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Southern Spectrums

The Raw to the Smooth Edges of Energopower

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I love to dance in tune with the beat of drums and good music. But now I dance with all my energy to the tune of songs like ‘Velkave Velkave Anukulaye ethirku makkal poraattam velkave. . .’ [‘Win, Win, People’s power against nuclear power’] that a brother from Kudankulam village made against the KKNPP [Kudankulam Nuclear Power Plant]. It fills my mind with the determination that on no account should the plant be established here or anywhere in the world. If I can stop the plant with my legs and hands, I will keep on dancing forever so that the world will not see any more Chernobyls, Fukushimas, Hiroshima and Nagasaki. I think that there is enough knowledge in the world to decide to stop this.

—Cited in ‘With Love from Idinthakarai’, 8 August 2012¹

This is the view of Ignatius, a young boy from a coastal village called Idinthakarai in the peninsular region of the south Indian state of Tamil Nadu. He was caught up in the struggle against a nuclear power plant in the neighbouring village, Kudankulam, that saw its acme from 2011 to 2014, with thousands of people protesting against the development only a couple of kilometres from their homes (Figure 1.1).

Ignatius is one of the more confident and outspoken of the children who reside in the village. Others too joined him in the chorus – girls and boys, women and men, from coastal, rural and urban locales



Figure 1.1. *Idinthikarai village next to the Kudankulam Nuclear Power Plant in Tamil Nadu, India. © Raminder Kaur.*

across the nation, especially those based in regions where other nuclear reactors had been earmarked for construction. To a greater or lesser extent, support also extended to international circles, despite the fact that there were national security hurdles among other limitations when mobilizing ‘transnational activist networks’ (Edelman 2001) on the nuclear issue (Kaur 2019).

For many of those based in Idinthakarai, their struggle was not specifically against electricity or development, nor was it merely a symptom of a ‘not in my back yard’ (NIMBY) sentiment. Rather, their appeal was for a less costly, environmentally damaging and potentially dangerous form of electricity production and distribution that was complementary to their lives, rather than the authoritarian conduct, regulations and militarization that accompanied the construction of a nuclear power plant.

Boyer makes an incisive and influential proposal about the need to highlight the politics of electricity in contemporary social analyses. He affirms that ‘[e]lectropolitics infuse governance’ (Boyer 2015: 534) when discussing how electricity informs modern subjectivities – in a neologism, energopower (Boyer 2011). He elaborates: ‘modalities of ‘biopower’ (the management of life and population) today depend in crucial respects upon modalities of energopower (the harnessing of electricity and fuel) and vice versa’ (Boyer 2014:

309). In the process, energy and related infrastructures become imbricated in subtle, smooth and what become rational forms of capillary power. However, Boyer appears to overlook the fact that in the Global South, we continue to have a case of modern *governmentality* entwined with more direct and authoritarian *government* that follows on from colonial regimes. The hangover of British imperial control layered with a promising democratic constitution and new procedural mechanisms to do with transparency and accountability are the hallmarks of the postcolonial Indian state. Its particularities owe to the exclusionary mechanisms of colonial government, an apparatus that has carried over into the contemporary era in what has been termed by Alavi (1982) as an ‘overdeveloped state’. This has come with ‘a twilight zone of multiple, indeterminate configurations of power and authority’ (Hansen and Stepputat 2006: 302) that draws upon the colonial conjunction of brute force, despotism and lawlessness, along with the exercise of liberal ideas about rights and the rule of law that developed in India in response.

Such circumstances raise my main contention: energopower, as Boyer and others have proposed, is overly derived from Foucault’s (1991) proposals for modern biopolitics.² Thus conceived, it applies more to urban and metropolitan populations far removed from sites of electricity production. By metropolitan, I refer to a nexus of ‘grid governmentalities’ located largely in the Global North, but also extending to relatively affluent and grid-connected urban centres across the Global South. As Gupta observes with respect to the modern lifestyles of the emergent middle classes in India, there is a strong case to be made for ‘the colonization of their imagination of the future’ by the ‘rich citizens of the global North’ (2015: 566).³ While the notion of modern governmentality applies to the Global North and elite urban contingents in the Global South, it is on its own insufficient to account for the violence and authoritarianism that attends energy infrastructures at other ends of the grid.

Boyer’s oversight with respect to the raw or rough edges of energopower is surprising, considering that the Mexican isthmus of his fieldwork site has also seen the rise of violent tensions and uprisings around the development of gigantic wind turbines (2014: 324–25). The energy produced on the isthmus is primarily to serve industrial corridors and metropolitan hubs in Mexico and across the border in the United States. Their installation has not come without repression and resistance against the marketization and militarization of the region (Dunlap and Fairhead 2014). Such violent contexts appears to be an oversight in Boyer’s theorization, for he is well aware of the po-

litical authority of centralized grid systems, just as he is of ‘the rights of indigenous communities, environmental impacts, and resource exploitation’ that have marked the anthropological study of energy (Boyer 2014: 313) and the prospect of ‘carbon modernity’s accelerating death-bringing in the name of enfueling human life’ (ibid.: 318). Indeed, he emphasizes that ‘biopower in southern Mexico is, for good or for ill, an often forgotten partner in the transactions between old and new regimes of energopower’ (ibid.: 325; see also Dunlap 2018a, 2018b).

