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Negotiating ‘darkness’ and ‘light’: Meshworks of fluidity and fire in Baucau¹

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While Timor-Leste’s cosmologies and western philosophy may seem worlds apart, in this chapter I draw on the work of Karen Barad (2003), Tim Ingold (2011, 2015) and Marilyn Strathern (1996) to explore approaches to the materiality of different ‘resources’ in Timor-Leste. By interrogating particular cosmological understandings of water, stone and metal, my aim is to shed light on locally differential attitudes towards modernist development practices – in this case, a cement mine and factory. My argument unfolds by triangulating a discussion of cosmology, landscape and ancestral relations to make connections with, and build a narrative account of, a number of ritual prescriptions and proscriptions involving metals. In this discussion, I focus on the movement and flows of relations that are associated with, and are potentially cut off by, various agencies entangled with metallurgical matter. I ask what all this means for the authorisation of the ongoing activities involved in the creation and use of metals and other hardened objects. By the chapter’s end, I draw

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these insights into a discussion about visions for the future in Timor-Leste framed by particular Timorese approaches to place, the mutual constitution of human and more-than-human agencies, and industrial resource extraction.

Meshworks

As a starting point, I will briefly explore how, as with western scientific understandings, indigenous Timorese understandings of materiality are articulated through a focus on causal interactions – what in science is known as measurement, and which in Barad’s (2003: 824) agential realist account concerns the ‘local separability of different “component parts” of the phenomenon, one of which (“the cause”) expresses itself in effecting and marking the other (“the effect”)’. Barad is interested in the ways that:

discursive practices are not human-based activities but rather specific material (re)configurings of the world through which local determinations of boundaries, properties, and meanings are differentially enacted. And matter is not a fixed essence; rather, matter is substance in its intra-active becoming – not a thing but a doing, a congealing of agency. And performativity is not understood as iterative citationality ... but rather iterative intra-activity. (Barad 2003: 828)

Of such performativity, Ingold (2015: 85) has written that the world is ‘immersed in sentience’, wherein places:

are like knots, and the threads from which they are tied are lines of wayfaring. A house, for example, is a place where the lines of its residents are tightly knotted together. But these lines are no more contained within the house than are threads contained within a knot. Rather, they trail beyond it, only to become caught up with other lines in other places, as are threads in other knots. Together they make up what I have called the *meshwork*. (Ingold 2011: 149)

Within these meshworks of place (and matter), it is movement that enables the dynamic reconfiguring of the intra-active components of phenomena, and it is the resultant material-discursive ‘congealing’ of what Ingold calls ‘knots’ or Barad calls ‘substances’ that gives meaning and order to our worlds.

Previously, I have drawn on the work of Ingold to examine the fluidities of a meshwork created by more-than-human agencies activated through water (Palmer 2015). By tracing the spiritual ecology of a karst hydrosocial system in the Baucau and Viqueque districts of Timor-Leste, I explored the agential, symbolic and material connective capacities of water, as well as the intricate connections between society and nature created by the flow of water. By bringing together material on water, kinship, affinity, ritual and narrative, I was able to explore the ritual ecological practices, contexts and scales through which the use, negotiation over and sharing of water occur. This enabled me to show the complex functioning and social, cultural, economic and environmental interdependencies of hydrological societies in this eastern region of Timor-Leste.

My concern in this chapter is with more hardened things – chiefly, rock and, more specifically, metals extracted from the minerals in rock by the use of fire. Janowski (2015) has written that in the highlands of Borneo, *lalud*, or 'power' and 'life force', coheres or 'knots' in stone where it may reside as a substance and/or be associated with a distinct spirit within the stone. Similarly, in Timor, rather than considering hardened objects such as rocks² as flows through a meshwork, it seems appropriate to think about them as dense concentrations of congealed agency, as flows that have knotted together in movement to manifest a hardness – and often a brilliance – understood as cohering (spiritual) power (cf. Janowski 2015). Here, I examine the power and role of the human agency that becomes embedded in these 'objects'. A process that Blakely has described elsewhere as the 'the intellectual and symbolic mastery of the nature–culture transition' (Blakely 2006: 158). With my lens trained on local ecologies of spirit, I am interested in the particular ways in which human agency is activated by interweaving with the more-than-human – flowing, cohering and growing in the knots embedded in a broader meshwork. I am particularly interested in the process of holding apart and bringing together these different types of matter, as well as in the local struggle to maintain a semblance of control over the process. For analytical insight, I turn to Strathern's (1996) notion of 'cutting the network'. She asks us to consider the ways and circumstances in which networks of relations are, by necessity, cut; for example, they may be severed in order to enable more limited ownership of property or to create space for relational

