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Natural Resources and Capitalist Frontiers

The late 20th century saw the creation of new 'resource frontiers' in every corner of the world. Made possible by cold war militarisation of the third world and the growing power of corporate transnationalism, resource frontiers grew up where entrepreneurs and armies were able to disengage nature from its previous ecologies, making the natural resources that bureaucrats and generals could offer as corporate raw material. From a distance, these new resource frontiers appeared as the 'discovery' of global supplies in forests, tundras, coastal seas, or mountain fastnesses. Up close, they replaced existing systems of human access and livelihood and ecological dynamics of replenishment with the cultural apparatus of capitalist expansion. This essay explores the making of a resource frontier in the eastern part of South Kalimantan, Indonesia, in the 1990s.

ANNA LOWENHAUPT TSING

A frontier is an edge of space and time: a zone of not yet – not yet mapped, 'not yet' regulated. It is a zone of unmapping: even in its planning, a frontier is imagined as unplanned. Frontiers are not just discovered at the edge; they are projects in making geographical and temporal experiences. Their 'wildness' is made of visions and vines and violence; it is both material and imaginative. Frontiers reach backward as well as forward in time energising old fantasies, even as they embody their impossibilities. On the resource frontier, the small and the great collaborate and collide in a climate of chaos and violence. They wrest landscape elements from previous livelihoods and ecologies to turn them into wild resources, available for the industries of the world.

Most descriptions of resource frontiers take the existence of resources for granted. Most descriptions label and count the resources and tell us who owns what. The landscape itself appears inert: ready to be dismembered and packaged for export. In contrast, the challenge I have set myself is to make the landscape a lively actor. Landscapes are simultaneously natural and social, and they actively shift and turn in the interplay of human and non-human practices. Frontier landscapes are particularly active: hills are flooding away, streams are stuck in mud, vines swarm over fresh stumps, ants and humans are on the move. On the frontier, nature goes wild.

The place I describe is a mountainous, forested strip of south-east Kalimantan. My companions in travelling and learning this landscape are Meratus Dayaks, old inhabitants of the area, whose livelihood has been based on shifting cultivation and forest foraging.¹ For Meratus, the frontier has come as a shock and a disruption; it is with their help that I experience the trauma of transformation. There are other perspectives: for some, such as migrants and miners, the frontier is an opening full of promise. They come in expectation of resources, and so they can ignore how these resources are traumatically produced. I leave their stories for other chronicles, of which there are many.

In the mid-1990s, the political regime in Indonesia was called the New Order. The New Order was a centralised and repressive political machine that depended heavily on the power of its military, particularly to control the countryside. In the 1970s and 1980s, the regime flourished through a rhetoric of state-led development. In the 1990s, however, privatisation became a

regime watchword; in practice, the new policies further concentrated economic power in the hands of the president's family and close cronies. In Kalimantan, state policy privileged corporate control of natural resources; huge tracts were assigned to logging companies, mining companies, and pulp-and-paper as well as oil palm plantation companies. The military played an important role in transferring these tracts from previous residents to their corporate owners; military men also took their own interest in resources. It seems fair to say that the military had a central role in creating the 'wildness' of the frontier. This seminal period, which has gone on to shape the wildness of the early 21st century, is the moment I describe.

An Abandoned Logging Road

An abandoned logging road has got to be one of the most desolate places on earth. By definition, it does not go anywhere. If you are walking there, it is either because you are lost or you are trespassing, or both. The wet clay builds clods on your boots, if you have any, sapping your strength, and if you don't have any boots, the sun and the hot mud are merciless. Whole hillsides shift beside you, sliding into the stagnant pools where mosquitoes breed. Abandoned roads soon lose their shape, forcing you in and out of eroded canyons and over muddy trickles where bridges once stood but are now choked by loose soil, vines crawling on disinterred roots and trunks sliding, askew. Yet, ironically, the forest as a site of truth and beauty seems clearer from the logging road than anywhere else, since it is the road that slices open the neat cross section in which underbrush, canopy, and high emergent trees are so carefully structured.

In 1994, I walked on a lot of abandoned logging roads in the eastern sector of South Kalimantan, Indonesia, between the Meratus Mountains and the coastal plains now covered with transmigrant villages – block A, block B, Block C – and giant, miles-square plantations of oil palm, rubber, and Acacia for the pulp and paper trade. The region was transformed from when I had last seen it in the 1980s. Then, despite the logging, I had thought the forest might survive; local villagers were asserting customary resource rights and transmigrant here was just a gleam in one engineer's eye, and he wasn't in charge. Now, even beyond the newly-planted industrial tree plantations lay miles

of scrub and vines. These were landslides of slippery red and yellow clay, with silted-up excuses for water. The logging roads had eroded into tracks for motorcycles, water buffalo, and the still-streaming mass of immigrant and local blood and sweat that the government calls 'wild': wild loggers, wild miners, and bands of roving entrepreneurs and thieves. I had seen resource booms before: When the prices for rattan shot up in the 1980s, for example, people went crazy cutting rattan until all the rattan had been cut to the ground. But this was something different. Something easily called degradation was riding through the land. It was the kind of scene that informs so many powerful theories of resource management. The human presence was leaving the landscape all but bare. This, they say, is ordinary behaviour on the resource frontier where everything is plentiful and wild. It is human nature, they say, and the nature of resources.