With respect to the nuclear issue, on the one hand, there is an accentuated collusion between the state and nuclear departments and organizations where both state and atomic energy took on the role of a fetish (see Abraham 1998). Elsewhere, I have elaborated on this unyielding nexus of state-corporate-military power that implanted itself in the south Indian region as the ‘nuclear state’ (Kaur 2013a; see also Jungk 1979). On the other hand, there are discrepant inscriptions on the populace, as Chatterjee suggests for regions characterized by vast economic discrepancies, where the marginalized ‘are only tenuously and even then ambiguously and contextually, right-bearing citizens in the sense imagined in the constitution’ (2004: 38). As a consequence, their views are either suppressed altogether or are only taken on board as a procedural matter with the staging of public hearings where officials record, log and file the hearing, leaving a paper trail as to its evacuated execution (Kaur 2013a; see also Sharma and Gupta: 2006: 13–14).

The strong overdeveloped state is therefore attendant with what could be described as a relatively weak and ‘underdeveloped civic space’ (although this is not to pose civic space in the Global North as the normative standard). Large swathes of the Indian populace are not decreed citizens in the sense of participating in what could be called ‘civil society’ and, moreover, as Chatterjee (2004) describes, constitute an arena of ‘political society’ consisting of subaltern populations such as Dalit (historically known as Untouchable), tribal, fishing and farming communities. Although the rigidity of this civil-political binary is arguable, the sociogeographical extremities of the metropolitan-marginal spectrum are undeniable – a marginal that might be physically located in the urban context, as with slum dwellings, or distantly removed from it in terms of rural, forest and coastal hinterlands. Correspondingly, a manner of provisions including electricity – widely backed up by home-based diesel electric generators when needed – flow relatively smoothly for certain contingents, but not so much for others who are only marginally inscribed into modern biopolitical technologies of power.

Energopower as it applies to the postcolonial state then needs to take on board a more discrepant, twilight character. It needs to be qualified for differentials in the equation between energy and politics as it applies to divergent contexts – a complex that I refer to as ‘southern spectrums’ in the title of this chapter. The diffuse and indirect nature of the grid governmentalities discussed by Boyer both oppose and mask or deflect from a series of direct and authoritarian government exacted on others, the ‘smooth’ with respect to the ‘rough’ or ‘raw’. The spectrums of violence therefore extend along the grid, from governmental dispositions concentrated in the North (aimed at replacing the brutality of physical violence through measures to do with knowledge-making, community management and ‘soft power’) to the ‘raw power’ of necropolitics that is rabid among marginalized and remote communities concentrated in the hinterlands.

While according to Foucault (1991), the modern state organizes and affirms the lives of populations in biopolitics, following Mbembe (2001), necropolitics departs from it by emphasizing the centrality of death to the organization of sociopolitical life. The latter is a return to archaic notions of sovereignty, but, as Mbembe reminds us, pugnaciously continues in the modern era in a relation of dependence. Montenegro, Pujol-Tarrés and Posocco note that ‘necropolitical logic enact[s] a politics of death in the name of vitality that defines which lives are worth protecting and which are deemed disposable’ (2017: 143). In the case of nuclear power plants in India, biopolitics is centred on relatively affluent and comfortable urbanites. Necropolitics marks the marginalized who are deemed incidental and even dispensable to this mainstream narrative – the likes of low caste-class slum-dwellers, peasants, and fishing and tribal communities.⁴

On a related point, *nuclear* biopower channels Boyer’s ‘conceptual lens’ on energopower (2014: 326) in another direction by highlighting how the science of nuclear energy has entered into the micromanagement of our everyday lives, often invisibly.⁵ Nuclear biopower is not only to do with the provision, distribution and governance of electricity, but also fans out to encompass medical science, X-ray diagnostic applications and studies, agricultural developments, irradiated food and other goods, industrial radiography and building and road construction material. While radioactivity might appear in our natural environment, nuclear biopower is about how it has been siphoned and scattered by specialists of different orders into diverse operations to control and enhance the lives of populations as a purported manageable byproduct of a (national) good. These activities have themselves become normalized with re-

spect to the individual, community and/or country's growth, power and protection.⁶

Nuclear *necropower* as opposed to *biopower* reverses the optics. By focusing on the deathly underside, alter worlds are emphasized (see Pitkanen and Farish 2018). Mbembe (2001) develops the concept not through a focus on life worlds, but 'death-worlds' to refer to conditions of colonization, slavery and apartheid in which people are subjected to a status of 'living death' under technologies of destruction, or what he terms 'necropower'. From this perspective, death conditions may emerge by way of technologies that, on the one hand, claim to be life-enhancing, but, on the other hand, can be revealed to be life-destroying (Kaur 2012a). In the case considered here, the supposed smooth operations of nuclear science are disrupted to create death conditions for those who have little to benefit from them.⁷ The project of life enhancement by generating electricity and other goods through nuclear power for metropolitan and industrial hubs comes with huge somatic and political risks for those living around and objecting to nuclear power stations, a deathly biopolitics. So whereas biopolitics is 'to make life and to let die' as Foucault might have it, necropolitics is 'to make die and let live' (2004: 247). The latter is not an archaic form of government, for it has persisted into the modern era along with biopower. In the Idinthikarai case, the lives of those who dissented were death-dispensable to the life power of urban and industrial needs located miles away.

