genetic analysis of 22 teak plantations revealed that nearly all the teak landraces analysed from Africa (Benin, Cameroon, Ivory Coast, Tanzania, Togo and Senegal) came from India, and Indonesian and Ghanaian plantations matched natural populations from central Laos. Interestingly, south India was not identified as a likely source for any plantations, and this goes against some early assumptions that teak was spread along with Hinduism from this region, although a link to eastern India (around Orissa) has still not been ruled out.

In addition to identifying the region from which teak plantation stock was originally sourced, the genetic maps presented above can also be used for identifying the source of the origin of teak timber and other ‘migratory’ products. This genetic source analysis was attempted with the teak bed in the Jalan Jati project. We were able to successfully extract DNA from the teak bed and the genetic markers that were applied to wood DNA were able to confirm a Southeast Asian origin of the timber. However at this juncture we are not able to confirm a more precise source.

Works Cited


He knew that it would work. Every so often, on several of his expeditions in the Congo basin between 1900 and 1909, the Hungarian explorer Emil Torday would show a toy elephant to the assembled ‘natives’.

1 The animal—which, when wound up, would raise and lower its trunk—proved to be an effective means of loosening tension. It was also a sly way for Torday to acquire their ritual objects—what would soon become the collection of prized artefacts that he would, in turn, donate to the British Museum. Figure 1 is the photo taken of one such display.

Unease and suspicion quickly turn into wonder. The photograph has been set up to capture the natives’ amusement and bewilderment: two men on the left lean back in friendly deference, almost all of them seem to smile.

2 For these Congolese natives, there must have been something mystifyingly powerful about this mechanical creature. Left unaided by our ethnographer—

"At that time, my father was definitely dead. He had been dying a number of times, always with some reservations that forced us to revise our attitude toward the fact of his death."

– Bruno Schulz, ‘Father’s Last Escape’
In the 20th-century colonial world. Something similar took place when a collaborative group—

And yet it might not have been the case that these natives were so easily subdued. European pillage and plunder of their lands.

only were prized objects lost, these Africans would become mostly bystanders to the comic trickery.3 Of course, in a larger sense, the encounter was hardly benign: not only is aesthetics always an ethical affair; more strongly, art emerges out of (an) ecology—emerges out of place.

I begin with this photograph as it captures something of the intricate, multi-layered ‘lost’ (their autonomy, their objects, their dignity), there were often ways—subtle

Torday must have been proud to render these natives docile in an adroit display of authority. The scene is about the ‘magic’ of Western science and technology, here

used in a seemingly benign way (notice how the object is an

Ecologies Project—journeyed to the island of Muna in Southeast Sulawesi, Indonesia, in October 2010, to investigate the possible origin of a piece of teak wood, obtained from a 1950s bed that Davis had found in a dusty junk shop in Singapore. Triggered by thoughts of household objects and place, and prompted by several paradoxes of recycling (why are some things recycled, and some not?), a series of questions emerged in the group’s conversations: Where do everyday, household objects come from, particularly those made from natural materials like wood? What might the history of these objects tell us about our migratory lives?

Investigation of that teak bed soon became the Jalan Jati project—named after a street in Davis’s garden. Immersing it, burying it, turned it into a metaphor of death—or better, put it in a suspended state between life and death (the ‘soul’ of the bed made to await proper ascension, perhaps). Burying the bed also returned the object to the earth, acknowledging it as a ruin—which the ‘found’ teak bed was, essentially. The buried bed curiously recalls a passage in Book 1 of Aristotle’s Physic, which finds Aristotle contemplating the essence of things, by way of the argument put forth by the materialist philosopher Antiphon. If a man were to bury a bedstead in the ground, says Antiphon, and if the rotting wood were to take root and throw out a shoot, what we would find resting in the soil would not be a bedstead, but wood. The form, then, may undergo external transformations, but the matter endures as the intrinsic ‘nature’ or physis of the thing.

For Antiphon, what endures throughout the many transformations undergone by substances in general in their exist (not only but the whole of human cultural life) is in fact their material physis. The nature of the bed is that which persists while undergoing modifications, such as the arrangement of the wood into a bed.4 Aristotle refutes this (in the same manner in which he refutes the arguments of the Pre-Socratics in general). When we speak of the ‘nature’ of something, we mean its formal properties rather than its-performed matter. Form in the title or goal, which governs the physis of natural substances. Contrary to Antiphon, physis is nothing other than the movement of things into their natural forms. Antiphon’s example allows Aristotle to demarcate the superordinated physis of over nature over human craftsmanship or culture, the essential over that which is imposed by man. Nature (in and as form) is primary, culture (and custom, but also matter) secondary.

In turning to DNA to geographically locate the source of the wood, the Migrant Ecologies Project was, as it were, returning to the ‘ide’ (nurture) beneath the geographical circulations—the multiple endpoints or ‘telos’ of form. For there is a way in which we can think of DNA as the concrete expression of matter beneath surface form. Another way of saying this is that DNA is more materially ‘real’ than matter itself, the ‘depths’ of DNA release preferred matter as surface form. Embracing ‘concerned explorers,'
curious collectors, daughters of woodcutters, miners of memories and art by nature, the Migrant Ecologies Project asks questions about migration and ecology. The series of woodprints and woodprint collages by Lucy Davis, Together Again (Wood Coll.) 237 cm. (times?) of nature.

It is also a shifting of scales (again, notice the miniaturization of the stool-wood used in the first image. Our experience and response in front of this image differs from that of the specimen-stool. The image has us looking up at a tall tree, reproducing or literalizing Davis’s original gaze in the Bukit Timah Nature Reserve in Singapore. We do not need to be too sacrilegious here, that tree keeps a yearning for transcendence, our primal longing for ecstasy (from ‘désir’ 1 to stand outside oneself’). And it is the tree that occasions this. ‘An ancient peoples knew, trees were epiphanies of a hidden force. Linking earth and heaven, they served as numinous touchstones to the sky.

Any sort of transcendence for the viewer, however, is mediated by the way we are moved between ‘specimen’ and ‘realistic’ views. Moving between these woodcuts is also a shifting between distance and closeness, alienation and being, forgetting and remembering. It is also a shifting of scales (again, notice the miniature stool in the ‘Chinese stool tree’ print) that asks us to think of different kinds of time: the time of natural history versus tree time, clock time versus the time (times?) of nature.
Natural classification had always presumed that there was an order to the world, and that this order could be found. Aristotle was the first to devise a natural classification that truly reflected the essence of different forms. Setting out the basic rules of taxonomy, he held that the taxonomist must pick out particular characteristics of each of nature’s creatures, and consider which and how many of these characteristics it shares with other creatures. Linnaeus extended the Aristotelian method in the 18th century, and, via the approach of binomial nomenclature (e.g. *Vitis vinifera*), gave it greater rigour. His method allowed the vast numbers of specimens coming into Europe from far-flung parts of the world, such as South America and Oceania, to be located—and made intelligible—within an ordered system. Voss Linnaeus’s kingdom began to represent the great bouquet of all-embracing phylogenetic tree. The classes and orders were the thinner branches, the individual species the twigs. Laid out before us was a graphic summary of evolutionary history.

And yet, Linnaeus classification does not tell us everything—and may not even tell us all that much. One thing it does not tell us, for instance, is how organisms may exhibit polymorphism—the ability of a single organism to take multiple forms. We might speak of a polymorphic tree that takes on a form for the forest, another for the open ground. Many plants, in their own evolutionary lineages, have independently evolved the form of the tree, each but achieved freedom in its own way. And what if, despite the tens of thousands of tree species that have been identified, we still do not know of the many others that exist and continue to proliferate in the forests of the world? Are there other aspects of true life not captured by taxonomy? Though it allowed us to gain some traction on the vastness of nature, what if natural history collecting of the 18th and 19th centuries merely provided us with a photo—quantitatively and qualitatively—of what is out there?20 Nature history: less rigorous certainty than rueful dream.

It is the gap between the woodcuts that allows us to start asking these questions. It lets us, ever so slightly, breach that screen of natural history. Gap but maybe also interval, perhaps even caesura and cut. Walter Benjamin’s opposition between *Erfahrung* and *Erlebnis*, in contrast, refers to the bits and pieces of memory that cannot be fully incorporated, and that can break through into consciousness. It refers to a non-personalised experience that reveals the non-ground of time. *Erfahrung* belongs to allegory—that fired term of Benjamin’s—and works towards the destruction of the naïve organic. Only notice that most natural history collecting is, in fact, re-collecting. Collecting and representing this or that specimen is both a remembering, of a chosen object, and a forgetting: of the many others that exist and continue to proliferate in the forests of the world? Are there other aspects of true life not captured by taxonomy? Though it allowed us to gain some traction on the vastness of nature, what if natural history collecting of the 18th and 19th centuries merely provided us with a photo—quantitatively and qualitatively—of what is out there?20 Nature history: less rigorous certainty than rueful dream.

The god of sacred boundaries in Roman religion was Silvanus, deity of the outlying wilderness, and historically the natural boundaries of the Roman republic were drawn by the margins of the study- mented forests, which in ancient Roman law had the status of no one (belonging to no one). The forests were in fact commonly referred to as the *lucus*, or ‘place of no one’ [...]. City and forest were thus rigorously set off from one another.25

Something of the primordial relation between the city and its ‘outside’ (lucus) reappears, I think, in periods of heightened consciousness over urban space, as took place in 1950s and 1960s Singapore. Historian Loh Kah Seng has powerful argued that urban kampung fire, and the individual species that surrounded these natural disasters, added the state’s resettlement of so-called kampung (villages) ‘squares’ into public housing in these decades.26

**Burial mark the coming-into-being of societies. Robert Pogue Harrison tells us: ‘In order to plant the genealogical tree and accrue the place of residence under the auspices of god, burial ceremonies were necessary. Through burial of the dead the family defined the boundary of its place of belonging; existing itself quite literally in the soil, or house, where ancestral fathers lived underground. Humanity is bound to those funeral rites.’**

Society and civilization took root at the edge of, and in distinction from, the forest. Making a clearing: we appropriated the forest to construct human institutions. For Giambattista Vico, who sought to recover the poetic wisdom of the first ages, every clearing in the forest was called a house, in the sense of an eye. Vulcans came to work with giants in the first forges, and in these forests to which he had set fire, he fashioned the first weapons, which were spars with burn tips. Making a clearing in the forest allowed him to observe in the open sky the direction from which Jove sent his hosts.19 The juxtaposition of specimen and realistic trees in Davis’s woodcuts alludes, I think, to these two primordial views of the forest: looking horizontally at the trees around a clearing or looking vertically up at the sky. The ‘else’. Harrison writes, ‘was the original site of our theologies and cosmologies, our physics and metaphysics, in short, our “contemplations”.’ The temples of the sky were the first tables of science.’24 Cities were founded by opening an asylum in the clearing. Those who entered the city boundary took refuge from the forest, which became a frontier against which civic and institutional space was defined. Such was the case with Rome: *The poem of sacred boundaries in Roman religion was Silvanus, deity of the outlying wilderness, and historically the natural boundaries of the Roman republic were drawn by the margins of the study-mented forests, which in ancient Roman law had the status of no one (belonging to no one). [...]. City and forest were thus rigorously set off from one another.*

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"Allergicy will make cuts in natural-historical time."
Juxtapose his argument next to Lim Whee Yuan’s After the Fire (Bukit Ho Swee fire) (1966), one of the many Nanyang woodcuts that Davis looked at as part of the Jalan Jati project.35 Lim’s woodcut is ghostly. We see the charred remains of several wooden houses, their timbers the only things left behind. Even the sky seems stained with a fiery red. The sanctity of the destruction complicates our sense of scale, we take a second or two to adjust our eyes, as though finding our visual footing. It is interesting, perhaps cruel, that a few trees remain: scarred and burnt, they cry to the sky and hint at a possibility that some individuals, maybe even a community, might survive this disaster (the Bukit Ho Swee fire of 25 May 1961 razed more than 2,932 squatter houses and left 16,000 persons homeless). In a related essay (independent of the Migrant Ecologies Project), Davis has asked of ‘the demands that trees make upon us,’ and in this terrifying, apocalyptic woodcut, trees stand both before and behind us.36 They serve as reminders of where we have come from and as insibl harbingers of a world to come.37

Notice how the area that Lim depicts is also a clearing; destruction is also tabula rasa.38 This opening in both space and time recalls earlier moments in the country’s natural history. Though most of the jungle in Singapore had been cleared by the early 19th century, many 1930s and 1960s artworks, I would argue, contain memories of this original clearing and destruction.39 It is as though, in the 1930s and 1960s—a time of intense urbanisation and resettlement—many in Singapore needed to recollect the original forest, in order for ‘identification’ to begin.40 We need to romanticise the lost forest, not dwell in such xylol nostalgia. If anything, the woodcut medium—the resistance involved in carving the woodblock, the physical effort involved in printing—contributes to the print’s layered, embodied sense of time. Lim’s woodcut, I would argue, figures the internal edges of the city (notice the fences), and alludes to the fact that keeping residents were either disciplined (by reversing them in public housing) or pushed farther from the city’s interior. The latter group became further marginalised, ousted from a land that had once been their own.41 In Lim’s woodcut, a solitary man appears in the middle distance. It is hard to tell if he is walking toward or away from us. He seems to be picking up remnants from the fire and adding these to the load of wood scraps on his back. The man resembles the figure of a ragpicker or recycler—known in Singapore as the karung guni-man—which was also curiously the role Davis inhabited in rummaging through old junk shops, looking for pieces of old wooden furniture. ‘Allegory attaches itself to the rubble,’ as Benjamin once said.42

One gradually realises that the film, to a large extent, is about the quest for knowledge and its disruption. The layering of objects and stories, however fruitful, is also (and more seriously) a layering of time. Erasure is simultaneously forgetting and remembering. We might look to 19th-century natural history writings to understand this dialectic of memory and erasure (or better, memory as premised on erasure). A lot of these texts mix personal reminiscence with memory of another sort: nature functions as an externalised and collective form of memory, a remnant of and mnemonic for what were, for these writers, now inaccessible recesses of the biological past.43 At one point in his book, Wallace had been in South America before his journey to the Malay Archipelago.39 On the way back from South America to Britain, the ship he was on, carrying thousands of his specimens, sank. Wallace survived, but not his specimens. The episode shaped his subsequent work; specimens became burdened with mnemonic meaning. Literary historian Cannon Schmitt explains: Wallace’s memory of loss turns out to be a meditation on the loss of memory. As so often in his work, what had seemed assured, solid—pinned insects, skinned
cal understanding of evolution. After the Muna journey, the Migrant Ecologies participants pondered: conventionally hierarchical coloniser–colonised relationship, and allows the film to break out of a narrowly teleological traveller, she then allows the tables to be turned on that initial, confident view. Such reflexivity surpasses a Positions of ‘civilised’ and ‘savage’ have been abruptly reversed. ‘Did the teak “use” humans to colonise areas of Indonesia in the same way as the Banyan “uses” birds to colonise

European ‘hothouses’ and ‘flower-shows’ where ‘we gather together the finest flowering plants from the most distant vegetation of the tropics’, with their promise of breathtaking, colourful beauty. He mentions the effect of visits to displays, botanical gardens, book illustrations. Quite astonishingly, he seems to be acutely conscious of the way

Though Wallace affirms many of the assumptions commonly held by members of his social class in his time—for example, the necessity for ‘higher’ races to civilise ‘lower’ or more ‘childlike’ races—there are other moments in his writings that trouble these same assumptions. Immediately following a sentence about the ‘identity of relation’ between parent and child, civilised and savage, in The Malay Archipelago, his record of travels undertaken in the

Now the tables were turned upon me, for I was to these people a new and strange variety

A few years before I had been one of the gazers at the Zoolos and the Aztecs in London. A few years before I had been one of the gazers at the Zoolos and the Aztecs in London. A photo in a related series, The Secret Life of Forest Products, shows an abandoned Bugis boat house: (the Bugis boat itself a remnant of what was once a thriving mode of transportation, run by this ethnic group). Looking at this scene, these fast-rising, hardworking Bugis would probably consider Muna a ‘sad, horrible place’, not unlike ‘scenes from gold mining towns that have gone to waste because there’s no more gold’. Decline viewpoints are familiar to those looking from the city onto the countryside (only recall that this perception of a timeless, unchanging, and backward countryside was what Gustave Courbet transposed in his 1839–1840 (1850) trilogy of paintings)!

Despite Wallace’s acuteness of the way nature has been turned into spectacle by the late 19th century, the Malay Archipelago

southeast Asia. The complicity is also an ecological one: an overharvesting of timber that led to deforestation. One might say that the island and its inhabitants in the midst of this long decline. We see a felled tree in a secondary forest clearing; small-scale loggers gathered on a timber–filled truck, wooden fishing boats, a new, imported (and importantly, faster-growing) strain of

The last thing we want to do is indulge in mournful (pitying) nostalgia. To what extent did Muna in the Asian ‘miracle’ of the 1980s and 1990s was premised on the environmental degradation of much of the Southeast Asian region. Recall that our teak bed dates from the 1950s—the beginning of the boom period of teak commodity production. But this history of an early ‘boom’ and later ‘decline’ can itself be questioned. For in looking at the photographs in Scenes from an Island after a Timber Boom, the last thing we want to do is indulge in mournful (pitying) nostalgia. To what extent did Muna woodcutting and logging families benefit between the 1950s and 1980s. It would seem that the reopening of the Indonesian economy to international trade, after a period of protectionism and political instability. The numbers tell part of the story: by the
mid-1970s, forest products accounted for close to 10 percent of all Indonesian export earnings.53 Yet, as is now well known, during the Soeharto years a mere handful of tycoons, one of whom, Prajogo Pangestu, came to control more of the world’s tropical rain-forests than any other individual.54

Logging and timber processing were the preserve of large private concerns dominated by politically-connected ‘timber tycoons’, one of whom, Prajogo Pangestu, came to control more of the world’s tropical rain-forests than any other individual.54

Villagers in Muna, in other words, would have benefited little from whatever ‘boom’ took place from the 1970s to 1980s, with conditions improving little in the decades after. About 10 years ago, villagers on the island were allowed to grow a small portion of teak for their own consumption and use. But this was only a tepid concession by the state, which has held a lock on forest use for about 350 years—the Dutch, then Indonesian governments from Sukarno to Soeharto Bambang Yudhoyono. We need to look a bit more closely at this long and intricate history of forest control and contestation.

In Indonesia, as in much of Southeast Asia, land control became the basis of state legitimacy with the arrival of European colonisation. From the late 16th century, the Dutch East India Company established itself in the East Indies for trade. On the island of Java, arrangements were made with local rulers, who had their own control over forest areas. Once the Dutch realized that teak wood was valuable for the building of their ships, it led not only to increased demand, but a greater desire on the part of the central authority to enforce restrictions on villagers’ access to teak trees. Only in the second stage of Dutch rule (1808–1945), however, did the colonial state really begin to assert control over the forest. This importantly took the form of a shift from the control of timber and labour to that of land. More precisely, land became the basis of timber and labour control. Boundaries were drawn between ‘forest’ and ‘agricultural’ land, and police forces were established to restrict people’s access to trees and other forest products. A quasi-governmental forest service, created with ‘rights’ to control the land, mapped and rigorously policed the forest.55 Local institutions were phased out by several forest laws, such as the 1870 Agrarian Law which declared that all land that could not be proven to be owned by villagers, individually or communally, was the property of the state.56 Land control was bolted together by a combination of laws and scientific ideology. Scientific methods in forestry and forest management were imported from Germany, and a technical form of species control, based on Linnaean classification, was put in place (‘ideology’, to be sure, is not just a loose word of ideas, but a constraining form of epistemic legitimation).57 Control over forest use across—the determination of forest as state ‘property’—was now tied to control over biological forms. One justified the other. Anthropologist Nancy Peluso writes: ‘Control over forest access—forest products and labour, to “landlords” who controlled forest lands and forest access, as waselloking the entire nature of forest access control. […] Villagers lost forever their free access to the forest, the potential autonomy of forest settlements and important subsistence options.58

Customary rights of access were, in turn, criminalised: long-standing forms of peasant access were now deemed forest theft, encroachment and squatting.59 By the early 19th century, the state had restricted villager’s ability to cut forest for household use and to convert forest lands to agricultural use.60 During his tenure in the Dutch East Indies (1808–1811), Governor-General William Daendels established the first state regulations punishing misuse of the forest. When one was caught, the forest police had inadequate patrols (at least in the early 19th century).61

In the late 19th century, in order to draft the first set of forestry laws, Dutch writers went back to treatises and documents written by Javanese kings. But if Javanese kings did not ‘own’ land in the Western sense of having property rights (a king merely claimed control of the labour of the land’s residents and a portion of their produce), these Dutch colonialists interpreted the Javanese ruler’s territorial control as being equivalent to Western ownership, to affirm their own case for control. This revisionist interpretation obliterated the more layered system of rights to the land through the centuries, but it did not change the fact that the Dutch colonial state was essentially forgotten, even the long-standing relationship between peasants and the land.