2 In Timor, I could extend this analysis to include the properties of hardwoods, such as ironwood, or even bone and shell, which also have particular powers when fashioned by humans; it could be argued that wood, shell and bone each have their own fiery principle.

recalibration. Such ‘cuts’, Strathern argues, enact stops, which can be permanent or only temporary pauses or blockages in the flow of relations, enabling the rerouting of arrangements in new ways. Considering, for example, marriage exchange relations, Strathern (1996) argues that the possibility of enacting ‘cuts’ in relations is as important as the relationally enabling effects of the exchange itself. In this chapter, I am concerned with the ways in which particular ‘cuts’ in relations (or relational networks, as Strathern puts it) may also be dangerously transgressive, interrupting the broader relational architecture of flows and knots.

Fiery objects

Taking up Strathern’s notion of ‘cutting the network’, my object of analysis in this chapter is fire – more particularly, it is the fiery elements of metals that are liquefied and then worked, material forms woven through with particular properties and meanings. From an interpretation of my own ethnographic data from the region, I argue that the form and materiality of metals involves a ‘cut’ in relational flows, and as such also reveals quite a bit about the ambiguous relationality between human and more-than-human agencies during times of social change (cf. Miller 1994: 417). Within the frame of local lifeworlds, I argue that metals are objects with powerfully generative (and potentially destructive) capacities. Taking as my starting point the transformation of rocks to metals, I argue that this is a process that, cosmologically speaking, constitutes the same kind of double movement found in the transformation of regional house-based social relations: one of ‘recomposition and differentiation, anchorage and flow, source and issue’ – in this case, between fluids and solids (McKinnon 1991: 280; cf. Schneider 2012; Strathern 1996). Although these transformations offer ‘pathways that extend growth into the future’ (McKinnon 1991: 282), I argue that such processes, especially in relation to metals, can also be understood as dangerously containing relations. For this reason, metals need to be treated as transgressive substances – ones that can even potentially stop the flow of life.

Rocks and metals continually appear, often confoundingly so, as actors in my ethnographic data. In Timor, rocks often manifest as sacred megaliths, while metals liquefied by fire are worked into swords, breast discs or other jewellery. These objects are frequently associated with powerful ancestors and kept in or near particular sacred houses as *sacra*. But there are also many stories that refer to the use – as well as prohibitions and constraints

on the use – of more mundane metals and rocks. Nails, fishing hooks, farm machinery, weapons, small stones and even the metal pipes in karst landscapes may all have a particular agency in certain times and places, which is understood as at once powerful, enabling and dangerous. Below, I will explore the reasons for these periodic and seemingly random prohibitions in relation to metals, and argue that, in contrast to water, which embodies relational flows, and stone, which condenses non-human agency, metal, as a result of human intervention involving the reconstitution of forms, is understood as condensing and potentially enclosing *both* human and non-human power and agency. As a result of their human-fashioned transformations (from solid to liquid to solid), metal 'substances' become 'stops' that are simultaneously alluring, powerful and dangerously transgressive of relations between the ancestral and the living worlds (the worlds of darkness and light). In order to provide a context for this exploration, I will first introduce a series of local responses to a large-scale development intervention in the Baucau subdistrict in the northeast of the country.

Risking transgression

In mid-2014, the 'barren' drylands of Caisidu and nearby areas in the district of Baucau were embroiled in simmering tensions over the proposed development of a cement mine and factory. While the local village heads were said to have given their support in favour of the development, the two clans with acknowledged traditional authority over the Caisidu region had not been engaged and consulted. The relations of these clans with others in the community who supported the development were rapidly deteriorating, resulting in high sensitivity and threats of violence.