In the rest of this chapter, I elaborate on postcolonial nuclear statecraft followed by views from the margins rather than metropolitan or state actors, as the latter receive more than their fair share in the coverage of nuclear issues in India. I highlight how fishing and farming communities and allied activists around the Kudankulam Nuclear Power Plant have become the 'bare life' (Agamben 1995) for metropolitan and corporate or industrial interests for more electricity. The marginalized then become the often silenced 'sacrifice' to ideas about the nation's development and progress onto which the raw politics of energy is exacted.⁸ What Boyer's energopower excludes from its focus is how biopolitics also has its darker underside, where supposedly life-enhancing technologies might lead to a living death when seen from other perspectives. Accordingly, energopower need to be qualified: from Foucauldian notions of governmentality that corresponds most closely with Boyer's energy politics to more direct authoritarianism in what I have called the raw politics of energy – in an adaptation of both Boyer and Mbembe – necro-energopower with its overlapping modalities of death conditions.

Great Divides

The 1990s marked the rise of a new era in the Indian political economy with the onslaught of neoliberal policies and the rapid growth of transnational/multinational ventures and consumer society. Development projects were also being pursued at breakneck speed as deals were struck up and down the country tied to a larger mission to make India a regional superpower. It was a decade where economic liberalization began to wreak havoc on the lives of the poor and dispossessed, and where the judicial and political system became more under the sway of multimillion-dollar development projects (see Nilsen 2012; Kaur 2020), as well as being a period in which, along with Pakistan, India declared itself a nuclear weapons state (Abrahams 1998; Bidwai and Vanaik 1999). With these developments came a thirst for power, electricity being the torch that would lead the way to development and regional, if not global supremacy.

Although the Indian government seeks to develop a diversity of energy pathways, the exorbitant costs of nuclear expansion are to the detriment of enhancing alternative forms of energy. The nuclear option became heralded as the primary way to increase bulk power: catering literally to the shortage of electricity supplies as well as purportedly dealing with the excesses of climate change (see Kakodkar 2005; Kaur 2011; Ramana 2013), while nurturing all along, as the sub-continental metaphor goes, a political and economic tiger.

These plans are very much based on grand top-down Nehruvian or statist models adapted for a neoliberal age – that is, the Indian state has not entirely relinquished to market-driven forces; rather, it continues to have a strong hand orchestrating various bodies including police, (para)military and surveillance agencies in their market-led endeavours. ‘Big development’ (Vanaik 2000) as it applies to nuclear infrastructure remains monolithic and state-centric, but is now enmeshed in widening national and transnational corporate ties. The state has adapted its centrality to engineering development plans in a context of market reforms, where the latter has a considerable influence on governmental policy, practice and process (see Ramana 2013; Kaur 2020). In this changing configuration of national–global relations, local lives in peninsular India matter little when flattened in what Jain describes as the ‘immortal timeline’ of globalizing capital (2013: 49).

With respect to nuclear energy, the changes are signalled by a number of national and transnational/multinational arrangements to build nuclear power plants across the country in the wake of the India–US civilian nuclear agreement signed in 2005 and the waiver

of the Nuclear Suppliers Group (NSG) in 2008. This waiver enables India to trade with the now forty-eight members of the NSG, even though it is not a signatory to the Treaty on the Non-Proliferation of Nuclear Weapons (1970). The accord was upheld with India's pledge to maintain its voluntary moratorium on nuclear tests, not to share nuclear material and technologies with others, and to permit International Atomic Energy Agency (IAEA) inspection of fourteen of India's twenty-two reactors in a phased manner.

Even though the history of the Kudankulam Nuclear Power Plant goes back to earlier decades, its development was picked up only at the turn of the millennium. The plant is an India–Russia collaboration, first announced under Congress leadership, and signed by the countries' two premiers, Mikhail Gorbachev and Rajiv Gandhi, on 20 November 1988. This agreement was then shelved, only to be revisited a decade later. After a revised agreement on loan interest, repayments in dollars and rearrangements regarding the spent fuel and radioactive waste to be kept in India in 2001, construction of the nuclear plant began soon after (see Ramana 2013: 86–88 and 279–92).

The planning itself of nuclear plants engraves a national necropolitics. The constructions are invariably located in the vicinity of those populations and regions deemed 'disposable' – in this case, regions populated largely by fishing and farming communities and well away from the density of metropolitan hubs. The entry and entrenchment of nuclear and bureaucratic elites from the powerful cities of the north to this southern peninsular – representing central government in collaboration with foreign powers and corporations (in this case, the Russian Federation's Atomsroyexport) – has proved to be an oppressive force in people's lives in the vicinity of Kudankulam.

Before the 1980s, Kudankulam used to be a fairly insignificant and relatively impoverished inland village. By the turn of the millennium, it was indelibly marked on India's nuclear map. With minimal compensation to landowners, about 929 hectares of land were taken for the project and another 150 hectares for the township, Anuvijay, located about 10 kilometres away further down the coastline (Moorty 2000). One of the most ironic features is how relatively uninterrupted flows of electricity are largely due to the wind farms that have been erected by companies like Suzlon and Prem throughout this district, principally to supply the nuclear plant and Anuvijay residents (Figure 1.2.).