The Javanese had relied on stories to make sense of their relation to the forest, long before the arrival of the Dutch. Legends spoke of aristocrats who left the peace of their kingdoms to confront enemies of both spirit and flesh in the forest. In these quest mythologies, evil turned out to be no more than part of the quester’s self; what was asserted and performed was the self’s sovereignty. That these stories oppose cleared, cultivated, safe space to wild, primitive, and dangerous space makes them resemble stories from medieval Europe, in which a knight proves himself by vanquishing evil in the forest, in order to return to, and be worthy of, the love of his lady in the castle.62 One could, quite fancifully, compare the journey taken by the Migratory Ecologist Project to the ones in these pre-colonial Indonesian tales, insofar as the former also started from totalitarian states and conquered them. But our group had a different quest, which lay in the search for the origin of the teak wood, via the ‘proof’ of DNA. These pre-modern stories were eventually replaced by a newer one—that of the desire on the part of the Dutch to protect and maintain the forest. Yet such environmentalist efforts to conserve the forest, rather than ameliorating the destruction endemic to capitalist industrialisation, ironically played a part in capitalist control.63 Conservation and acquisition became entwined: the Forest Service’s conservation function was used to argue for state acquisition of watershed areas. Both land and species controls were accompanied by a litany of colonial production and conservation objectives.64 Claims for the ‘protection’ of the forest, in other words, were used to assert and legitimise control. (We will see this recurring in the late 20th and early 21st centuries.)

The turn towards conservation in the late 19th century coincided with an expansion of private contracts: between 1865 and 1874, the number of private concessions increased from 7 to 17, with private companies felling some 51 percent of the annual teak cut.65 Land holdings were increasingly privatised. There was also, at this time, a rewriting of laws and official policies and the ‘freeing’ of labour to work for wages on agricultural plantations. In 1865, the Ongebruikbaarbos (a system of compulsory forest labour in forest districts) was abolished in favour of a free labour system.66 But this meant that...
workers were made dependent on the land—ironically, they now had to pay rent for land that once belonged to them. This shift derived from the short British occupation of Java from 1811 to 1816. Following Lieutenant-Governor Stamford Raffles declared that forest workers should be subjected to the same land taxes as all other peasants. Rather than paying land rents in cash, however, the wages of forest workers were to take the form of tax remissions. One advantage of the new system, for the government, was the willingness of the people...

...in emergencies...to lend their own buffaloes to assist those of the government in dragging heavy timber, which could not be removed otherwise without great expense [sic], while their children at other times watch and attend the cattle belonging to the government...  

In other words, this was a voluntarism that was in fact coercive. Raffles created a system for putting all the resources of forest settlements at the immediate disposal of the government, at a cost less than one-third the potential cost of wage labourers hired to cut and haul the wood. 70 On top of that were punishments and fines for firewood collection, charcoal manufacturing, woodcutting to build new homes, and grazing cattle in the forest (often the same animals used to haul timber). Peluso writes, ‘the state effectively evicted people from the source of their subsistence.’ 70 Dutch forester W. Buurman’s temporary system, introduced in 1873, was another instance of voluntarism subjected. After a forest area was cleared, local cultivators were taught to clear the rest of the land and plant teak seeds in measured rows. Between the rows, planters could grow agricultural crops for one or two years. Landless peasants sought temporary access to land through this system. Reforestation labourers who succeeded in replacing a new forest tract were rewarded with access to other newly opened forest tracts. By 1912, some 60 percent of reforestation was done by temporary access policy saw the rise of a new kind of forest-dependent rural proletariat. 43 When Dutch researchers came to reclaim communal land, some lay down, crying out ‘Kanggo’ (I own it). 44 Others cut teak despite Dutch efforts to guard the forest. Saminists refused to pay taxes and fines, refused to accept wages, refused to leave rented or communal land when their leases expired, and refused to participate in the rituals of village reciprocity and the feasts that accompanied them. ‘I own the land—holding peasant people know what their own, they chantded, to the puzzlement of Dutch authorities. Only around 1905 did the state begin to worry about the Saminist movement, and tried to exile its leaders and confiscate protesters’ land and possessions. 45

Another more ‘passive’ form of resistance has involved stealing teak for subsistence use. Measures taken to evade forestry officials have included: muffling saws with rubber (to prevent discovery while sawing in the forest), burying timber under cultivated fields (approximately one meter below the surface, with crops planted above them), double-boarding a house, which allows the householder to sell off the inside or outside walls without making the change obvious to patrolling foresters; tipping forest police more generously when faced with inspection (or distracting forest police by having a young woman flirt with them); storing “welfare” programmes without informing them. The will of the people was rarely, if ever, seriously taken into account. This shift derived from the short British occupation of Java from 1811 to 1816. Following Lieutenant-Governor Stamford Raffles declared that forest workers should be subjected to the same land taxes as all other peasants. Rather than paying land rents in cash, however, the wages of forest workers were to take the form of tax remissions. One advantage of the new system, for the government, was the willingness of the people...

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teak in cursed sites, and repeating stories of divine retribution to scare off outsiders.78

During the Muna visit, Castleman took several photographs of trees that were inflicted with cuts—‘wounds’ of sorts. These trees were located in protected konservasi (conservation) forest, which is given this designation ostensibly to protect the water table.79 Yet Muna peasants have been counter-appropriating trees for their own use. By inflicting cuts on a tree over a course of time, no individual can be found guilty when that tree falls—unusual but creative way for a community to reappropriate a piece of their ‘property’. When we look at the tree wound portraits, then, we are also seeing—are called to remember—this long, subterranean history of peasant resistance to forest control.

A study of native land rights was conducted in all residences of Java from 1867 to 1869, just before the introduction of the 1870 Agrarian Law; this was a moment of attempted ‘knowledge’ of the forest. In Tegal in central Java, for instance, the names of the first forest clearers were remembered and these individuals were considered the first founders. Clearing began by marking a border and dividing the land among the participants according to individual agreements with those who granted permission to clear; with boundary markers, each person marked their share. By the time of the survey, clearance-derived rights—included the right to sell, pawn and rent the land. As long as the clearer tilled the land, he or she maintained hereditary rights to it.80 Governmental boundaries eventually co-opted these individual ones: in the late 19th century, the Forest Service began to mark more and more permanent boundaries around forest and agricultural lands, as the police tightened access.81

What interests me are these boundary markers, for there is a way that we might read the wounded trees as boundary markers of sorts. Each represents an internal boundary or threshold of sovereignty within the forest.82 Though these photographs were taken outdoors, Castleman staged them with a black cloth background and controlled fill-in lighting, such that the photographed trees look like it is indoors, in a studio. Suspended between inside and outside, these trees become properly exceptional.83 Taking the photograph also involved suppressing all interfering elements in the surrounding environment—sunlight, mud, wind, water, noise.84 Such suppression—an ecological suspension—gives the photograph its formal rigour and conscious artificiality. In choosing a vertical composition (appropriate to the portrait genre), Castleman also anthropomorphised the tree—thus undoing the wound to one on a human body. Such depictions of wounded ‘persons’ might recall French Revolutionary paintings of wounded martyrs, for example Jacques-Louis David’s Death of Marat (1793), or better, his Death of Bara (1793), because of the sketchiness and indeterminacy of this suffering body out in nature.85 Both works by David were calculated assertions of Republican/Jacobin power.86 In looking at Castleman’s photos, too, the viewer is not simply asked to contemplate the picture, but to perform a ‘cut’. This cut, this incision, I suggest, is one of sovereignty. What we are seeing is less a wounding by the state than a self-inflicted wound that tries to reassert sovereignty deep from it.87

I want to probe, more deeply, the possible sources of such violence. For anthropomorphising the photos brings nature into the social field: the idea of a wound, for one, is implicit in sustainability discourses. Leerom Medovoi writes:

To ‘sustain’ something can also mean to endure or withstand it, or even, as the Oxford English Dictionary indicates, to ‘undergo, experience, have to submit to (evil, hardship, or damage; now chiefly with injury, loss as objective, formerly also sorrows, death); to have inflicted upon one, suffer the infliction of.’

Instead of suggesting the support of life, this definition implies a suffering among all edges of life. In attempting to speak to sustainability is to consider not the damage that we are trying to eliminate, than how much injury
we are able to withstand or endure. Peluso has remarked how current state forest practices have changed little since the time of the late Dutch colonial state—might that be a prolonging, a sustaining, of the colonial wound? The main change in the New Order period (1966–1998) was that the State Forest Corporation became a quasi-development agency, responsible in part for the well-being and economic development of forest villagers. Because village development projects were developed by central planners without input from either field personnel or forest villagers, they were not geared toward the specific needs and constraints of particular villages. This contributed to their ineffectiveness. Peluso asserts that in the worst cases, villages have been militarised. Not only are they distinct sites of more intense policing, such militarisation has been tied since 9/11 to First World concerns over global terrorism. Yet developmental programmes, though ostensibly directed towards the peasantry, are violence by other means. Developmental programmes have been, in essence, an antipolitics machine—neoliberal in the manner in which they are explicitly designed to defuse questions of politics, in favour of individual and community betterment.

An example of one such developmental project has been the Lore Lindu National Park, which occupies a significant portion of the Central Sulawesi highlands. It was designated as a park at the World Parks Congress hosted by Indonesia in Bali in 1990, when the New Order regime wanted to demonstrate its environmental conscience. The Ministry confirmed its official park status in 1993 and border demarcation began in earnest. The problem was that the conservation law, which regulates national parks, depends upon a cultural imaginary that began in the late colonial period: legal-institutional environments were created through which commodity production and trade could efficiently proceed, the market now governed by the nation rather than 'soft', liberalising measures, such as various forms of voluntarism and welfare. Neoliberalism needs a cultural imaginary to displace capitalism or eliminate poverty, he sought to use disciplinary means to create habits of industriousness, rendering them permanent minors who would require the ongoing tutelage of a disciplinary state. But rather than seek to displace capitalism or eliminate poverty, he sought to use disciplinary means to create habits of industriousness, substituting it for the incentives of the 'self-regulating' market failed to supply. He sought to make the poor more productive and less threatening to the state.

What intensified over the course of the 19th century was the degree of paternalism, from the attempt to govern through existing social forces to the assertion of paternalistic control. But a sense of official responsibility for the welfare of citizens was present in the Dutch East Indies throughout the colonial period. The Dutch East India Company believed it was its duty to civilise the 'natives'. This self/other binary conditioned paternalistic intervention: colonial administrators in the early 19th century thought that they should abandon the attempt to change native ways, and focus rather on restoring the harmonious village life of an 'intrinsically Eastern community'. The late colonial policy of restoring Javanese villages grounded itself on a fiction of the innateness and authenticity of native custom (adat). Village rehabilitation, Jan Bremen writes, 'pointed the way back, not to tradition, but to the illusion of one, which was first evoked in the course of the 19th century in order to be modelled into reality.'

There is a way that the double movement of immersion and distance that figures throughout the works in John Flot’s speak to that ethos of a ‘will to improve’, this desire to restore native autonomy (though I am not suggesting that the works merely do so). Seeing close is akin to evaluating native age—so what is authenticity if not the concept of time and distance? We leave art for the reality of the world. This is the governing dialectic of the project, I think, one ‘rooted’ in memory and historical time. In this manner, the formalism and rigorous abstraction of the tree–wood–photographs does not take all to the side of distance and detachment, as much as put the diacritical of immersion and distance in play. We emerge into the ‘law’ of beauty, if only for the drama of irresolution to crackle and return.

Many of Castelmaurou’s photographs thankfully avoid a keycdned humanity—most—the pictures of tree house construction—project the strength and resilience of the Muna villagers. There is a temptation in looking at these photos to want to better these people, to help them in a (neo)liberal manner. Perhaps it is only natural for us to want to improve their condition, as natural as it is for us to feel pity. (How easy it would be if we could click a ‘donate’ button on an international aid website.) But the stronger of these photographs, I contend—such as the one of three ‘healing’ (shaman) with his family brimming through a doorway behind present us with people who do not need, nor want, our help. Neoliberalism took hold in Indonesia after the fall of Suharto, with neoliberal forms of ‘aid’, development and investment normalised. But neoliberalism—which promotes market liberalisation and financial deregulation—depends upon a cultural imaginary that began in the late colonial period: legal-institutional environments were created through which commodity production and trade could efficiently proceed, the market now governed by the nation rather than ‘soft’, liberalising measures, such as various forms of voluntarism and welfare. Neoliberalism needs a cultural
dimension to operate: the market is essentially naturalised (compare the metaphor of ‘enclosures’ and forest ‘clearing’). In the late colonial period, the metaphor of ‘native’ ‘difference’ was used as a cover to pursue expansionary economic policies; in the late 20th century, this became the rhetoric of ‘Aboriginal’ difference, pitted against the evil spirits of the West. Indonesia’s forests, marked and bounded in the colonial period, have, I would argue, reconstituted as ‘new enclosures after 1965’ (with Subharte, market operators were brought to the fore). These ‘new’ enclosures indicate a return to more advanced stage of capital accumulation, rather than the assumed progression from more ‘ primitives’ to a more ‘advanced’ stage of capital accumulation, as Marx believed.105

Stratified adjustment imposed by the IMF encompassed neoliberal policies of trade liberalisation, fiscal austerity and privatisation in favour of the construction of global capital markets. It involved the ‘creative destruction’ of overprotected national industries— for example, eliminating the monopolistic marketing role of APKINDO (Asosiasi Pan- Karya Induk Nusantara or Indonesian Wood Panel Producers Association), and placing the Reformation Fund under the budget of the Ministry of Finance. But if the broad subordination of state to market allowed natural resource management and control to shift away from the state, that brief opening of decentralisation was soon shut.106

Encroachment on the political forest also took place in logging licences: for a brief period after 1997, there was a boom in the issuing of district-level permits under the decentralisation laws. But this effort was soon closed down—recentralisation was couched in terms of the central ministry’s concern over the ‘misuse’ of forests and the ‘lack of control’ resulting in an illegal logging ‘crisis’. In 2002, President Megawati’s administration launched a campaign to shift away from the state, that brief opening of decentralisation was soon shut.105

Structural adjustment imposed by the IMF encompassed neoliberal policies of trade liberalisation, fiscal austerity and privatisation in favour of the construction of global capital markets. It involved the ‘creative destruction’ of overprotected national industries—for example, eliminating the monopolistic marketing role of APKINDO (Asosiasi Pan- Karya Induk Nusantara or Indonesian Wood Panel Producers Association), and placing the Reformation Fund under the budget of the Ministry of Finance. But if the broad subordination of state to market allowed natural resource management and control to shift away from the state, that brief opening of decentralisation was soon shut.106

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The paper that was used for the woodcut is part of the circle/cycle that binds Widjaja and Diana. Sumatra and Singapore, and the two are always gestured to than dealt with. Governance and corruption are smokescreens that legitimise recourse to selective, centralised control. The poor have been displaced to a nether zone: exposed to the vagaries of the market, they are outlaws in their own land—what Giorgio Agamben has called the figure of homo sacer, someone who is killed but not sacrificed.107 Agamben has called the figure of homo sacer, someone who is killed but not sacrificed.107

Fig. 9: A traditional arborealist or wood spirit doctor) examines a teak sample from the bed. Photograph by Shannon Lee Castleman.

In a way, neoliberalism is anti-thermal to national development. Whereas Subharte’s New Order authoritarian state at least tried to legitimise by creating jobs, alleviating poverty and industrialisation, non-liberal globalisation implies little or no constraints on the plunder of resources, no more nationally distributed benefits from development, with the burden of responsibility of poverty shifting—shockingly—to the private sector—meaning nowhere. The poor have been displaced to a nether zone exposed to the vagaries of the market, they are outlaws in their own land—what Giorgio Agamben has called the figure of homo sacer, someone who is killed but not sacrificed.107

Governance’ and ‘corruption’ have become flip sides of the same discursive coin: on the one hand, inter-national financial institutions have changed their tune, from the crude anti-statist of the 1980s to support for ‘good governance’ since the 1990s.106 On the other hand, there is a concurrent rhetoric blaming Indonesia’s developmentills on corruption, including illegal logging—but corruption, vague and abstract, is always more gestured to than dealt with. Governance and corruption are smokescreens that legitimise recourse to selective, centralised control. The poor have been displaced to a nether zone: exposed to the vagaries of the market, they are outlaws in their own land—what Giorgio Agamben has called the figure of homo sacer, someone who is killed but not sacrificed.107

Jala jat-risk-burys largely on, maybe even probes deeply, the complexity of corruption (and what is corruption but internal riot and decay). One of the woodcuts in the Together Again series has the multi-billionaire—and second richest person in Indonesia—Ekki Widjaja smiling as he poses for a photograph for the launch of his Corporate Social Responsibility project of 2007. More than any ordinary tycoon, however, Widjaja is the head of Suma Max, one of the largest conglomerates in Indonesia, which is still engaged in clearing rainforests and destroying peatlands. Suma Max and the rest of the Indonesian palm oil and paper continue to be used in a wide variety of products around the world, from toilet paper and shopping bags, to chocolate bars and doughnuts. The two Suma Max mills that form part of its pulp and paper division, Asia Pulp and Paper (APP), have caused more loss of rainforest than any other company on the island.108 Since 2005 or so, the company has used sustainability rhetoric to mask its activities: one advertising campaign touted the line ‘APP cares’. On top of the irony that the company that was used for the woodcut is part of the cycle/cycle that binds Widjaja and Diana. Sumatra and Singapore, and the two are always gestured to than dealt with. Governance and corruption are smokescreens that legitimise recourse to selective, centralised control. The poor have been displaced to a nether zone: exposed to the vagaries of the market, they are outlaws in their own land—what Giorgio Agamben has called the figure of homo sacer, someone who is killed but not sacrificed.107

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Diana. Also known as Artemis, Diana was the huntress and protectress of wild animals and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and the goddess of childbirth. Worshipped during antiquity as the great womb of the world, she haunted the outlying forests beyond the bounds of human dwelling. She was the wild creature, she could at once hunt them down and take their lives. She was matrix and mother, the goddess of the moon and
by his own hounds, who cannot recognise him. The mythological story is, on a simple level, about the cruel vindictiveness of a goddess. But this is no ordinary tale—something more is at play in Diana’s chastenment: if Diana represents the forest, what exactly leaves her naked? We turn back to Ovid, to find the following description: she had painted over every object’s shade, and the sun was at equal distance from either goal. If Diana became visible to human eyes, it was with exceptional poetry; lost in her natural cover at the critical time of the day, noon, when the forest’s shade was at its minimum. Her habitat proper is the dark side of the visible world. Her role is none other than the forest’s umpire, its protector secret.**

Like Actaeon, the Migrant Ecologies Project was ‘chastised,’ in their case for wanting confirmatory evidence that their piece of wood came from the forests of Southeast Sulawesi. The judgment was also probably a reaffirmation of the authority of Western science and the ‘magic’ of DNA. But Actaeon was punished not simply for seeing a goddess physically naked, but for the insight ‘that all things, whatever their formal natures, arise from a more primordial unity.** Perhaps the deeper insight of Jules Faye, then, is that DNA evolution and shamanistic vision are of the same kind.** Actaeon was punished not simply for seeing a goddess physically naked, but for the insight ‘that all things, whatever their formal natures, arise from a more primordial unity.** Perhaps the deeper insight of Jules Faye, then, is that DNA evolution and shamanistic vision are of the same kind.**

There is a cost to every insight. The female deer’s leavering, I suspect, is of the limits of scientific knowledge and possession, that is also (remarkably) an acknowledgment of death. The tasks sculptures of forest deer in some of the Muna houses now begin to make sense: they are reminders of the ghosts of biodiversity on the island, not-dead species over which these teak trees continue to reign. The members of the Migrant Ecologies Project made a final, appropriate gesture before they left the island: they hung one of their necklaces, with a bored hole, on a teak tree. Here, perhaps, was the essence of life: not DNA but metabolism—the interplay of different molecules to form a series of self-renewing chemical feedback loops that go around and around. Tudge, 46.

