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Anti-nuclear Movements in India: The Case of Kovvada, Andhra Pradesh

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The Indian state's civil nuclear policy, characterised by the construction of nuclear power plants, has witnessed considerable opposition in recent years from people residing in its vicinity. The direct impact on the livelihoods of these often rural, poor and lower-caste populations is discerned through land acquisition and population displacement, along with a loss of traditional ways of earning, especially through fishing and subsistence farming. In addition, the perceived impact on health and safety of the population and pollution to the environment, especially from the radiation emitting from the plant, as well as the propensity of a potentially catastrophic accident like that of Fukushima or Chernobyl, has driven the opposition to nuclear power.

The narrative, thereby, becomes one of the state and the larger national interest versus the rights of those living in the periphery. The paper demonstrates the relationship of the periphery and the nation-state with regards to nuclear power, particularly through the example of the planned nuclear plant at Kovvada in Andhra Pradesh.

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The anti-nuclear movement in Kovvada would be heightened in the aftermath of the Fukushima disaster. Described by the villagers as a 'satyagraha' (policy of passive political resistance), the opposition would, however, be hampered by a fractured civil society and an absence of support from political structures.

Introduction

The Indian government plans to construct a nuclear power plant at Kovvada, in Andhra Pradesh. The eponymous village, home to about 5,000 residents, needs to be depopulated, and its population resettled, along with four other neighbouring villages in the Ranasthalam Mandal (administrative area of a district), in order to make way for the plant.

The residents of the village have been opposing the plant's inception for several years. Their opposition had coalesced into an anti-nuclear social movement in recent years, and has attracted the support of several non-governmental organisations, activists and on occasion, political parties. In May of 2016, however, the village Panchayat, following a public consultation with the villagers, decided to forego their opposition, and to instead negotiate with the state for adequate compensation for their land. They seem to have resigned themselves to what they perceive to be the inevitable: the construction of the plant and the disappearance of their village to make way for its construction.

Kovvada is near the sea. A bus from Srikakulam, the nearest major town, would halt in Ranasthalam, the nearest village that somewhat resembles a town. From there, the journey onwards would snake through narrow roads that pass through villages that appear and then disappear again into green fields bordered by faraway mountains.

My trips to Kovvada, in June and December of 2016, were undertaken as part of my doctoral thesis at the National University of Singapore, which attempts to engage with a larger question, 'How have anti-nuclear movements impacted India's civil nuclear policy?' When I arrived in Kovvada in the mid-June heat, state functionaries were already present, conducting a preliminary survey of the land and land ownership among the villagers. The survey was to be the basis of a compensation package that the government plans to offer to the villagers in lieu of their land.

I spoke to the *sarpanch* (village head), M Polisu, who had led his villagers (and who, in turn, had been entrusted by the villagers to lead them) in the years-long agitation against the nuclear plant. All of the houses in the village are a little more than modest hutments – including that of the *sarpanch*. We sat down in an open grassland just outside the village, charpoys laid out under a tree; along with the *sarpanch* was the village headmaster and two others villagers.

The mood was despondent; resignation and defeat mixed with uncertainty over the decision they collectively had made over their future. Polisu justified the collective decision of the villagers to, in effect, capitulate to the state, “The first proposal for a nuclear plant to be constructed here was put forth in 1991. From then up until this May [of 2016], the people of this village have continuously resisted the government’s plans for a nuclear plant. In spite of this, the project has not been cancelled. All these past years, the government has prevented any development from taking place in this region. We are now fed up of fighting. We just want the government to provide a good compensation for those of us who will lose our lands, our livelihoods, and our homes. We want a good accommodation, along with the assurance of a job in the industries that will soon spring up here. The people here – they have all agreed, collectively, to give their village up so that the plant may be constructed – just so long as they are fairly compensated.”²

Beginning mid-2011, just after the Fukushima-Daiichi nuclear accident in Japan, the populace from Kovvada and its surrounding villages engaged in district-wide rallies, wrote repeated petitions to the local state functionaries, and other forms of civic protest culminating in a year-long hunger-strike, throughout much of 2013. In spite of a spike in civil society-based opposition in the late-2000s, the people of Kovvada would acquiesce to the government’s plan for the civil nuclear plant by mid-2016.

The paper’s central questions are thus: What led to the opposition of the villagers of Kovvada to the nuclear power plant in their midst, and why did the villagers of Kovvada eventually give up active opposition to the plant?

In Kovvada, as with other anti-nuclear movements such as that at Haripur and Kudankulam, the potentially adverse impact to the lives, livelihood and safety of the surrounding population

² Interview with M Polisu, June 2016. Translated from Telugu by the author.

was a major impetus for opposition against the plant by the local populace. This includes the potential for devastation that may result in the surrounding area in the case of a natural catastrophe, such as the Indian Ocean Tsunami that struck the southern Indian coastline in 2004, or an accident in the plant, such as the Fukushima-Daiichi accident of 2011. In addition, the potential hazard to the health of the populace, as well as to the environment, land and sea, upon which the surrounding population was intimately reliant for their livelihood, was an additional, common cause for opposition.

The civil society-based opposition in Kovvada featured neither the threat of violence inherent in the anti-nuclear opposition in Haripur, nor the extensive appeal through the judiciary with the assistance of urban non-governmental organisations (NGOs) that was a feature of the opposition in Kudankulam. The villagers described their mode of opposition in Gandhian terms, centred on mass-based, non-violent resistance.

As with other anti-nuclear movements in India, the Kovvada anti-nuclear protests did not, however, seep into the urban middle-class consciousness. Even more strikingly, nor did it become a district-wide phenomenon, in spite of civil society-based protests becoming an intrinsic aspect of the rest the Srikakulam district of which Kovvada is a part. The fractured civil society produced a sense of isolation, compounded by a closed input political structure that did not accord any meaningful support from political parties.

Under such circumstances, the movement could not withstand the pressure – through coercion and co-option – exerted by the Indian state. By mid-2016, the anti-nuclear movement centred in and around Kovvada had fizzled out.

This paper hopes to narrate the story of the anti-nuclear agitation in Kovvada. It contrasts the strategies employed by the villagers in opposing the state policy, and the responses of the Indian state to opposition from the civil society, and how this would lead to the eventual capitulation of the villagers. In doing so, it also looks at how this agitation reflected the clash between the civil nuclear policies of the Indian state, and the concerns of the civil society at the periphery.

Kovvada is but the latest in the ambitious civil nuclear development programme of the Indian government – one that had been considerably impacted by civil society-based opposition. A

study of the opposition itself – especially the reasons for, and the modes of, opposition – and the consequent reaction of the state, is, therefore, essential to understanding the impact that anti-nuclear movements would have on India’s civil nuclear policy.