By the turn of the millennium, security, intelligence and related operations tagged this region to the central state. The gates to the nuclear plant and township are now akin to national border secu-



Figure 1.2. *Wind turbines outside the nuclear power station in Kudankulam.*
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rity. Central Industry Security Forces, with their signature berets and camouflage uniforms, patrol the imposing fence and gate. There is a board at the gate to the plant reminding viewers and visitors alike that this is a prohibited zone and that any offence will be punishable under the Atomic Energy Act 1962 (section 33) and the Officials Secret Act 1923 (section 9/19). Along with a neat picture of the nuclear plant with the caption, ‘Government of India Enterprise’, the edge of the main Kudankulam junction is surrounded by a small clinic, a medical store, an orthopaedic hospital, a newly built police station and various other small shops and tea stalls. A bulbous white Ambassador car with blacked-out windows would be constantly stationed at the corner, presumably carrying officers from the Intelligence Bureau to keep an eye on visitors or any suspicious activities. By 2011, this sparse surveillance was bulwarked with cordons of security forces, paramilitary and police when local resistance against the plant came to a volatile head (Kaur 2012b).

People in the peninsular region felt that they were hinterland underdogs for power interests emerging in large cities to the north. One local fisherman despaired while resigning himself: ‘We have to sacrifice ourselves for the nation. The greater good is for the nation.’ By comparison, his friend was bitter about this enforced sacrifice: ‘We are like guinea pigs [for the nation] and are forced to suffer.’ The

need for electrical power was a driving need for ‘city people’ as he put it, but not necessarily them. A medical expert elaborated on these metropolitan–margins divisions: ‘The people there were brainwashed into thinking that they will get more electricity through the plant. So there was more support for it than here.’

Residents added that those in distant cities have little understanding of local issues in the hinterlands (see Moolenaar, Chapter 5 in this volume). Any of these so-called ‘outsiders’ did not care for they had much to profit from the plant. Manick, a youth worker from the town of Nagercoil located about 30 kilometres away from the nuclear power plant, stated:

This is all happening here because of power crisis in Delhi which is dictating the terms here. India seems to have an energy crisis and nuclear is the answer without enough investment and research in alternative energy sources – due to the Brahmanic lobby.

Caste attached itself to class and regional divisions, as summed up by Manick’s term ‘Brahminic lobby’. On further discussion with him, he clarified that this lobby is not specifically about Brahmins exclusively – traditionally associated with those endowed with sacred learning in the hierarchical caste system – but high-caste ‘outsiders’ in general. Their predominance in the modern nuclear state might be described as neo-Brahminism. On a parallel note, Ramana describes the nuclear enclave as part of an elite priesthood (2003: 207), noting in particular that the structure of the Department of Atomic Energy is hierarchical and not conducive to dissent. As with arguments about whiteness (see Dyer 1997), the discourse refers to the institutional power of neo-Brahmanic hegemony rather than suggesting that Brahmins are inherently powerful, as is implicit in accounts of the caste system (see Berreman 1971).

It is true that nuclear departments are not open to quotas for low caste Indians – officially termed Backward and Scheduled Castes – being exempt as part of ‘scientific and technical posts’.⁹ In their sub-contracted operations on the ground, there appears to be an utter disregard for the poor who work as daily labourers in the nuclear industry, exposing them to various health hazards – a situation that is comparable to the racial necropolitics that Davies (2018) identifies for petrochemical pollution in the African-American dominated town of St James in Louisiana. In a variation of Goldberg’s (2009) term, neo-liberal racism – one that promises equality and social inclusion while at the same time contributing to the passive extermination of racial minorities – here we have a case of neo-Brahmanic elitism where pas-

sive extermination is rooted in trenchant caste-class hierarchies and fears of the numerical expansion of the poor. Krishnan expands how this elitism comes with a murderous impulse where they would quite happily look the other way if the ‘masses’ were ‘disappeared’:

This self-imposed distance between the middle class and the ‘masses’ sometimes partakes of a genocidal impulse, as is indexed in many milieus – everyday expressions of desire for a country with a smaller population; the occasional wild-eyed scheme for secession from the rest of India by momentarily prosperous enclaves such as the IT sector in Bangalore or parts of Mumbai or Gujarat or Punjab; the oft expressed idea that it may not have been a bad thing if Sanjay Gandhi [the son of prime minister, Indira Gandhi] had had a relatively freer hand for a few more years back in the mid-1970s [with his family planning and sterilization programmes]; urban planning schemes that fantasise bypassing slums through freeways, subways, hovercraft and helicopters – but is more often indicated by a simple wish for the masses to simply, magically, disappear. (Krishnan 2006: 2327)

Krishnan goes on to identify a liberal discourse trenchant among nuclear experts as well. With his analysis of the atomic scientist Rammanna’s autobiography, *Years of Pilgrimage*, he concludes that he too ‘loves the masses in the abstract but detests each one of them individually’ (Krishnan 2006: 2329). In the neoliberal era, it would seem that even the abstract love for the masses has virtually disappeared.

Neo-Brahmanism characterizes many of the powerful institutions that are seen to constitute the fulcrum of national security and where reservations are not in place, as with high security think tanks, intelligence bureaus, nuclear agencies and the like. In Krishnan’s view, it is as if ‘upper castes are uniquely fit to govern India and any dilution of their presence could only mean an impoverishment of quality’ (2006: 2328).

Almost 3,000 kilometres away, New Delhi, the site of central government and symbolic of the tyranny of the north in particular, was seen as too cut off from this southern peninsula. Interlocutors spoke of it as if it were a different planet – one associated with wealth, business and enterprise, comfort, capital and pomposity, where it was deemed that about half of the population was complacent and conservative government servants. The highly electrified metropole represented the epitome of a hunger for power, literal and metaphorical, that was all too evident among people removed from the toils and troubles of mining for atomic minerals and nuclear expansion in rural, tribal and coastal areas of the subcontinent. According to Manick, their thinking on this peninsular region was as follows:

For them if it provides power, it is justified . . . Before this [construction of the plant], nobody bothered us. They weren't interested in this place. It was just the end of India for them.