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**Endnotes**

Further references to ‘natives’ will not be bracketed with quotation marks. Antipathy towards the period term’s pejorative connotations will be assumed.


4 Tudge, 46.


8 In a similar vein, think of the way nature is not outside of, but constitutes, culture; nature is in the process, the very production of, the commodity. For this method of analysis, see Fernando Coronil’s excellent *The Magical State: Nature, Money, and Modernity in Venezuela* (Chicago: University of Chicago Press, 1999).


10 Roof wants to understand how the workings of figurative rhetorics—metaphor, narrative—torque “scientific” production of, the commodity. For this method of analysis, see Fernando Coronil’s excellent *The Magical State: Nature, Money, and Modernity in Venezuela* (Chicago: University of Chicago Press, 1999).

11 I was very clear I was working backwards from a stool, and not going to find some kind of pristine originary tree. Roof, 14.

12 Similarly, Colin Tudge contends that DNA cannot survive by itself; it cannot function at all except in dialogue with cytoplasm and all that goes on in it. The essence of life is not DNA but metabolism—the interplay of different molecules to form a series of self-renewing chemical feedback loops that go around and around. Tudge, 39.

13 For the Linnaen method, see especially Philip Sloan, *The Gaze of Natural History*, in *Inventing Human Science, eds. Christopher Fox, Roy Porter and Robert Wokler* (Berkeley: University of California Press, 1995), 112–151; and the *Cambridge Classical Texts and Commentaries: Aristotle, Physics*, trans. W. Charlton (London: Oxford University Press, 1970), Book II. 1. 193a1-193b7. The magical state is, on a simple level, about the cruel vindictiveness of a goddess. But this is no ordinary tale—something more is at play in Diana’s chastenment: if Diana represents the forest, what exactly leaves her naked? We turn back to Ovid, to find the following description: she had painted over every object’s shade, and the sun was at equal distance from either goal. If Diana became visible to human eyes, it was with exceptional poetry; lost in her natural cover at the critical time of the day, noon, when the forest’s shade was at its minimum. Her habitat proper is the dark side of the visible world. Her role is none other than the forest’s umpire, its protector secret.**

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James Rodway, Cannon Schmitt, The William Kentridge reference might be more than fortuitous, or too cleverly invoked. Davis has told me that this is not the longer version of the film that was shown at the Oberhausen Film Festival in 2012.

Walter Benjamin, ‘Central Park,’ In Europe, ‘[with] respect to the medieval social order that was reorganising itself on the basis of new feudal and religious institutions, the forests were foris, “outside.” In them lived the outcasts, the mad, the lovers, brigands, hermits, saints, lepers, the maquis, fugitives, misfits, the persecuted, the wild men.’ Ibid., 61.


Harbingers have its etymological roots in the Old Saxon ‘herbing,’ meaning ‘shelter.’

Diana interviewed Lim Yee Kwan for the film project, during which he remarked that this particular woodcut was a collage of different scenes of the fire’s aftermath. Email communication with the author, 28 May 2012.

Schmitt interestingly points out that for Wallace, unlike Darwin, ‘[e]ncounters with savages initially provide some contingent exceptionality of the savages in order to retain an unbroken evolutionary continuum. In some ways, particularly in his response to contingency, Wallace was more Darwinian than Darwin himself.’ Interestingly, although the Muna islanders rejected Wallace and evolutionary science (as briefly explained to me during the visit by Davis), Wallace, after the episode in which he lost his specimens, might have become closer to Indonesian animism and shamanism. For that loss was in a sense an initiation, that provoked in him an acknowledgment of death (of his specimens and of other species). For Wallace and biography, see David Quammen, The Song of the Dodo: Island Biogeography in an Age of Extinction (Oxford: Oxford University Press, 1997), especially chapter 2.


Cheow Xin Yi, ‘She went all the way to Sulawesi… To see where her bed came from,’ TODAY, 1 April 2012, 6–7. Though these quotes are attributed by reporter Cheow Xin Yi to Davis, Davis contends that they have been decontextualised and thus misrepresent what she was trying to say. For me, Cheow’s misrepresentation characterises the Indonesian Ministry of Forestry’s broad claim justifying modernisation: ‘The logging industry is a necessary stage on the road to development; environmental destruction and social costs are downplayed. Without forest concessions most of the Outer Islands would still be underdeveloped.’ For this spokesman, logging supports related industries. ‘…It creates the necessary conditions for social and economic development.” For Wallace and biogeography, see David Quammen, The Song of the Dodo: Island Biogeography in an Age of Extinction (New York: Scribner, 1997), especially chapter 2. For Wallace in general, I find Michael Shermer’s intellectual biography, In Darwin’s Shadow: The life and Science of Alfred Russel Wallace (Oxford: Oxford University Press, 2001), more convincing than some of the other biographies in the recent Wallace revival.


53 :


While in 1966 the share of timber in export earnings was only 0.6 percent, by 1973 its share had risen to 18 percent. Figures from Peter Bougard, "The Long Goosefoot" Trends in Forest Exploitation in the Indonesian Archipelago, 1800–2000," in Mafloë Nèto, 219.

C.V. Barbier, N.C. Johnson and E. Håkland, Breaking the Logjam: Obstacles to Forest Policy Reform in Indonesia and the United States, 1935–1945, DC: World Resources Institute, 1995; 69–70. (See also, of Apeldoorn and Marion Ouwens, Introduction, Mafloë Nèto, 6.)

"This paragraph is largely drawn from: Naomi Peluso, 86 Forests, Poor People’s Resource Control and Resistance in Java (Berkeley: University of California Press, 1993), 23–45.

Ibid., 64.

Ibid., 63.

Species controls imposed by Indonesian foresters include classification systems, tree tenure and marketing restrictions.

Ibid., 61. Daendels appointed bosgangers, or subdistrict forest managers, to oversee logging, replanting, teak wood collection, and the guarding of trees the year before they were to be cut.


Peluso, 55.

Ibid., 54.

The following paragraph draws from Peluso, 55–58.

Kaufman, 187, 1, 188. Cited in Peluso, 58.

"Under the new, formalized forest laws, villagers were required to purchase wood for housing—an option that few could afford. The limited quantities of timber available for private purchase were overpriced for the poor. Non-governments' participation in the extraction and trade were underway. From the government's perspective, anyone taking wood from the teak forests without permission was a thief." Peluso, 57.

Ibid., 58.


Ibid., 77.

Ibid., 77–79.

Ibid., 79.

Ibid., 69.

Ibid., 70.


Peluso, 205–206. Shannon Lee Castellan relates how at one point during their Muna visit, she stood on a tree stump and her camera suddenly broke down. Moving away, it started to work again. When she returned to the tree, the camera again broke down. (See also, of Tjeenk Willingh & Zoon N.V., 1933), 55. Cited in Peluso, 64.

One of Castellan's Jln Jkt photos shows an informal rubbish dump right beside two wounded trees. There is an air of haggard beauty to these four forest, in that it 'belongs' to the people yet at the same time disarmed or abjected.

Peluso, 59.

Ibid., 62.

I have adapted this idea of boundary markers from Steven DeCaires, "Boundary Stones: Giorgio Agamben and the Field of Sovereignty," in George Agamben: Sovereignty and Life, ed. Matthew Calarco and Steven DeCaires (Stanford, CA: Stanford University Press, 1999), 65–69. Sovereignty's evolutionary role in sovereign law, creating a regular "frame of life," which the law preserves and codifies but does not instantiate. The political distinction between inside and outside, inclusion and exclusion, structures the basic logic of sovereignty itself, insurmountable as sovereign maintains a boundary not between the legal and the illegal, both of which participate fully in the legal order, but between the legal and the non-legal, that is, between the lawful and the unlawful, between the citizen and the exile." (53)


Shannon Lee Castellan, email communication with the author, April 2012.

The indeterminate natural landscape in Dutch-of-vous might be read as paradoxically both an evacuation and intensification of sovereignty. For Death of Bara, see Thomas E. Charny, Embodying Photos: Making Art for Revolutionary Russia (New Haven, CT: Yale University Press, 1995), 179–180.


In 2000, during the post-Suharto period known as reformasi, anthropologist Tanja Li attended a seminar on illegal logging at US Agency for International Development (USAID) office in Jakarta. In attendance were members of donor agencies, consultants and others concerned with the fate of Indonesia's forests. The guest speaker was Suripto, former secretary-general of the Forest Department, who, with regard to the problem of illegal logging, spoke about the need for "execution." But the striking thing was that he meant this in a literal way, that the 10 or so bosses of the main illegal logging syndicates should be executed. No one brought up the fact that it was difficult to find these elusive and well-protected heads, whereas the frontline "illegal loggers" were ordinary villagers. Suripto was proposing to exercise the sovereign's right to kill in order to protect life. Tania Murray Li, "Shifting Nature(s) of 'Development': Growth, Crisis, and Recovery in Indonesia's Forests," in State of Exception, trans. Matthew Calarco and Steven DeCarioli (Stanford, CA: Stanford University Press, 2008), 48–53.

Ibid., 56.

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Peluso, 183.

Ibid., 149.

Ibid., 153.
The endless deferral of the promise of development to the time when the ultimate strategy is devised and intervention intended to deliver some “badly needed” goods to a “target” population. It comes as no surprise that was conceived not as a cultural process [...] but instead as a system of more or less universally applicable technical cultures as abstract concepts, statistical figures to be moved up and down in the charts of “progress.” Development continues to be for the most part—a top-down, ethnocentric, and technocratic approach, which treated people and of development as a necessary attempt at grasping the larger system of power and control. ‘Development was—and the ways the experts prescribed. Communities envisaged as sites for improvement became sites from which claims accumulate while others are impoverished remains firmly off-limits.’ Li, 276–277. For the history of development/developmentalism, see Arturo Escobar, Encountering Development: The Making and Unmaking of the Third World (Rotterdam: Comparative Asian Studies Program, 1980), 42. For 21st-century enclosures, see Ashley Dawson, ‘Introduction: New Enclosures,’ in Dawson, ed., New Enclosures (New York: North Point Press, 1999). For example, although a new Basic Forestry Law was passed in 1999, superseding the 1967 law, control over resource extraction did not shift to the regions. Decentralization would have allowed local communities to regain rights to the forest, communities ended up not regaining any territory. By 2007, a mere 0.3 per cent of the forest area was under community tenure. Marcus Colchester, Juntos en el Bosque ( Bogor, Indonesia: CIFOR, 2005), 40. Cited in Gellert, ‘What’s New with the Old,’ 50.

Lucy Dive, email communication with the author, 30 May 2012.

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Lucas, 96.

Ibid., 106.

Ibid., 29.

Kolko, Confronting the Third World, 96, 119ff).

Ibid., 49.

Gellert, ‘What’s New with the Old,’ 50.

Tudge tells us that there are people who grow up in forests who recognise trees from the feel of their leaves, their scent and the texture of their bark, ‘as readily as any of us recognise our cousins and our aunts.’ In Brazil these indigenous experts are called mates; they sometimes disagree with specialist botanists—and are often right. Tudge, 27.


Harrison, 29. Intriguingly, Diana/Artemis seems to date from the Paleolithic period, when hunting was the primary means of obtaining food. ‘Artemis is simply one embodiment of the Great Goddess, a fearsome deity who was so beautiful she was admired in her beauty, but was also implacable, vengeful and demanding. Artemis herself is notorious in exacting sacrifices and bloodshed, if the rituals of the hunt are violated.’ Armstrong, 38. For Artemis’ possible Paleolithic origin, she cites Walter Burkert, Greek Religion (Cambridge, MA: Harvard University Press, 1985), 149–152.

Ibid., 3–4.

Tudge, 27.

Harrison, 25.

Ibid., 26.


Li, 174 and Peluso, 222.

WHO PUT THE WOOD IN THE WOODCUT?: VISIONS OF THE FOREST IN THE WOODWORK OF DIE BRÜCKE AND JALAN JATI

KATE KANGASLAHTI

“The simplest medium, a woodblock is enough [...] Every cut with the knife is a slice into the innermost self. This wood is truly flesh of thy flesh.”

- Rudolf Adrian Dietrich (1918)

The graphic technique of the woodcut is one of the most widespread artistic practices, common to cultures geographically and temporally distant from each other. As a relief method of printmaking, images must be conceived negatively: the woodblock is carved along the grain with a sharp implement and the parts which are to be printed are left level with the surface, while the areas which will appear ‘white’ must be cut away. A thick ink is rolled over the remaining plane of the block, and a print is obtained either through the use of a mechanical (perpendicular) press, or by hand, pressing a sheet of paper to the block or vice versa. The earliest of the printmaking methods, the woodcut offered its practitioners two distinct attractions: a reproductive capacity—the possibility of producing multiple prints from the same block—and accessibility. As the words of German literary figure Rudolf Adrian Dietrich (above) suggest, the woodcut was the simplest of the print mediums: it required only wood, a cutting tool, ink and paper. In East Asia, where the development of the final constituent element, paper, occurred as early as the 2nd century BCE in China during the Han dynasty, official and devotional texts and illustrations printed using wooden blocks can be traced to the 7th century CE. In Europe, where paper became widely available some 700 years later, woodcut prints began to appear in France and especially Germany only in the early 15th century (although it is likely that carved wooden blocks had been used much earlier in the printing of textiles). The circumstances in which woodcuts were made and the motivations of its practitioners differed across cultural and historical divide, as too did the visual nature of the prints they produced. The defining characteristic of the technique, however, remained constant: the physical act of cutting the block, or, to reprise Dietrich’s terms, the slice of the knife.
Written in July 1918, Dietrich’s words celebrated the renaissance of the woodcut as an artistic practice in the early 20th century, primarily at the hands of a group of Expressionist artists. His reference to the 20th-century woodcut, although not in the form collectively known as ‘Dit Briket’, who, in confiding with the woodcut’s knife’s blade, sought to expose their innermost selves.1 The latent sense of violence which underscored Dietrich’s remarks paralleled the brutality of the era in which he wrote. The First World War had yet to come to an end, a conflict in which deadlocked armies of Europe had flattened the forests of Belgium and northern France, and ruthless industries used those fields with deep trenches—much as the artists, whose work Dietrich described, gauged the wooden block. But whereas war in industry took the form of violence, felling trees and men alike, the sacrifice which the woodcut demands is partial. Intimate to its creation is an act of force in which only the wood’s flesh is physically penetrated; the artist’s exposure is symbolic. It is, furthermore, an act of two parts, for in order to obtain the block or plank upon which a cutter works, the living tree itself must first be ‘cut’ or felled. To make the boards out of which the final woodprints both conjured the spirit of the wood’s grain were to Lu Xun the physical evidence of the artist’s relationship to his material and the dialogue out of which the final print (literally) surfaced.2 The ‘wooden aesthetic’ which Davis collected and ‘Humpty-Dumpty style’ put together,3 as he discovered, ‘this wood is truly flesh of thy flesh’, then Davis desired doing violence unto it. The impetus for the Project’s material-investigation originated with a deep appreciation for the form and content of the 20th-century woodcut, although not in its German Expressionist form but in its mid-century Singaporean/Malayan incarnation. Beginning in 2009, Jalan Jati’s ‘wooden aesthetic’ uncovers first the material sold for woodblock printmaking was a dilemma for the artist: in her home of Singapore and deforestation in Southeast Asia. Yet therein lay what Davis’s emphasis on the wood’s materiality also ties her practice to a wider material and performance of the wood’s life journey in reverse, from object to timber to tree. Against the wider context of deforestation and the illegal timber trade, the woodcut is conceptually and materially recast as woodprint. Davis’s focus on the wood’s materiality also ties her practice to a wider material history of the woodcut, specifically its 20th-century revival. In crediting the Singaporean/Malayan print movement of the 1950s and 1960s with sparking her interest in the medium, the artist has recognized the inspiration those artists drew from the Modern Woodcut (or Creative Print) Movement in China, under the spiritual patronage and intellectual guidance of the literary ideologue Lu Xun.4 He notably advocated an ‘esthetic of vigour’ (li zhi mei qi) which would emerge only when the artist worked directly on wood, wielding the engraving knife on the block just as he might have applied the brush to pen to paper. Slips of the knife and the visible traces of the wood’s grain were to Lu Xun the physical evidence of the artist’s relationship to his material and the dialogue out of which the final print (literally) surfaced.5 He in turn had been inspired by European artists whose work he had begun extensively reproducing in China in 1939, the German Expressionists.6 Some 10 years before the form of Lu Xun’s woodcut publications, the artist Max Pechstein had articulated the Expressionists’ preference for a direct engagement with the medium. ‘It was and still is fundamental’, he began to work with the same tools with which the woodcut was cut, without making a preliminary drawing on the wood. [... ] the [knife] realises the idea.7 An art-historical exegesis of Jalan Jati’s ‘woodest aesthetic’ uncovers first Lu Xun’s ‘esthetic of vigour’, then what Dietrich, in his native Germany, might well have deemed to be Expressionism’s ‘Holzgedanke’—a feeling or sentiment for the wood as the material. In the context of the current exhibition, might we not then recover Expressionism’s formal contribution to woodblock printing and reconsider its abiding appreciation of material, with some reference to the ecological implications driving the Migrant Ecologies Project? We will then set the woodcut reveal about their own usions of nature, their consciousness of, or feeling for, the forest, and its wider cultural meaning.”
The very first European woodcuts, which coincided with the first reliable domestic papermaking process, were single-leaf sheets most commonly depicting religious figures or themes. Woodcutters, exploiting the possibility of generating multiple prints from a standard block, sold inexpensive images for veneration to the wider populace at fairs and markets. These early designs were simple, even naive contour woodcuts. The vast majority of the block’s surface was carved away to leave only fine wooden ridges, which printed as black on a white page and closely resembled the initial surface effects. The surface effects inherent to the wood’s grain, which would later consume 20th-century graphic artists, were not developed. The large areas of white may rather have been intended for hand-colouring, mimicking the visual character of contemporary illuminated manuscripts and stained glass windows.*

Following the success of Johann Gutenberg’s movable type press in the mid-15th century, more sophisticated forms of woodcut illustrations began to appear alongside printed texts. In Germany, by late that same century, some of the most talented designers of woodcuts were running their hand to the technique, and with great eloquence. Michael Wolgemut, Hans Baldung, Lucas Cranach, Albrecht Altdorfer and Albrecht Dürer, most notably, were drawn not only to the creative potential of the new medium, but also to its reproductive advantages: the sale of multiple prints offered both welcome income and more widespread recognition of an artist’s work.12 The rise in compositions became increasingly complex—Dürer’s contributions to the medium are generally considered to be the apogee—the designs bore little relation to the world’s grain, which would later consume 20th-century graphic artists, which the artist had in all likelihood made for transfer to (or even directly onto) the block, but which were then cut out by a highly skilled craftsman, the Drücker or Aufdrücker (Chinese and Japanese printmakers developed a similar system).13 The woodcut suffered a decline in popularity as a vehicle for artistic pursuit in the mid-16th century, following the spread of intaglio printmaking techniques. Linen engraving and later etching on metal plates were considered to be more sophisticated means of aesthetic expression, offering greater flexibility, richness and variety of tone. Displaced from the realm of high culture and its ‘collectibles’, the simplicity of the woodcut nevertheless continued to appeal as a source of popular and popular imagery. Achieved with inexpensive, readily available materials and without the use of acid or a press, the participation of a professional printmaker, woodblock printmaking continued to be actively employed for the dissemination of biblical and folk stories, as well as for street banners, pamphlets and broadsides. When, in the early 20th century, artists—and most notably the German Expressionists—revived the medium, its potential for an artistic endeavour, much of its lure lay in its dual ‘accessibility’: a simplicity of means, and a means of popular appeal. Artists welcomed the opportunity to work independently, refusing the division of labour of the early woodcut workshop— they designed, cut and printed their own blocks. Their experimentation with every stage of the printmaking process in turn gave them a better sense of the material with which they worked and a greater respect for their craft, from which there emerged a richer utilisation of the wood itself. For artists intent on changing both what constituted art and the artist’s role in society, an ambition which grew in the aftermath of the First World War, their embrace of the woodcut signalled a desire to spread their ideas more widely and to garner support for their activities.14 As Gustav Hartlaub, author of the first comprehensive study of Expressionist printmaking, suggested in his Neo-German Print, the woodcut today […] wants to fly, a broadsheet fluttering downward from a spiritual height to a vast populace with arms outstretched. 15 The ‘new’ woodcut flew even further than Hartlaub anticipated. For Lu Xun and his contemporaries, and for the Singaporean and Malay artists who later emulated their Chinese forebears, the example Expressionism set proved seductive. It provided a model whereby artists were able to express progressive social and cultural values in a revitalised visual language that was nevertheless deeply rooted in indigenous (be it Chinese or German) popular culture. 16 From this perspective the woodcut’s very aesthetic—a gaudy line, uncom plicated forms cut from the block and the strong contrast of black on white—has also come to be associated with social and political agitation. 17

The Expressionist movement was born in the German city of Dresden in the summer of 1905, when four young architecture students—Fritz Bleyl, Erich Heckel, Ernst Ludwig Kirchner and Karl Schmidt-Rottluff—abandoned their studies to form an artists’ collective. They were joined by Emil Nolde and Max Pechstein in 1906, and from 1910 by Otto Mueller. The name they chose for themselves, Die Brücke, ‘the Bridge’, was symbolic of their ambition to overthrow the established order of art (and life) and to create a means by which man might present into the future, and transcend the mundanity of his existence.18 Their choice evoked Friedrich Nietzsche’s description of the human condition and its paradoxical nature: ‘What is great in man is that he is a bridge and not a goal’.19 Man is at once bound by the material realm and yet yearns for spiritual fulfilment (in Nietzschean terms he is part animal, part Superman or Übermensch), which he reconciles only by forging a link or bridge between the two. For the artists of Die Brücke: however, the positivism of contemporary bourgeois society precluded spiritual attainment and led rather to its stagnation. This ‘lack of spirituality’, as summarised by the group’s long-time supporter, Hartlaub, ‘promised itself in art as a more imminent reality, as a resume summary of representa-tion—on other words, as the basic naturalism of Impressionism, to which the future Expressionists stood opposed.’20

* Figs. 1 and 2. Anonymous (German), St Catherine (beheading), c. 1480–50, woodcut with hand colouring, 77 mm × 80 mm. British Museum, London. (© The Trustees of the British Museum.)