Others from outside Caisidu welcomed the vision of regional economic development but were concerned about the risks of the venture. It was said that the ritual leaders from all of the villages needed to be brought together to discuss the matter. However, while these leaders could attempt to *koalia* ('ask for ancestral permission'), there was no guarantee that they could ameliorate the consequences of digging up the karst. Before actions could proceed, it was said that local negotiations needed to take place between the 'world of light' and progress, on one side, and the 'dark' and powerful world of the ancestral beings who continue their fluid movements through the landscape, on the other.

Announced in late 2013, the US\$450 million proposal included plans to mine the local karst for the next 50 to 100 years. Brokered by politicians and bureaucrats at the national level, the foreign venture promised economic development and hundreds of local jobs. The local village heads, the political leaders of seven of the villages in the subdistrict, were said to have expressed their support for the development, but at that point the proposal was only at the exploration stage. Even before the social, cultural and environmental assessments of the proposal had been carried out, community relations were not proceeding well; apprehension was beginning to spread throughout the community. A local ritual leader recalled a time in the 1960s when a small area of karst was quarried to build the Baucau airport; seawater had begun to rise up through the soil, after which time the project had been abandoned. Others also remarked that the removal of rock from the coastal areas around Caisidu would result in the sea rising up to swallow all of the agricultural land. Some were concerned about movement of the *talibere* ('python') and the proper flow of the region's hydrosocial cycle. Others from the inland areas feared that such quarrying would simply cause the underground waters connected to the *talibere* (in this case, the eels known as *marui masara*) to dry up. Yet, even among those expressing concerns, there was an openness to inquire into the possibilities of mining, itself framed by the possibilities for such an action to receive sanction from the world of darkness, the ongoing source of all life. It was hoped such development would bring prosperity to the region, enabling people in the newly independent country to travel further forward 'into the light' with jobs and associated social benefits. Nonetheless, even if ancestral permission was sought and received, there remained a lingering doubt about the outcomes for the land and its people over the longer term.

The agency of metals

In his book *Stone*, Jeffrey Cohen (2015) examines the ambiguous collaboration between humans and lithic matter throughout time, focusing in particular on medieval approaches to rocks, stone and gems. His argument is that we need to understand lithic histories not as 'frozen in stone', but rather as both fluid *and* unstable processes constituted by continual metamorphosis and agency. Stones, configured as earth's embrace of water, are fascinating 'because they are engendered through long processes and trigger wondrous effects as they move through the world' (Cohen 2015: 15; cf. Tilley 2004; Janowski 2015). He insists:

that medieval writers thought about materiality in ways worth investigating for the challenge they pose to those who would disenchant the world ... where enchantment functions [as] a way of thinking that contests dreary and destructive modes of reducing matter to raw materials, diminishing objects to uses. (Cohen 2015: 10)

Similarly, in relation to metals, their transgressive and risky qualities, the prescriptions for and prohibitions against their use, are documented in literature from the ancient Greeks to accounts of metallurgy and ritual in recent Africa (cf. Blakely 2006, 2012; Barndon 2012; Haaland et al. 2002). Below, I will examine the ways in which stone, reconfigured as metal, has challenged – and continues to challenge – the collaboration between humans and lithic matter in the Baucau/Viqueque region of Timor-Leste.

Many local spring narratives across the region recount the danger of introducing fishing hooks into the ancestral realm (Hicks 2007, 2016; Palmer 2015). In many of these narratives, a shark or a crocodile (who is actually an ancestral ruler of the subterranean world) is inadvertently hooked by a fisherman, who must then descend undersea to extract the hook and save the ruler's life. All the while, the fisherman conceals the true properties of the offending object, the hook (deftly substituting it with a vegetative substance, such as a small sharp stick or thorn, when it is eventually extracted). Later, when the subterranean ruler makes return gifts of thanks to the human world above, these gifts emerge through springs as vegetative substances such as gourds and vines. Only later, after the sun has risen, do these gifts transform into wealth, including ornamental gold discs, swords and often buffalo.