In the violent clarity of the abandoned logging road, questions come to mind that might seem simple or even idiotic elsewhere. How does nature at the frontier become a set of resources? How are landscapes made empty and wild so that anyone can come to use and claim them? How do ordinary people get involved in destroying their environments, even their own home places?

This is business that gets inside our daily habits and our dreams. Two complementary nightmares come into being; the frontier emerges in the intertwined attraction and disgust of their engagement. Consider in comparison the urban frontiers of southern California. Orange County is full of planned communities, industrial tree plantations of neatly spaced condominiums, row on row on row, which give way only to identical roads and shopping malls. There is truly no directions, no place marks, only faceless serenity, time on hold. Orange County is one kind of nightmare. Its flip side is south-central Los Angeles, the mere thought of which drives masses of whites and Asian Americans behind the Orange Curtain. Time is not on hold in that bastion of short lives. Yet these two nightmares play with each other: Just as the fear of hell drives the marketing schemes of paradise, so too does the desire of paradise fuel the schemes of hell. Both rise and fall on the spectacular performances of savvy entrepreneurs.

The same is true in Kalimantan. The giant monocrop plantations are the flip side of the wild resource frontier: on one side, endless rows of silent symmetry and order, bio-power applied to trees; on the other side, wild loggers, miners, and villagers in the raucous, sped-up time of looting. Each calls the other into existence. Each solves the problems put in motion by the other. Each requires the same entrepreneurial spirit. In that spirit, gold nuggets, swallows' nests, incense wood, ironwood posts, great logs destined to be plywood, and whole plantations of future pulp are conjured. Here I find the first answer to my impertinent questions. Resources are made by 'resourcefulness' in both plantation and wild frontier. The activity of the frontier is to make human subjects as well as natural objects.

The frontier, indeed, had come to Kalimantan. It had not always been there. Dutch plantation schemes mainly bypassed Kalimantan in the colonial period, allowing colonial authorities to treat their natives as subjects of kingdoms and cultures. Kalimantan's Dayaks, to them patently uncivilised, were still seen as having law and territorial boundaries, not a wilderness that needed to be filled up. In its first years the post-colonial nation maintained Kalimantan's villages, fields, and forests. Commercial logging only got underway in the 1970s. Administrative expansion and resettlement followed, with the goal of homogenising the nation. In the 1980s, conflicts broke out between village people and commercial loggers. Massive fires and waves of immigration disrupted emergent localisms. Through the 1980s, however, it was possible to see rural Kalimantan as a landscape of villages, small cultivations, and traditional agro-forestry, with discrete

patches of estate agriculture and large-scale logging and mining here and there.

The late 1980s and 1990s witnessed a national wave of entrepreneurship. Spurred on by economic 'liberalisation' with its international sponsors, and a consolidating regional capitalism, entrepreneurs shot up at every level from conglomerates to peasant tour guides. In this great surge of resourcefulness Kalimantan became a frontier.

The frontier, then, is not a natural or indigenous category. It is a travelling theory, a blatantly foreign form requiring translation. It arrived with many layers of previous associations. 'Indonesian Miners Revive Gold Rush Spirit of 49ers', proclaimed a headline in the *Los Angeles Times*.² Indonesian frontiers were shaped to the model of other wild times and places. Nor was 1849 California the only moment of frontier-making available to be reworked and revived. There is the dark Latin American frontier: a place of violence, conflicting cultures, and an unforgiving nature driving once-civilised men to barbarism, as Domingo Sarmiento, soon to be president of Argentina, argued in 1845.³ This savage vision of the frontier has continued to percolate through later frontier optimism. There is the nation-making frontier, as famously articulated by Frederick Jackson Turner in his 1893 address. 'The Significance of the Frontier in American History'.⁴ Wild, empty spaces are said to have inspired white men to national democracy and freedom in the US. Amazing for its erasures, the power of this formulation is suggested by the fact that US historians remained in its thrall for nearly a hundred years. Finally, in the 1960s, frontier chroniclers dared to mention that there were Native Americans, Asians, Hispanics, and women in these empty spaces, and they may not have benefited from that nation-making freedom quite so much as Anglo-American men. Finally, in the 1980s, environmental historians dared mention that someone despoiled the land, forests, and rivers.⁵ But the proud frontier story of the making of 'America' will probably be around a long time, particularly because it was remade in an internationally colonising form after the second world war in the concept of the techno-frontier, the endless frontier made possible by industrial technology. The closing of national borders, dense settlement, and resource scarcity need no longer lead to frontier nostalgia; the techno-frontier is always open and expanding. In the guise of development, the dream of the techno-frontier hit Indonesian centres hard in the late 1960s. By the 1990s, it had dragged its older frontier cousins, those entangled stories of the wild, to the rural peripheries.

Frontiers are notoriously unstable, and it is fitting that Kalimantan landscapes should have a role in forging new frontier conceptions. The frontier arrived in Kalimantan after environmentalism had already become established not just among activists but also among government bureaucrats and corporate public relations agents. No one could be surprised this time to find that frontier-making is destructive of forests and indigenous cultures. Susanna Hecht and Alexander Cockburn write that in the Amazon, heroic development plans unexpectedly turned to smoke, mud, and violence: 'The generals had unleashed forces beyond their control, and now the Amazon faced its apocalypse'.⁶ But in New Order Kalimantan, the Amazon apocalypse was already known. Plans were set in motion to save the environment in the process of destroying it. Tree plantations were introduced to restore deforested and degraded land. Only then was the landscape deforested and degraded to make way for the restorative tree plantations. Giant mining conglomerates were licensed to save the land from the pollution and depreciations of wild miners, yet legal and illegal prospectors were inseparable. "They go where we go", a Canadian engineer explained, "and sometimes we follow them".⁷ The national timber king, also czar of plywood and crown prince

of mines, hosted the 10K 'Run for the Rainforest' and produced a glossy coffee-table book of disappearing species. This is the salvage frontier, where making, saving, and destroying resources are utterly mixed up, where zones of conservation, production, and resource sacrifice overlap almost fully, and canonical time frames of nature's study, use, and preservation are reversed, conflated, and confused.