![Image 400x538 to 602x772](image-url)
United by their desire for human and artistic renewal, the group issued a manifesto in 1906 which spoke to their goal and a belief in its realization through the power of youth, understood not chronologically, but as an ideological opposition to the status quo.

With faith in progress and in a new generation of creators and artists we call together all youth. As youth, we carry the future and want to create for ourselves freedom of life and of movement against the long-established older forces. Everyone who reproduces the medium's technical procedures […] releases energies for public expression and it was meant to be issued as a broadside. But the group's subsequent dedication to woodblock printmaking also testified to its conviction, as Kirchner suggested, that the medium's 'technical procedures […] released energies in the artist that remained unused in the much more lightweight processes of drawing or painting.'

The credit which Kirchner gives to the influence of early German masters is not borne out by the stylistic characteristics of Die Brücke's very first woodcuts: his claims, while not wholly apocryphal, were certainly retrospective. Initial prints made by the core artists of the group following its formation, such as Kirchner's *Reclining Female Nude*, of 1906 (Fig. 4), bear rather the hallmarks of the decorative linearity widely associated with fin-de-siècle Art Nouveau and its German incarnation, the Jugendstil. *Reclining Female Nude*, 151 mm. British Museum, London (© The Trustees of the British Museum).

**Art was no longer to imitate nature but to express an authentic vision of the artist's personal experience.** Die Brücke's investment in the woodcut as the medium most suited to the pursuit of their objective was made evident by the form of the manifesto (Fig. 3). Car in wood by Kirchner, it was produced by a technique long used as a vehicle for public expression and it was meant to be issued as a broadside. But the group's subsequent dedication to woodblock printmaking also testified to its conviction, as Kirchner suggested, that the medium's 'technical procedures […] released energies in the artist that remained unused in the much more lightweight processes of drawing or painting.'

The woodcut encouraged the simplification of forms and developed the idea of a new, abstracted language which the artists believed better conveyed their profound emotional and spiritual engagement with life. ‘No medium can express the spirit of the dead better than woodcuts,’ Kirchner wrote, and his print *The Spirit of the Dead Thinks of Her or She Thinks of the Spirit of the Dead* (Fig. 5), for example, the pale amorphous shape excising a tightly curled female nude—like the ‘white of an egg’ in which she, the ‘yolk’, lies in the only element of the composition which the artist emphatically defines. Encouraging linear precision, his forms—including the ‘spirit’ of the title, a dark-toned figure to the upper right—are silhouetted, loosely described by fine marks and scratches rather than deep cuts. The artist has printed the plate by hand twice, the second time inking the entire block in a lighter colour, including its lower, carved areas. The uninking marks made by his chisel and other indentations have printed likewise. Further obscuring the image, *Reclining Female Nude*, 151 mm. British Museum, London (© The Trustees of the British Museum).

Kirchner credited himself with the group’s embrace of woodblock printmaking in the chronicle he wrote of Die Brücke’s early history, *Über uns Brücke*, in 1913. Kirchner brought back the woodcut from southern Germany, which he visited, inspired by the old master cuts in Nuremberg. *The Spirit of the Dead Thinks of Her or She Thinks of the Spirit of the Dead*, 151 mm. British Museum, London (© The Trustees of the British Museum).

The artist was referring to a trip he made to the southern city in 1903 where, in the collections of the Germanisches National Museum, he had studied not only 15th- and 16th-century prints but also Albrecht Dürer’s original printing plates, for which he held greater fascination. The images on paper revealed only that which was left behind, narrow ridges which printed as fine black contours on a smooth white surface. The blocks themselves—worm-eaten, darkened by age and deeply bitten by the knife—betrayed the true vehemence of the work, faithfully retaining the phases of struggle between the formal concept and the resistance of the wood. The appeal of Germany’s early artistic heritage was manifold. For a group of artists united in their pursuit of bold, emotionally laden forms, *“Proportions follow from the emotion out of which the work arises, so that it may be presented in the most forceful manner.”* Die Brücke’s identification with Germany’s Gothic and Early Renaissance periods also reflected their rejection of naturalism and refinement in art as the outcome of an industrialized, materialist age. By the act of carving the block, the artist felt an affinity with the medieval craftsman and thereby sought identification with the artistic product of which was perceived as an uncorrupted era.

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**Inspired by the unconventional techniques of both Guuguap and Munch, from 1907 the artists of Die Brücke gave up the finer-tipped greener and burin for the knife and chisel, and their carving of the woodblock became more roughly-hewn.** The accidental qualities of the wood, its pronounced grain and uneven surfaces, were incorporated into the design, culminating in a raw, almost violent appearance which seemed to convey the physical process of the knife slashing the block. *In Erich Heckel’s woodcut *Bulls* (1910), for instance, the animals themselves and the area (arena) in which they
appear to confront one another, have been cut out using only a gouge or a chisel, revealing an irregular printing surface which at once exposes the grains of the wood and marks the cut block and applied varying degrees of force to the paper during printing. In so doing, he ensured that traces of the gouged area are not just the remaining surface, appear in the final print as a blend of bold blacks, half-tone greys and ‘blind stamping’, the process whereby un-inked cuts in the wood show as embossed marks in the smooth paper.

Heckel chose his material with increasing care, and the stimulation he and his fellow artists subsequently drew from the wood’s expressive potential, the way in which its unique structural nuances quickened their imagination, came to define Die Brücke’s printmaking. Gustav Shiffer, one of the group’s long-time supporters, noted in 1918 that Heckel went so far as to vary his choice of wood according to the possibilities offered by the distinctive grains of different species. It often appealed to him to take advantage of the nature and quality of specific woods, in the way that he carved the weather-beaten face of an old man in a piece of oak wood which had lain in a swamp for centuries.36 The historian did not specify which of Heckel’s prints had been cut into the ancient, reclaimed oak, but his words serve just as well to describe Emil Nolde’s quintessential Expressionistic woodcut, Das Prophet (1912). A brooding face emerges out of the darkness, seemingly torn from the very recesses of the block, but only with a few gouges of the chisel. Nolde’s work itself echoes the jagged, harrowed features of the aged prophet, whose hollow, melancholic eyes almost resemble knots in the plane. The dramatic use of black and white contrast further wed form to content, suggesting the blinding light of a vision which emanates from the darkness, and the solemnity of the visionary whose enlightenment is destined to be ignored. The rough-hewn aspect of the final print belies the cut block and applied varying degrees of force to the paper during printing. In so doing, he ensured that traces of the gouged area are not just the remaining surface, appear in the final print as a blend of bold blacks, half-tone greys and ‘blind stamping’, the process whereby un-inked cuts in the wood show as embossed marks in the smooth paper.

As Nolde’s remarks suggest, there was a certain level of consciousness amongst Die Brücke’s artists that by engaging in woodblock printmaking they were creating art from a piece of nature, in the eyes and knots of the planks upon which they worked, in the fibers of the wood were stored the memories of many years. The art critic Paul Westheim, in his 1912 publication Das Holzschnittbuch (Das Holzschnittbuch), cast this engagement in explicit terms by concluding that the tree’s growth, as recorded in the smooth paper.

The group’s respect for the block’s independent existence—in its grain, texture, irregularity and shape, and above all, its resistance—proceeded from a new interest in the nature and treatment of materials which had emerged in German discourse in the late 19th century, beginning with Gottfried Semper’s 1860 treatise on the preconditions of Style in the Technical and Tactile Arts, Or, Practical Aesthetics. In a conventional artistic hierarchy oriented towards idealism—that order of things against which the Expressionists so expressly revolted—wood ranked lowly. Compared to the pure quality and intemporal beauty of stone, wood’s fragility and irregularity of shape were understood to limit the artist’s scope for invention. Semper, to the contrary, was the first to argue that art should confront these disadvantages, exploit them, and make a virtue of necessity. He recognised that the limitations of the medium were ‘an important factor in artistic design as its advantages’ and in fact provided the ‘richest source of new formal devices.’ The artwork’s form, its style, should be governed not simply by historical function, but rather by the artist’s free and creative response to the innate properties of the medium. In the artist’s studio, ‘nothing [was] to be altered or foisted, which would be a distortion of the material, “which rather demanded of the artist a decisive declaration of materials.”’ In Semper’s characterization of a ‘wood-style’ were seen the seeds of Die Brücke’s Holzgefuhl. The artists’ feeling for the wood as a raw material was decisively declared by their roughly worked cutting, which revealed rather than effaced, leaving both the traces of the knife and the wood’s grain perceptible, touchable to the eye.

The group’s embrace of an arboreal aesthetic and medium signalled its rejection of the academic tradition and its ‘marmoreal’ ideal.35 In taking the knife to the block, in privileging a ‘wooden aesthetics’, Kirchner, Heckel, Bley, Schmidt-Rottluff, Nolde and Pechstein claimed a more potent historical mandate, the spirit of which was most clearly articulated in a contemporary article written by Wilhelm R. Valentiner, appearing the work of Schmidt-Rottluff.

Since the oldest timberwork architecture of the Teutons, since the wooden sculpture of the German Gothic and Renaissance, since the art of the woodcarver of Diem’s time, the German artist has preferred to use wood. It is as if the structure of the block was full of the owner’s spirit, with its knotty, manubhage form that nevertheless submits to the passionate carving of the artist, who, by their very collective name, both proclaimed their ambition to serve as a link between the material and spiritual worlds and sought to overthrow those ‘long-established older forces’ that stifled art in the name of its refinement, their own emotional states.

As Simon Schama, among others, has persuasively argued,
the myth of a northern forest—beheading—race—a nose of noble, noble, noble barbarians—first emerged in the account of the Roman historian Cornelius Tacitus circa 98 CE. Germania; or Concerning the Origin and Situation of the Germans.49 Tacitus chronicled the resilience of the northern peoples who had long resisted Roman subjugation, children of a terrain bristling with forests (silvis horrida),’

46 woodland warriors clad in animal skins and tree bark who were hardened to discomfort. Eschewing, again, the arboreal versus the marmoreal).48 Publishing world of Roman stone and its corrupt Church (once beauty, stood opposed to the moribund, deforested idea of a free and natural arboreal nobility, whereby the Germanics, or Concerning the Origin and Situation of Germany beyond the northeastern frontier of the Roman empire and the mythical site of origin for Germany, 50 the population and the growth of urban centres. 51 The few ancient broadleaf forests that survived the conflicts of the 16th and 17th centuries soon succumbed to the profitability of a burgeoning timber industry in the early 18th century. 52 Kirchner's vision of the uncivilised world of 'timbered virtue' which survived the conflicts of the 16th and 17th centuries. 53 Four orange-coloured figures playfully wade amongst the reeds along the lake's shore, entirely at ease in their nudity as they enjoy the unspoilt natural environment. 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Kirchner’s artistic response to his wartime experience was different from the others’. Having enlisted in 1915 as an ‘involuntary volunteer’ and serving as a driver for an artillery regiment, he, like Pechstein, suffered a breakdown. He was discharged the same year as unfit for military service and admitted to a sanatorium at Königstein im Taunus. Hesse for his convalescence, where he began working once more. He cut his, the physical and mental stress of battle left him unable to paint, although he continued to make prints. Ernst Heckel avoided the frontline by volunteering for the medical corps, but still witnessed first-hand the mud and slaughter of the ‘Flanders War’. Stationed in Belgium with the Red Cross under the direction of the art historian Walter Kausche, he was able to continue to work for the war’s duration. While he avoided depicting scenes of battle altogether, the wounded soldiers or long-suffering colleagues who inhabited Heckel’s stifling interiors and gloomy landscapes reflected the torments of the war, alien in an oddly detached way. In Man on a Plain (1917), a lone figure, presumed to be Heckel, stands with his back to an empty field, the myriad trestles of his block foreground suggested by the way the artist has roughly scored the surface of the block with horizontal marks of the cutter’s tool. The man, his trunk a dark void against the landscape, appears to stand apart from his surroundings, even as the desolation clearly press on his state of mind. The sense of psychic turmoil is heightened by his looming forehead, to which he raised his hand in a gesture at once protective and suggestive of pain and very different from the playful abandon of Heckel’s Moritzburg scenes. The carved areas of the sky which rain down upon the figure further underscore his discomfort. Whether it is memory or the pain of the present which haunts him is unclear, but placed before a denuded plain, the sense of oppression is palpable.

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wildeness. Despite the mournful resolution, however, thought of his former home still intruded, as the artist wrote in his

Die Brücke's investment in, and revival of, woodblock relief he felt having escaped wartime Berlin and his apprehension of the urban violence of its post-war uprisings.

Kirchner's "Winter Landscape" like his print "Firs in the Taunus Range" and a large number of Expressionist woodcuts depicting the natural environment: performs a kind of artful abstraction. The artist is inspired by the same organic forms—trees and the landscape as a whole. But what gives the material he uses—the woodblock—newly created form and function. But to what extent, to prolong the analogy, is the artist's relationship to the wood/s parasitic rather than mutualistic? Or, to what extent, to return to the question out of which the Migrant Ecologies Project grew, what, if anything, distils from it, will, the cutting of the woodblock, from the act of force by which that block is obtained, the felling or cutting of the tree? While the Expressionist depiction of the landscape and Die Brücke's embrace of the woodcut's organic aesthetic forms of the timber objects she collected, compelled the artist to forego the knife she initially intended to wield, to preserve the wood's flesh and to use its imprint to recreate the original tree, as it may have been. The historic, material

Davis's acute consciousness of the presence of the original tree in the timbers. While the Expressionist exercised

The Print in the Western World: An Introductory History

**Endnotes**

4. Dietrich was at the time reviewing an exhibition devoted to "The Expressionist Woodcut", held at the Galerie Neue Kunz Hans Goltz in Munich from 15 June to 15 July 1918.
6. I take the expression ‘multiple arboreities’ from the Migrant Ecologies Project’s description of the network of movements and projects: "stories about trees, stories about people and their relationships to one another, stories of what happens when fingerprints meet wood-grain, stories of how plants, trees and forest materials have ‘used people’ to migrate across continents and how these stories and plants have then taken root in foreign soil.” See Jian-Jiu "Teak Road", "The Abrasive Roots: An Introduction to the History of Woodcut", in Rose-Carol Washton Long, ed., The New German Print, Art and Artists of Twentieth-Century China (Berkeley and Los Angeles: University of California Press, 1996), 89–93.
9. Tang notes that to Lu Xun and his contemporaries, the ‘refreshingly defamiliarising elements of the modern / urban world’ that the ‘modern woodcut’ were in fact inseparable from the principles that they ‘deemed desirable and wished to promote.’ See Tang, 137.
11. For an exploration of both the division of labour which most likely characterised the production of early woodcuts, as well as those questions which remain unanswered, see Alison G. Stewart, ‘Early Woodcut Workshops’, Art Journal 43:3 (1984), 189–194.
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through their membership, while attending Chemnitz grammar school, of the literary club Vulcans, where
the author’s works were widely read.


21 Louis de Marsalle [Ernst Ludwig Kirchner], ‘Seven of Gauguin’s works were shown alongside the works of Vincent van Gogh, the Nabis and other French Post-
22 Robin Reisenfeld dissects the group’s self-identification with both primitive and medieval art in ‘Cultural
23 Ernst Ludwig Kirchner, Black Hat Venus, 1903. 9. For an English translation of Kirchner’s chronicle by Peter Seil, see Ernst Ludwig Kirchner: Art and Society, ed. Stephanie Barron and Wolf-Dieter Dierke (New York: Rizzoli, 1997), 328–329.

24 What little is now known of the usual division of labour in early relief printmaking would, of course, negate Kirchner’s reverence for the plates themselves as revealing the true nature of the artist’s achievement. Such is the technical accomplishment of Dürer’s woodcuts, however, and particularly those 15 from his Apocalypse series (1498), that many scholars have historically suggested that the artist, contrary to contemporary practice, cut his own blocks. See for example William M. Irvine, Notes on Three Durer Woodblocks. Metropolitan Museum Studies 2 (1939), 102–111.

25 De Marsalle, 213. Kirchner was here, by way of illustration (and validation), comparing his own woodcut, ‘Die Künstlerinnen’ (1922), to Louise Cranch’s well-known print (1933) in Frankfurt-am-Main’s Staedel museum.

26 The contemporary critic Paul Westheim noted, for example, the authenticity, spontaneity and purity of feeling which the group attributed to the woodcuts of the 15th century. Westheim, ‘Holzschnitt und Monumentalkunst,’ Das Kunstblatt 3:2 (1938), 42.

27 Paul Westheim, Die Holzstichkunst (Potsdam: Kunstsgraphische Verlag, 1921), 168.


29 For a wider discussion on the re-emerging interest in wood as a national material in the late 19th century see Monika Wagner, ‘Wood – “Primaries” Material for the Creation of “German Sculpture,”’ in New Perspectives on Brücke Expressionism, ed. Christian Weikop (Burlington, VT: Ashgate, 2007), 71–88. Wagner examines the role that organisms and the conception of a German ‘language of wood’ played in Die Brücke’s woodcuttings and wood sculpture.

30 For further discussion of Munch’s technical innovations, see Elisabeth Podeling, Edvard Munch: Master Printmaker: An Exhibition of the Artist’s Works and Technique Based on the Philip and Lyda Rosenthal Collection (New York: W. W. Norton, 1983).


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34 Marit Wernaeck more widely discusses the group’s response to Munch’s work in ‘Die Brücke and Edvard Munch,’ Zeitschrift des deutschen Vereins für Kunstwissenschaft 58:1 (1973) 1980).


38 Paul Westheim, Die Holzstichkunst (Potsdam: Kunstsgraphische Verlag, 1921), 168.


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43 Wilhelm R. Valentin describes the German’s cultural landscape as nationalist symbol had reached something of a climax (and cliché) in the paintings of the 19th-century Romantic, Caspar David Friedrich, and so in considering the work of the 20th-century Expressionists, he argues that it was primarily through their use of wood as a material—Holzgefühl—rather than through their depiction of the woods—Waldgefühl—that artists connected with the forests of a mythical German past. See Weikop, ‘Arborescent Expressionism: an essay in English the joint significances of Holzgefühl and Waldgefühl in terms of the Brücke’s practice. ‘Arborescent’ here extends beyond images of the German forest to include the use of the forest’s material in woodworking and woodcutting. In this Weikop points out that the native landscape as national symbol had reached something of a climax (and cliché) in the paintings of the 19th-century Romantic, Caspar David Friedrich, and so in considering the work of the 20th-century Expressionists, he argues that it was primarily through their use of wood as a material—Holzgefühl—rather than through their depiction of the woods—Waldgefühl—that artists connected with the forests of a mythical German past. See Weikop, ‘Arborescent Expressionism: Myth. Material, Landscape and Memory: The Aesthetics of Coherence and Subversion in Brick’s Woodcut Culture’ (PhD dissertation, University of Westminster, 2005).