While scholars have, previously, written in detail on other anti-nuclear movements – Haripur and Kudankulam in particular – comparatively little has been written on Kovvada. This paper hopes to fill that gap. In doing so, it also hopes to contrast the case of Kovvada with that of Haripur and Kudankulam – neither of which are copies of the other, nor are they entirely unique.

The paper is divided into two parts. The paper first narrates the Indian state’s policies of civil nuclear development in India, and the anti-nuclear movements that have emerged from within the periphery of the civil society in response. The second delves into the story of the Kovvada anti-nuclear movement, concentrating primarily on how the civil society-based opposition and state response resulted in a petering out of the anti-nuclear agitation.

This part is also interspersed with prior scholarship on other anti-nuclear movements, particularly Kudankulam and Haripur, so that the three aspects under study – the reasons for, and modes of, civil society-based opposition, and the consequent reaction of the state – are situated within the story of the civil society-based opposition to civil nuclear policy in India.

A History of India’s Civil Nuclear Programme

Civil nuclear power was, in its initial years, viewed both as a means for India to attain energy independence (by breaking its dependence on imported fossil fuels) and as a symbol of technological advancement that a third-world country should aspire to. In 1948, just a year after independence, Prime Minister Nehru declared, “to remain abreast in this world, (India) must develop this atomic energy” (Ramana, 2013: 71).

In recent years, nuclear power has been presented as a viable alternative power source to climate change-inducing fossil fuels. In 2011, Prime Minister Manmohan Singh stated, “I am convinced that nuclear energy will play an important role in our quest for a clean and

environmentally friendly energy mix as a major locomotive to fuel our development processes” (*The Hindu*, 22 August 2011).

India developed its nascent nuclear capacity through extensive international collaboration. The first two power plants at Tarapur were commissioned with assistance from the United States (US) with US-based firms General Electric and Bechtel taking the lead, while the power plant at Rawatbhata in Rajasthan was built with Canadian assistance.

At the height of international collaboration, India tested a ‘peaceful nuclear device’ in 1974, having clandestinely diverted US and Canadian nuclear fuel and technology towards military purposes. The repercussions were immediate. The US, Canada and much of the West would altogether halt any civil nuclear collaboration with India. The Nuclear Suppliers Group (NSG), a global body formed in the aftermath of the tests to control trade in civil nuclear technology, enforced an embargo on nuclear trade with those countries that are non-signatories of the nuclear non-proliferation treaty, and that did not submit their civil nuclear facilities to International Atomic Energy Agency safeguards. India refused to do both.

During the decades of nuclear isolation, India primarily relied on indigenous expertise to develop its nuclear capacity. India’s nuclear establishment adapted the Canada-built reactor, thereby commissioning 16 more indigenously-built nuclear reactors over the next three decades. In spite of this, expansion was considerably slowed. There are, as of 2016, 21 nuclear power plants in India, spread across seven locations, with total plant capacity at 5,780 Megawatts (MW) – just under 2 percent of India’s total installed power capacity. Nuclear power plants generate just over 3 percent of India’s total electricity.

In the aftermath of the Western embargo, the Soviet Union became a source of potential collaboration. By 1988, India signed an agreement with the Soviet Union for a jointly-constructed nuclear plant at Kudankulam in Tamil Nadu. By the early 1990s, several regions emerged as a potential site for further Indo-Soviet constructed plants, including Kovvada. Soon after, the Soviet Union collapsed, and plans for any nuclear expansion through Soviet collaboration were in a limbo.

A series of developments beginning in the late 1990s brought the focus back on nuclear expansion. First, in 1997, disregarding the global embargo, Russia signed an agreement with

India for providing reactors and constructing a nuclear plant at Kudankulam. Then, in 2005, the US signed an agreement with India, stipulating potential Indo-US collaboration in India's civil nuclear development. In 2008, the NSG granted a waiver to India, thereby enabling it to participate in (limited) trade and collaboration in nuclear technology. Since then, India has signed agreements on civil nuclear collaboration with France, the UK and Canada.

India's plans for nuclear expansion, which largely had remained dormant in the era of the global moratorium on collaboration, was rejuvenated in the mid-2000s with its gradual re-induction into the global nuclear community. By 2007, the Department of Atomic Energy (DAE)'s plans included a nearly four-fold expansion of India's nuclear power capacity over a 15-year period. Potential sites for new nuclear plants were identified, including Jaitapur in Maharashtra, Haripur in West Bengal, Mithi Viridi in Gujarat, Gorakhpur in Haryana and Kovvada in Andhra Pradesh, which once again was brought to the fore.

The 12th Five-year plan, drafted in 2013, states, "Nuclear energy is another important energy source for the country, and has the greatest potential over the next 20 years, of providing a substitute for coal-based energy" (Planning Commission 2013).

By 2010, revival of international collaboration divided these sites among various global nuclear firms to develop into nuclear 'parks': Jaitapur was proposed to France's Areva; Kovvada and Mithi Viridi to the US based firms – GE-Hitachi and Westinghouse, respectively (*Business Standard*, 11 January 2010). According to the latest reports, Westinghouse could likely be finalised as a reactor supplier for Kovvada.

Kovvada would feature 6 nuclear reactors, with a total capacity of nearly 10,000 MW, spread over 2,500 acres. The site would also feature an extensive residential township spread over 300 acres, with capacity to host 6,000 potential employees and families. The Kovvada village spans about 300 acres, and has been home to about 5,000 residents, all of whom would have to be displaced.

The Kovvada nuclear plant, in keeping with the central reasoning for the pursuit of nuclear policy, was seen by the nuclear establishment as essential for the energy security of the Andhra Pradesh state (*The Hindu*, 30 June 2014).

India's Nuclear Establishment

In India, the state and its ability to implement policy is defined and delineated by Subrata Mitra (2000: 38) as, “clear, constitutionally guaranteed division of power between the central government and the constituent states, effectively policed by an independent supreme court.” Within India’s federal structure, a division of powers exists, “between the central government and the States with a bias in favour of the centre...” (Mitra 2011: 90).

However, the formulation and implementation of policies on nuclear energy have solely remained within the purview of the central government. The Atomic Energy Act (1962) lists the powers and responsibilities of the central government with regards to nuclear power, “To produce, develop, use and dispose of atomic energy... To provide for the production and supply of electricity from atomic energy...” (DAE 1962).

The central government relies upon a well-entrenched state-affiliated nuclear scientific establishment, which includes the DAE and the Nuclear Power Corporation of India Limited (NPCIL) to create and implement policies regarding the construction, commissioning, and operation of nuclear power plants.