Another example of caution over the use of metals involves the use of metal machinery in agriculture. In some areas, horses and buffalo are still preferred to puddle wet rice fields, and there are strict prohibitions against iron machinery such as ploughs, tractors or threshing machines entering the fields. The fields in question are usually those that were first 'opened' by the ancestors in the distant past, and that today remain central to ongoing ritual exchanges with ancestral spirits as clan groups seek agricultural and human fertility. In other cases, machinery may be allowed to work such fields, but only once the permission of the ancestors has been requested and granted at rituals carried out at the clan's sacred house. Likewise, many of these sacred houses have prohibitions on the use of iron nails and other metals in their structures (across Timor, a sacred house is ideally

woven and knotted together, and in many places only wooden nails may be used). Meanwhile, some clan groupings prohibit the construction of new, modern concrete- and steel-enforced houses until their associated sacred houses have been rebuilt (many sacred houses are only now being reconstructed after the widespread destruction of the Indonesian era). In karst limestone landscapes found across the region, elders continually advise that the placement of metal pipes underground will result in a cessation of groundwater flow or in another calamity. Moreover, pregnant women travelling through places known to be frequented by powerful nature spirits, such as springs or caves, are advised to place a sharp object – for example, an iron nail – in their hair in order to ward off the unwanted attention of malevolent spirits. Indeed, people are cautioned to avoid powerful places such as springs and burial sites in the midday heat. This is when the sun's radiance is at its most powerful, agitating life into the spirits below.

Elsewhere in the regional literature, this agency attributed to metals is said to involve its apotropaic power to avert evil influences or spirits (Strathern and Stewart 2002: 70). When I inquired about this in Timor, people simply said that such metals were not used by the ancestors; furthermore, and perhaps as a result, ancestral beings and nature spirits were in general averse to metals. I want to suggest here, however, that this agency attributed to metals also concerns something more about their (human-enabled) properties and their power.

While it is clear from my previous work that water in the region enables the flow and connection of diffuse spiritual agency through all bodies and things, it is also clear that this agency is transformed into life itself by the radiance of fire, often represented as the power of the sun. A major 'historical' tale from the western coastal region of Baucau tells of a famous colonial-era figure, a man called Joao Lere, whose magical powers gave him the capacity to manipulate fire with his giant bellows (which are still present in this landscape, revered as twinned megaliths called Mamau Toha). At some point, he asserted his intention to use the fire generated by these bellows to break up the earth, which would cause the sea to rise up and divide the island in two. This anti-colonial act aimed to banish the Portuguese from the eastern quarter of the island (Palmer 2015). Meanwhile, in a coastal cave with freshwater pools near the site of this (failed) transgression, innumerable pythons are said to live (also connected to the narrative of Joao Lere's power).

In the Baucau region, the python, often known as *talibere* (or 'the great rope'), is the main protagonist who creates and ensures the ongoing functioning of the hydrosocial cycle. The python's body both contains and connects water (blood), rock (bone) and fire (an oily radiance), an essential mixture responsible for the renewal of life cycles (agricultural and human fertility) (cf. Strathern and Stewart 2002). In the narrative of Joao Lere, a man who also mixed water and fire, Lere is clearly a human counterpart to that which is found in the 'natural' world in the form of pythons (and, indeed, the narrative maintains that he transformed into one upon his death; see Palmer 2015).

Pythons are animals that, once brought to the light of the surface world, may also manifest as gold, one of the only metals to occur naturally in its native form. Yet if pythons are linked to gold and underpin the proper functioning of the hydrosocial cycle, it is also significant to note here that gold is somewhat different to other metals. It is in many ways a metal already complete in its radiance, as it is often found in nugget form and does not necessarily need to be worked by fire. Most other metals cohere as minerals in rock and are primarily extracted (and activated) by the workings of fire and human agency – a process that I suggest makes working with metals not only potentially powerful, dangerous and enabling, but also radically transformative (cf. Blakely 2006). Just as fire is instrumental in converting land into productive swidden gardens (or pasture), it is also the transformational substance for creating smelted metals. According to local oral histories, when this knowledge of metalwork arrived in the region, it was accompanied by radical social change, enabling a renewed process of ritual exchange between intermarrying clans (Palmer 2015). Metal tools would also transform agricultural productivity. If gold in nature is linked to the python and to spiritual potency (*lulik*) – that is, if it has its own agency – it is also clearly an agency that is embedded in the land (cf. Bovensiepen 2015; Wardlow 2004). Yet, when such rocky potencies are activated and liquefied by fire and transformed into metals, this agency is also radically transformed and harnessed for use by humans (cf. McIntosh 2004).