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48 Schama, 92–95. Richard Hayman also discusses the resurrection of Tacitus’s Woodlands and Western Civilisation (London: Hambeldon & London), 97–110.


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Jason Geiger discusses these competing interpretations of Die Brücke’s Berlin street scenes as representing the De Marsalle, 213.

L.D. Ettinger was among the first to scrutinise Die Brücke’s complex and belated response to non-Western art. See 64

These words belong to the artist-cum-critic Hugo Lang-Danoli, from his article ‘On Joy and on Material [Von der Freude und vom Material’] in Deutsche Kunst und Dekoration, 24 (1909): 201–205. The periodical was an important German-speaking forum for the applied and fine arts in the early 20th century, as Monika Wagner discusses in ‘Wood—Cut: Background’. Accessed 12 June 2012. http://www.migrantecologies.org/project_


The Contemplation of Islands

Many a milestone in biological thought. David Quammen reminds us—Darwin’s (Orgy of Species) lucidiously among them—owes its existance to the contemplation of islands: ‘the answer to the riddle of evolution was best sought by a study of islands’. Quammen contends; ‘Charles Darwin himself was an island biogeographer before he was a Darwinian’. In The Song of the Dodo, Quammen explicates biogeography, the enquiry into patterns of species distribution, through an itinerary of islands. Of course, in addition to those relatively small land masses that are surrounded by water, biogeography is also concerned with large continental areas. But as he points out, many of the world’s greatest life forms, both plant and animal, occur on islands. There are giants, dwarfs, crossover artists, nonconformists of every sort. […] On Madagascar lies a species of chameleon barely more than an inch long […] On the island of Komodo lurks the gigantic lizard we’ve all heard of, hungry for flesh and placidly nicknamed a dragon.

Islands are ‘instructive because their limited area and their inherent isolation combine to make patterns of evolution stand out starkly, they are like “natural laboratories of extreme evolutionary experimentation.” Singapore has famously been criticized by outsiders, from architect Rem Koolhaas to fiction writer William Gibson, for being like a social laboratory, or worse, an aberrant experiment in capitalism.’ But for the artist or critic based here, to contemplate the city-state as an island may be a little like asking a fish to think about water. The author David Foster Wallace opened his famous 2005 Kenyon College commencement address with a joke on this very aquatic theme:

There are these two young fish swimming along, and they happen to meet an older fish

W O O D A N D W I L L

LEE WENG CHOY
Wallace assures his audience of university graduates, if you’re worried that I plan to present myself here as the wise, older fish explaining what water is to you younger fish, please don’t be. I am not the wise old fish. The point of the film is to present a series of questions and to reveal a meeting-point / For loners and loiterers: / A sense of things reduced—'.

 Watching Jalan Jati is like a strange exercise in peripheral vision— you start by acknowledging the object at the centre of your field of vision, then spend most of your effort concentrating on what’s at the edges of your sight. But I don’t mean this literally; it’s not as if the details on the borders of the screen are of greater interest than what is in the middle. What’s on screen is often layered imagery or thickly worked drawings and sometimes the effect is even saturated or dense, almost woody. In such cases, the result is that when you stare straight at the film, you feel as if you are seeing things folded back on themselves. The film presents something of a regional unconscious—of Southeast Asian ecology—but just as importantly, it calls forth the local unconscious, whether in Singapore, which it attempts to excavate, or in Singapore, which it hints at. The artwork intimates that through a peculiar form of peripheral vision we might obtain a glimpse of these multiple unconscious.

 Davis’s film may take us east into Indonesia and we may spend much of our time travelling and exploring there, but as I’ve suggested above, Singapore remains at the centre of the artwork. Jalan Jati virtually presupposes some understanding of the Singapore condition. Alfian Sa’at’s 1998 poem, ‘Void Deck’, could be, for instance, a part of this underhanging local substrate. Over 80% of the Singapore population live in public housing provided by the Housing Development Board (HDB). In a typical apartment block, residences begin on the second level, while the ground floor is like a strange exercise in peripheral vision— you start by acknowledging the object at the centre of your field of vision, then spend most of your effort concentrating on what’s at the edges of your sight. But I don’t mean this literally; it’s not as if the details on the borders of the screen are of greater interest than what is in the middle. What’s on screen is often layered imagery or thickly worked drawings and sometimes the effect is even saturated or dense, almost woody. In such cases, the result is that when you stare straight at the film, you feel as if you are seeing things folded back on themselves. The film presents something of a regional unconscious—of Southeast Asian ecology—but just as importantly, it calls forth the local unconscious, whether in Singapore, which it attempts to excavate, or in Singapore, which it hints at. The artwork intimates that through a peculiar form of peripheral vision we might obtain a glimpse of these multiple unconscious.

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Or course, a chart is not an actual being, yet this conflation of cartography with flora and fauna in Davis’s film highlights how the use of nature as metaphor is explored and interrogated (a theme to which I will later return).
Anyone who has visited an HDB flat, let alone lived in one, might disagree with this characterization of the void deck as being a ‘vast space’—it certainly is not a very large area. But Allison’s choice of word is precise; it is indeed ‘vast’, but relative to this island of Singapore, which is projected on constantly thinking of itself as small and guarded against openness. A ‘vast’ home can be a comfortable and happy one, but a ‘vast’ mind? The poem, among other things, is a critique of Singaporean inwardness.

Jalan Jati Street 81, Castelman’s 2018 video installation, also elaborates on the Singapore condition. Complementing Allison’s poem, it offers another counterpart and more colourful footnote for Jalan Jati. Jalan Jati takes up the theme of the relative isolation of HDB life, where neighbours usually keep to themselves—the home as an island that ignores the fact that it is part of an archipelago. With HDB flats, usually it’s the front of one building facing the back of another. But Castelman found the blocks on Jurong West Street 81 to be an exception: here, the kitchens of opposing flats face each other. With the help of student volunteers, she approached the residents, and 16 homes agreed to collaborate on the video project. As Castelman explains, she asked residents to allow her to—

...place a camera in their homes so that they can film each other simultaneously for a fixed length of time. The cameras are fixed in the identical positions in windows or balconies that are opposite each other. Residents then film each other [...] The only instruction given is for the neighbours to stand in their window or balcony for the first five minutes of filming. For the remaining 15 minutes they are asked to do as they please. All the while, the camera that records their neighbour from their flat also records the ambient sound and conversations that take place within their own flat. Once the filming has concluded, an event is hosted in the common space of one of the buildings, and all the participating residents share a meal [...] These projects expose a surprising series of funny, idiosyncratic, and even moving vignettes. They allow residents and neighbours to view and be viewed with tacit recognition and even moving vignettes. They allow residents and neighbours to view and be viewed with tacit recognition and permission. They are artworks about neighbours discovering neighbours, looking at each other from across a void.8

Jalan Jati raises the question of what it means to be neighbours, in their window or balcony for the first five minutes of filming. For the remaining 15 minutes they are asked to do as they please. All the while, the camera that records their neighbour from their flat also records the ambient sound and conversations that take place within their own flat. Once the filming has concluded, an event is hosted in the common space of one of the buildings, and all the participating residents share a meal [...] These projects expose a surprising series of funny, idiosyncratic, and even moving vignettes. They allow residents and neighbours to view and be viewed with tacit recognition and permission. They are artworks about neighbours discovering neighbours, looking at each other from across a void.8

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 Wallace and Wood

To get out of the water and back onto land, or rather, islands. It is another Wallace, not David Foster, but Alfred Russel, who is present in Jalan Jati. And it is this Wallace, not Darwin, his co-discoverer of evolution, who is the protagonist of Quammen’s The Song of the Dodo and arguably the quintessential island biogeographer. Wallace, inspired by early travelling naturalists like Alexander von Humboldt and Darwin himself, left Britain for Brazil in 1848, accompanied by a colleague, Henry Bates. For four years, he explored the Amazon rainforest, collecting copious specimens, taking notes and making drawings. Calamitously, on his return home, the ship caught fire and he lost nearly everything, saw part of his diary and some sketches. While in London, despite sustaining these losses, Wallace produced six academic papers and two books. Had his Amazonian specimens survived, Quammen speculates, perhaps Wallace would have stayed in Britain, as did Darwin after his own voyages with the Beagle. But Wallace was in need of more data, as well as adventure and money. So in 1854 he left for the East Indies—what is today known as Singapore, Malaysia and Indonesia. He travelled the archipelago extensively until 1859, when he returned home for good. His book of his experiences, observations and theories, The Malay Archipelago, was published in 1869, and it would become one of the most popular works of scientific exploration.9 In 1879, at the age of 54, Wallace passed away.

In Jalan Jati, Wallace only makes two brief appearances—he figures more prominently in his own works of scientific exploration.10 In 1913, at the age of 90, Wallace passed away. Here is just one example of the total wrongness of something I tend to do automatically and of everything in my own immediate experience supports my deep belief that I am the absolute centre of the universe, the most real and most important person in existence. We rarely think about this sort of natural, basic self-centredness because it’s so socially repulsive. But it’s pretty much the same for all of us. It is our default setting [...] I know that this stuff probably doesn’t sound fun and breezy or grandly inspirational the way a commencement speech is supposed to sound. [...] It is about the real value of a real education, which has almost nothing to do with knowledge, and everything to do with simple awareness, awareness of what is real and essential, so hidden in plain sight all around us, all the time, that we have to keep reminding ourselves over and over. ‘This is water. That is water.’

Wallace and Wood
from the bottom right corner and squarely exists at the top of the frame; the drawing in the background transforms into what looks like the cellular structure of a teak tree. In Wallace’s second appearance, about six minutes into the film, we first see a pale blue map with trees and birds and animals overrunning the islands of Java and Sulawesi, when our naturalist floats by, emerging from this tiny frame and leaning on the right side of the screen, crossing the Wallace line between Borneo and Sulawesi. (This famous line represents a geographical boundary with Asian species on one side and uniquely Australian species on the other.) The image of Wallace that Davis uses in the well-known photograph of him standing with a simple wooden chair. He is holding the top of the backrest with his right hand, and resting his right knee on the seat; his right foot doesn’t touch the ground. His left arm is bent, with his hand on his waistcoat. He has a beard, and is wearing a hat, a dark coat and glasses. It is the only picture of him from his time in Southeast Asia, and was taken in 1862, just as he was about to return to Britain. It was taken in Singapore. The island had been his base for his eight years in the region.1

Nearly it minces into Jalan Jati; we see a found photograph of men standing next to a tree in a teak plantation in Muna. One of them has his right arm straight out, his right palm set against the tree trunk. Davis has spoken to me about how she finds these pictures of men and trees rather curious and funny. There must be a lot of old photos of men—mostly men, I suppose—leaning on tree trunks. My guess is that they strike the pose spontaneously, as if it were the most natural thing to do. She has half-jokingly suggested that these images might be material for a new project. More seriously, she asks, what is the picture of Wallace and his chair, if not part of this photographic genre of men standing with trees? Our man in Muna also had his left arm bent, with his left fist resting at his waist. A tree, of course, can be something great and grand, and can completely dwarf a human. Yet, somehow, by resting your hand against its trunk, it’s as if you can grasp and apprehend the entire thing, as if you could be the frame for the larger life form. Which brings me back to an earlier point about the use of nature as metaphor. Every use of nature as metaphor is also a deliberate or unconscious circumscription of it into our own human perspectives, an act of us continually framing the world. Davis too is not immune to metaphorising nature in her work or paintings, and she delights in the pleasures of symbols just like any other artist. But like David Foster Wallace, Davis reminds us that, “Wood has will. Wood has will.”

So, yes, teak used humans to colonise Southeast Asia. Although when it comes to imposing one’s will on an other, the empires of men have acted with much greater and violent force that any tree or bird or seed. Yet we are also reminded of in Jalan Jati is the eventual and ultimate failure of this colonising and instrumenting will. In The Song of the Dodo, Quammen explains why the extinction of the dodo was significant. He quotes Carl Jones, a Wibawa who runs a bird rescue project in Mauritius, where the large flightless creature was once endemic:

... it was at that moment—or in that era—when [homo sapiens] realised the dodo was gone, that he realised the world was a vanishing place. That he couldn’t just go pillaging and raping … if you think about it, that was a very, very important time in the dawning of human consciousness.15

Weald and Wounds

Thruna in human history has always been defining—for both individuals and communities. And art has always acknowledged this: whether in a novel like Melville’s Moby Dick, in which the inscrutable and deadly ship, the peeling bark of Captain Ahab’s whaling ship, tells a tale that unfolds into an allegory for 19th-century America; or a painting like Picasso’s Guernica, which depicts the bombing of the Basque town by the fascists during the Spanish Civil War. The obverse also obtains: the history of humankind is a history of traumas. The German critic Walter Benjamin once wrote, “There is no document of civilization which is not at the same time a document of barbarism.” Benjamin was a consistent critic of the ideology of progress. In another famous passage, he offered this interpretation of Paul Klee’s painting, Angelus Novus:

His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned toward the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken, or to achieve some_form of closure before the catastrophe catch him up. In his hands he holds a chain of events that chaos has无所谓, and falls, no one is blamed. Castleman photographed these stumps against a black velvet backdrop, effectively removing them from their forest settings, and making

Conservation rainforest areas on the island, so what disenfranchised and impoverished villagers do in the steadily-chop into the same tree again and again, over an extended period of months, slowly, mortality weakening it, so that when the plant finally breaks and falls, no one is blamed. Castleman photographs these stumps against a black velvet backdrop.
them look as if the pictures were taken in a studio. As if they were portraits. With portraiture, the media may vary—it may be paint, drawing, photography or video—but what we’re talking about, usually, is a portrait of an individual person. As a relatively large mammal, we number an unfathomably large seven billion, but, for the most part, we insist on respecting each and every person. In context, the overwhelming majority of us can’t seem to acknowledge trees as anything other than generic specimens. The idiomatic expression, ‘can’t see the wood for the trees’, is ironically pertinent here. With the exhibition Jalan Jati, however, it’s not just the larger picture, but the details that matter. Not only does Castleman’s tree frame the stumps as individuals, their wounds are specific injuries; their traumas define them.

The last scenes of Jalan Jati are scenes of a catastrophe of the sort evoked by Benjamin. As mentioned, it starts with a map of Singapore island. Things happen very quickly. Sailing ships arrive, bringing timber, and soon British colonial architecture is. The chaos of development gives way to the chaos of war, as warships then.

Jalan Jati's portraiture frame the stumps as individuals, their wounds are specific injuries; their traumas define them.

Endnotes
5. See The Artwords section in this catalogue for some stills from the film Jalan Jati.
6. Donna Haraway has written about the ‘god-trick of seeing everything from nowhere’ and the ‘conquering gaze from nowhere’, but at the same time she cautions that there lies a ‘serious danger of romanticising and/or appropriating the vision of the less powerful while claiming to see from their positions’ (see future, 3/36 et al. Women: The Newscritics of Nature [New York: Routledge, 1993], 186–93). Davis contends that ‘the critique of the representation of the other (or anthropomorphic projections) cannot mean that one gives up and does not try to represent. I hope what I’m doing is a kind of critical anthropomorphism: one that doesn’t pretend it’s not a human’s view of a bed or a tree, or a cockatoo, but one that nonetheless draws out the agency of what would otherwise be considered out.

Haraway’s strength is in showing how there can be a two-way dances with companion species. And I think our relations with trees and wood can be called companion-species relations: we think we are the one telling the stories, but trees and wood are also telling their own stories. As a relatively large mammal, we number an unfathomably large seven billion, but, for the most part, we insist on respecting each and every person. In context, the overwhelming majority of us can’t seem to acknowledge trees as anything other than generic specimens. The idiomatic expression, ‘can’t see the wood for the trees’, is ironically pertinent here. With the exhibition Jalan Jati, however, it’s not just the larger picture, but the details that matter. Not only does Castleman’s tree frame the stumps as individuals, their wounds are specific injuries; their traumas define them.

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As mentioned, it starts with a map of Singapore island. Things happen very quickly. Sailing ships arrive, bringing timber, and soon British colonial architecture is erected. The chaos of development gives way to the chaos of war, as warships then.
This discussion of Singapore and lost possible futures is taken from my essay, ‘The Future Was When: Art Criticism’ by Walter Benjamin, 253–254.


See The Malay Archipelago: The Land of the Orang-utan, and the Bird of Paradise. A Narrative of Travel, with Studies of Man and Nature (London: Macmillan and Co, 1869). See also Paul Rae, a Singapore-based academic and theatre-maker with spell#7 performance, who has been writing on the theme of archipelagic performance in Southeast Asia, working his way up from union shop steward to become a manager for Uniroyal and Goodyear. He also worked in the rubber industry all his life, making tyres for aeroplanes in the Second World War and working his way up from union shop steward to become a manager for Uniroyal and Goodyear. He also worked in Germany for many years before he retired—perhaps in the very place where the aircrafts he built 1950s for might have dropped their bombs.

In September when I was writing this essay, I called my granddad, Denis Orton. It was the day after his 97th birthday. We talked about the times he visited Singapore and I suddenly remembered another story of a migration of Southeast Asian materials that occasionally gets revisited in my family.

Denis was born in 1915 into a large, Catholic family in Wolverhampton. He left school early to work in a rubber factory and worked in the rubber industry all his life, making tyres for aeroplanes in the Second World War and working his way up from union shop steward to become a manager for Uniroyal and Goodyear. He also worked in Germany for many years before he retired—perhaps in the very place where the aircrafts he built 1950s for might have dropped their bombs.

Denis was the epitome of the 20th-century modern dream—a self-made man of industry. But it was only when my family migrated to Singapore in 1980 and my grandparents came to visit, that Denis finally experienced a rubber plantation and saw a real rubber tree. Perhaps I’m making this up but I can remember us driving off a road in Malaysia into a plantation and saw a real rubber tree. Perhaps I’m making this up but I can remember us driving off a road in Malaysia into a plantation and saw a real rubber tree. Perhaps I’m making this up but I can remember us driving off a road in Malaysia into a plantation and saw a real rubber tree.

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details…or even whether Denis was as impressed by this experience as I was. But it’s an event—a rite of some kind—that intermittently gets recalled and reviv’d in my family. ‘Remember when…’

I released this anecdote via that online confessional as I was writing this essay and recall the anecdote about my grandmother’s stories from the 1950s and 1960s: histories from all ethnicities—seem to harbour quite taken aback at how pretty much everybody’s fathers, grandmothers, uncles, aunts—family histories from all ethnicities—seem to harbour.

It’s as if in urban Singapore, where tangible markers of memory are erased, rebuilt and re-erased at a terrifyingly consistent rhythm, there are still generations that carry with them imagined rubber plantations—linking people like the railway once did when it brought rubber from a mainland Malaya to the island of Singapore to be processed. The point of all this of course is that the sharing of stories would not all be possible without the trees, or without a vague memory of a rubber seed in someone’s palm.

In the process of recounting this story, I realise that I need to foreground other ecologies of art–art exchanges in Singapore and Southeast Asia that feed into what we are doing with Jux (at). I write about the artist Tang Da Wu’s art education projects about rubber, tin, bamboo and teak in 1950–60s another story about the exchanges in Singapore and the performances that evolve in the asking is a clear influence on Jux (at). But the full degree of such artist–artist processes of grafting and imprinting are often only partially conscious. Only after my Facebook post did I realise I was ‘doing a Paul’ by invoking my granddad. Perhaps I was also unconsciously trying to express my position as long-term resident on the island of Singapore—trying to acquire that ‘rubber stamp’ of Malayan legitimacy for my practice, in a political-economic climate of fitter where newer migrants are regarded with suspicion.

A process of attempting to inscribe a more ‘permanent residence’ in Malaya is one of the most moving stories of regional materials brings me to another determining starting point in the recent deceased grandmother and draws parallels between tree growth, an ‘ecology of theatre’ and a circular layering of memory—all the while performing a process whereby his family ‘begin[s] to incorporate who [his grandmother] use to in who we are’.

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My interest in working with woodprints, beginning in 2008, comes out of a deep reverence for the form and content of a Malayan art historical movement—the mid-20th century modern woodcut. I wanted to work through what this legacy might mean in a contemporary context in a way that was not merely a postmodern appropriation of a historic art form for present-day purposes. Rather, I was aiming at an art historical, ecological and experiential exploration of an art material (wood), an art form (woodcut) and stories of both as they migrate through our region. I wanted to explore what recasting the form and content of the Singapore/Malayan modern woodcut movement might mean in a contemporary context of the ‘cutting of wood’—meaning macro-scale deforestation in Southeast Asia.