Since its early years, India has viewed the absolute autonomy of the central government and nuclear establishment in the formulation and implementation of nuclear policies as an imperative in developing its indigenous civil nuclear capacity (Abraham 1998). The accordance of such autonomy has traditionally allowed the central government to construct and commission nuclear power plants without having to consult State governments or the localised civil society on an equal plane. It has also enabled the central government to unilaterally enter into agreements on international collaboration in implementing its indigenous nuclear policies.

While the State government does not have any *de jure* powers over nuclear energy policy, the cooperation of the respective State governments is an essential component for its implementation. They support the central government in facilitating policy implementation, particularly through logistical clearances, including land acquisition, that are imperative for the effective construction and operation of the plant. The withdrawal of cooperation from State governments, therefore, would effectively derail the inception of a plant.

Save for a public consultation with the “local affected persons who have a stake (MOEF 2016) ...” as part of the Environmental Impact Assessment that the central government must undertake (without obligation to take into consideration), the civil society has no direct stake in the civil nuclear programme.

The Indian state relies primarily on ‘The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013’ (referred to as the Rehabilitation and Resettlement Act 2013, which overrides the National Rehabilitation and Resettlement Policy, 2007), to address the concerns of the displaced populace as a result of a nuclear power plant. The Act aims, “to ensure, in consultation with institutions of local self-government and Gram Sabhas established under the Constitution, a humane, participative, informed and transparent process for land acquisition...” (Ministry of Law and Justice, 2013).

Since the late-1990s and by the mid-2000s, however, a strong civil society-based opposition to nuclear power plants gave rise to localised anti-nuclear movements in various parts of the country. Anti-nuclear movements are social movements that arise out of the civil society and are opposed to the inception of a particular nuclear plant – they are thereby pitted against the growth of India’s civil nuclear programme.

India’s civil nuclear programme has been implemented, since the inception of the nuclear plant at Tarapur in 1969 to the plant at Kaiga in 2000, through this centralised, hierarchical policy process, with the central government and its attendant nuclear establishment at its crux. Kapur (1994) terms this hierarchy an “autonomous scientific empire.”

The Periphery within India’s Nuclear Policy

Srikant (2009) and Choudhury (2012) locate anti-nuclear protests in India in the milieu of other anti- (state-sanctioned) development, grass-roots movements such as the Chipko movement, against deforestation of Himalayan lowland forests and the Narmada Bachao Andolan (NBA) movement, against the construction of a large hydroelectric dam over the Narmada among others.

Unlike the anti-nuclear movements of the West, which are centered around the urban middle-class or the youth, the anti-nuclear movements in India often emerge from the periphery of the civil society – localised around a specific proposed nuclear plant, and featuring the rural poor or lower middle-class communities that do not benefit from state-led development, and are often adversely impacted by them.

In one sense, the lack of a developed civil society in India, brought about by a traditionally omnipresent state that encroaches considerably into the civil society (Kaviraj 1990), and an entrenched class of social elites and interest groups within the civil society that have strong linkages with the state and that are often beneficiaries of state-led and state-affiliated development (Kohli 1990, Bardhan 1990), may have given rise to a groundswell of social movements from the periphery that stand in opposition to the state and attack state-led development (Heller 2005, Chandhoke 1995, Satyamurthi 1996).

To the largely electrified and industrialised urban civil society, the prospect of greater power generation due to growth in civil nuclear capacity would far outweigh the abstractness of a nuclear catastrophe. The villagers of Kovvada were quite aware of their isolation from the urban and elite civil society, as Polisu explicates,

“We are aware of the dangers that a nuclear plant could pose to society. They say in case of a catastrophic accident, the effects could be felt as far as Kakinada on one side and Berhampur on the other. And yet, in spite of this, no one else seems to oppose it, none among the entire populace from Berhampur to Kakinada. Vizag is a huge city...the population is what? Nearly a crore? People from all over India reside there...even people from outside of the country. Educated people, rich people. And yet, they haven't raised their voice against the plant, in spite of knowing the sort of danger it would pose to the city. I do not know why.”

Kaur (2013) delineates those regions that are potential beneficiaries of nuclear power – “elites from the powerful cities of the north, representing central government in collaboration with foreign powers and corporations,” from the periphery where the nuclear plants are being planned and constructed, and who primarily have led the opposition against them – “the hinterlands populated largely by fishing and farming communities and well away from metropolitan centres” (13).

Anti-nuclear movements are social movements, and thereby constitute informal networks within the civil society that comprise of a variant of temporal participants and social actors that are brought together by a common ideology (of opposition to a specific nuclear power plant) and a common adversary (Porta and Diani 2006) – in this case, the Indian state.

The crux of social movements is engagement of its participants and social actors in collective action, characterized by the attempt to actively engage with the state either through contentious engagement comprising of mass action, mobilisation, strikes, rallies, demonstrations, sit-ins, fasts as well as direct clashes with state security forces (Tarrow 1994), or assimilative engagement through individual or collective activism, including lobbying, petitioning the state, through the press, as well as using the judiciary (Cohen and Arato 1994). The variance of collective action by disparate social actors and participations constitute the ‘rational protest’ model, whereby the key strategy of such action is state responsiveness (Mitra 2011).

Therefore, the key aspects under study in this paper include the causes and modes of opposition on the one hand, and state responsiveness on the other.

Kovvada: Causes and Modes of Opposition

Opposition against nuclear plants in India began in the late-1980s, when India and the Soviet Union explored avenues for collaboration in civil nuclear development in India. Along with Kudankulam in Tamil Nadu and Peringome in Kerala, Kovvada was also among the proposed sites. Localised opposition began in response in all three regions.

Jagannatha Rao, a member of the Human Rights Forum (HRF), an NGO in Andhra Pradesh which has been actively involved in the anti-nuclear movement, and whom I had met at Srikakulam on the way to Kovvada, recalls leading a series of rallies and public awareness meetings during that time, to galvanise the population against a nuclear plant at Kovvada.

The protesters were primarily residents of the surrounding villages, and their opposition centered on the potentially harmful effects of radiation on their lives, on the environment and the sea – on which they relied intimately for their livelihood, as fishermen. Opposition also featured more immediate concerns – land acquisition, and population displacement.

M G Devasahayam, a former civil servant and anti-nuclear activist, recounts that the acquisition of land for Kudankulam had created rifts in the local society between the land-owning community of the *Nadar* caste, who willingly sold their land to the government, and the fisher folk largely belonging to the Catholic religion. Opposition centred on the nuclear plant's potentially adverse impact on local water bodies – the Pechiparai dam in particular, as well as to the sea water and its ability to sustain fishing.

