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Educating for the Anthropocene

Schooling and Activism in the Face of Slow Violence

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Notes

DILEMMA 1

1. Helen and the names of other interlocutors in this book are pseudonyms. If an informant chose to be named, I refer to them by their full name and their affiliation. Throughout the book, I provide as much ethnographic detail as possible about people, places, and events, but in some cases the level of detail is limited by the need to protect the identity of individuals and institutions that opted not to be named in the book.
2. This episode occurred during my research into the effectiveness of “handprint,” an ESE intervention that sought to empower students to “use their hands” to make tangible contributions to the sustainability of their communities, rather than focusing on the environmental “footprint.” This idea originated in Bangalore, India, spread across the country after being picked up by the Ahmedabad-based Centre for Environment Education (CEE), and eventually found its way to South Africa through international networks of educators connected to CEE.
3. There was nothing in my field notes from the visit to the school to suggest the children were in any way disabled, although I am not qualified to assess this. It is possible that at least some of the children were attending this school because of their socioeconomic status and poor academic results (which could be for a number of reasons) rather than because of a disability.
4. ESD refers to educational programs and approaches promoting sustainable development, but not all programs that are concerned with the environment or environmental sustainability would fall into this category. Another group of interventions is linked to the notion of environmental education (EE), and these usually refer to programs that make use of the physical environment in which education takes place. The term ESE incorporates both ESD and EE research and practice, as well as approaches that may not fit into either the ESD or EE paradigm but are related to environmental or sustainability concerns. I use the term ESE to denote formal education interventions designed to address any aspect of the natural environment or sustainability, as these are all relevant to the concept of “educating for the Anthropocene” I develop in this book.
5. From this point onward, I use the term “education” in a broad way, referring to intentional learning processes within or outside an institutional setting. When referring to education

taking place in the context of government-run schools, I use the term “schooling” or “formal education” interchangeably. Educational programs—inside or outside the classroom—designed to address an environmental or sustainability concern are referred to as ESE. These distinctions are important: part of my argument is that “educating for the Anthropocene” is about more than schooling, an idea that contradicts much of the educational development discourse, which often effectively equates education with schooling.

6. Throughout this book, the word “imagination” refers to “all those *imaginative processes by which collective life is symbolically experienced and this experience mobilised in view of achieving political aims*” (Glăveanu & de Saint Laurent, 2015, p. 559; emphasis in original).
7. I borrow the word “multicrisis” from Karen Litfin (2016).

CHAPTER 1

1. This translation of the term assumes that *anthropos* is a compound of *anēr* and *ops* (eye, face), but this theory has not been proved, and the term is frequently translated simply as “human being” (Etymonline: Online Etymology Dictionary, n.d.).
2. It is arguably appropriate to use the term “man,” given the masculinist imprints that have shaped the ideology of the Anthropocene (Gear, 2015; Grusin, 2017).
3. By “marginal peoples,” I refer to groups of people left behind by modernity and development. This includes Indigenous groups (Adivasis in the Indian subcontinent), people living from subsistence agriculture in rural areas, and people on the margins of society, such as Dalits in India or people living in slums in South Africa. Large-scale development and infrastructure projects that have major environmental and human consequences tend to be built in places far from privilege and to disproportionately affect marginal peoples.
4. In the context of South Africa’s diverse constituent groups, the term “Coloured” usually refers to people of mixed heritage who do not refer to themselves as “White,” “Black,” or “Indian.” This “intermediate” group was recognized by the apartheid government as a separate racial category and suffered from racial discrimination (Adhikari, 2005).
5. In providing this description, I was inspired by Rachel Carson’s (1965) *Silent Spring*, one of the defining books of the environmental movement, in which she invites the reader to envision a place that suffers from all the major environmental issues of the second half of the twentieth century in an effort to imagine what the planet’s future might look like. My description of South Durban, likewise, combines the key issues, even though I have not personally experienced being in a space affected by all these issues simultaneously.
6. Neither Pashulok nor Wentworth existed in their current forms prior to the “great acceleration” (McNeill & Engelke, 2014) of the post-World War II globalizing transnational processes. Both spaces were molded by governments in response to the by-products (or “negative externalities” in the language of economics) of the consumerism-driven, infinite-growth-seeking world.
7. The belief that state-sponsored education can help bring about sustainability is reflected in a range of UNESCO’s publications (e.g., Nolan, 2012) and underpinned the Decade of

Education for Sustainable Development (DESD) in 2005–2015 (for a critique of the limited reach of DESD, particularly in Africa, see Manteaw [2012]).