I also knew that I wanted this project to be material-led—that I wanted to draw out stories from the wood itself. This emphasis upon materiality makes for an inevitable situating of the project in a larger regional context. Singapore’s natural histories and materials are intertwined with the currents of the seas and movements of the winds around our very small island, and they are brought to our shores by migratory flora and fauna. And of course it is not just flora, fauna and natural materials that have migrated through the Southeast Asian archipelago for centuries. People have too.

The woodblock print Nanyang University (Fig. 1) depicts the construction, in 1955, of the predecessor of my current university, Nanyang University—more familiarly known as Nantah—with funds collected from diverse members of the migrant Chinese community in Malaya. Nantah has been described as having a ‘good claim to being the first Southeast Asian university’ because although the medium of instruction was Chinese, Nantah was independent of colonial rule and resolutely located in Malaya. But after 1956, the heroic May 4th movement-inspired vision espoused by Nantah founders and students proved to be at odds with the Anglophile, pro-capitalist government of post-independence Singapore. Nantah was closed by the government in 1979 and merged with the National University of Singapore. In 1982, an engineering institution was developed on the original site and in 1991 it was renamed Nanyang Technological University—where I currently teach.

The ideals and perhaps also anamnesis of Nantah reverberate through the rough-worked lines of this woodblock print. Here, concrete dreams of a modernising China, transplanted onto a plot of orange soil and carved out of the hilly jungle, plantations and marshlands in western Singapore, are held in place by a nervous exoskeleton of wooden scaffolding (possibly mangrove) and inscribed with much intensity—indeed with much labour—into a woodblock. In Nanyang University there is an unfinished dance between a porous natural material and a concrete dream, between the raw expressiveness of the grain and the construction of a modern that was not to be. Today, the Nantah administrative building still stands, but has been turned into a ‘Chinese Heritage Centre’—an impossible attempt to co-opt this unruly matter into official ‘heritage’.

There is presently considerable interest in the turbulent mid-20th century history of Singapore, Malaya, the Philippines and Indonesia, and in the re-excavating and rehabilitating of stories that were suppressed during the Cold War and by the US-allied political entities that came to power during this period. The woodblock above was produced during a time that has been called the Malayan Emergency (1948–1960), when the Malayan Communist Party—which had held out the most sustained resistance to the Japanese during the Second World War—was left out of post-war power sharing arrangements and took up violent anti-colonial struggle in the plantations of Malaya (a time echoed in the rubber stories of my friends above).

The 1950s and 1960s were a time of great idealism and a battle for hearts and minds along a wide spectrum of nationalist positions. Artworks, including these woodblocks (cut laboriously by hand, only to be mass-produced in the Chinese press), were a particularly vital medium for the struggle over which vision of modernity would prevail. A number of the woodblock artists were also political cartoonists and their prints were reproduced alongside their cartoons. I first encountered the Singapore woodblocks in an exhibition at the National Museum of Singapore in 1999. This was the first exhibition to begin to critically
reconsider the idealistic content of these works. But there are also other dreams inscribed in the woodblocks than the overly political. And one often finds a tree not far from the frame.

In Persuading, a 1958 print by Singapore modern woodcut artist Tan Tee Chie, a frangipani tree surrounds two men seated on a wooden bench. While speaking, the older man taps the thigh of the younger man with his fingertips, an intimate gesture that the latter does not appear to reciprocate. What is actually being proposed here is a little unclear. This scene may be a ‘guidance session’ where the older man is asking the reluctant younger man to follow his teachings. Or perhaps something a little more shady is being proposed.

Fig. 2: Tan Tee Chie, Persuading, 1958, huang yang (boxwood) block, 20.7 cm x 15 cm. Reproduced courtesy of the National University of Singapore Museum Collection.

Even this time as expressive, anthropomorphised witnesses to disrupt the composition. The black ink of the trunk and branches connect to the wooden bench upon which the men sit, to the cavernous wooden doorway in the background, and to the pathway upon which the men rest their feet—which has uneven tiles, like a scaly kind of bark. The path slopes downwards, evoking organic, subterranean forces, which contrast with the controlled, pale geometry of the human structures in the space behind.

There are a lot of things humans do to nature and natural materials in Southeast Asia, which is one of the international centres of circulation for illegal wildlife. There are also other dreams inscribed in the woodblocks—particularly persuasive in the next decade, the 1960s, when Singapore gained involuntary independence after being expelled from the kampung—a conflicted national narrative encircling the end of kingdom life and a move to high-rise social housing, in which 80 percent of the Singapore population (including Lim Yew Kuan) now reside.

When I say I’m interested in the few of the modern woodcut, what I mean is that I am interested in the emotional, primitive quality of the woodblock print as it is often heroic content therein. I am interested in positive and negative space in a way that is mystical as much as it is political. There is an emotional depth in the deep, counterpoint contrasts of the woodblock, which is perhaps a reason why the media has been prolific in times of social antagonism or crisis. In Western art, the woodblock was particularly suited to medieval invocations of the Black Death, the religious upheavals accompanying the Reformation and, as Kate Kangaslahti mentions in this publication, the trials of the Weimar period.

Lu Xun advocated that Shanghai woodcut artists (much emulated in Singapore) should embrace the living spirit of the woodblock in parallel with the political spirit of the time and let the woodblock speak via an ‘aesthetic of vigour’—or as we see in Lim Yew Kuan’s After the Fire (Bukit Ho Swee fire), 1966, woodblock print on paper, 20.7 cm x 15 cm. Reproduced courtesy of the National University of Singapore Museum Collection.

Fig. 3: Lim Yew Kuan, After the Fire (Bukit Ho Swee fire), 1966, woodblock print on paper, 20.7 cm x 15 cm. Reproduced courtesy of the National University of Singapore Museum Collection.

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That this frangipani tree actually emerges from a small block of wood serves to doubly emphasise the material and intensity of the tree, extending its influence beyond the heavy outline of the thing itself, absorbed through self-porous cells of wood. The black studded ridges of the woodblock when pressed onto also-porous paper outline the milky-way forms of both men. There is at least at the level of material—a two-way dynamic going on here, as wood grain becomes skin, earth, concrete and wood again.

There are a lot of things humans do to nature and natural materials in Southeast Asia, which is one of the international centres of circulation for illegal wildlife. However, I am equally interested in what nature ‘does to us’, or as Paul Rae and Kaylene Tan put it in Tree Lust, ‘what trees ask of us’. In the case of Tan Tee Chie’s frangipani and also the teak bed that is the heart and mind of Jalan Jati, I am interested in what trees and wood objects persuade us to do.

The final woodblock work that I want to discuss here, Lim Yew Kuan’s After the Fire (Bukit Ho Swee fire), in fact, from the next decade, the 1960s, when Singapore gained involuntary independence after being expelled from Malaysia. Trees are again invoked in this woodblock—this time as expressive, anthropomorphised witnesses
When I interviewed Lim Yew Kuan about his practice, he belaboured this emotional-spiritual as well as political relationship to wood. I was given a demonstration as to how to breathe correctly so as to absorb the energy of the material in a woodblock—an exercise which involved the octogenarian Mr Lim having me run with him round his living room to prove that I had the correct breathing patterns to work with the material!

When I say I'm interested in the content of the mid-20th century woodblock, what I mean is that I am interested in what this primitive, emotional material inscribed with the utopian dreams of the 1950s and 1960s might mean today. Indeed there is something in Lim Yew Kuan's sublimely apocalyptic After the Fire that foreshadows contemporary media images of environmental destruction.24 Rather than reject outright the undeniable romance of such representations as aestheticising the trauma of others, I'm interested in how such forms might be recast in ways which channel an affective empathy, rather than objectification of, the ecological imperatives of the 21st century.

I am interested in how to shift a subject-object relationship in ecological representations from the human spectator regarding victim-nature, to one in which an in-between-culture between the natural agent (in our project, a natural material) and human storyteller is revealed—even as we document undeniable threats to nature by human activity.

“I was given a demonstration as to how to breathe correctly so as to absorb the energy of the material in a woodblock—an exercise which involved the octogenarian Mr Lim having me run with him round his living room to prove that I had the correct breathing patterns to work with the material!”

TOGETHER AGAIN (WOOD CUT) PART I NATURAL HISTORIES
14–18 May 2009, Post-Museum, Singapore

A problem I encountered when I attempted to find woodblock to work with was that the wood on sale today as artist’s materials is largely made of jelutong. Some preliminary research revealed that while jelutong is not on the CITES A-list of endangered species, the harvesting of jelutong for art supplies and pencils is not carried out in an environmentally sustainable manner.25 Another option was plywood, that unsung staple and scaffold of so many arts and theatre initiatives (the 2011 Singapore Biennale used and then discarded many truckloads of this material). However, much of the plywood sold in Singapore is imported from Malaysian companies in Borneo and Papua New Guinea.
which are responsible for the destruction of moths of the richest areas of biodiversity left in our region.25 At the time, I was living in a quarter of Singapore called Little India. There is much human and non-human tourism and primate on the streets of the quarter, including a fair bit of timber. Little India is famous for its congregations of migrant workers on weekends. There is an informal, sectarian economy or ‘ecology’, where items discarded in the daytime are collected at night, to be reused. Eldersly Singaporeans and migrants, hit by the recent waves of economic recession, collect discarded electrical items, cardboard and tin cans which they then trolley to a central pick-up spot off Kampong Kapor Road. I noticed that leftover timber from construction sites and furniture in skips from torn-down buildings had not yet been integrated into this informal ecology. I purchased a trolley (see Fig. 6) from the 24-hour store at Mustafa which presides over the quarter and began to venture out after midnight with my partner when the traffic was less heavy, collecting wooden items.26 Initially we were very ambitious and had an idea to build a multi-species migrant arborial sculpture from the discarded timber and steel we found, and then make woodprint ‘shadows’ down the walls of the gallery from all the wood we collected, and then make a multi-species migrant arboreal sculpture

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Once DoubleHelix were able to identify from cell samples from which species of tree our objects derived, a second search began: a pilgrimage to living, Singapore specimens of the trees themselves, either in the Singapore Botanic Gardens or Bukit Timah Nature Reserve, the last remaining site of primary forest in Singapore. I was grateful here for the assistance of Dr Shawn Lum, plant biologist and president of the Nature Society of Singapore (Shawn has curated the educational materials for the Jalan [art project]). A different kind of humorous performance took place when Shawn, who knows practically every inch of Bukit Timah Nature Reserve from memory, guided me to sites of specific trees via mobile telephone. Figure 1 depicts the terentang tree (Campnosperma auriculatum) the tree of the kind from which the four-legged stool we found at Kampong Kapor Road might have originated.

The second part of this exploration, which was exhibited at an art/activist space in Little India called Post-Museum, concerned a Humpty-Dumpty task of putting the tree back ‘Together Again’ and trying to rebuild the terentang tree as collage, made exclusively from chopped-up prints of the grain of the wooden stool (Fig. 12).

A second play on the naming of names took place at this stage with the put-together trees. I enlisted the assistance of friends Savina Nicolini and Laura Miotto to create a Latin genealogy of this ‘Four-Legged Stool Tree’. Here, I was rehearsing a practice of naming newly-discovered species and human cultures alike after lovers, royalty, politicians, movie stars and, in the case of the orchid collection in the Singapore Botanic Gardens, a trail of visiting dictators and their wives. For example, a Latin text which ran alongside this ‘Terentang Stool Tree’ read: ‘This is the stool found on the corner of Kampong Kapor Road and given to us by the karang guni seller in the black hat with the black dog’. There is an emphasis on the agency of the object and a play on a modern quest for origins in the way I was putting these print collages ‘together again’ (a ‘quest for origins’ I will return to when I discuss the role of DNA in Jalan Jati below). In these reconstructed images of trees, I was as interested in the ‘four-legged-stool-ness’ of the tree—in the spirit of the wooden object in the tree—as much as in the spirit of the tree in the object. I was very aware that I was working backwards, led by the object through a supply chain. The depiction of trees in this series were composed therefore not as a return to a pristine, romantic source but to depict something that was known out of the spirit of objects that had migrated to Little India.

* * *

ESSAYS | LUCY DAVIS

Fig. 14: Lucy Davis, ‘Washboard Tree Mersawa/Anisoptera marginata’, 2009, assembled prints of found washboard with mixed ink and paper, 150 cm x 234 cm.
My exploration of the secret lives of forest products continued in 2009 with an exhibition at the Substation arts centre in Singapore and a project to conjure magic-realist histories of Southeast Asian forests from the grain of one particular teak bed—the same bed that comprises the central subject and material of Jalan Jati. In this exploration, imagined memories inscribed in the grain of the bed we found in a junk furniture store off Rangoon Road are ‘awakened’ by an encounter with a domestic Singapore cat, and emerge in images made of paper puppets, woodprints and charcoal. This project was also the first time that the photograph that is also part of Jalan Jati appeared. After

I made prints of the bed we decided to bury it in my garden (Fig. 16). It is the same bed that I have obsessively been working with since then.

This exhibition included a first collaborative experiment with animated images, as ten collections of my drawings and paper collages were edited together by Amin Zainotdini, Aaron Ng Kaijun and Candice Elizabeth Chua, film and animation students from the School of Art Design and Media, Nanyang Technological University. This bed also ‘called forth’ two human colonial protagonists whose lives were historically intertwined with forest beings and materials: the 19th-century natural historian Alfred Russel Wallace, together with puppet renditions of flora and fauna illustrations from The Malay Archipelago (his seminal account of his journeys through Southeast Asia); and William Farquhar, first British Resident and Commander of Singapore, together with woodprint and paper puppet reproductions of the William Farquhar Collection of Natural History Drawings. Most of the animation puppets and works in the exhibition were made from prints of the original teak bed.

Alfred Russel Wallace discovered a theory of natural selection independently of Charles Darwin during his travels as a natural history collector through the Malay Archipelago (Fig. 21–24). Through animations of Wallace’s ‘Journeys to the Interior’, I explored how an ‘agency’ of forest materials, animals and plants might manifest and mutate. In an early scene, Wallace splits from himself and a famous photograph of Wallace taken in 1862 in Singapore is ‘emptied’. The positive image of Wallace wanders off into the forest and the negative space—a cut-out silhouette—becomes invaded by the flora and fauna represented in The Malay Archipelago. In another scene, a fictive story of how the chair from the famous photograph of Wallace arrived in Singapore mutates into a monstrous collection.

Both the historical figure of Wallace as well as his writings are shot through with two competing, but oftentimes uneasily conflated discourses on the modern relationship to nature. There is the functional, distanced, empirical discourse on nature, dictated by Enlightenment science. But there is also the spiritual, yearning, mystical discourse, emerging from Romantic thought. In two sections of The Malay Archipelago in particular, this split between empirical distance and a romantic quest for communion with nature rupture[s] the stability of the narrative.
Fig. 18: Lucy Davis, In which Alfred Russel Wallace Pins and Mounts ‘The Malay Archipelago’, 2009, woodprint collage on paper, 200 cm x 150 cm.

Fig. 19: Lucy Davis, In which Alfred Russel Wallace Encounters ‘remarkable beetles’ and ‘glorious wings’, 2009, woodprint collage on paper, 195 cm x 150 cm.
baby its responses are, delighting in its pleasures and its facial expressions, building it a cradle and feeding it ‘biscuits mixed with egg and sugar and sweet potatoes’, while all the time he continues to shoot and skin its family members. After three months however, the little orang utan ‘lost all appetite for its food and after lingering for a week a most pitiable object it died’. Wallace appears most devastated by this experience, but continues to add to his collection of skeletons and skins.38

The second example is a famous section from Wallace’s voyage through the Moluccas, referenced in my animation, when after capturing a female of a new species Ornithoptera or bird-winged butterfly, he recounts an experience of near-spiritual ecstasy, a sensation he tries to contain by ascribing it to scientific pursuit:

The beauty and brilliance of this insect are indescribable and none but a naturalist can understand the intense excitement I experienced when I at length captured it. On taking it out of my net and opening the glorious wings the blood rushed to my head, and I felt much more like fainting than I have done when in apprehension of immediate death …39

At the same time, in his letters Wallace despairs of how his assistant, Charles Allen, was not able to impale captive butterflies in neat rows as needed for identification and display.40

These micro examples mirror an equally unresolved macro relationship between scientific distance, romantic dreams and violence that pervades 19th-century natural historic explorations and concurrent exploitation of tropical resources by colonial capital. Such discursive legacies reappear in ways in which contemporary timber merchants promote tropical hardwood, highlighting the rich beauty and feeling of being closer to the forest that undeniably comes with the experience of putting one’s bare feet on a 50-year-old Burmese teak or Papuan merbau floor—obscuring the violence that got the timber there in the first place.41 In other contexts, taxidermy trophies, fur, feathers and leather are celebrated for the way that they exude a sense of vicarious animality in the owner/wearer. Indeed a fascination with these ‘living’ materials and the ways these resonate a pleasurable feeling of a proximity to the non-human is very much a part of this project.

The second part of the animation and exhibition concerned another colonial pioneer who, like Wallace, has been subjected to a B-role in official histories. William Farquhar moved down from Melaka to be the first British Resident and Commander of colonial Singapore. With his Malay wife, penchant for local dress and considerable support from the local population, Farquhar came to be most disliked by Stamford Raffles (now celebrated as the founder of the modern metropolis) and he has until recently been dismissed as little more than a layabout.42

Fig. 20: Lucy Davis, In which Alfred Russel Wallace Encounters an ‘Orang Utan attacked by Dyaks’ (Jacob and Angel), 2009, woodprint collage on paper, 185 cm x 150 cm.

Fig. 21: Screenshot, Part III ‘In which Alfred Russel Wallace journeys to the interior’, Together Again (Wood:Cut), animated film, 2009.

Fig. 22: Screenshot, Part III ‘In which Alfred Russel Wallace journeys to the interior’, Together Again (Wood:Cut), animated film, 2009.

Fig. 23: Screenshot, Part V ‘In which Alfred Russel Wallace’s chair journeys to Singapore and beyond’, Together Again (Wood:Cut), animated film, 2009.

Fig. 24: Screenshot, Part VI ‘In which upon opening the glorious wing a heart began to beat violently’, Together Again (Wood:Cut), animated film, 2009.
Fig. 25: Lucy Davis, In which William Farquhar Meets a Black Banded Gibbon, 2009, charcoal and woodprint collage on paper, 150 cm x 150 cm.

Fig. 26: Lucy Davis, In which ‘A View of a Town from Government Hill’ Reveals and Conceals Encounters with Residents, 2009, charcoal drawing with woodprint collage on paper, 280 cm x 150 cm.
One of Farquhar’s many legacies was a collection of exquisite natural history drawings commissioned during his time in Melaka and painted by migrant artists from southern China. The drawings for this collection (compiled from 1803 to 1818) are drawn from specimens possibly very similar to those that Wallace was sending to England from the archipelago a half century later.

In an animated section of my film entitled ‘In Which A View of the Town from Government Hill Reveals and Conceals Encounters with Residents’, shadow puppets of the Farquhar collection, made from woodcuts of the teak bed, haunt an iconic, impossibly defoliated and much reproduced colonial scene of Singapore as depicted in the painting, *View of Singapore Town From Government Hill* (1846) by surveyor John Turnbull Thomson. The ‘revealing and concealing’ refers equally to: the former flora and fauna of Singapore before land was cleared to create the colonial settlement; Resident Farquhar’s subordinated role in official histories; and finally a scene centre-left of the painting, not revealed in the title, where a group of Malay residents are being given a payoff for supporting the British and keeping down pirate attacks in the region.

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**TOGETHER AGAIN (WOOD-CUT) PART III: MATERIAL**

2011–2013 (ongoing)
March–July 2013, Art Science Gallery, Royal Botanical Garden Edinburgh, Scotland
2014, NUS Museum, Singapore

Jalan Jati, the exhibition that coincides with this publication, displays works from the third stage of this inquiry, originally called *Together Again (Wood-Cut) Part III: Material*. In 2010 we were awarded a Singapore Ministry of Education Academic Research Fund grant to run DNA tests on timber from our bed, in collaboration with DoubleHelix Tracking Technologies, and to travel to wherever the DNA suggested that the timber came from. This time the research was a collaboration which included photographer Shannon Lee Castleman, DoubleHelix Tracking Technologies, Dr Shawn Lum, musicians and composers Zai Kuning and Zai Tang, and ten students and graduates from the School of Art, Design and Media, Nanyang Technological University, Singapore.
As this is the first time we are exhibiting this part of the project, the layers that have emerged from repeated narrations of earlier incarnations of the work have not yet fully revealed themselves. My account of this last exploration and the work coming out of it may therefore contain fewer critical reflections.