It is, therefore, the fisher folk who resided in the villages surrounding the proposed nuclear plant, who perceived their lives and livelihood as being directly threatened by the plant, who have since spearheaded the anti-nuclear movement. Polisu expressed the fears of the civil society at the periphery of state-led development,

“We are, and have always been, fisher folk; we rely on the sea for our livelihood. The people here – their ancestors have been in this region for hundreds, perhaps thousands of years. This has always been our land. If we give our land up, we become rudderless, our lives will become rudderless. Our movement is a struggle – a struggle for our land – what else? The people here, all of us who took part in this, we did it to tell that government that this land isn't barren, that it is inhabited by people, that the people rely on the land here, so please build your nuclear plant elsewhere.”

After the collapse of the Soviet Union, the plans for a nuclear power plant were shelved. From the mid-2000s onwards, however, the government's plans for a nuclear expansion were rejuvenated in the aftermath of the Indo-US nuclear deal. These plans witnessed a constant roadblock, in the form of protracted localized protests against proposed plants at Haripur, Jaitapur, Gorakhpur and Kovvada, and the plant under construction at Kudankulam,

In the post-Chernobyl era, the catastrophic impact of a potential nuclear accident foregrounded the fears of the surrounding populace. One activist, recalling the early protests at Kudankulam during the late-1980s, said, “Chernobyl awakened us and hence we protested against Kudankulam nuclear plant” (Srikant 2009: 7).

The Fukushima-Daiichi nuclear accident in 2011 also acted as an additional catalyst in heightening the opposition to nuclear plants (Jha 2015). Choudhury (2012) credits Fukushima disaster for having “a major galvanising effect” on India's anti-nuclear movements, which, for

the first time, had “assumed a mass character and brought the issue of nuclear risk and radiation to the public consciousness” (39). It was a reminder that a nuclear plant was not an issue for a few surrounding villages alone, but one with potentially disastrous repercussions for the society at large.

The ‘potential for catastrophe’ that is perceived to always characterise nuclear plants constitutes a Chernobyl or a Fukushima Daiichi-type devastation in the event of a plant accident or natural calamity. E A S Sarma, former Principal Advisor (Power and Energy) to the Indian Government and a trained nuclear physicist, provides a justification when he states that while the probability of a nuclear-induced disaster transpiring may be decreased, the consequence of such a disaster, were it to occur at all, would be difficult to mitigate, and could result in a catastrophe.³

However, the importance given by the periphery to the causes for opposition is not necessarily equal. In Kudankulam, for instance, the ‘potential for catastrophe’ became a major cause for the opposition to the nuclear plant. The Tamil Nadu coastline had borne the brunt of the 2004 Indian Ocean Tsunami. The 2011 Fukushima-Daiichi nuclear disaster in Japan was a combination of accident within the plant, exacerbated by a tsunami that hit the Japanese coast. Localised protests coalesced into large-scale social movements that expanded beyond the immediately affected populace. Anti-nuclear rallies at Kudankulam now attracted tens of thousands of protesters.

In Kovvada, on the other hand, opposition to the nuclear plant had centered primarily on the threat of displacement, and the loss of livelihood for the fisher folk and subsistence farmers who resided in the surrounding villages. The ‘potential for catastrophe’ did, however, provide an additional impetus for protest. It was the primary impetus of most urban-based NGOs – those whose lives and livelihoods were not directly impacted.

Rao, for instance, would bemoan the decision of the villagers of Kovvada to forfeit their opposition in the face of state coercion and co-option, stating instead that the ‘potential for catastrophe’ meant that the HRF, and other such activists, would continue the movement against the nuclear power plant at Kovvada.

³ E A S Sarma, interview by author, Visakhapatnam, December 2012.

The Fukushima-Daiichi nuclear disaster took place on 11 March 2011, around the same time as the NPCIL had announced plans to accelerate land acquisition in Kovvada. Almost immediately thereafter, villages throughout the Ranasthalam Mandal, including Kovvada, rallied in protest (*The Hindu*, 19 March 2011).

From his ethnographic study of the opposition in and around Kudankulam, Srikant (2009) concludes that the anti-nuclear movement advocates for an alternative “Gandhian model of development with stress on self-reliance and village development,” instead of the mainstream “Nehruvian model of development,” which traditionally has emphasised rapid industrialisation within which nuclear power plants was an integral aspect. They were centred primarily on “the threat of displacement, loss of livelihood, alienation from their own surroundings and the harmful radiation from nuclear power plants” (Srikant, 2009: 3).

Sarma represents the urban activists and NGO who have supported, or expressed solidarity with, the anti-nuclear movements that nonetheless have always been centered on rural populace.

The villagers in Ranasthalam coalesced under an umbrella anti-nuclear organisation, the *Anuvidyut Kendram Vyatireka Porata Udyamam* (AKVPU). In the following two years, the AKVPU organised and led several mass rallies throughout the district, as well as submitting several petitions to the Mandal administration, the District administration and the local Member of Legislative Assembly, citing their opposition to, and demanding a withdrawal of, plans for the nuclear plant (*Dianuke*, 16 August 2011).

Urban NGOs such as the HRF, based in Visakhapatnam and Srikakulam, and other urban activists based in Hyderabad and across the country, became occasionally involved. These organisations distributed pamphlets, and conducted talks in the villages in an attempt to educate the population on the dangers of a nuclear plant, and to consolidate an anti-nuclear solidarity. Various anti-nuclear activists, including Medha Patkar of the NBA, visited the region to express their solidarity (*The Hindu*, 28 November 2013).

E.A.S Sarma wrote a series of petitions to the then Prime Minister Manmohan Singh to halt the inception of a nuclear plant, arguing that a nuclear plant represented a major hazard to the surrounding populace; and that the NPCIL had not fulfilled requisite legal obligations,

including the obtaining of a proper Environmental Clearance for the plant, nor had it adequately conducted public hearings. The government had still not budged.

Of their Kafkaesque experience with petitioning local representatives of the state, the village headmaster summarises, “The Collector’s doors have always been open to us, he always listens to what we have had to say, and he commiserates, but is he able to do anything about it, in the end? He must follow the instructions of the central government. It is not in his hands to really do anything, is it?”⁴

I travelled to Chennai, just before heading to Kovvada, to understand the strategies employed by the anti-nuclear protest movement in Kudankulam. G Sundarrajan, a trustee of Poovulagin Nanbargal, a Chennai-based NGO, said, “In a democratic setup, what are the forms of protest you can have? We are not a violent movement...we are strong supporters of ahimsa. You can fight on the ground, you can have fasting, you can meet all the political parties and convince them, you can go to the court, you can write in the media. This is what a democratic setup allows you to do.”

Moolakattu (2014) also details the primarily non-violent methods of agitation that the anti-nuclear opposition movement in Kudankulam had employed intermittently over the next decade: “indefinite hunger strike, a relay hunger strike joined by political and community leaders, the petitioning to officials, dialogue with scientists and government officials...convening of all party meetings to build consensus,” among several others.