8. Whether economic growth can be decoupled from continued extraction of natural resources has been subject to debate. I align here with the view that such decoupling is very unlikely to happen in time to avoid catastrophic environmental decay, as argued by Parrique et al. (2019).
9. By “environmental learning” I mean processes both outside and inside institutional spaces of education. I borrow this use of the term from Thomashow (2020).
10. This type of research shares some of its goals and approaches with the kind of participatory analysis applied in the context of photovoice (Wang & Burris, 1997) and the visual methods inspired by the anthropology of childhood (G. A. Johnson et al., 2012).
11. The Holocene is the current geological epoch (as the Anthropocene has not yet been officially recognized, largely because of disagreements about its beginning), which began approximately 11,600 years ago, following the melting of glaciers at the end of the Pleistocene.
12. This brief article was followed by more elaborate analyses of the Anthropocene (Steffen et al., 2011a, 2011b; J. Williams & Crutzen, 2013), including analyses of the implications for human survival and the changes needed to avoid extinction (Costanza et al., 2007; Robin & Steffen, 2007; Rockström et al., 2009; Steffen et al., 2007).
13. For comparison, the “background,” or expected rate, of natural mammalian extinction is about 0.25 per million species-years (Kolbert, 2015, pp. 15–17).
14. The discussion of a human epoch can be traced back at least to the late eighteenth century. The first identified instance of using the prefix “anthropos-” to refer to a human epoch occurred in 1854 in a series of articles by the Welsh theologian and geologist Thomas Jenkyn (Lewis & Maslin, 2018, p. 31).
15. The argument for locating the origins of the Anthropocene in ancient history is made by Ellis (2011), but this view is not among the “mainstream” proposed beginnings (Dalby, 2016). For an overview of the different arguments for and against various dates, see Smith and Zeder (2013).
16. Referring to Marshall McLuhan’s article proclaiming the end of Earth-Nature and the beginning of “man-made” Earth in 1974, Bonneuil and Fressoz (2017, p. 60) argue that “the scientific imaginary of the Anthropocene inherited ideologies, knowledge and technologies from the Cold War.”
17. Quoted from Crutzen and Stoermer (2000, p. 18).
18. Bonneuil and Fressoz (2017, p. 66) borrowed this analogy from Malm and Hornborg (2014, p. 67).
19. A discussion of what the *anthropos* in the Anthropocene refers to can be found in Usher (2016).
20. During the imperialist age, “an ‘environmental orientalism’ reserved the ‘external’ influences of the environment on human history to discourses on ‘less advanced’ societies, as

a counterpoise to an industrial society moved above all by an ‘internal’ logic of progress” (Bonneuil & Fressoz, 2017, p. 31). The “external” influences now often take the form of toxic byproducts of modernity (such as e-waste) exported to the Global South, which shows that “environmental orientalism” (and indeed “environmental racism”) that dehumanize the non-White other are still at play.

21. See, for example, Bonneuil and Fressoz (2017), Berners-Lee (2021), McKibben (2019), and Kolbert (2015, 2021).
22. The interview with Trisha was conducted in Hindi with the help of a translator. The accuracy of the translation for all such interviews that appear in this book was checked with the help of a second, independent translator who listened to the audio recordings and verified the transcripts and their English translations.
23. “Oustee” is often used in the literature on India’s dams to refer to people displaced from their land. The connotation is that state coercion and force were used to move people, rather than them relocating voluntarily.
24. See also Komljenovic & Robertson (2017) and Robertson & Komljenovic (2016).
25. For more context, see also Nambissan & Ball (2010), W. C. Smith & Joshi (2016), Tooley (2013), and Woodhead et al. (2013).
26. Throughout the book, I refer to “Global South” and “Global North” in quotation marks. These categories—while at times helpful in clarifying meaning—advance a bifurcated view of the world reminiscent of earlier binaries (such as colony and metropole). This can contribute to the homogenization and essentialization of societies.
27. Anthropology itself has colonial origins as a field that was used by colonial empires to study the colonized “other.” Perhaps in part because of this history, anthropology has also engaged in decades-long conversations reflecting on this colonial heritage (Pels, 2008) and ways to decolonize the discipline and its methodologies (Allen & Jobson, 2016). In my work, I endeavor to make the most of this “reflective edge” of anthropology.
28. For the purposes of my argument, I am relying on Harvey’s (2007, p. 22) definition of neoliberalism as a “theory of political economic practices proposing that human well-being can best be advanced by the maximization of entrepreneurial freedoms within an institutional framework characterized by private property rights, individual liberty, unencumbered markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices.”
29. The workshop encouraged students to think carefully about their subjects, framing, and composition. This is one of the reasons why professional-grade camera equipment was used; the use of such equipment required students to go through a series of conscious choices (about white balance, sound source and volume, focal length, focus) every time they pressed the “record” button (cf. Sutoris, 2021).
30. This conception is related to Potts and Brown’s (2005, p. 255) notion of “anti-oppressive research,” which is characterized by “committing to social change and taking an active role in

that change.” Throughout this research project, I aimed to facilitate the co-creation of knowledge through the observational films made by children that I discuss in chapter 4, in the tradition of collaborative ethnography (Lassiter, 2001). During the course of my research, I also identified with the related notion of “critical ethnography,” whose aim is “to theorize social structural constraints and human agency, as well as the interrelationship between structure and agency in order to consider paths towards empowerment of the researched” (Atkinson, 2001, p. 193). An earlier, still relevant, definition of critical ethnography focuses on its being “structured in relation to our efforts to construct a mode of learning, and a conception of knowledge that may enhance the possibility of collectively constituted thought and action which seeks to transform the relations of power that constrict people’s lives” (Simon & Dippo, 1986, p. 196).