Some people in the region directly compared the encroachment of a 'nuclear grid government' as a form of neocolonialism, where their lives were oppressed and their rights abrogated as was the case under the British in the colonial era. S.P. Udayakumar, convenor of the People's Movement Against Nuclear Energy (PMANE) that was based in Nagercoil and Idinthikarai, describes the phenomena as 'nu-colonization (nuclear + colonization)' (see Figure 1.3).¹⁰



Figure 1.3. *Dr S.P. Udayakumar, the main coordinator of the People's Movement Against Nuclear Energy, 2012. © Raminder Kaur.*

To similar ends, a leaflet from 2002 by the Nagercoil-based Conservation of Nature Trust given to me by its chairman, Dr Samuel Lal Mohan, declared:

The Russians may be happy over the pact as it will boost its dollar hungry economy with an inflow 360 crore of US dollars (Rs 173,000 crores) work as this is entrusted to 300 industrial units in Russia which will manufacture parts for the VVER-1000 Reactors. It is like the manufacture of cloth in Manchester, England for India in the pre-independent India. The much-publicized job opportunity [*sic*] for the local labourers is only a mirage.¹¹

The inequities of colonial exploitation of India's resources and manpower were likened to the current scenario, where Russian technology was bought by Indian authorities at exorbitant costs that were then borne financially and environmentally by the Indian government and, by extension, Indian citizens.

In a meeting that preceded my fieldwork period from 2006, Lal Mohan, crystallized the collusion between Indian and foreign metropolitan elites in literature that he published and circulated in the region as follows:

The Atomic Energy Commission officials sitting in New Delhi, Bombay, Chennai or Moscow do not understand the ground realities of failed crops and the poverty of stricken farmers . . . Further an amendment is suggested in the Kyoto Protocol (which prescribes reduction of Carbon emission by 5% of 1990 level) that building of Nuclear Power Plants, in poor and underdeveloped countries by the G-7 countries like the USA, the UK, Canada, Russia and Japan, as an effort to reduce Green House Gases like Carbon-di-oxide [*sic*]. The global environment fund and [International] Monetary Fund and World Bank may support such funding for building Nuclear Reactors at the instance of the USA. So Russia may utilize this 'Pro-Environment' or 'Environment friendly' funds of G-7 countries to build Nuclear Power Plants in India, and escape the Kyoto Protocol by the back door. We should not fall prey to the international game played on the poor countries by the rich countries. For shorter goals let us not sacrifice our precious environment.¹²

Local residents felt they were pitched in an uphill battlefield that had taken on vastly global dimensions to do with climate change compulsions. As Dunlap and Fairhead (2014) argue, terms such as 'green', 'sustainable', 'clean' and 'climate-friendly' have become part of a worldwide vocabulary to legitimate extractive, exploitative and/or toxic industries. On this global platform of self-legitimacy, nuclear power plants were rebranded as 'green' and 'clean'.

At a meeting that I attended in 2006 with about twenty people including fishermen and women, farmers, conservationists, doctors, teachers and other community leaders, Udayakumar elaborated on the power dynamics in much blunter terms:

Religious leaders are sell-outs. Political leaders are idiots. Business leaders are into money-making and that's it . . . It's an issue about poverty and powerlessness. It is the poor people who will be most affected. They do not know what's going on. Powerless people are more vulnerable. The middle classes can run away to another town or city.

Promises made by nuclear authorities about more development and electricity for the region might have seduced some in the early days, but many became convinced that their health and livelihoods were not worth the price that had to be paid. The 'abundance of jobs' mantra became despised as a myth as there was little employment in the nuclear plant itself for local people after its construction was complete – the first reactor was commissioned in 2013 followed by the second in 2016. All the other nuclear bounty deliverables were undermined as well: more electrical power (but this was less so for the region and mainly for distant cities and industries); roads and related infrastructure (but these were primarily for the nuclear plant and its employees); and a financial and business boom (but this was highly temperamental and when the plant is operating and radiation levels increase, there could be less interest in the area for investors).

Development with its electrified political grid of governmentality brought less of the fruits of modernity in terms of 'goods'. Instead, as Beck (1992) maintains, many of my interlocutors based in the region reflected on how it introduced what would be better summed up as 'bads': the fear of contamination, the loss of livelihood, and a keen sense of repression clearly evidenced in nuclear authorities' indifference about local grievances and the increased surveillance, policing and militarization of the region to the relentless beat of national development and energy security.

'Development Kills'

By mid-2012, the state machinery clamped down on the village of Idinthakarai where PMANE has had its base from 2011 to 2014 (PMANE Struggle Committee 2016). Over time, PMANE protesters' claim to legitimate citizenship was revoked with police and paramil-

itary sieges, ambushes and countless allegations and arrests in order to suppress dissent. As their movement got bigger and their appeals grew louder, they progressively became reduced to ‘bare life’ (Agamben 1995) – a designated exclusion and dehumanization of those who are at the margins and/or choose to dissent even when peaceful protest was technically permitted in a democratic constitution.