First the DNA: Each individual tree has a unique DNA identity termed, with some anthropomorphic arrogance, a ‘fingerprint’. This technology is being used by DoubleHelix as mentioned, in order to certify that timber purchased by international consumers comes from legal plantation as opposed to illegal rainforest sources.

Preliminary tests suggested a possible connection between the DNA sequence extracted from a teak sample from our bed and teak trees in Southeast Sulawesi. (We were quite surprised by this as we had been informed by the second-hand dealer who sold us the bed, that it was a 1940s–1950s design and that in those days most of the teak in Singapore came from Burma). Following these preliminary DNA findings, a team travelled to the scant remains of century-old teak plantations on Muna Island in Southeast Sulawesi. The exhibition we are launching with this publication represents as far as we have come in what is an ever-growing ecology of inter-dependent scientific, social and magic-realist stories, traced out from the grain of this one teak bed.

In a conversation with art critic Mayo Martin from Singapore’s Today newspaper about this project, he asked me if it was all made up. He was referring to a trend among artists in Singapore and elsewhere to conjure fake documentaries as a means to reveal discourses and desires at play in and for the ‘real thing’. I had to reply that no, this is not fiction, and indeed that I found the stories and natural historic revelations that emerge from our project as fantastic as anything an artist can think up in an attempt to critically subvert an aesthetics of natural history or science.

Having said that, there is a mystique in representations of scientific inquiry that dates back to the times when the red-cloaked, flowing-locked, scientific ‘genius’ eclipsed the position of the priest, alchemist, magician or divine at the centre of perspective of Western painting. Science has its own aesthetics, its own poetic enhancement of its truth claims. This is particularly the case, as Judith Roof has argued, in the way in which DNA is narrativised. There is something of the spirit of the 18th to 19th centuries in the way DNA is popularly projected: a ‘Journey to The Source’ along ‘The Barcode of Life’; a reincarnation of the Enlightenment belief in man’s ability to chart new territories of truth through science, with the value-added barcode-poetics of capital.

We are of course most grateful for the journey that DNA timber tracking technology has taken us on, and we are premised of the macro-ecological potential of DNA certification. However, there are unresolved tensions in this endeavour. As contemporary artists, our instincts are to question the ways that modern orders of things are represented. There is another not-unrelated tension between our desire to explore multiple stories of wood, some which may not be considered strictly ‘factual’, and the definitive ambit and ecological utility of DNA tracking technology. We regard these tensions as productive.

Macro and Micro Arborealities

Fig. 29: Shannon Lee Castleman. ‘Secondary forest the day after it was felled,’ Scenes from an Island after a Timber Boom, 2010, Muna Island, Southeast Sulawesi.
marshland, mangrove or forest upon which human habitation and teak plantations had caused various levels of development and depletion.

The Jalan Jati project is situated in a macro-scale, global context of deforestation and illegal logging. The large-scale deforestation of Muna, according to local historian and philologist Mr La Ode Sirad Imbo, began in the Dutch colonial period in the 18th and 19th centuries, with the felling of indigenous forests to make way for teak. Today there are small, subsistence farm plots in Muna, which produce fruit and vegetables for local consumption, and fishermen along the coast. But the mainstay of the economy and the pervading cash crop is teak. What we didn’t completely grasp before visiting Muna was how teak in some places has had the same effect as palm oil in other parts of Southeast Asia, where vast areas of forest had been laid bare for the planting of the precious cash crop.

In Muna, Javanese teak has been introduced from Burma, India and possibly Laos over a period of more than 500 years. According to local legend, teak was originally brought as a gift from Java to the King of Muna. In the pre-colonial period only the King of Muna could plant teak. Later, it was the exclusive purview of Dutch colonial plantation owners and, during the war, the Japanese. After independence, the Indonesian government (at least on paper) controlled the teak trade of Muna.

A saying we heard repeated in Muna and also in email correspondence with former visitors to Muna was ‘politik Muna adalah politik kayu’—‘Muna politics is a politics of wood’. The period from the 1950s to the 1980s was a time of a large-scale timber boom, where demand exceeded supply and sawmills lined the harbour of the main town Raha. The felling of teak was unsustainable and ecologically destructive—both because there were no longer large amounts of timber for sale, but also because the destruction significantly affected the water table. Those sawmills that still stand today have fallen into disrepair and are overrun by weeds, but the teak plantations have yet to grow back to their former glory.

Alongside telling stories of macro ecological change, our project is also about micro stories of trees and wood. And it is here that things get more complicated. Until 2000, Muna islanders were only permitted to fell a limited amount of teak for housing and domestic use. That meant that if one was to survive beyond a basic subsistence level, one had to do things that were illegal. Villagers would cut down more teak than they needed and sell the extra timber. They would build houses with double walls and keep extra stocks of teak underneath their homes for ‘repairs’—but also as savings. Fences, pathways, bridges, drain covers—much of the infrastructure across the island is made of thick pieces of quality teak. Illegal logging of government and later ‘konservasi’ forests (overgrown plantations awarded conservation status in order to protect groundwater) is still prevalent.
In a snapshot taken by Shannon Lee Castleman (Fig. 33), we are standing around the largest teak tree we found in Muna—estimated to be over a century old—in what was considered to be a haunted plantation. In these haunted forests, a strange ‘battle’ had developed between those impressive teak trees that remained, and the banyan or strangling figs (Figs. 34 and 36). The banyan or berening—a strange ‘battle’ that has grown up a teak tree. Photograph by Shannon Lee Castleman.

Strange ‘battles’ had developed between those impressive teak trees that remained, and the banyan or strangling figs (Figs. 34 and 36). The banyan or berening—numerous species of trees in the smallholder plantations established since 2000 are still too small to compete with the banyan. The banyan can expand into a veritable city of roots and in most cases the host tree is suffocated, leaving a hollow at the centre.

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independently of Charles Darwin. Although they were not familiar with Wallace, the mention of Darwin sparked a negative response in many. We realized that, far from this being a simple ‘journey to the source’ with the aid of DNA, we were tracing multiple and conflicting arborealities 

Another of our collaborators, the patient and wise country project manager from DoubleHelix, Laksana Pelawi, who took time from his hectic schedule to accompany us to Muna, became a little frustrated by our constantly positing the same question to local people. He didn’t understand why we were repeatedly asking about the possible origin of the wood from our bed and how it might have gotten to Singapore when we had gotten the answers from the DNA. Laksana’s main role in accompanying us to Muna was to collect samples with which to confirm a match between our bed and new tests from our bed are also very close to profiles from Burma. 

We realised that, far from this being a simple ‘journey to the source’ with the aid of DNA, we were tracing multiple and conflicting arborealities—many-layered, historic, contemporary and competing aerial and subterranean root systems of trees.

In the animation, a loose narrative juxtaposes scenes from two ‘Islands After a Timber Boom’: I. Muna and II. Singapore (Singapore, the place to which our bed is “migrated”, is one of the historic and contemporary entrepôt trading centres). The animation evolved organically, alongside sound input and electronic music. The project is still evolving via a recycling, transplanting and re-grafting of stories we collected in Muna—local theories from both islands. 

We were particularly keen for Shannon Lee Castleman to join the project. In Shannon’s previous work in Southeast Asia and elsewhere, through the use of light and subtle reframing she suggests ‘secret lives’ of everyday objects, land and cityscapes. One thread of her photographic investigations in Muna concerns trying to find timber structures, which might possibly be ‘family members’ of our bed.

Castleman states: My interest in photographing houses and other timber structures in Muna came out of a story told to us during Lucy’s interviews. Before 2000, the only way villagers might possibly be ‘family members’ of our bed. 

Lucy Davis, ‘Banyan Battles with Teak, Magic Battles with Science’, 2012, animated film still from Jalan Jati, Animation using woodcuts in a wood bed and charcoal. See also the animation stills in the Artworks section in this volume.

Fig. 40: Laksana Pelawi, Indonesia country manager for DoubleHelix Tracking Technologies, in action. We gathered both tissue and wood DNA extracts. Photograph by Lucy Davis.

Fig. 42: Lucy Davis, ‘Banyan Battles with Teak, Magic Battles with Science’, 2012, animated film still from Jalan Jati, Animation using woodcuts in a wood bed and charcoal. See also the animation stills in the Artworks section in this volume.

Fig. 41: Lucy Davis, ‘A Bed Remembers A Bird’, 2012, animated film still from Jalan Jati, Animation using woodcuts in a wood bed and charcoal. See also the animation stills in the Artworks section in this volume.

Fig. 41: Lucy Davis, ‘Banyan Battles with Teak, Magic Battles with Science’, 2012, animated film still from Jalan Jati, Animation using woodcuts in a wood bed and charcoal. See also the animation stills in the Artworks section in this volume.

Fig. 39: ‘Talisman’ teak sample from our bed, left behind for forest products). The animation evolved organically, alongside sound input and electronic music. The project is still evolving via a recycling, transplanting and re-grafting of stories we collected in Muna—local theories from both islands.
An interesting turning of the politics of the gaze also occurred whenever Shannon would stop and set up her old-style black-hooded camera. She was unsure about taking too many portraits of Muna islanders themselves, for fear of reproducing well-worn tropes of the kind disseminated by documentarians of disenfranchised islands. However, in a humorous reversal of this class dynamic, there must now be hundreds of images of our perspiring, flustered team on Muna island, captured by adults' and children's mobile phones as they crowded around us while we grappled with Shannon’s equipment.

Another line of inquiry for Shannon was to document the consequences of deforestation and over-harvesting of teak, as well as the centrality of teak to everyday life. The Muna economy relies almost entirely on the production of raw materials. There are no secondary timber industries on Muna; no wood furniture making or carving by islanders, as there are in Jene or Bual or further north in Toraja, Central Sulawesi. There is a modest boat-building activity for local fishermen, which appears to be largely conducted by Bugis migrants. The few Chinese furniture makers who used to live on the island were forced to flee Indonesia to Singapore, Hong Kong and Taipei during what Mr La Ode Sirad Imbo calls the ‘Exodus’—the ethnic cleansing of Chinese during the years of the Suharto dictatorship.57

**Woodcuts and Wounded Trees**

Halfway during our fieldwork in Muna, we discovered what Shannon calls ‘tree wounds’. This became a moment whereby Shannon’s attempts to document the destruction of Muna in a way that both avoided ‘victim’ tropes and gave attention to individual micro stories seemed to come together with my initial investigation into the form and content of the modern Malayan woodcut. Shannon states:

> We first discovered the tree wounds when we were collecting samples in the conservation forest. Along the edges of the forest we noticed these enormous wounds in the older teak trees. Mr La Ode Sirad Imbo explained that since it is illegal to cut down the trees, villagers would chop at them slowly on the side not facing the road until the tree eventually dies. The tree can then be removed as it is understood to have fallen on its own.

> Another theory is that this process enables the tree to dry out and the wood to become ready for use while still standing. Fig. 44 shows a tree wound that Shannon photographed in November 2010. Fig. 45 is the stump of the same tree that she photographed again in April 2011.

These at once monumental and intimate ‘tree wound portraits’, shot in the forest with a black velvet backdrop, are quite literally ‘woodcuts’—both cut by the axe and cropped by the camera. They exist somewhere between life and death—between tree and wood. And yet a tremendous material presence of these trees still pervades—a presence which compelled Shannon to return six months later to photograph them again.

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ESSAYS | LUCY DAVIS
On our last day on Muna we interviewed the aforementioned Mr W. T. Bermuli, a retired sawmill engineer from Muna. Mr Bermuli’s family had worked with teak over three generations. He permitted us to photograph his rich collection of snapshots from the time when sawmills lined the main town and one could walk from the interior on rivers of teak logs all the way to the sea.

We are displaying copies of these photographs, with captions provided by Mr Bermuli and Muna islanders, in the Jalan Jati exhibition—evidence of another rich collection of family memories of plantations, and a somewhat asymmetrical mirror of the rubber plantation stories harboured in the other ‘island after a timber boom’ with which I started this essay.

In Mr Bermuli’s collection is a photograph of a group of people gathered around a teak tree (Fig. 46). It’s a kind of foreshadowing of the photo of our team standing around the largest teak tree in Muna in 2010 (Fig. 33 above). A silly question arises: Could it be the same tree? Like our snapshot from 2010, there are politics of all kinds in the earlier representation: there appears to be class (the man with his hand on the tree acts like he is the supervisor); there is gender (no women are present in this earlier version); there is possibly ethnicity (is the supervisor from elsewhere, possibly a Chinese migrant?); there is an awareness of the power of the camera, very possibly the unseen power of the spirit world. And as I mentioned to Lee Weng Choy, there is that inescapable temptation for human beings to place the palm of their hand on a tree trunk when they stand beside it.58 Perhaps in this particular case the gesture reveals a desire for propriety or an attempt to channel the potency of this vertical familiar?

What is also fascinating about Mr Bermuli’s family photographs, as well as the way they provide rich documentation of a time when teak was king, are the hints of what these photos do not reveal. The dark secret spaces, the smudges of chemicals, the things that get blurred half out of focus, the shifting, duplicitous sunlight—none of which would be possible without the dance between the light and the chemical wizardry of the analogue photograph and the material of the tree.
The main town of Raha, where Mr Bermuli’s comfortable concrete house and compound can be found, bears fading signs of the glory days of teak. The front jutting (open field) facing the harbour where ships would pick up logs bound for Makassar, Surabaya, Taiwan, Japan and possibly Singapore, was once buzzing with activity. It is now a site on other half-hidden material to surface. She writes: “Like the phone call with my grandfather with which I started this essay, the contents of Hera’s reply enabled us to have a better one. However, when she returned to Raha in March 2011, the street sign itself appeared to be a display of criminal evidence, perhaps as proof that the Director of Forestry is on top of things. Most of them are damp, sinking into the rich buggy ground and sprouting very healthy-looking shoots. Trees that develop from teak logs and stumps, we were told, produce inferior timber when compared to trees grown from seeds. However, sprouting logs and stumps across the island are evidence of how readily this migrant species has taken to the Muna environment.

One of the main artery roads leading down to the port of Raha is called Jalan Jati (Teak Road). Our exhibition is named after this street.

During a final edit of this essay I sent an email to Hera, our project designer, asking about possible other meanings of the word ‘jati’ ('teak') in Bahasa Indonesia. Like the phone call with my grandfather with which I started this essay, the contents of Hera’s reply enabled us to have a better one.

The meanings of ‘jati’ that Hera proposes present an ironic poetic layering of our project, bringing together signs of the efforts of colonial natural historians and migrant Chinese artists to naturalise their presence in Nanyang via vicarious channellings of and associations with local natural forms, materials, languages and cuttings of wood. Moreover, the singular, inward resonances of ‘jati’, as suggested by Hera, present a densely-apt turn to our efforts to bring together the heroic ‘purity’ of a quest for origins and certitude via DNA, with the multiple and migratory otherworlds we encountered in Muna.

I was able to take only a very bad snapshot of the Jalan Jati signpost out of the back of our car, on the way to the ferry the day that we left the island. So when Shannon made a second pilgrimage back to Muna to film the part she had made with the wounded trees, we agreed that she would take a better one. However, when she returned to Raha in March 2011, the street sign itself appeared to have been cut down.

Endnotes

1. Lucy Davis. ‘Of Commodities and Kings: Art Play in the Work of Tang Da Wu,’ Art AsiaPacific 25: 62–65 (2000);
2. Lucy Davis. ‘Processing Raw Material—the workshops of Tang Da Wu,’ The Art Magazine (Singapore), 1999;
4. Other key influences are the work of Zai Kuning, including his homage to Kuo Pao Kun’s sculpture in Sculpture Square, 2005; and the work of Synevra Gill, whose photographic installation series Fever (1996–1998) I wrote.
labour of making a woodblock materialization, however, that the case of Singapore culture, when one top-down story had predominated for so long and where so many paths have been erased or unread, I don’t see a problem just yet with writers and artists trying to incorporate who she was into who we are. For me, and perhaps for you, it’s a process that will continue indefinitely, as the sly work of memory does its thing’. Paul Rae and Kaylene Tan, Tree Duet, unpublished playscript, 2008.

Kevin Choo once complained to me that writers from Singapore ‘really have to get to stop citing each other’, which is fair enough, however, in the case of Singapore culture, when one top-down story predominates for so long and where so many paths have been erased or unread, I don’t see a problem just yet with writers and artists trying to incorporate who she was into who we are. For me, and perhaps for you, it’s a process that will continue indefinitely, as the sly work of memory does its thing’. Paul Rae and Kaylene Tan, Tree Duet, unpublished playscript, 2008.

Although my family has been based in Singapore since 1980, my own residential status on the island is for various reasons still quite precarious. 

Iam grateful to Peter Schoppert for the observation concerning the popularisation of the woodblock versus the mass production of the newspaper. As the few surviving sources that discuss modern woodblock art are written in Chinese, I have relied upon the writings in English of Lin Cheng Tju, a master’s dissertation by Joyce Fan and discussions with oral historian, archivist and former Singapore History Museum researcher Koh Nguang How, and my own research in woodblocks mailed to them from Shanghai, and teaching themselves the techniques from these books. Lim also names Lu Xun as a major influence. Lim Yew Kuan, interview with the author and Tan Tee Chie, interview with the author.

Tan Tee Chie states that he intended it to look like there were pretentious modern buildings going up in the background—a reference to the dangers of urban materialism. Tan Tee Chie states that he intended it to look like there were pretentious modern buildings going up in the background—a reference to the dangers of urban materialism. Tan Tee Chie, interview with the author.

Tan Tee Chie and Lim Yew Kuan speak of the Singapore woodblock artists hungrily reading textbooks on modern art, as Paul Rae and Kaylene Tan point out in Tree Duet, is to apply to NParks for it to be given ‘Heritage Tree’ status.


The contested discourse on heritage in Singapore often concerns a struggle over which entities from the past get to be incorporated into official culture and which must make way for growth and progress. One way to save a tree, as Paul Rae and Kaylene Tan point out in Tree Duet, is to apply to NParks for it to be given ‘Heritage Tree’ status.

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The heritage of left-leaning politics in Singapore in the mid-20th century is contested. Leftist members of migrant Chinese communities and migrant Chinese schools in Singapore have been painted by post-independence histories as communist affiliates, if not card-carrying members of the Malayan Communist Party. Others argue that the collective-oriented culture of the Chinese in Singapore in the mid-20th century had more to do with the values of the earlier May 4th Movement—a movement to modernise China and throw off the shackles of tradition, emerging from the disillusion and revolutionary territory lost after World War I—than later affiliations with communism. See for example Yao Soussou, ‘All Quiet on Joo Chiat Road. Nanyang University and Radical Vision in Singapore’, in Peh-Teck Hian Political Printers in Postwar Singapore, ed. Michael D. Barr and Carl A. Trocki (Singapore, National University of Singapore Press, 2008), 170–187.

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DoubleHelix Tracking Technologies’ and Andrew Lowe, chief scientific officer at DoubleHelix, writes about the
Darren Thomas, managing director of DoubleHelix, discusses his involvement with the project in ‘Introduction:
See note 28.

Only when writing this essay did I notice the wooden stool in the far right of the image! (see note 31).

lingua franca common as a

Today Malay is still the National Language, but due to various political-cultural pressures it has become less

various forms of wayang kulit of the Southeast Asian archipelago; William Kentridge’s choreography of the poetic

New artistic influences on the work need to be referenced here: Many conventions of shadow theatre including

animal’ as it is an everyday, individuated matter of species ‘making each other up in the flesh’, ‘full of the patterns

animal’. Haraway’s ‘becoming with’ is moreover to be distinguished from Deleuze and Guattari’s ‘becoming-

When Species Meet

Donna J. Haraway,

Today and in the Time of William Farquhar


The Malay Archipelago: The land of the Orang-Utan, and the Bird of Paradise; A Narrative of Travel, with Studies of

man and Nature


The William Farquhar Collection of Natural History Drawings

peninsula 1803–1818

These artists and their practice deserves more primary, art historical research—a fascinating study of migration,
syncretism and possibly cultural subversion. See for instance

Natural History Drawings: The Complete William Farquhar Collection, Malay Peninsula 1803–


Ibid., 257. Emphasis mine.

For an attempt to revise Farquhar’s position vis-à-vis Raffles, see John Bastin, ‘William Farquhar, First Resident

and Commandant of Singapore’, in Natural History Drawings: The Complete William Farquhar Collection, Malay
Peninsula 1803–1818.