31. This use of liminality is also linked to Karl Jaspers’ concept of the “axial age” (Jaspers, 1953).
32. In inherited spaces of marginality, the proximal cause of marginalization may no longer be visible (or it might not even exist anymore, e.g., direct colonial rule), but its impacts are real. This too is liminality—a use of the term similar to Wacquant’s (2016).
33. In this book, I avoid the use of the term “developing,” as this concept is often understood to refer to a universalist notion of a single model of development toward which all countries (should) be moving. Instead, I use the term “low-income country” whenever possible. For a discussion of universalisms and particularisms in educational development, see Sutoris (2018b).
34. Citing UN statistics, Rawat has argued that “India uproots most people for progress . . . 60 to 65 million people are estimated to have been displaced in India since Independence [due to development projects], the highest number of people unsettled for such projects in the world. Of these people, 40 per cent are Tribals, 40 per cent Dalits and other rural people” (Rawat, 2013, p. 65).
35. As Bond and Hallows (2002, p. 32) point out, the “Constitution also provided a caveat in mandating ‘reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation, and secure ecologically sustainable development and use of natural resources *while promoting justifiable economic and social development*’ (emphasis added), quite consistent with international sustainable-development rhetoric.”
36. I approached Engen for an interview to include their perspective on air pollution in this book, but I received no response.
37. This is how the school staff often referred to their school, which was built in the 1970s as a temporary structure made of prefabricated plywood panels. Although it was supposed to be replaced by a permanent brick-and-mortar building within years, the temporary structure was still in place at the time of my research.
38. According to Wacquant, advanced marginality is characterized by “realities of extreme poverty and social destitution, ethnoracial divisions (linked to colonial history) and public violence, and their accumulation in the same distressed urban areas” (1996, p. 123).
39. Sunderlal Bahuguna was also directly involved in struggles against Tehri Dam (James, 2013; Sharma, 2009), as discussed in more detail in chapter 3.

40. This is not an official figure, as the Indian government does not keep statistics on the number of oustees who have left the rehabilitation site. This figure was quoted by one of my interlocutors in Pashulok and independently confirmed by two other community informers.

CHAPTER 2

1. By “sculpting” I mean deliberate changes to cultural landscapes of societies, including through the medium of advertising, film, fiction writing, and other channels.
2. In selecting the examples of educational thinkers in this paragraph, I relied partly on my own knowledge of the field and the figures considered influential within it and partly on the register in the volume *Fifty Major Thinkers on Education: From Confucius to Dewey* (Cooper et al., 2001).
3. For a discussion of the potential of education to aid specifically in addressing climate change, see Bangay and Blum (2010).
4. The degrowth literature, while not (yet) prominent in the development or education literature and largely confined to a small number of niche journals and a biannual International Degrowth Conference, has generated a number of economic, political, and philosophical debates (Demmer & Hummel, 2017; Fournier, 2008; Latouche, 2010; Sekulova et al., 2013; van den Bergh, 2007) that are likely to gain more attention as the Anthropocene becomes further established as an object of research and as humanity moves further into the environmental multicrisis.
5. According to Dryzek (2016, p. 945), ecosystemic reflexivity “differs from simple reflexivity in at least two ways . . . the incorporation into human institutions of better ways to listen to ecological systems that have no voice; and an ability to re-think what core values, such as justice, mean in the context of an active and unstable Earth system.”
6. Some of this literature—and arguably much public discourse—privileges technological solutions. For example, Denny (2017, pp. 131–137) lists four potential scenarios: (1) “business as usual,” (2) “love, peace and granola,” (3) “the technofix,” and (4) “we’re doomed.” Of these, he argues, only (3) has the potential to prevent some of the Anthropocene’s gravest potential consequences. A similar line of thinking also appears to underpin Bill Gates’ (2021) influential book, *How to Avoid a Climate Disaster*.
7. As Caradonna (2014, p. 156) points out, “UN involvement in sustainability has suffered from many shortcomings and failures. The main issue is that many of the treaties, frameworks, and agreements . . . have been ineffectual and are often seen as a load of hot air. The Rio Summit was marked by bitter disagreements between the global North and the global South and between NGOs and governments. The documents produced in Rio were greatly watered down and reflected the disagreements of member states. The following UN summits in Johannesburg (2002) and Rio (2012) basically acknowledged the massive gap between where the UN would like the world to be and where it actually is.”
8. The Club of Rome, founded in 1968, is a membership organization consisting mostly of scientists, academics, and (former) politicians that is concerned with potential future challenges to humanity.