By this point it should be clear that by frontier I don't mean a place or even a process but an imaginative project capable of moulding both places and processes. Turner describes the frontier as "the meeting point between savagery and civilisation".⁸ It is a site of transformations; "the wilderness masters the colonist. ... Little by little he masters the wilderness..."⁹ It is a space of desire: it calls; it appears to create its own demands; once glimpsed, one cannot but explore and exploit it. Frontiers have their own technologies of space and time. Their emptiness is expansive, spreading across the land; they draw the quick, erratic temporality of rumour, speculation, and cycles of boom and bust, encouraging ever-intensifying forms of resourcefulness. On the Kalimantan salvage frontier, frontier intensification and proliferation lurch forward in a hall of mirrors, becoming showy parodies of themselves. Time moves so quickly that results precede their causes, and the devastation expected behind the line of frontier expansion suddenly appears, as it seems, ahead of its advance.

The Kalimantan frontier is not the enactment of a principle of commodification or conquest. The commodification of forest products is centuries old in this area, and while the new frontier draws on the earlier trade, it is not a logical intensification of this earlier trade. The frontier is not a philosophy but rather a series of historically nonlinear leaps and skirmishes that pile together to create their own intensification and proliferation. The most helpful scholarship, then, is not to be found in abstract treatises but rather in historical descriptions and ethnographies. Thus, accounts of the US west tell us how the rush to grab one landscape element can jump off into another, as when gold prospectors made property claims on stream water. Legal precedents unexpectedly link one region and another. Aesthetic models are carried to new homes, as colonial conservation inspired the national parks movement.¹⁰

As these kinds of moves are repeated, they gain a cultural productiveness even in their quirky unpredictability. Thus Marianne Schmink and Charles Wood describe frontiers in Amazonia as a series of ironic twists. Planned communities lead to unplanned settlement; resource nationalisation leads to private control, land titling leads to forgery, military protection leads to generalised violence.¹¹ Such twists are more than irony: they predict and perform their own reversals, forming productive confusions and becoming models for other frontiers. In Kalimantan, related paradoxes produce frontier degradation and salvage. The frontier is made in the shifting terrain between legality and illegality, public and private ownership, brutal rape and passionate charisma, ethnic collaboration and hostility, violence and law, restoration and extermination.

Legal, Illegal

Shifting cultivation is illegal in Indonesia, despite the fact that it is the major subsistence technology for many rural people in Kalimantan, including Meratus Dayaks. Perhaps that is why, as I hiked down the Meratus Mountains into the eastern coastal plains with Meratus friends, the lines of legality were not clear to me, and I was hardly aware that the immigrant loggers I passed were out of bounds, wild men. As soon as we hit the old logging roads we found them, singly or in groups of three or four, each with a small chainsaw or a water buffalo to haul out the logs.

Their living places were bed-sized bamboo platforms along the road with only a sheet of plastic hung over to keep out the rain; they seemed to have no possessions but a coffee pot and a can of mackerel, the poor man's sardines. We stopped to drink sticky thick coffee, loaded with sugar, and to talk of the pleasures and dangers of the forest world they knew. They chanted the prices of wood, the names of logs. They spooked themselves, and us, with tales of stolen chainsaws and armed men on the roads. They were always planning to leave in a few days, when the earnings looked good, and before fiercer men arrived. Even as quick-moving transients, they gave us a human face for the frontier.

My friends thought the men worked for Inhutani, a government forest company, and while this turned out to be technically wrong, they were right that the lines between public, private, and criminal enterprise were unclear. These loggers have both legitimacy and access. They sell their logs to the properly concessioned logging companies or to small construction firms. Where environmental regulations keep the companies off mountain slopes or village claims push them back, that's where the wild loggers go. They fill out logging economies of scale, and their earnings are the only prosperity that logging is likely to bring to the province. Their chainsaws come to them through networks of renting and profit-sharing that cross local, ethnic, and religious lines. They form the slender end of channels of capital reaching from rich Chinese entrepreneurs, conglomerates, and – at that time – the family of the president, flowing in ever narrowing channels out into the forest. Usually, the police and the army do not bother them, although the police and the army can be unpredictable. Many pay fees to official Meratus village heads to give them permission to cut in village forests, and while villagers complain that village heads keep it all for themselves, this privatisation is common, even proper, for government village subsidies.

And yet, both, despite and because of all this respectability, these lonely loggers carried and spread the 'wildness' of the frontier. Even in sitting with them, chatting with them, we partook of that wildness. They encouraged our fears of armed men; oh, no one will attack you, they joked, because they will assume you are carrying a lot of guns. And who can tell the difference between a logger and an armed thief? Each time we came upon another man, another logger/thief, we stopped, hoping to domesticate him with our chatter. Perhaps he wouldn't attack us; perhaps he would alert us to the presence of other logger/thieves. Soon our nerves were jangling from all those cups of coffee, and by then we had formed a silent pack, each huddling in his or her own unspoken fear.