The death conditions that were created around the nuclear power plant can be viewed in terms of three overlapping modalities: first, the use of ‘quick-fire’ state violence, such as shooting at people who protest against state plans or through the hiring of henchmen to enact violence against dissenting individuals, their families and/or their property; second, death conditions were through ‘sociopolitical deaths’ brought on by state neglect and the inflicting of punitive strategies of intimidation, harassment and demonization designed to malign and outcast key protagonists; and, third, nuclear necropolitics was vindicated silently through ‘slow violence’ (Nixon 2011; Rose Johnston 2011; Hecht 2018) with an encroaching death where nuclear industries subjected communities to a life of uncertainty, exploitation and environmental hazards (see Figure 1.4). The latter came with the invisibility of gradual ecocide that might accompany contact with radioactive material or through the radionuclide emissions from reactors in general that enter the food chain and the DNA of neighbouring residents, a substantial percentage of whom will succumb to genetic mutations, disease and death over the ensuing decades (see Churchill 2003; Alexis-Martin and Davies 2017; Davies 2018). The onslaught of such developments inscribed people into ‘the necropolitics of radiation’ (Kohso 2011). As one person summarily dismissed it on a paper hat at an anti-nuclear cultural event in Idinthakarai in 2012: ‘Development kills’ (see Figure 1.5).

As a blatant sign of the first modality of death in the hands of law enforcement agencies, Anthony John was shot by the police in a nearby town during a solidarity protest in nearby Tuticorin after the police and paramilitaries blockaded those in Idinthakarai in March 2012 (see Figure 1.5). Other earlier deaths of anti-nuclear protesters at the hands of paragons of the state were of one other man, Ignatius, who was killed in a police firing at an anti-nuclear march in 1988 when the plant was first announced. This toll in south India is on top of the deaths of other anti-nuclear protesters in other parts of India. For instance, forty-year-old activist Irfan Qazi died in 2011 when a police officer driving a four-wheel drive Sumo SUV rammed into his scooter close to the site proposed for the Jaitapur Nuclear Power Plant in Maharashtra, with the French company, Areva, now



Figures 1.4 and 1.5. *People at a solidarity cultural event in Idinthakarai in 2012.*
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replaced by EDF (Viju 2010). In all cases, the authorities denied culpability.

Other protesters were killed through state neglect after they were arrested and put in prison, or through intimidating actions that led to accidental deaths (an explanation also given for some of the deliber-

ate attacks cited above). Sahayam Francis was a father of three young children who fell from a height after Indian Coast Guard surveillance planes dived within a few metres above protesters' heads in 2012. He was watching those engaged in civil disobedience in Idinthakarai who were standing in a chain in the waves on the beach for *jal satyagraha*: following Mohandas Karamchand Gandhi's anti-colonial campaigns, *jal satyagraha* alluded to the 'truth force' embodied in people and the sea (see Hardiman 2003; Nilsen 2012).

J. Roslin was a woman in her sixties who died shortly after spending time in jail for peaceful protest in 2012 under the charge of 'Waging War against the Government of India' (see Figure 1.6). She had a severe illness that led to her further deterioration in prison. She was released on bail and was asked to sign into a Madurai police station every week, an overland journey that took five to six hours over 200 kilometres away from her home. Shortly after being released on bail, she succumbed to her illness.

People were both saddened and incensed, believing her death was yet another outcome of 'state vengeance'. As the conservationist Nityanand Jayaraman reports:

Roslin is a victim of neglect, and the vengeance of a state that views the very holding of a contrary opinion on nuclear power as a crime warranting imprisonment under harsh sections.¹³



Figure 1.6. Portraits of Anthony John (Manapadu), Sahayam Francis (Idinthakarai), J. Roslin (Idinthakarai) and C. Rajasekar (Kudankulam), who died due to their protests against the Kudankulam Nuclear Power Plant. © Raminder Kaur.

The sheer stress of protesting against a mammoth power took its toll. Elsewhere, elderly farmers died due to the stress of a sit-in since 2010 against land acquisition plans for the Gorakhpur Nuclear Power Plant in the blazing heat of Haryana: Ishwar Singh Siwach, Bhagu Ram and Ram Kumar (Sundaram 2011).

These death conditions were combined with life-destroying strategies that extended to people's lives and livelihoods. For those known to be living in Idinthakarai, a number of coercive and punitive measures were adopted. By the time of the escalated anti-nuclear struggle at Kudankulam in 2012, more than 55,000 people had been charged in about 170 First Information Reports, charges of a cognizable offence, from the nearest police station to KKNPP in Tirunelveli District.¹⁴ Of these, about 8,000 were accused of 'sedition' and 'waging war against the state', allegations that carry with it the prospect of a death penalty (Janardhanan 2012). Typically, a few names would be mentioned in any charge followed by a number anywhere between 2,000 and 4,000 other supporters to add to the list of named individuals. The exact figures have vacillated along with the prevarications of officials.

In the aftermath of police charges, many protesters were financially and psychologically destroyed by legal fees and constant trips to either attend court hearings or, if they were on bail, periodically report to police stations as far away as Madurai. To turn up at a hearing was more often than not to hear that the case had been adjourned and a date set for a new hearing. Stupefying to say the least, court cases drawn out over months and years were like an albatross around their necks, tied to policing prerogatives to extinguish dissent. Defendants became puppets to larger machinations as lawyers – if they showed up at all – debated right from wrong in an excruciatingly slow Indian judiciary. The process itself was the punishment (see Human Rights Watch 2016).