In November 2011, Sundarrajan filed a case in the Madras High Court against the Indian government. The petition argued for a temporary halt to the Kudankulam nuclear plant project, till the NPCIL fulfils all its legal obligations including obtaining an updated Environmental Clearance, and adhering to all the guidelines laid out by the Task Forces that NPCIL had itself constituted in the aftermath of the Fukushima disaster to review the safety of India’s nuclear plants.

When the High Court gave judgment in favour of the government in August 2012, Sundarrajan appealed to the Supreme Court. This was the first time that a petition seeking a halt to a nuclear

⁴ Interview with the headmaster, June 2016. Translated from Telugu by the author.

power plant had been entertained by the Indian judiciary, much less its highest court. In spite of lingering questions on radioactive waste disposal and the extent of adherence to existing safety and environmental regulations, in May 2013, the Supreme Court gave its judgment in favour of the government.

The Court, however, had not established an independent ombudsman or consultant to look into the aspects of safety, security and environmental protections that were being debated, and had relied inordinately on the nuclear establishment itself as the basis of its judgment. The autonomous nature of the Indian nuclear establishment, within which is the NPCIL and the DAE, as well the regulatory board, the Atomic Energy Regulatory Board, renders any opposition – through the judiciary or otherwise – an uneven battle.

On 18 December 2012, having perceived to have exhausted all other avenues of protest, the people of the Kovvada village commenced their year-long relay hunger strike. The concept of ‘ahimsa’ or non-violent action that Sundarrajan had mentioned as being one of the many aspects of resistance (along with the judicial), was seen as intrinsic to the mode of protest by the population of Kovvada, who sought to legitimise their opposition to the Indian state-led development by situating it within the Gandhian tradition.

The village headmaster describes the hunger strike thus,

“My friend, the hunger strike is part of the Satyagraha; it has been bequeathed to us by Mahatma Gandhi. It is both our tradition and our right. In this country, if one were to fight for anything, any right, it must only be fought non-violently. Gandhi won our independence from the British in that manner. He has shown us the path. It is in that path that we tread.

For one full year, we had carried out the relay hunger strike, continuously without any break, all of us, each one of us in the village. We had displayed our determination, our resolve. And yet, in spite of all of this, the government hadn’t budged. The government hadn’t sympathised with us whatsoever.

Each and every resident of this village – all 5,000 of us – took part in the strike – the young, the old, kids, the elderly, men, women, everyone. Solely the residents of this

village. It was a statement – that this land, this village is ours, and that we will protect it. We were formed into a team, from every house, every street, and every neighbourhood. And each team would sit in for the hunger strike for a day, on a rotational basis. The plan was created under the auspices of the Sarpanch and our panchayat, as to who should sit in for which day. And in this manner, this relay hunger strike went on for all 365 days of the year.”⁵

They ended the strike on 17 December 2013. The government had not budged. The village headmaster recounts how the villagers had felt on that last day, “As if this was our last day in our village...as if we would be exiled today...as if all our efforts had been for naught.”

Kovvada: Response of the State

The Indian state has had a history of brutality in suppressing popular agitations, and in the case of anti-nuclear protests, state response has been particularly repressive. As popular protests at Kudankulam continued into late-2012, the state ordered thousands of police deployed into the surrounding villages. Police violence led to one casualty and dozens severely injured. Bhadra (2013) writes “One of the main protesting villages is currently held under martial law; the leader of PMANE [*People’s Movement Against Nuclear Energy*, one of the leading grassroots NGOs of the protest movement] and followers have been charged with sedition and war against the state; the police have arrested hundreds of villagers engaged in civil disobedience such as fasting, demonstrating and forming barricade; and the police have revoked ration cards for food and cooking oil.”

The police would go on to file charges of sedition against nearly 7,000 villagers who had opposed the plant. The state halted foreign funding of various NGOs – and particularly the Catholic Church – which was suspected of funding protests. The mixture of police brutality along with legal and extra-legal harassment was rather effective. A member of the Church of South India (CSI), who had been leading the protests in Tuticorin, told me that constant harassment from the state police led him and several other members of the Church to withdraw from the movement.

⁵ Ibid.

The nuclear plant at Kudankulam would be commissioned in late 2013 – albeit after a delay of several months, due in no small part to the protracted civil society-based anti-nuclear movement.

In Kovvada, the Andhra Pradesh State government seems to have employed a ‘softer’ approach in suppressing the opposition. In the aftermath of the hunger strike, further developmental works, as well as the disbursal and expansion of state services to Kovvada and the surrounding villages were severely constricted. Polisu described the situation, “No one is giving us loans any more...the government corporation isn’t giving us loans. Further construction or renovation of school buildings and Anganwadi buildings has been halted. No new electricity poles have been laid out.”

He continued, “However, if we are ready to leave, the government is willing to compensate us. We had had a meeting here once recently, [the Chief Minister] Chandrababu Naidu came, along with the District Collector. He said he would see to it that we would not be taken advantage of, that we would be given a very good compensation package – if we acquiesced and gave our land and our struggle up.”

This coercive-conciliatory approach had successfully exploited the fears of a weakened civil society. The headmaster lamented,

“Once this region came within the zone of a potential nuclear power plant, the government had simply decided that further developmental projects were simply not necessary here. And this has driven the people to the brink. We cannot sell our land. If fathers wish to sell the one or two acres of land that they possess to marry off their daughters, they cannot do so.

How long can we continue to fight? We are seeing no development. We aren’t getting any agricultural or developmental loans. We aren’t getting any loans for digging bore wells. No new power supply lines or facilities have been laid out.

And on top of all this, there aren’t fishes any more. This is the main livelihood for this region, and it has been depleted. The industries that have sprung up in recent times have polluted the waters, and fishes are no longer in shallow shores. We need better boats

and equipment to go deeper. But the government isn't giving any loans to buy that equipment. Because they think we won't leave if we are able to sustain ourselves here.

In the olden days, every household in here had hardworking men, men who fished, men who hunted for their livelihoods. Now there aren't many fishes left in the sea. The youth are slowly moving out – to Chennai, to other shores, the more enterprising are heading to Gujarat. They fish in deep seas there, earn a thousand rupees or two, and then send it back to feed their old folk and children left behind. The strength of this village is now entirely depleted.

It is the government that has, calculatedly, weakened us, so that we would be left with no other choice but to leave. A deer that is being chased by a tiger would, after having run for miles and exhausted itself, would be resigned to being killed. We, too, are at that stage now. We have no strength left.

It is only in stories that God himself comes down to rescue the elephant from the clutches of the crocodile. No gods will come for us.”