They modelled frontier behaviour for us, teaching us the value of wood until my Meratus companions began looking at familiar forest trees with eyes like cash registers. Oh, that one could bring me a million rupiah, Ma Salam sighed, interrupting our conversation about environmentalism. In writing their names or initials on the logs they cut, the wild loggers had introduced the new practice in this area of writing one's name on trees – to claim the tree to hold it or sell it to a logger with a chainsaw before someone else did. The proliferation of naming brought new identities for trees and men, wrapping both in fearless assertion and violence, for, people said, armed men came by and cut the name off the tree, or cut the tree above the mark, and wrote their own names on the logs. If you confront them with five men, my friends said, they will come at you with 10 or 20. Sell quickly and move on to write your name again.

Who were these men, so human and yet so transiently identified? They came from everywhere and spoke the common language of trade and calculation based on the hope of a quick windfall. They were called *penyingso*, 'chainsaw men', or *pembaluk*, 'square log men', after the shape of their logs. No one knew them as wild, but they were men without ordinary

culture. Appendages to their equipment and their products, they had names but no houses, families, meals, work schedule, or ordinary time. And in this stripped-down human form, they communicated across cultures, arranging ethnic collaborations. They offered a hot human connection to still the chills of fear. This thrilling connection was an anaesthetic, blocking out the damaged world in which they operated – a world already left behind by bigger frontier makers, the soil sloughing off the hills, trees falling, waters muddied. Looking in and through that damaged world, can't you see the resources waiting to be claimed?

It is difficult to find the words to discuss this kind of transethnic, translocal collaboration and the regional resource dynamics it sets in motion. Resource economists and bureaucrats recognise no localisms; to them, the world is a frontier. There is no point in asking how frontiers come to be; they are nature itself. To counter that perspective, anthropologists, rural sociologists, and geographers have drawn attention to non-frontier-like (or even anti-frontier) environmental social forms, such as common property, community management, and indigenous knowledge. They have returned attention to the cultural specificity of capitalism and state bureaucracy.¹² This important and quite wonderful work has come to dominate local and regional analyses of environment and society in Kalimantan; scholars point to the long-term social making of the rainforest, to a community 'ethic of access' that sustains forest commodities, and to the bizarre stereotypes of government planners.¹³ My own work has developed within this dialogue.

Yet in contrasting community conventions with state and corporate schemes, there is little room for discussing the call of the wild, with its regionwide collaborations for aggressive resource grabbing and the seemingly-unstoppable spread of the frontier. One might call this 'the tragedy of the tragedy of the commons', that is, the tragic result of state and corporate policies that assume and enforce open-access conventions as the flip side and precondition of private property.¹⁴ By refusing to recognise alternative forms of access, these policies will alternatives to disappearance. But this is a tragedy that cannot be well described with the vocabulary of management, property, and access rules. From the perspective of the abandoned logging roads, the divide between community and state-corporate standards feels nostalgic: too little, too late. The logging road and its illegal-legal loggers from everywhere call me toward more dangerous country.

One look back: grand schemes never fully colonise the territories upon which they are imposed. If the frontier is an environmental project, not a place, it can never fill the landscape. Away from the logging road, there are trees, fields, and villages, and not everyone is so caught up in frontier schemes. The frontier could move on, and something else could happen in its place. The forest might regenerate. Although...those industrial tree plantations are truly huge, and through them the frontier claims powerful national and international players.

The Public Private

Riding from the provincial capital up the east coast and in toward the mountains in an airless, overcrowded van with the music so loud it closes down my senses, there is more than enough anaesthetic; yet the difference between legal resource concessions and the wild is perfectly visible here. The road runs for miles through land without underbrush or animal life but only neatly planted tree stock, row on row on row. The transmigration villages recently placed here to provide the labour force for these future trees are similarly orderly, blank, and anonymous; in striking contrast to everywhere else I've been in Indonesia, the passengers get on and off at these nameless stops without looking

at us or speaking. Sometimes we stop in noisy frontier towns, full of gold merchants, truckers, and hungry, aggressive men. But soon enough we are back among the silent army of young trees. This is the kind of discipline that boosted Indonesia – for awhile – among the so-called Asian dragons. In the name of political stability, discipline made economic indicators soar.¹⁵

Appearances are important here. No weeds, no trash timber. Indeed, it is unclear to what extent appearances were not the New Order economy's most important product. Oil palm, the darling of the export-crop set, was sponsored by foreign and domestic plantation subsidies¹⁶; perhaps the companies will have moved on before the oil is pressed. The pulp plantations were financed by the national reforestation programme, the answer to environmentalists' concern for the rainforest. New international agreements offered plantation timber as the solution to rainforest destruction; timber companies put in plantations, sponsored by the government, to earn the right to cut down more forest, useful for future plantations. Meanwhile the young trees await future pulp factories. And as they wait, what will befall them? Many of the Acacias are cloned from the same parent stock, making them highly vulnerable to disease.¹⁷ They are also affected by a rot that causes hollow boles, an apt image for an economy of appearances.