For a defendant to not attend court in what many considered to be unjust and distorted charges in the first place was to risk further punishment. R.S. Mugilan, a member of the PMANE Struggle Committee, was himself arrested in September 2017 for ignoring a series of court summons. A determined environmentalist to the core, Mugilan continues to be harassed to this day (Ananth 2018). To add misery to the outrage, those who are in pre- or post-trial custody atrophy with unwarranted isolation, beatings, substandard food, unhygienic conditions and swarms of mosquitoes as if nature too is conscripted as mercenaries.¹⁵ Women in prison face the added burden of being vulnerable to sexual assault, the suspicion of which alone was a merciless social poison if and when they are released (see Sen 2014; Vaid 2016).

Some people were even revoked of their citizenship quite literally when passports were impounded, new ones were not issued and old ones were not renewed. This was particularly problematic for those fishermen who needed to travel abroad for work and training. It also posed a problem for activists who wanted to travel, even if they did not technically need a passport. For instance, travel to the neighbouring country Nepal ordinarily does not require a passport for an Indian citizen. But when Udayakumar was at the airport in New Delhi in September 2014 in order to attend a United Nations Special Rapporteur on Human Rights Defenders meeting in Kathmandu, he was not able to board the plane and instead was taken away for questioning (Shubhomoy and Sudhakar 2014).

A more invisible deathly spectre was by way of the violence of slow ecocide to do with radionuclide emissions released into the environment by a nuclear power plant, the rise of the sea-water temperature due to the discharge of water coolant that would disturb and possibly contaminate sea life and, as a consequence, further jeopardize fishermen's livelihoods. This was akin to a 'future present death', where present concerns were exacerbated by the anxiety of likely prospects. Exposure to the high background radiation in the neighbouring district of Kanyakumari is deemed to be 'higher than the world average value reported by UNSCEAR [United Nations Scientific Committee on the Effect of Atomic Radiation] (2000)' (Ajithra et al. 2017: 33). This is exacerbated by the sand mining of monazite sands on the southern coast – an alpha-radiation emitter that can be processed for a thorium-based nuclear fuel cycle – a subject that has been explored at length elsewhere (see Kaur 2013b). High levels of radiation have predisposed the population to a high rate of genetic mutation and related diseases. Having nuclear reactors in the region would undoubtedly increase the ionizing radiation levels (Cardis et al. 2015), a realization that further fuelled the anti-nuclear movement in India, which by 2014 was contained, demonized and eventually crushed by draconian measures adopted by the nuclear state (see Banerjee 2015).

Smooth Operators, Rough Operations

In his reminiscences, Gupta observed that 'for a large share of India's population, life off the grid was the normal condition of everyday life' (2015: 559). He added an important query, albeit with little of an answer:

The question is how new technologies can make the quality of life higher without reproducing the steps taken by the growth of the carbon economy, and the forms in which electricity has been historically incorporated into the lives of people. (Ibid.: 565)

The evidence so far shows that electricity has not been smoothly incorporated into the lives of all people. There are not only internal hierarchies to take on board in any one locality, but also their intersection with external hierarchies in terms of wider national and transnational geopolitics. Boyer's proposal for energopower as 'electricity already works us' (2015: 531) needs to be qualified first with due consideration to those who are not so reliant on uninterrupted supplies of energy, where life on a smooth grid is not the norm, as Gupta points out. But Gupta's observation does not go far enough. There is also, to lead to the second point, the need to consider those who are brought into biopolitics at the expense of others who lie in the twilight zone between the civil and the political, metropolitan and marginal, welfare and warfare, as I have highlighted in this chapter with a delineation of nuclear necro-energopower. This leads to my third main point in terms of metropolitan and global inequities that entrench the repression of marginalized communities in the Global South when it comes to large-scale power developments entailing transnational treaties and trade: energopower is not without fracture or friction (see Tsing 2005).

While I appreciate Boyer's point about non-nuclear, low-carbon energy as a potential 'threat to grid' – a view that allies with PMANE activists but not all including those disenfranchised communities under the wings of large-scale wind farms in Mexico (Dunlap 2018a, 2018b) – it also needs to be emphasized that what Boyer refers to as the 'soft hum of electric currents' (2015: 532) represses a loud, interruptive and abrasive raw politics that spans a tangled skein across local, national and transnational scales. This chapter brings the hammer to the hum. The wires are not always neatly hidden away behind the smooth walls of energopower biopolitics; rather, they can become (re)routed, ruptured, exposed and even dangerous live wires that can create a spectrum of death conditions.

Being at the brunt of the raw politics of energy in south India has led to a struggle against what McMurtry (1998) has described as the 'cancer-stage of capitalism' quite literally. With its globalizing and mutating market paradigms, global capitalism has multiplied into several carcinogenic eruptions and metastases that may even be decoupled from commercial logic such that alternative visions and

autonomous lives become hard to realize. This ‘cancer stage’ has become the prevailing rationality of our times that we often take for granted. However, many residents in the embattled vicinity of the Kudankulam Nuclear Power Plant saw through this governing logic. They believed that with ‘nuclear capitalism’, the political, social, electrical, ecological and the corporeal were all too worryingly entwined. The contaminated phase of the global political economy has led to a myriad of death conditions with the extreme repression of their lives and could indeed manifest itself in all too critical conditions in terms of somatic cancer-stage pathologies.