The fate of the movement in Kovvada is reminiscent of Rucht's (1990) description of the anti-nuclear movement in France. The French experience was characterised by sustained direct action, with mass protests by different anti-nuclear groups, culminating in the large-scale anti-nuclear rally at Malville in the mid-1970s. However, nearly all the main political parties were pro-nuclear, and the social movements did not trigger a change in their stances. Post-Malville, the failure to effect real change in policy exhausted the movement. Internal dissensions further fragmented it, and the anti-nuclear movement could not coalesce again as it once had.

Shortly thereafter, the villagers of Kovvada held a meeting, and unanimously decided to cooperate with the State government. Their fight, they say, is now for adequate compensation. It is no longer for their land – which they have all but foregone.

The Fall of the Movement: A Fractured Periphery

Protests began in and around the village of Haripur, West Bengal in late-2006, just after the Indian government announced a proposal to construct a nuclear plant there, with the support of the Communist Party of India (Marxist) (CPIM)-led state government. In the aftermath of the announcement, Shamik Sarkar records, “popular science movements and organisations launched protests, workshops, road blockades, signature campaigns locally” (*Dianuke* 2011). At the same time, activists belonging to the State farmers’ and workers’ union, the *Paschim Banga Khet Majdoor Samiti* (PBKMS), along with anti-nuclear activists from Kolkata, began conducting anti-nuclear meets in Haripur and nearby villages.

In November of that year, the villagers of Haripur themselves organised a mass barricading of their village, so as to prevent a team of scientists from NPCIL – led by the Chairman himself – from entering. Bhadra (2014) narrates how, “6000 farmers and fishermen...creating a bamboo barricade to prevent government scientists, engineers and police from entering the village...and threatened to take up arms if necessary. (240)” Sarkar (*Dianuke* 2011) records, “the vigil...lasted for months.”

An umbrella anti-nuclear organisation, the *Haripur Paramanu Vidyut Prakaralpa Pratirodh Andolan*, comprising of the villagers and local fisher folk was launched. In the ensuing months, even up until 2009, several mass rallies would be held intermittently in Haripur and the surrounding villages, even as regional fisheries trade unions, NGOs and anti-nuclear activists, as well as the PBKMS professed continued support (Choudhury 2012).

In the face of such protests, the State and central governments would temporarily halt any further foray into Haripur.

Both the movements actively engaged with the larger civil society: they educated the surrounding villagers on the necessity to oppose the nuclear plant; the local unions and grassroots NGOs were inducted into the movement. And both utilised various strategies in its protest – assimilative and contentious. However, the movements’ strategy in Haripur – *gherao* and threat to take up arms – was in fact far more contentious, and less diverse, than that in Kovvada, which involved repeated petitions, followed by a mass hunger strike.

The high point in the protests in both cases involved mass action by the villagers themselves – the months-long mass barricading of the village in Haripur, and the year-long mass hunger strike in Kovvada. However, the aftermath is telling. In the case of Haripur, the anti-nuclear movement continued unabated, with continued support from the state union, the PBKMS. The successful ouster of the NPCIL scientists had only bolstered the protest further.

In the case of Kovvada, fissures were already apparent. The hunger strike itself was largely perceived by the villagers as unsupported by other social organisations. Nearly thirty local NGOs had expressed solidarity with the villagers during the hunger strike. By this time, however, the AKVPU was no longer as united as it once had been; the umbrella organisation was quietly disbanded. The result was disheartened fatigue.

The urban civil society, barring a few activists and NGOs, had been apathetic to the anti-nuclear opposition. However, in the case of Kovvada, unlike the case of Haripur, there was a failure to garner adequate extent of the rural populace within the district as well.

Throughout the mid-2000s, rural Bengal simmered with acute discontent. Protracted demonstrations in Singur and Nandigram were met with brutal state response. Mass arrests, *lathi* charges, and police firing followed. In the ensuing protests, eighteen civilians died in Nandigram. It was within this milieu that the villagers of Haripur opted for a contentious mass protest action against the State. They were rewarded for it with continued support from grassroots unions, and a backing down of the State government, “fearing another bloody debacle” (Bhadra 2014).

In 2010, a private firm, backed by the state government, attempted to construct a thermal power plant in near Sompeta, a town in the Srikakulam district – the same district as Kovvada. The proposed thermal plant met with extraordinarily fierce resistance from the surrounding villages. The state response was particularly brutal: police firing into one demonstration resulted in the deaths of two protesters. The concerns were similar to that of Kovvada: land acquisition and possible displacement of villagers; possible degradation of the Beela, an immense fresh-water wetland body that was the principle source of livelihood to the fishing communities surrounding it.

However, where the protests against the nuclear plant at Kovvada seem to have failed to make a major dent, those against the thermal plant at Sompeta have succeeded. Rao of the HRF, who has been actively involved in both the Sompeta and the Kovvada protests, attributes this to the difference in the strength of the civil society.

The Sompeta protests were backed by everybody – the poor fishing communities, as well as the rich landowners and well-to-do industrialists. None of them were willing to part with their land, or acquiesce to a thermal plant in their midst. According to Rao, the entire rural community was dependent on Beela for its livelihood. This collective opposition left the government little choice but to concede.

Kovvada and the surrounding villages, on the other hand, comprises only of poor fishermen whose land and livelihood are both intricately tied to the nuclear plant. These poorer communities had slowly recognised the futility of holding on to a land that no longer was worth as much. Many of the other villages in the Mandal have not been as involved in the protests as the Kovvada village has been. According to Rao, this lack of unity is attributable to the state's subtle divide-and-rule strategy: unlike the Kovvada village, the state government had explicitly not signalled to other villages that they would be displaced; no survey had yet been undertaken in any other village – as yet. Their participation in the protests has, therefore, been comparatively limited.

The surrounding land owning communities and the middle classes were not as directly affected. To the larger civil society, the prospect of a nuclear catastrophe is, unlike the case of Beela, far too abstract to warrant stronger opposition.

Land acquisition, displacement and livelihood go beyond opposition to nuclear power – they are the common concerns of all marginalised communities affected by neoliberal development. The government would offer a compensation package to those residents of the affected villages who would have to part with their land. Gradually, several of the villages in the region would have to accept the prospect of a package in lieu of their land

The Srikakulam district remains an epicentre of state-led development: an international airport, a ferry terminal, thermal power-plants, and the Kovvada nuclear power plant are some of the major projects. Rural Andhra Pradesh, however, tells a different story to rural West Bengal –

that of a weakened civil society. The largely successful land acquisition in Amaravati, undertaken through the much-touted assimilative land-pooling strategy, saw very little protests from the rural populace. In this onslaught of state-led development, it is the fate of the protest movement at Kovvada that is the norm, and that of Sompeta that is the outlier.