The alchemist's fire

The social anthropologist David Hicks (2007: 50–51) has argued that in narrative tales collected in Timor and the wider eastern archipelago, the fishing hook acts as a form of dynamic agency and as a mediator between human and ancestral worlds, which involves social transformations of profound importance. According to Hicks, the hook is an object that mediates changes of ontological and sociological significance. Focusing on its visual appearance and tactile nature, he suggests that its instrumental role is to convey the notion of ‘snagging divinity’, suggesting a parity – and even periodic superiority – of humans over the divine in some contexts and circumstances. Drawing on the early work of Marcel Mauss, Hicks argues that these encounters demonstrate that in the cosmic exchange of existence, humans must replenish and care for the gods and vice versa. This correlates with the fact that in Timorese ancestral religions, aspects of the divine/spirit world are also immanent in the physical world, requiring constant vigilance and communicative awareness (Hicks 2004).

I want to build on Hicks’ work to suggest that a further – and not necessarily incompatible – link can be made between the hook and other ontologically related metals (understood as a particularly powerful congealing of agency) and their relation to the exercise of human agency. This insight is relevant to the mythic narratives of fishermen compelled to hide the true properties of a fishing hook from an ancestor snagged in subterranean water. It also helps to explain why people might feel the need to ask ancestors for specific permission to build a new, modern (and permanent) concrete- and steel-enforced house, or to use tractors in particular fields.

My hypothesis is that cultural narratives of the human world involve a concern for the physical and metaphysical transgression of reintroducing metals, or other similar objects of spiritual agency manipulated and cohered by humans, into a primordial ancestral world of diffuse watery spiritual power. The smelting and smithing of metals enables humans to fashion and tame the congealed substances or knots of agential power that cohere (‘naturally’) in minerals. As such, the *lulik* or spiritual potencies of rock – of the earth itself – are now able to be harnessed by humans via the human manipulation of fire, providing an additional source of power (which at the same time always remains potentially dangerous and excessive). Humans are themselves brought into this world by the

alchemy of fire and water ('hot' male and 'cool' female properties) and traditionally birthed and warmed for 40 days by household hearths in a process euphemistically termed *tur abi* – 'sitting on the fire'. In death, humans need first to be ritually cooled by complicated and extended funerary rites, which realign cosmic forces and prepare the deceased for their journey back into the subterranean or 'dark' world. In life, humans also require forms of heating and cooling to render their bodies into a healthy and non-threatening state. For example, when used in war, metal weapons (and their users) need to be taken to particular springs at the conclusion of a battle to be ritually cooled, reducing their accumulated heat (including from the blood of enemies) and their 'congealed' potency. For this reason, in times past, periods of warfare were ritually demarcated and controlled so that this dangerously hot enmity would not harm the warriors' own communities (McWilliam 2007: 80).

Like eighteenth-century European alchemists (see Chang 2012), Timorese ritual specialists understand both metals and water to have combustible qualities: both are intimately connected to fire, which differentially enlivens them. This is why in many spring-associated narratives and ritual practices, it is sacra such as swords (*surik*) and alloy discs (*belak*) that control and draw forth water (Palmer 2015). Here, metal's inherent fiery principle or combustible qualities are harnessed in the service of human beings. Whereas rocks and pythons are 'natural' mixtures of water, earth and fire, worked metals signify processes through which, as the world moves from darkness to light, humans have activated and tamed fire and associated objects.³

Yet even as it is domesticated, the ever-present threat of wildfire remains. Many regional narrative myths detail the destructive 'escape' of fire subsequent to its domestication (Palmer 2015). I contend that in the material cultural system that I have studied in Baucau and Viqueque, there is clearly an acknowledgement that such working of 'spirit substances' into human-made knots of metal may be too dangerous and transgressive. The process of working 'rock' with fire risks cutting (i.e. disrupting or destroying) the careful arrangements and flows of fire and water, dark and light, whose normally ordered and generative movements are essential to the flow of life itself. In Baucau, blacksmiths continue to carry out

3 Given the circular nature of the movement from darkness to light, this transgressive power of metals is likely also associated with the time before the separation when all 'beings' and relations were one.

collective annual ceremonies and offerings at the river or sea to cleanse their bodies and their implements of the accumulated heat and potency of metals. At these times, ash from the blacksmiths' fires is thrown in the water so that it may return to its place of otherworldly origin. Meanwhile, a goat is sacrificed, and an augury is carried out on its liver to foretell the blacksmiths' prospects for the coming year.