It was the rejection of a repressive ‘grid government’ that compelled many to defy the nuclear power plant in south India in favour of peaceful lives unencumbered by the darker side of grid governmentalities. After all, my interlocutors could see that the electricity was not to power them, but to power other interested parties. Electricity did not work them; it worked others. Instead, the marginalized have had to suffer in view of an array of state, corporate and metropolitan interests for a rapidly liberalizing and growing economy. Their experience has compelled many to assert that they need energy technologies that are complementary to their lives and ecology, and even to reject modernity or grid governmentalities. As a young fisherwoman from Idinthikarai stated, ‘we do not need electricity if we have to pay for it with our lives’.

Acknowledgements

The ethnographic fieldwork was conducted over a protracted period of time – spanning a year in 2006, to five periods of month-long fieldwork up until 2018. At certain points from 2012 to 2014, I was not able to visit the village Idinthakarai, where PMANE was then based, due to sporadic police and paramilitary clampdowns, and so had to rely on online communication and postings made by my interlocutors. The early part of the research was funded by the Economic and Social Research Council grant (2006–8). My sincere thanks to my interlocutors and supporters who made this research possible; to those who provided feedback when I presented the original paper at the panel ‘Power Legacies, Energy Futures: Governmentalities along the Grid’ at the European Association of Social Anthropology Conference in Milan in 2016; and to Tristan Loloum for his helpful comments on the chapter. The usual provisos apply.

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Notes

1. Cited in ‘With Love from Idinthakarai’, 8 August 2012, compiled by Anitha S. based on her interaction with children in Idinthakarai, Tamil Nadu, south India. Retrieved 16 July 2020 from <http://www.dianuke.org/with-love-from-idinthakarai>. I reproduce Anitha S.’s account, a local researcher and environmentalist, as she was conducting fieldwork at a time that overlapped with my own. Due to the urgency of the matter, she was compelled to post them online as soon as she had written them up. Similarly, statements by my interlocutors from the PMANE Struggle Committee and the website *DiaNuke* were posted online to transmit their views as soon as possible by Michael Pushparayan and P.K. Sundaram respectively. The latter is also the website developer, editor and writer of *India Resists*. This is in addition to literature provided to me by another of my interlocutors, Dr Samuel Lal Mohan, that is cited in this chapter. See Kaur (2019) on *multi-situated* fieldwork combining offline and online engagements as opposed to Marcus’ *multisited* fieldwork (1995) to question the paradigm of proximity and artificial authenticity attributed to on-the-ground fieldwork (viewed as ‘thick evidence’) as against their mediations through other channels (seen as ‘thin’ and biased; see Postill 2013).
2. This is not to overlook cases of necropolitics in the Global North, as has transpired with nuclear plant accidents and pipeline violence in the United States, Canada and in the sea (see Matsen 2011). Nevertheless, governmentality remains idealized as the main tributaries of energopower in the North. Thanks to Tristan Loloum for this point.
3. For a discussion on the complex of Indian middle classes, see Varma (1998), Mazzarella (2005) and Brosius (2010).
4. By comparison, in the Global North, nuclear companies take particular care of neighbouring communities precisely because they are the ones that they most need to convince. This they do through measures to do with public relations, corporate social responsibility, sponsorship, training programmes, environmental and community management, and so forth (but see Wynne 2011). While cursory measures to do this are evident in India, various ruses are in place so that local opinion is evaded or repressed in a more blatant manner (see Kaur 2013b).

5. On a different argument about ‘biological citizenship’ as it applies to the health claims of victim-survivors of the Chernobyl nuclear disaster, see Petryna (2002).
6. An indiscriminate side-effect of nuclear biopower are consequences to do with excessive radiation that can debilitate, and the *longue durée* impact of atmospheric, sea and underground nuclear tests that we have all had to live with. It might therefore be argued that nuclear biopower is interwoven with nuclear necropower.
7. For a psychoanalytical interpretation of nuclear necropolitics, see Schwab (2014).
8. On how notions of ‘sacrifice’ apply to the contiguous state of Kerala, see Abraham (2012: 115–17).
9. See Mohanty 2020. See also <https://citizenmatters.in/facts-reservations-ews-sc-st-obc-government-court-9719> (last accessed 6 October 2020).
10. See Vishwanath (2009). See also Kuletz, who refers to the phenomenon as ‘nuclear colonialism’ (1998: xviii), Churchill (2003: 103) and Masco (2006: 101) on ‘radioactive colonization’ of the lands of indigenous communities in the United States, and Navajo activists describing it as ‘radioactive colonialism’ as reported by Hecht (2012: 177).
11. ‘Why the Kudankulam Nuclear Power Project Near Kanyakumari – A Few Objections’, 2002 leaflet, Nagercoil, Conservation of Nature Trust.
12. ‘Seminar on the Impact of Kudankulam Nuclear Power Plant on Pechiparai Dam and Its Health Hazards’ publicity, 18 August 2001, Nagercoil, Conservation of Nature Trust.
13. ‘Koodankulam: Jailed Idinthakarai Woman Dies for Want of Timely Treatment’, 21 December 2012. Retrieved 16 July 2020 from <http://www.indiaresists.com/koodankulam-jailed-idinthakarai-woman-dies-for-want-of-timely-treatment>.
14. Retrieved 16 July 2020 from <http://www.theweekendleader.com/Causes/1201/quiet-resistance.html>.
15. <https://www.facebook.com/amirtharaj.stephen/videos/pcb.10155258388737202/10155258380312202/?type=3&theater> (retrieved 16 July 2020). On the prevalence of torture, see Kaur (2018).

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