I also spoke to the headmaster of the local school in Kovvada. He saw the events in Kovvada and elsewhere in rural Andhra Pradesh as part of a larger framework of a predatory state versus a weakened civil society,

“Wherever there is a chance of profit to be made, and wherever the people are perceived to be weakest, it is only there that the government swoops. The government has perceived this region as both profitable to its projects, and its people – who are entirely reliant on the sea for their livelihood – as weak. If you wish to make a major investment in an area, you would be well-versed with the sort of land there is, the sort of people who currently reside there, the extent to which they would be able to resist, the extent to which they can be bought, their status, their strength...everything, would you not?”

The government has already concluded our worth – and we aren't worth all that much.”

The Fall of a Movement: An Absence of Solidarity from Political Structures

Protests began in Haripur, West Bengal in 2005, just after the Indian government announced a proposal for a nuclear plant there. The proposed plant received the support of the CPIM-led state government. The anti-nuclear protests were part of the larger anti-neoliberal development protests in the state – against a proposed Tata Nano plant in Singur, and the Special Economic Zones in Nandigram. The major opposition party at the time, the Mamata Banerjee-led Trinamool Congress, supported all three agitations. In 2011, the newly-elected Chief Minister Banerjee would, in the wake of the Fukushima disaster, make good on its electoral promise, and shelve the plans for the nuclear plant at Haripur.

Unlike Haripur, the nuclear plant at Kudankulam would be commissioned in late-2013 – in spite of the large-scale and protracted anti-nuclear protests witnessed in Tamil Nadu. Neither

of the two major political parties in Tamil Nadu, the Dravida Munnetra Kazhagam and All India Anna Dravida Munnetra Kazhagam, had accorded any such substantial support for the protests, apart from expressions of sympathy.

In the run up to the Andhra Pradesh State Assembly elections of 2004, the then opposition leader Y S Rajasekara Reddy of the Congress party undertook his famed 'Padayatra', the nearly 1,500 kilometre traversal of the state by foot. He passed through the Ranasthalam Mandal, and according to Polisu and Rao, declared his opposition to any nuclear plant in the region. After Reddy had been elected Chief Minister after the Congress won the elections in 2004, he would categorically deny having ever said as much.

Rao recalls the Telugu Desam Party (TDP) being considerably involved in the protests in the 2011, when they were still in the opposition. At present, the Chandrababu Naidu-led TDP heads the State government, and is, ironically, in the process of acquiring land for the nuclear plant. Chief Minister Chandrababu Naidu unveiled ambitious state-led developmental projects in the Srikakulam district, including the construction of the nuclear plant at Kovvada. In May 2016, his government explicitly announced its support for the nuclear plant at Kovvada.

Polisu summarised the fickle nature of political support accorded to the anti-nuclear opposition, "For a while, the TDP was against the plant; for a while, the Congress too was against the plant. And both these parties were in parliamentary opposition when they professed their opposition. Once they were elected to power, however, their stance would suddenly change. This has been a tired story in our state: whosoever is in the opposition is against the plant, and once they are in power, they suddenly say nothing can be done about it and the plant must go ahead."

This paradox reflects the state of the political elites in Andhra Pradesh. Although two major political parties exist, both pursue state-led development; have strong cleavages with entrenched social elites; and have strong relationship with the central government. Furthermore, each party traditionally has specific caste groups as constituents (the *Kamma* caste for the TDP, the *Reddy* caste for the Congress) – all of whom are dominant and upwardly mobile.

The input political structure is, therefore, decidedly closed for non-identity centric social movements emerging from the periphery. Kitschelt (1986) has this to say about the French

political structure: “two blocs, organized along the fundamental socio-economic cleavages of French society, vie for political power. Thus, the two main competitors in the party system have had difficulty in accommodating... ‘new politics’”(65). As in Andhra Pradesh, the lack of solidarity from political structures essentially exhausted the anti-nuclear movement in France.

Anti-nuclear movements, per Choudhury’s (2012) observation, have “either forced the state governments to reject the central government proposal all together, as was done by Kerala and West Bengal, or compelled the Government of India to halt construction at the plant sites and start consulting with the local people to ‘allay their fears’, as is the case with Koodankulam” (42).

The contrast with the Haripur anti-nuclear movement could not have been starker; Kovvada seemed to increasingly tilt in the way of Kudankulam. The support accorded by the State government to the anti-nuclear movement, and concurrently, the withdrawal of support to the central government, is a key determinant of the strength of the anti-nuclear movement. In Kovvada, the lack of openness of the input political structure meant that the anti-nuclear movement could only fizzle out in the end.

Aftermath: Interactions between the State and the Periphery

Sovacool and Valentine (2010) highlight China’s “centrally isolated” civil nuclear policy, which ensured that the anti-nuclear movement that arose against the Daya Bay nuclear plant in the late 1980s was stonewalled by an essentially indifferent state. In India, the extent of indifference of the state is tempered by legally and constitutionally mandated interactions with the periphery.

As part of the Rehabilitation and Resettlement Act of 2013, the State government organised a series of meetings between state functionaries and villagers. I had attended a recent *Gram Sabha* (village council) organised in Kovvada, in late-December of 2016, attended by the Chief Engineer, NPCIL, the Joint Collector, and local bureaucracy, as well as local members of political parties. The Sarpanch laid out a 22-point memorandum of guarantees that the government should accord to the people of Kovvada, in lieu of their displacement. These

included guarantees of housing, jobs, monetary compensation, and continued usage of the sea as the means of livelihood, among others.

The Chief Engineer and the Joint Collector stopped just short of giving those guarantees. They, however, stated that the rights afforded them by the Rehabilitation and Resettlement Act, 2013, would be honoured, and any request or petition of the villagers that did not fall under the purview of the Act, would be submitted to the central government for consideration.

The guarantees of plant safety from the Chief Engineer did not elicit requisite confidence from the villagers in attendance (who preferred to discuss among themselves rather than confronting a state official). The prospect of a tsunami, much like the devastating tsunami that hit the shores of southern India in 2004, or a Fukushima-like accident at the nuclear plant, and what that would mean for the lives of themselves and millions of others in the region – were aspects that the Chief Engineer had not addressed.

In essence, the compensation accorded for displacement is not likely to assuage the civil society at the periphery that would surround the potential nuclear plant; concerns about the ‘potential for catastrophe’ still remain a latent cause.

None of the state functionaries present had addressed or acknowledged the sustained opposition put up by the villagers against the plant, or the circumstances in which they had acquiesced to it.