There were government corporations here, and there were private ones, but most fell awkwardly across this distinction. In 1994, the oil palms were said to belong to the wife of then president Suharto, Mrs. Tien Suharto, who died in 1996 but before her death was widely parodied as Mrs. Tien (Ten) Per cent, after her voracious interest in the economy. The loggers told villagers who complained about the invasion of village forests to 'go ask Mrs Tien'. The president's family served both a material and a mythical role in the plantation economy. The capital they controlled was both public and private. And it was the confusion of these categories that allowed frontier investment to flourish. For whom were these resources discovered and developed: national interest, the army, the president, foreign corporations, or, perhaps, all of the above?

Even the staunchest of neoclassical economists admit that it was difficult to distinguish among domestic, foreign, and government ownership in New Order Indonesia, given the mix of investors, the central importance of patronage, and the slippage back and forth between military and private enterprise. The confusion proliferated at every level. Foreign was domestic: foreign aid formed a major portion of domestic revenue, and foreign firms worked through domestic partners. Public was private: the explicit goal of the government was to sponsor entrepreneurship at every level. Even peasant subsidies in the 1990s were individual entrepreneurship loans. Licences and concessions were both public and private. Civil servants were paid a low base salary and expected to gain the rest of their living from perks and benefits of their discretionary authority.

You could call this corruption, or you could call it, as one North American corporate executive, gracefully submitting to government demands for a share of his company's enterprise, dubbed it, 'Indonesia's political, economic, and social environment'.¹⁸ One must also consider these public-private arrangements in relation to the worldwide post-cold war infatuation with the market. Soon after the collapse of the Soviet Union in 1989, every nation state redoubled its endorsement of the market, or at least the appearance of the market, and New Order Indonesia was exemplary. The bureaucracy was the market; its goal was to promote entrepreneurship. The military was the market; generals and common soldiers, at different levels, had the muscle to make the best deals. Environmental management was the market, offering another chance to claim resources and improve free

trade. In this context, the fluidity between public and private was a fertile space for capital, deals, plans, and the appearance of the economy itself.

The president's family and friends were exemplars of what every citizen was supposed to be doing; and their capital flowed out through transregional networks in small deals that complemented the large ones. Furthermore, this was a dynamic that supposedly sped up modernisation and development, the stated goal of the state. Secrets passed through personalistic ties encouraged speculation in which investments preceded contracts; for those tracking money and resources, an impatient anticipation emerged, speeding up the experience of time. A boom-time excitement was stimulated by the fluidity of deals, trickling down and then streaming between official coffers, foreign firms, and those-in-the-know. Rumours spread the excitement, and the wild men flocked to the frontier following or anticipating news of gold strikes and quick timber harvests, before the plantations rolled in. In this productive space, quick, erratic, anticipatory frontier time intensifies and spreads, ricocheting back and forth between centres and peripheries, and getting ahead of itself in death-defying leaps. Here alternative appearance-based scams – disciplined or wild—are born, and the only promise that must surely be kept is of fabulous, unearned wealth.

Roads that Empty the Territory

Between the tree plantations and the mountains are networks of more- and less-maintained logging roads, with their heavy cargoes of legal logs by day and illegal logs by night. For bosses and managers, the roads shrink and simplify the territory, making it quicker to get from here to there. For most everyone else, the logging roads expand landscape emptiness, separating off- and on-road sites and creating obstacles between once-connected forest places even as they speed the trip to town. The roads are also conduits for migrants, fugitives, and thieves, who expand both danger and wildness for everyone who lives or visits there.

Natural treasures themselves become fugitive in this landscape of movement and flight, just as once, people said, a man stumbled over a nugget of gold as big as a rice mortar and marked the place oh so carefully to come back later with help – but when he did, nothing was there. Masculine magic and charisma is required, for even safe in one's possession, treasures disappear. Thus every man on the road with a splinter of gaharu incense wood or a palmful of immature swallows' nests unwraps it from its plastic bag, shows it like a secret talisman, wraps it, stows it carefully in his pocket, chants the price, pulls it out again to rewrap it, trying thereby to stabilise its presence on his person. And how much more flighty are the incense trees and swallows themselves.

Take the swallows, for example. The saliva nests they build in limestone caves are the key ingredient of Chinese birds' nest soup and fetch startling prices even locally: a million and a half rupiah for a kilo of the white clean ones and 8,00,000 for the debris-filled black.¹⁹ In this area, they have long been associated with fugitive luck and danger. In the 1980s people told me that the only way to find birds' nests was to bring a freshly sacrificed human head to the spirits who could reveal them. Now, with armed men on the roads, the birds' erratic flight has intensified beyond the reach of headhunters, as have attempts to hold them in place. Where military men have found productive caves, they have posted guards and signs: 'This is the property of the army'. And so Meratus who consider themselves rightful traditional owners hurry to guard remaining caves, building their homes and clearing swiddens in the dark glens directly in front of the caves, never leaving them. Still, they are out-manoeuvred by the men on the roads, who come around with guns and flashlights and

demand entry, peeling off the birds' nests long before they are fully built and indeed ensuring that the birds will not return. Quick harvesting leads to quicker harvesting, and nests the size of nail clippings are removed, depriving the birds of any place to raise their young. In this fugitive landscape, armed men are the best part of the law, and parodies of property appear. One Meratus man who built his house in front of a cave to guard it showed me the letter written by the most recent gang to have come by to rob the cave, which warned off future gangs on the principle of this group's precedence. My host got nothing, as did the swallows, who could only fly to other fugitive locations.