‘Such paintings of colonial settlements, a genre that is repeated across Southeast Asia —Batavia, Manila, Singapore—
appear today to be impossibly defoliated celebrations of conquest over “tropical possessions”. I am “impossibly
deforested” because although up to 90 percent of primary forest in Singapore was cleared for clearance and
plantations during the 19th century, it is difficult to fathom how early colonial settlements could have been kept
so clean of foliage when—even eventful incidents such as the burning of certain species or homes (strangling figs)
would erupt high up on any building left alone for more than a couple of months, fording dreams (as Kevin Chua has argued in a different vein elsewhere) of our own extinction. See Kevin Chua, ‘The Tiger and the Thesaurus: George Coleman’s Dream of Extinction’, Forum on Contemporary Art and Society (FOCAS) 9 (2007): 13.

Kevin Chua ends that essay on the man-eating tiger as imminent alert, marking the edges of colonial regional incursions into the Malay interior by ‘warning[ing] to think’ of surveyor George Coleman, the key protagonist in one of the main works he analyses, ‘dreaming not only of the spectral tiger but also of his own extinction.’

Martin was implicitly referring to the cheetah and also very beautiful attempts to subvert scientific orders of
representation and dreams of flora and fauna of our region by Robert Zhao and his Institute of Critical Zoologists
(http://www.criticalzoologists.org).

For see for example Joseph Wright of Derby’s series on scientists at work, such as An Experiment on a Bird in the Air Pump, 1768 (The National Gallery, London) and Phosphoric Gas at Lecture in the Ossy, 1768 (Derby Museum and Art Gallery, Derby). See for example Joseph Wright of Derby’s series.

DNA, however, is not just another scientific fact. DNA’s overt connection to processes of representation (the
alphabet, the book, the map [one might add here, the imprint]) makes the representations of DNA particularly rich
texts for understanding the interrelation of science, metaphor and narrative.’ Judith Roof, ‘The Epic Acid,’ in
Sites for Understanding the Interrelation of Science, Metaphor and Narrative,” Science, Technology and Human Values


23 See note 38.

24 See note 28.

25 See note 38.

26 See note 38.

27 See note 38.

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48 See note 38.

49 See note 38.

50 See note 38.
than on the South Sulawesi mainland. Omar Pidani from the Australian National University has argued in his research essay that the scale of logging and the rate of deforestation during the logging boom years from the


Omar Pidani has argued that the story of Muna is emblematic of a larger story of the political processes in the region, one that is marked by the struggle for political independence and the role of the teak industry. Omar Pidani, ‘What Motivates People to Plant Teak? A Case Study from Southeast Sulawesi, Indonesia’ (unpublished research essay, Fenner School of Environment and Society, Australian National University, 2008).

See Kevin Chua, ‘The Teak of Neoliberalism,’ in this volume.

The academic, journalistic and biographical literature on the genocide of an estimated up to 500,000 people—
Indonesian Chinese and those accused of having connections with communism—in 1965 and 1966 has been
surging recently, with all clues surfacing from the fall of Suharto in 1997. This genocide led to what in Muna is

The Act Of Killing


Rainforest Relief. ‘Partners in Crime: Malaysian loggers, timber markets and the politics of self-interest in


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Woodprints from a 1940s–1950s teak bed found in Singapore, made with charcoal on paper.

240 cm x 150 cm

2013

LUCY DAVIS
The DNA profile from your sample was a closer match with the profile of South Sulawesi teak than the profiles of teak from Burma, Laos, Thailand and India. Hence it can be said with a good degree of confidence that your sample originated from South Sulawesi, came the reply from the plant geneticist.

Pokok Ranjang Jati
Teak Bed Tree
Woodprints from a 1940s–1950s teak bed found in Singapore with charcoal on paper. 240 cm x 150 cm 2009
Your bed is a style from the 1950s or 1940s. It was made perhaps by the kind of furniture-maker that used to live along Victoria Street. It is a style that would have been bought by Chinese or Peranakan families. I would guess that the timber came from Burma. That’s where most of the timber came from in those days.

Said ‘Mr David with the Big Eyel’, the karang guni second hand furniture seller from Rangoon Rd, Singapore, 2010.

Woodprint collage reproduction of David’s thumb print on prints of a 1940s–1950s teak bed found in Singapore. Paper on paper, 240 cm x 150 cm, 2012.
Teak is believed to have been introduced to Muna hundreds of years ago as a gift from an Envoy of the Javanese court to our King. The envoy settled in Muna and was given a royal title. That is why teak is called "kulijawa" in Muna language. Back then, only the King could plant teak trees. Later the Dutch took over and intensified teak production. Then during the Japanese occupation they controlled the plantations. After independence it was the turn of the Indonesian government. Only in the last ten years have Muna villagers been allowed to plant teak for commercial purposes. …" Said the Oral Historian from Raha.
During those days everybody worked in the teak plantations. We used buffalo to drag the teak logs. Later there were trams and cranes with caterpillar wheels. So we sold all our buffaloes to traders from Toraja. There are only very few buffalo left on Muna now. During those busiest years even the rivers were thick with teak logs. You could walk on wood all the way to the sea…' said the Pentirio Village Head, Muna Island, Southeast Sulawesi, 2010.

Reproduction of a historic photograph of the Muna Island Southeast Sulawesi teak industry from the collection of Mr W. T. Bermuli. Reproduced in woodprints from a 1940s–1950s teak bed found in Singapore and charcoal on paper.

ARTWORKS | LUCY DAVIS
In the days when villagers were only permitted to fell teak for domestic purposes like building houses, pathways and fences, villagers would circumvent restrictions by keeping extra savings of teak for “repairs” underneath their houses. Said the former teak plantation worker. Muna Island, Southeast Sulawesi.

Reproduction of a photograph of a solid teak pathway drainage cover on Muna Island, Southeast Sulawesi, 1910.

Reproduced in woodprints from a 1940–1950s solid teak found in Singapore in 2009 and dated to have been made in the 1940–1950s and charcoal on paper.

240 cm x 150 cm
2012
The fifties and sixties were a violent time for Sulawesi. Maybe your teak was smuggled to Singapore as contraband by Bugis traders in return for weapons... wrote the advisor from Kendari.

An attempt to reconstruct a teak Bugis boat, photographed in Muna Island, Southeast Sulawesi, 2010, with woodprints from a 1940s–1950s teak bed found in Singapore in 2009.

240 cm x 150 cm
2012

ARTWORKS | LUCY DAVIS
The Lesser Sulphur Crested Cockatoo is critically endangered in its native Sulawesi. However, introduced populations appear curiously able to thrive elsewhere, said the ornithologist. Singapore, November 2010.

While we were photographing teak and banyan trees in the overgrown, purportedly haunted, Konservasi plantation one morning, a flock of cockatoos made a noisy appearance in the canopy. Perhaps they came to eat the banyan seeds. Charcoal on paper. 2012.
A dukun or wood spirit doctor can tell by holding a piece of wood, which end is the 'crown' end of the wood/tree and which end is the root. House pillars must have the root end at the base. They must have the crown at the top. Lateral beams must have the crown end pointing to Mecca ... said the dukun, Muna, 2010.

Reproduction of a photograph of an abandoned sawmill factory in Raha, Muna Island, Southeast Sulawesi, 1940s, on woodpanel from a 1950s/1960s machined board in Singapore, 240 cm x 150 cm, 2012.
The only konservasi or conservation-status forests which have not been cut into by Muna villagers are particularly old plantations which are considered to be haunted. In these haunted plantations (hutan hantu), a strange battle has developed between those impressive teak trees that remain, and banyan or strangling figs which have grown from seeds dislodged by birds or other forest creatures in the canopy. Possibly because of the imposing form that it takes and the way that the banyan ‘possesses’ other trees, it is regarded in cultures throughout the Malay Archipelago as having strong positive and negative powers.

Banyan and Teak, Muna, Southeast Sulawesi, 2010, woodprints from a 1940s–1950s teak bed found in Singapore
240 cm x 150 cm
2012
ARTWORKS | LUCY DAVIS
JALAN JATI (TEAK ROAD)

23 minutes, 2012
Animation Stills

Concept, Direction & Animation: Lucy Davis
Music & Sound Design: Zai Kuning & Zai Tang
Editors: Tan Jac Min Benjamin, Edwina Ong Zhi Yi & Yap Su Zhen Michelle

A TEAK BED REMEMBERS
Charcoal and woodprint collage from a teak bed on paper, 2012

A BED REMEMBERS AN ISLAND, AN ISLAND REMEMBERS A BED
Charcoal and woodprint collage from a teak bed on paper, 2012
Any Battles with Teak, Magic Battles with Science
Charcoal and woodprint collage from a teak bed on paper, 2012

Scenes from a Town After a Timber Boom II: Singapore
Charcoal and woodprint collage from a teak bed on paper, 2012
Older teak plantations have been officially given konservasi (conservation) status—not in order to preserve biodiversity, but in order to conserve the water table after decades of forest destruction and over-harvesting, already

SHANNON LEE CASTLEMAN

Logging in a konservasi forest. Scenes from an Island After A Timber Boom.

Muna Island, Southeast Sulawesi, archival digital print.

140 cm x 176 cm
2010
Since it is illegal to cut down the trees in a konservasi forest, villagers chop at them slowly on the side not facing the road until the tree eventually dies. The tree can then be removed as it is understood to have fallen on its own.
"Tree wounds in a konservasi forest"
Muna Island, South eastern Sulawesi, archival digital print
80 x 80 cm
2010

ARTWORKS | SHANNON CASTLEMAN
Tree wounds in a konservasi forest
Muna Island, Southeast Sulawesi, archival digital print
2010

ARTWORKS | SHANNON CASTLEMAN
“Tree wounds in a konservasi forest”
Muna Island, Southeast Sulawesi, archival digital print.
128 cm x 100 cm
2010

ARTWORKS | SHANNON CASTLEMAN
Before 2000, villagers were only permitted to cut down the teak from the forest if the wood was used to build their houses. We learned how people often cut down more teak than they needed and sold off the extra timber. This led me to speculate that perhaps the wood from our bed could have originated from the same forest as one of the houses that was built in the late 1940s.
Almost all village structures and materials, from housing fences to drains to roofs, are made of teak.
The office of the Muna Regency (local government) is experimenting with new strains of teak for more rapid yields. Both plantations on this spread are found in front of the Muna government administrative building. The photograph on the left depicts a kind of teak that has been planted in Muna for decades. The photograph on the right is a plantation where an improved strain is being tested.
Two dukun-dukun, traditional arborealists or wood spirit doctors, who specialised in teak. Scenes from an island after a timber boom.

Muna Island, South East Sulawesi, archival digital prints

The male dukun told us that our teak was jati hitam (‘black teak’) or the lowest grade of teak—only to be used for the lavatory and back areas of Muna houses. The female dukun was not convinced that the timber from our bed was from Sulawesi.
“Huts look house construction,” Scenes from an Island After A Timber Boom
Muna Island, Southeast Sulawesi, archival digital print
80 cm x 65 cm
SHANNON CASTLEMAN
Teak Fishing Boats: Scenes from an Island After a Timber Boom

Muna Island, Southeast Sulawesi, archival digital print
80 cm x 65 cm
2010
The sample is then packaged at the DoubleHelix office, ready to be sent to plant genetic laboratories for DNA extraction.

EXTRACTING TIMBER SAMPLES FROM THE JALAN JATI BED

SINGAPORE, MARCH 2010
The following is an interpretation of the methodology we use:

The wood sample is first examined (Fig. 1) and the most appropriate surface from which to scrape the sample is chosen. This is usually the outermost or youngest surface. Then, using a clamp to hold the sample (Fig. 2), a scalpel is used to scrape the sample (Fig. 3) to generate what is essentially sawdust (Fig. 4). Once enough sawdust has been collected, the material is transferred into a tube for mashing.

The mashing process involves tungsten beads (Figs. 5 and 6) and a device known as a Retsch mill (Figs. 7 and 8), that shakes the samples at high speeds to break open the cell walls of the tissue and allow the DNA to be extracted. The result looks like a slightly more ground-up form of the original sawdust (Fig. 9). The bead is then removed from the sample (Fig. 10) and the DNA extraction process can begin.

Buffer (Fig. 11) is added to the sample, along with chloroform, to separate the organic matter containing DNA from the other material. This is done using a centrifuge (Fig. 12) and a heat block. The separation can be seen in Fig. 13. The separated DNA is then purified, removing essentially everything except the DNA, so it can be amplified in a polymerase chain reaction (PCR).

The PCR increases the number of DNA fragments of a particular genetic region—in our case, various barcoding regions. These regions help to identify the wood sample being extracted to a list of reference ‘barcode’ sequences (see Fig. 14 for an idea of this), so as to create a barcode that is unique for a particular genus, species or population. These barcodes are used to determine the level of matching the test piece to a barcode reference library.

To test the extraction barcode fragment to the barcode library, the amplified DNA needs to be sequenced, which allows a computer (and therefore the scientists) to see the sequence of bases (A, C, G and T) that make up a barcode. The computer-generated sequence can then be statistically tested against the reference library to determine the level of matching.
These historical images of the teak industry on Muna Island are reproduced with the kind permission of W. T. Bermuli, a former sawmill engineer from Raha, Muna, Southeast Sulawesi. All images were taken on Muna Island, Southeast Sulawesi. Some images feature his father, Alex Bermuli.
A forestry supervisor—possibly Alex Bermuli—with a felled teak tree. ‘These logs have just been measured. A young plantation is growing in the background.’ – W. T. Bermuli. Date unknown.

‘During those days, everyone worked in the teak plantations. We used buffalo to drag the logs.’ – Head of the Pentiro village on Muna Island. Date unknown.

Villagers, overseen by a government official, digging a road that will be used to transport the logs out of the plantation. Date unknown.

‘Later there were lorries, so we sold our buffaloes to traders from Toraja.’ – Head of the Pentiro village on Muna Island. ‘8–12 trucks would travel along the narrow roads in convoy. Children would ride on the logs and run after the lorries.’ – W. T. Bermuli. Date unknown.

Picture taken from a logging raft along a river or estuary on Muna Island. ‘The rivers during the timber boom days were thick with logs. You could walk on wood all the way to the sea.’ – Head of the Pentiro village on Muna Island. Date unknown.
Teak logs arriving at a sawmill. Date unknown.

At one of the sawmills overseen by Alex Bermuli, 1940s–1950s.

‘Later still we had caterpillar tractor machines to pull the logs out of the forest.’ – W. T. Bermuli, 1950s–1960s.

At the larger sawmills, there were trucks on rails to ferry the timber back and forth. Alex Bermuli (with sunglasses) is in the foreground. Date unknown.

Caterpillar and lorries dropping logs in cleared land, 1960s.

Alex Bermuli helping to repair sawmill machinery, 1960s.

Inside the sawmill, with Alex Bermuli (holding the pith helmet) inspecting the sawing of wood. Date unknown.

Inspecting wooden planks to be exported for flooring, 1950s–1960s.

A customs house to monitor the flow of teak off the island, 1950s–1960s.

This image was described to us in Bahasa Indonesia as depicting an excavation process for a swimming pool for the senior forestry staff and families. However, we are not completely certain about the translation in this case. There are certainly no swimming pools remaining in Muna today. Date unknown.

Inspecting wooden planks to be exported for flooring, including Alex Bermuli (in sunglasses with pith helmet), 1950s–1960s.
BIOGRAPHIES

The Migrant Ecologies Project

Lucy Davis is a visual artist, art writer and assistant professor at the School of Art Design and Media, Nanyang Technological University, Singapore. She is founder of the Migrant Ecologies Project. Her work has been exhibited and screened in Singapore at the National Museum of Singapore, Jendela Gallery (Esplanade – Theatres on the Bay), The Substation arts centre and Pisco Museum. It has also travelled to Chiyoda Arts 7331 (Japan), the Indonesian Visual Art Archive (for Valentine Willie Fine Art), Solanar Sunaryo Art Space (Bandung, Indonesia), International Short Film Festival Oberhausen, MACHINE WILDERNESS International Symposium of Electronic Arts (USA) and Rotterdam International Film Festival. The short film Jalan Jati won the Promotional Award of the International Short Film Festival Oberhausen in 2012 and the project Jalan Jati was a finalist for the Prix COAL Art & Ecology Prize (France) in 2011. Lucy was also nominated for the Asia Pacific Breweries Signature Art Prize, presented by the Singapore Art Museum, in 2011. Lucy has written for several international anthologies, journals and art publications, and is the Southeast Asia contributor for ANTENNE, Journal of Nature in Visual Culture. She was founding editor of FOCAS Forum on Contemporary Art & Society (Singapore/Southeast Asia, 2000–2007) which participated in documenta 12 (the Magazines Project, Kassel, Germany) 2007).

Shannon Lee Castleman is an assistant professor of photography and digital imaging at the School of Art, Design and Media, Nanyang Technological University, Singapore. As an artist she works she works in both photography and video. She is a member of the Migrant Ecologies Project. Shannon graduated with a BEA in photography from the Tisch School of the Arts, New York University, in 1993. She spent eight years working as a freelance photographer, before returning to study at the San Francisco Art Institute, receiving her MFA in 2004. Her work has been included in a number of exhibitions and publications, both in her native United States and internationally. In Singapore her work has been exhibited at Singapore Art Museum and the Asian Civilisations Museum. She is a recipient of the Murphy Fellowship in the Fine Arts, sponsored by the San Francisco Foundation, and she received the Gary B. Fritz Imagemaker Award for Excellence from the Society of Photographic Education in 2002.
Dr Shawn Lum holds a PhD in botany from the University of California, Berkeley (1993) and an AB in biology from Harvard University (1985). He has been a lecturer and assistant professor at the department of biology, Division of Natural Sciences and Science Education at the National Institute of Education, Nanyang Technological University, Singapore since 1993. He comes to the Migrant Ecologies Project having studied the ecology of Singapore and the region for the past 20 years, as well as being involved in environmental education and outreach for nearly as long. He is the principal investigator of a long-term forest dynamics study at Singapore’s Bukit Timah Nature Reserve—a project carried out in collaboration with the Smithsonian Tropical Research Institute. He has also invested significant free time volunteering for conservation NGOs and currently serves as the President of the Nature Society (Singapore), Singapore’s oldest environmental group.

Lee Weng Choy is an art critic. From 2000 to 2009, he was the artistic co-director of The Substation arts centre in Singapore. He is currently president of the Singapore section of the International Association of Art Critics. He has lectured on art theory and cultural policy, and his essays have appeared in such publications as After the Event: New Perspectives on Art, History, Breakout, FOSAM Forum On Contemporary Art & Society, Theory in Contemporary Art since 1985, and Modern and Contemporary Southeast Asia Art.

Andrew Lowe is chair in plant conservation biology and director of the Australian Centre for Evolutionary Biology and Biodiversity at the University of Adelaide, and head of science within the Science Resource Centre for the South Australian Department of Environment, Water and Natural Resources. Andrew’s predominant research interest is in how do plants survive and adapt to anthropomorphised landscapes? He leads a group applying ecological and genomic analyses, to understand and develop management strategies for a range of landscapes: historical, contemporary and future; intact, fragmented and exploited. Andrew is passionate about communicating science, particularly the threats and solutions to biodiversity pressures.

Hugo Volkart is a laboratory director at the Centre for Agricultural Biotechnology at the Kasetsart University Kamphaeng Saen campus, Thailand. The research issues in his laboratory revolve around the study of genetic diversity for plant adaptation to environmental and human-induced selection pressures. This involves genomic analyses combined with proper measurement of phenotypes, to understand and develop management strategies for a range of conservation and breeding-related problems. Hugo enjoys teaching evolution and molecular phylogenetic analysis and tries to inspire students to study biological diversity and the origin of species.

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Timber Species: Frames

Merbau (Intsia bijuga)

These frames are made of Indonesian Merbau. This species, like the other well known SE Asian hardwoods, is a popular timber for joinery applications particularly in European countries such as Belgium and the Netherlands.

Merbau is fast replacing Jarrah as the premium structural material in the ANZ market. Its natural resistance to fire due to its charring ability also makes it a preferred rebuilding material in the Bush fire Zones in Australia. The timber is mainly derived from two species, Intsia palembanica and Intsia bijuga.

Merbau’s grain and growth ring figure together with its dark red-brown colour gives it a very attractive appearance which is suitable for high class joinery and first class exterior timber decking. However, its most important quality is its dimensional stability.

Environmental Statement

This species is available from independently audited legal timber concessions, certified by CertiSource U.K. and recognised by the Singapore Green Label scheme. Proof of legality along with the Chain of Custody is available.

CertiSource is the only DNA Science based chain of custody system worldwide.