By working with and fashioning metal, humans can be understood as 'working life' and 'cohering power' – 'taming' it, 'channelling' it and 'knotting' it. This accumulation of human agency and energy, mixed with more-than-human agency and cohered by working with fire, tames the diffuse *lulik* (or spiritual power) of the underworld and gives it a new coherence, power and permanence – a type of agency that the ancestors of the dark world did not have access to. Although such *lulik* and non-*lulik* agencies must be ordinarily held apart, periodic transgressions (such as life cycle and fertility rites) are also necessary for life to progress. At some level, metals solidify this transgression ('cutting the flow'); this is what makes them both powerful and disruptive. In contrast to life cycle or agricultural rituals, metals are more fixed, and the fact that they have been fashioned via human agency mixing in with *lulik* agencies requires careful attention to the ways in which the flow of life might be threatened. In summary, in the entanglements of cosmology, landscape, ancestral relations and fiery materiality, it is both the ongoing flow of relations and the condensing (or anchorage) of relations in objects that matters – this is what Ingold terms the 'meshwork'. As has been shown in this chapter, metals threaten such processes by solidifying the transgression, and potentially but not necessarily disrupting and destroying the flow of life. To counter this threat, attention must be carefully directed to both the separation and the coming together of phenomena – hence the hypervigilance in relation to many of the periodic and seemingly random prohibitions on metals in Timor-Leste.

Conclusion

What do such metaphysics and material practice mean for future visions of extractive resource development in Timor-Leste? I have provided a story of agencies that need both to come together and be held apart. As Barad (2003: 829) argues, there is a great deal of work to be done in thinking 'about the kind of understandings that are needed to come to terms with how specific intra-actions matter'. She writes:

[p]articular possibilities for acting exist at every moment, and these changing possibilities entail a responsibility to intervene in the world's becoming, to contest and rework what matters and what is excluded from mattering. (Barad 2003: 827)

Variiegated local visions for the future associated with extractive resource development projects in Timor-Leste can be gleaned through close attention to the relational frameworks by which 'things' come to matter. In these cosmological understandings, oscillating differences (separation) *and* a greater unity (a coming together) are central to ensuring that proper communications are enabled between the worlds of darkness and light. It is the relations between the parts in this whole that require continual calibration, and this is done most powerfully via the human 'tending' of affective more-than-human relations. Extractive resource development is one way of enabling the power and possibilities of the world of light to be further activated. Yet while refashioning (excavating) these knots of congealed agency may offer hope for a brighter future, enacting such 'cuts' in the flow of relations is understood to be a very risky business. Yet, whether it is marking the end of a marriage alliance, the end of enmity and discord or the end of a period of ritual veneration, 'cuts' are also necessary ways of marking the possibilities for new beginnings.

From this chapter, it is apparent that in order to 'authorise' the practices that matter in Timor, attention must be paid to how to recompose, reconfigure and transform – yet still enable – the flow in life's meshwork of threads and knots. Metals, as an epitome of human agency, need to be used with caution lest their transgressive potential disrupt the flow of life. I have argued that rocks and metals can be understood as 'fiery objects' that, in consort with broader regional cosmologies, provide both anchorage (in the ancestral world) but also a new mobility (even a severance of relations) woven through with the power of possibility. The same metaphysics applies to large-scale disturbances of the karst landscape of Baucau, which is considered the conduit for the flow of life in the region's hydrosocial cycle (Palmer 2015). In such local readings for cause and effect, assessments of 'environmental feedback' are carried out via the embrace of continual caution and uncertainty, underpinned by the knowledge that while we may not be prisoners to the parameters of our individuated bodies, nor even to space and time, we remain prisoners to the laws of the larger universe.

The work of affective geographies reminds us that humans are always woven into a wider ecology of things. In Timor-Leste's state-centric and crowded cacophony of high modernist aspiration, 'tradition' is currently considered little more than background noise (cf. Meitzner Yoder 2015). As has been shown in this chapter, people's ritual relationships with rocks and metals have long enabled a slow dance with time and more-than-human agencies (including the potent energies of water and fire). Yet as the new nation-state increasingly embraces late modernity and fast-tracks old-fashioned industrialisation, this ambiguous relationality between human and more-than-human agencies will be tested to its limits.

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