Men arm themselves with old war stories, and invulnerability magic from the 1958 rebellion has been revived, with its metaphors of penises as weapons and semen as spent bullets. As much as I tried to steer around the concerns of a simple ecofeminism, it was difficult not to conclude that an emergent masculinity fuelled this regionally spreading dynamic, with its ability to unite men across lines of local culture and religion in a competitively intensive virility. Men arouse each other on the roads with stories of women who will do anything (and then, he said, she tore off her bra). They work themselves and each other into a constant state of masculine anxiety, forever talking about deals and opportunities and prices in the sped-up time of the chase. They forget day-cycles, life-cycles, seasons. They call to and challenge each other to greater efforts.

Hiking the logging roads in the hot sun, I find it difficult to refuse a ride from the men in the truck. But crammed into the cab with the crew behind a windshield covered with stickers of busty naked ladies and my male Meratus friends stuck in the back with the water buffalo, fear hits me like an avalanche. Within 30 seconds, they are feeling my arms and legs and breasts, and I must concentrate on how to get them to let me off at the next crossroads, where I heave a sigh of relief that I made it out, again, this time. Yes, says a wizened Meratus friend, they grab your breasts even if you are a wrinkled old woman, they must have no eyes, and every woman longs and must learn to jump out of the truck. But a younger friend replies to my stories with bravado: why didn't you do it? weren't they handsome enough? I had heard similar bravado from young men when a peer was cowed by soldiers: if they had come at me, I would have shown them something! And indeed, one's only choices are to hide or to play. Women can be resourceful too, and prostitution brings new resources to the frontier. But this is a world made by an intensive, peculiar, exaggerated masculinity.

This is a masculinity that spreads and saturates itself with images and metaphors, amulets, stickers of naked women, stories based on the confusion between rape and wild sex. Its moving force is perhaps best seen in the imagistic effects of the 'water machine', the high-pressure hydraulic pump, small enough for one man to carry and connect to any local stream, but whose power in the spray emerging from the taut blue plastic piping can gouge a hole four feet deep into the land and thus expose the gravel underneath the clay, gravel mixed with which, perchance, small flakes or nuggets of gold can be found. What charismatic force! And what possibilities it unveils.

The water machine, introduced in this area around 1990, is the key technology of small-scale or 'wild' gold mining. It's much too expensive for an ordinary Meratus man, but networks of renting and share splitting, with borrowed funds and imagined profits split among more and more make it possible for many ambitious men to join a mining group, or more aggressively yet, to bring the machine and a team upstream toward home. Nor are Meratus the only players. The miners, like the loggers, come from everywhere, building makeshift settlements along the logging roads with names like 'Kilometre 105 and a half'. At their

excavations, they erect camps of bamboo platforms hung with plastic sheets; they have coffee pots, sugar, mackerel cans. But I know some of these people; they are Meratus farmer-foragers. I know they are perfectly capable of stopping anywhere in the forest and, in half an hour, building a cosy, rain-tight shelter of bamboo, palm leaves, or bark. I know, in other circumstances, they would carry rice; they would hunt and fish and gather wild fruits and vegetables and make a tasty meal. But here, surrounded by familiar forest, they observe the proprieties of rain-soaked plastic sheets and a nutrition of coffee and rancid fish. It feels like nothing so much as 'culture' in its most coercive, simplistic form: a way of life that draws us in, ready or not, sensible or not.

Among the huddled mining shelters, men and women disagree. Women join the profit-sharing groups, panning the gravel with men until their own jealous menfolk arrive, sending them back to the village. The men attack the land with new vigour, sharing the washing with other women, and women sneak back to join the gold parties of strangers. But what is the result of all this passion? Despite obsessive attention to secrets and signs, much of the gravel exposed yields no metal at all; and when it does, the gold flakes are quickly spent in the extortionate prices of coffee, sugar, and cigarettes. No one I heard of had made much money; meanwhile, water machines broke and huge debts were accrued. Most strikingly, the land lay pock-marked and deeply eroded beyond recovery. Those trees that remained clung tottering by the tips of their roots, their bases airily exposed. Broken streams formed muddy pools; even grass was banished. 'They have ruined the land for many generations', said the old people. But perhaps it doesn't matter if the industrial tree plantations and their transmigrant labour force are coming anyway. Their mission is to make and restore degraded lands; why not get started?

Frontier Citizenship

Frontier men and resources, I have argued, are made in dynamics of intensification and proliferation. Confusions between legal and illegal, public and private, disciplined and wild are productive in sponsoring the emergence of men driven to profit, that is, entrepreneurs, as well as the natural objects conjured in their resourceful drives. These men and objects are contagious, recharging the landscape with wildness and virility. The frontier then appears to roll with its own momentum.

The frontier is a globally travelling project, but it requires localisation to come to life. I have tangled with this restless localisation by moving back and forth between the intense physicality of the frontier landscape, its guiding models, and its unplanned insights. Let me re-site it one more time in the hesitant emergence of frontier politics.

The frontier has been associated with distinctive political models of citizenship and culture. Most famously, frontier conditions are said to have made a freewheeling white male democracy in the new world. There is ongoing populist appeal here, not just in nostalgia for the US west, but more recently in respect for the independent miners of Brazil, who found their representatives and fought for their rights. Frontier fears of apocalypse have also stimulated models of protection: extractive reserves, indigenous reserves, nature reserves; each, at its best, produces an alliance among small collectors, native peoples, and forest advocates. Neither of these models made an easy entry into the cultural politics of Indonesia's New Order. In New Order models for the countryside, ethnic groups gained respect for cultural difference only with political submission: custom to keep farmers in their place. Yet frontier dynamics can unseat the obedience of custom to create a wider, wilder citizenship. Drawing

men from everywhere, frontier culture can mobilise them both for and against each other.