In many ways, the *Gram Sabha* of 2016 is reminiscent of a similar public hearing held in Kudankulam in 2007. Kaur (2013) records that the nearly 600-700 people who had attended at the behest of the state officials, “spoke about the risks of the nuclear development in relation to the scarcity of water, the dependency on agriculture, the threat to their livelihoods in farming or fishing, the prospect of cancer and increased radiation, and the future of their children. (19)”

They did so with a certain realisation that it would not have any impact on state policy regarding the inception of the nuclear plant at Kudankulam. She records a conversation among the participants (who again preferred to discuss among themselves), “People don’t have any faith in the political or judicial system. We can only rely on people’s protest but even that can fail people” (22).

Conclusion

The anti-nuclear movement in Kovvada emerged in opposition to the planned nuclear power plant to be commissioned in and around the village of Kovvada, in the Srikakulam district of Andhra Pradesh. The movement emerged primarily from within the periphery of the civil society – among rural, poor fisher folk and subsistence farmers that resided in and around the village.

The primary causes for opposition was the threat of the plant to the lives and livelihoods of the people, centered on the threat of displacement and pollution to the sea and water bodies, as well as the ‘potential for catastrophe’ that could be induced by an accident within the plant or a natural calamity such as the 2004 Indian Ocean tsunami. The villagers mostly viewed their opposition as a Gandhian *satyagraha* – non-violent and righteous. The marches, petitions and rallies would culminate in a year-long hunger-strike in 2012-13.

The rise and fall of the anti-nuclear movement at Kovvada could lead to certain generalisations and commonalities with other anti-nuclear movements in the country. The most important generalisation the role of the State government in determining the fate of the movement centered on the periphery of the civil society. The Kovvada movement was, furthermore, unable to obtain any meaningful support from the political structure of the state. This aspect was instrumental in the eventual success of the movement in Haripur. In Kudankulam, conversely, the state effected a brutal crackdown on the movement, which eventually allowed for the inception of the plant, albeit with some delay. In Kovvada, the state pursued a coercive approach, halting any development in a region where the civil society was already weakened.

In addition, the strength of the civil society and the corresponding mode of protests has been yet another defining factor in determining the fate of an anti-nuclear movement. The anti-nuclear movement that emerged in Kovvada, if viewed within the ambit of the larger opposition to state-led industrialisation and urbanisation within the district and the state, points to a fractured civil society at the periphery. This was unlike the case of the anti-nuclear movement in Haripur, in West Bengal, which emerged in a milieu of similar protests by the periphery against state-led development in Singur and Nandigram. Unlike the movement in Kovvada, the

protests in Hariipur were always foregrounded by a threat of violence against the state, even as violent encounters between the state and protesters claimed nearly twenty lives in Nandigram.

These aspects ensured that the anti-nuclear movement in Kovvada would, eventually, capitulate. The villagers now hope for adequate compensation from the Indian state, one whose interactions with the periphery is characterised by Kaur (2013) in hierarchical terms, by invoking Agamben's (1998) 'state of exception'. The headmaster of Kovvada gives vent to this perception as well,

“You must understand, this village is comprised of extremely poor people. If the government is able to just provide us fair compensation to each and every one of us at the end of this long ordeal, we will be more than happy. We will garland the government. We will pray for its long life. Right now, this is all we can hope for.”

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References

Anupam Jha, “The Fukushima Effect on India’s Science, Technology (Nuclear Energy), and Environmental Governance,” in Richard A. Hindmarsh and Rebecca Priestley (eds.), *The Fukushima Effect: A New Geopolitical Terrain*, New York: Routledge, 2015.

Ashok Kapur, “India: The Nuclear Scientists and the State, the Nehru and Post-Nehru Years,” in Etel Solingen (ed.), *Scientists and the State: Domestic Structures and the International Context*, Ann Arbor: University of Michigan Press, 1994.

Atul Kohli, “Interpreting India’s Democracy: A State Society Framework,” in Atul Kohli (ed.) *India’s Democracy: An Analysis of Changing State-Society Relations*, New Jersey: Princeton University Press, 1990.

Department of Atomic Energy (DAE), Government of India, “The Atomic Energy Act, 1962,” 15 September 1962, <http://dae.nic.in/?q=node/153>.

Dieter Rucht, “Campaigns, Skirmishes and Battles: Anti-nuclear Movements in the USA, France and West Germany,” *Organization and Environment*, 4/3, 1990: 193-222.

Donatella della Porta and Mario Diani, *Social Movements: An Introduction*, Oxford: Blackwell Publishing, 2006.

Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, Translated by Daniel Heller-Roazen, Stanford: Stanford University Press, 1998.

Herbert P Kitschelt, “Political opportunity Structures and Political Protest: Anti-Nuclear Movements in Four Democracies,” *British Journal of Political Science* 16, 1986: 57-85.

Itty Abraham, *The Making of the Indian Atomic Bomb: Science, Secrecy and the Postcolonial State*, London: Zeb Books, 1998.

John Moolakkattu, “Nonviolent Resistance to Nuclear Power Plants in South India,” *Peace Review*, 26/3, 2014: 420-426.

Jean L Cohen and Andrew Arato, eds., *Civil Society and Political Theory*, Cambridge: MIT Press, 1994.

Neera Chandhoke, *State and Civil Society. Explorations in Political. Theory*, New Delhi, Thousand Oaks, and London: Sage Publications, 1995.

Monamie Bhadra, "Fighting Nuclear Energy, Fighting for India's Democracy," *Science As Culture* 22, 2013: 238-246.

Upendra Choudhury, "The Impact of the Fukushima Daiichi Nuclear Crisis on Anti-nuclear Movements in India," *Social Alternatives* 31/3, 2012: 39-44.

Raminder Kaur, "Sovereignty without Hegemony, the Nuclear State, and a 'Secret Public Hearing' in India," *Theory, Culture and Society*, 2013, 30/3: 3-28.

Srikant Patibandla, "Koodankulam Anti-Nuclear Movement: A Struggle for Alternative Development?" The Institute of Social and Economic Change. Bangalore: ISEC Publications, 2009.

Subrata K Mitra, "The Nation, State and the Federal Process in India," in Ute Wachendorfer-Schmidt, ed., *Federalism and Political Performance*, London: Routledge, 2000: 38-55.

Subrata K Mitra, *Politics in India: Structure, Process and Policy*, London: Routledge, 2011.

Planning Commission, Government of India, 2013: 12th Five Year Plan 2012-2017, New Delhi: Yojana Bhavan.

Pranab Bardhan, "Dominant Proprietary Classes and India's Democracy," in Atul Kohli (ed.) *India's Democracy: An Analysis of Changing State-Society Relations*, New Jersey: Princeton University Press, 1990.

Sudipta Kaviraj, "On State, Society and Discourse in India," *IDS Bulletin*, 21/4, 1990.

T V Sathyamurthy, "Centralised State Power and Decentralised Politics: Case of India," *Economic and Political Weekly*, 31/13, 1996: 835-843.