A rhetoric of democracy is possible in official acts of protection of frontier culture, as when a governor of South Kalimantan once defended illegal logging as the livelihood of the people. Of course, this is a particular kind of democracy, in which women and indigenous residents – and, more firmly still, nature – are excluded. Then there is the question of race and ethnic violence, even genocide. This is the way frontier democracy has been made from below, at least historically. Thus far I have stressed transethnic collaboration, but this history alerts me to the lines and limits it also creates. Indeed, ethnic violence has come to fill out the Kalimantan frontier. In the mid-1990s, Dayaks mobilised in violent clashes with Madurese migrants in West Kalimantan. The year 2001 brought an eerily self-conscious echo in even more dramatic violence in Central Kalimantan; for a few days Dayak-Madurese clashes dominated international news. In the distorted lens of international journalism, one might imagine the scene as the return of the US Wild West – in its Hollywood version – with Dayaks as blood-thirsty savages scalping encroaching but civilised settlers. This is ridiculous parody; the clashes have their own political and cultural histories.²⁰ Yet the emerging frontier is a place for the historical repetition of re-imagined savagery. Sometimes the army stages it; sometimes young men find themselves in its wild tropes. One's only choices are to hide or to play.

The reserve model has also attracted global attention. It arises in places where environmentalists are panicked by the possibility of total destruction; it argues that something must be saved. The most promising feature of this model is the mobilisation it has inspired, which brings the possibility of citizenship claims to those who never had them before: small collectors, tribes, trees. In Brazil, a moment of alliance between rubber tappers and Indians offered conservationists a strategy to save the forests. Yet in Indonesia, the alliance between frontiersmen and indigenous residents has only recruited the latter to the frontier. This has not been an alliance that saves forests.

Conservationists, in turn, have taken their pleas to corporations and the state, and these, indeed, have found some use for reserves. Resource companies support nature reserves because they cordon off a small area in exchange for permission to destroy the remaining countryside. Given the collusion between legal and illegal, disciplined and wild, and the new frontiersmen who come to complement development, corporate giants can rest assured they will get those reserves back, once appropriately degraded from below. Then too, in an age of natural simulation, it is never quite clear what is being preserved, what is degraded, and what is restored. The zones overlap and tease each other, and Indonesia now has national parks zoned as logging concessions. It is hard to know what one is seeing. Environmental activists say tree nurseries of hard-to-grow indigenous species are really cut-back natural forest, with young trees disguised as nursery seedlings. This, after all, is the salvage frontier. Meanwhile, maps contradict each other: a nature reserve sketched on one map is a production forest on another map, and a village territory on a third. A community forest designation is assigned to a treeless plain on which only dry stumps left by loggers recall living trees. The worst social coercions of conservation politics have been avoided in the areas I know best by not conserving anything at all.

In the late 1990s, the frontier began to spin out of control even from the perspective of capitalist investors and migrant entrepreneurs. In 1997, great fires broke out across Kalimantan, many of them set by the plantation companies who hoped to use this cheap method to clear their land. Since drought had been predicted due to the El Nino southern oscillation, the ministry of forests had warned the companies not to burn. But why consider

regulation or prudence on the frontier? The fires spread beyond all expectation, destroying settlements and forests and forming a dangerous haze across south-east Asia. Then the financial crisis that had begun in Thailand spread to Indonesia and wiped out the promises of the New Order economic boom. Kalimantan villagers were most hurt by the crisis in the 'wildest' frontier areas, where subsistence agroforestry had already been threatened or ruined by corporate and immigrant expropriations as well as destruction of the forest landscape. Meanwhile, in West Kalimantan ethnic violence between indigenous Dayaks and immigrant Madurese flamed into a war. In 1998, demonstrations in Jakarta, together with international pressure, toppled the government. In the ensuing moment of political freedom, community groups, entrepreneurs, and gangsters seized corporate resource sites. Mines were occupied. Logging camps were destroyed. The wildness sponsored by the New Order had veered out of control.

With the passing of the New Order, great possibilities opened up. Finally, there was hope for an Indonesian democracy. Students and activists in Jakarta were jubilant. In Kalimantan, non-governmental organisations and activist alliances took a newly assertive role in advocating for the rights of rural communities. Yet the frontier sponsored by the New Order only proliferated, taking off in new leaps and bounds. The resources were surely there; who could ignore them? Decentralisation of resource rights, begun in 2000, pitted government officials at different levels against each other, such that the provincial governor and the regency assembly might fight continually over what forms of resource exploitation should be allowed – and who would get the proceeds. Meanwhile, regional groups within the military – no longer the tool of the central government – provoked ethnic violence and disorder. In 2001, Dayaks and Madurese became bloodily embroiled in Central Kalimantan. Still, hope rested on the possibility of new kinds of politics – as long as international powers allowed it. The US government decision in 2002 to re-arm the Indonesian military for domestic surveillance in the 'war against terrorism' was a painful reminder of the international sponsorship of frontier violence. The frontier is no neighbourhood storm. It gathers force from afar, entangling multiple local-to-global scales.

Back in California, I remember the frontier hero John Wayne – a man who wasn't even a Wild West cowboy but instead an actor who made his living pretending to be a Wild West cowboy. He never served in the military, but a congressional medal honoured him as the embodiment of American military heroism.²¹ Orange County has dedicated its airport to him, attracting visitors to the frontier – where adventure still leads to wealth, and a man with guns can stand tall. The frontier, like a film, can be played and replayed. That's resourcefulness on the salvage frontier. **[P]**

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Notes

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- 1 See Anna Tsing, *In the Realm of the Diamond Queen* (Princeton: Princeton University Press, 1993).
- 2 Williams, Nick, Jr 'Boom Time Along "Rim of Fire": Indonesian Miners Revive Gold Rush Spirit of 49ers', *Los Angeles Times* 108, sec 1 (1988, December 12).
- 3 Sarmiento, Domingo, *Facundo, or, civilization and barbarism*, translated by Mary Mann, (New York: Penguin, 1998 [1845]).
- 4 Frederick Jackson Turner, 'The Significance of the Frontier in American History', in *Rereading Frederick Jackson Turner*, (ed), John Mack Faragher (New York: Henry Holt and Company, 1994), pp 31-60.
- 5 For an introduction to these literatures, see Patricia Limerick, *The Legacy of Conquest: The Unbroken Past of the American West* (New York: Norton, 1987) and Donald Worster, *Under Western Skies: Nature and History in the American West* (New York: Oxford University Press, 1992).
- 6 Susanna Hecht and Alexander Cockburn, *The Fate of the Forest: Developers, Destroyers, and Defenders of the Amazon* (Harper Perennial, New York, 1990), pp 141.
- 7 Williams, Nick, 'Boom Time', pp 1.
- 8 Turner, 'The Significance of the Frontier', pp 32.
- 9 *Ibid.*, pp 33.
- 10 Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford University Press, 1992).
- 11 Schminck, Marianne and Charles Wood, *Contested Frontiers in Amazonia* (New York: Columbia University Press, 1992).
- 12 For an introduction to this literature, see Raymond Bryant and Sinead Bailey, *Third World Political Ecology* (London: Routledge, 1997); Richard Peet and Michael Watts, *Liberation Ecologies* (New York: Routledge 1996).
- 13 See, for example, Tania Li, 'Marginality, Power and Production: Analysing Upland Transformations', in *Transforming the Indonesian Uplands*, (ed), Tania Li (London: Harwood Academic Publishers, 1999); Nancy Peluso, 'Fruit Trees and Family Trees in an Anthropogenic Rainforest: Property Rights, Ethics of Access, and Environmental Change in Indonesia', *Comparative Studies in Society and History* 38 (3): 510-548 (1996); Michael Dove, 'Representations of the "Other": The Ethnographic Challenge Posed by Planters' Views of Peasants in Indonesia', in *Transforming the Indonesian Uplands*, (ed), Tania Li (London: Harwood Academic Publishers, 1999). In the last few years, Kalimantan scholars have turned much more intensively to problems of ethnic violence and resource conflict. See, for example, Nancy Peluso and Emily Harwell, 'Territory, Custom, and the Cultural Politics of Ethnic War in West Kalimantan, Indonesia', in *Violent Environments*, (eds) Nancy Peluso and Michael Watts (Ithaca: Cornell University Press, 2001).
- 14 I am referring to the much-discussed thesis called 'the tragedy of the commons' (Garrett Hardin, 'The Tragedy of the Commons', *Ecistics* 27 (March 1969): 160, 168-170), which argued that common property – in contrast to private property – is invariably degraded by its users. Many commentators have showed that this thesis is wrong, despite the fact that it has considerable authority among policy-makers. (See, for example, Bonnie McKay and James Acheson, *The Question of the Commons: The Culture and Ecology of Communal Resources* (Tucson: University of Arizona Press, 1987). Indeed, as I suggest here, the thesis itself as applied in policy can be destructive to the environment.
- 15 Consider the relationship between mass murder and 'banking output' suggested by Figure 9.1 in Hal Hill, *The Indonesian Economy Since 1966: Southeast Asia's Emerging Giant* (Cambridge UK: Cambridge University Press, 1996) pp 180, which shows the soaring line of growth exactly on the years of the army-sponsored massacre of 1968-69.
- 16 *Ibid.*, pp.124.
- 17 Harold Brookfield, Leslie Potter, and Yvonne Byron, *In Place of the Forest: Environmental and Socioeconomic Transformations in Borneo and the Eastern Malay Peninsula* (New York: United Nations Press, 1995), pp 105.
- 18 The quotation is from David Walsh, the president of the ill-fated gold mining company Bre-X, as reported by Richard Borsuk, 'Bre-X Minerals Defends Pact With Indonesia', *Wall Street Journal* 136 (no 41, February 2, 1997):B3A. For more on this company and its arrangements with the Indonesian government as well as its actions on the Kalimantan frontier, see Anna Tsing, 'Inside the Economy of Appearances', *Public Culture* 12 (1):115-144 (2000).
- 19 These are prices from the mid-1990s, before the currency devaluation of 1997. At the time, one US dollar was worth a little over 2000 rupiah.
- 20 See Nancy Peluso and Emily Harwell, 'Territory, Custom, and the Cultural Politics of Ethnic War'.
- 21 Richard Slotkin, *Gunfighter Nation: The Myth of the Frontier in Twentieth Century America* (New York: Atheneum, 1992) pp 243.