9. The Charter states, “Environmental education, properly understood, should constitute a comprehensive lifelong education, one responsive to changes in a rapidly changing world. It should prepare the individual for life through an understanding of the major problems of the contemporary world, and the provision of skills and attributes needed to play a productive role towards improving life and protecting the environment with due regard given to ethical values” (United Nations Environment Programme, 1975).
10. The environmental destruction of the Soviet system is described in detail in Peterson (1993).
11. African countries were not included in the analysis because of a lack of available data.
12. These quotes from Latour and Giroux were included in a May 2019 call for articles for a special issue on *Educational Philosophy and Theory* on the topic “ESD in the ‘Capitalocene’: Caught up in an impasse between Critique and Transformation.”
13. A similar logic has also been used to offer alternative interpretations of pro-environment “terrorist” groups, such as ALF (Animal Liberation Front): “If one wants to understand the ALF, one must transcend the false rhetoric of ‘terrorism’ and approach the real purpose of its struggle—animal liberation—through the method of critical pedagogy” (Nocella, 2019, p. 22).

DILEMMA 2

1. Chatsworth is an Indian township in the southwestern part of Durban, not easily accessible from Wentworth without a car.

CHAPTER 3

1. The institute was at the time of apartheid one of the centers of (White) liberal thinking that opposed the apartheid policies of the Nationalist Party government and advocated “bridging the gap” between South Africa’s racial groups; some of its views were, however, influenced by the racial ideologies of the time and it sometimes clashed with the ANC and other representative bodies of the non-White majority (Everatt, 2010).
2. The change was to reflect what the commission perceived to be the essential features of India’s history and culture: “The two most characteristic features of Indian civilisation have been the ethical approach to life’s problems and broad tolerance of differences, and these are attitudes which are not irrelevant today but more than ever needed” (Planning Commission of India, 1958, p. 2). The commission’s essentializing of “civilisation” reflected an Orientalist, top-down approach to educational development.
3. While the vision reflected in the report was dominant at this time, other viewpoints circulated within the government and proposed alternative definitions of education, including those rooted in the ideas of Tagore and Gandhi. Elsewhere I have analyzed some of these competing educational visions, as they manifested in government propaganda films of the era (Sutoris, 2018a).
4. The difference between “environmentalism of the poor” and “First World environmentalism” or “environmentalism in the North” has been dealt with extensively in the literature

on environmental movements, with Ramachandra Guha being one of the key figures in this debate. According to Guha and Martinez-Alier (1997, p. 16), “[E]nvironmental movements in the North have . . . been convincingly related to the emergence of a post-materialist or post-industrial society.” In India—and elsewhere in low-income countries—“environmentalism has emerged at a relatively early stage in the industrial process. Nature-based conflicts . . . are at the root of the environmental movement in countries such as India. These conflicts have their root in a lopsided, iniquitous and environmentally destructive process of development” (p. 17).

5. For a discussion of how such historical narratives have been used by Indian nationalists in mobilizing support for their movement before India’s independence, see Liu and Khan (2014). Such a “golden age” was arguably an invention of orientalists rather than a historical fact; such ideas, however, in many cases outlived the period of colonial rule, as discussed by a number of contemporary historians of India, including Prakash (1990) and Singh (2003).
6. Gandhi’s resistance to industrialization is captured perhaps most powerfully in his manifesto *Hind Swaraj or Indian Home Rule* (1921).
7. Mokshagundam Visvesvaraya was India’s chief civil engineer and politician in the early twentieth century.
8. This does not mean, however, that Ambedkar won. While independent India embraced industrial modernity as a path toward development, it would be difficult to argue that this has benefited Dalits and other marginalized groups in the way Ambedkar hoped for, especially given the current political climate that in many ways reinforces caste hierarchies (Komireddi, 2019).
9. Limited attempts have been made to advance the theory of Gandhian economics since Gandhi’s death, but they have not received much attention in the field of economics; see, for example, Das (1979).
10. Here I refer to the reverence with which Nehru is often addressed in public life, as experienced through my own observations and informal conversations with Indian journalists and scholars.
11. By “depoliticization of environment” I mean the evacuation of Arendtian politics from the shared imaginaries, discourses, and practices related to the natural environment.
12. Estimates range widely, however, with thirty-eight hundred being the conservative government figure. Crematorium and cemetery officials in the Bhopal area, for example, claimed at least eight thousand dead (Kurzman, 1987, p. ix), and some estimates put the figure as high as sixteen thousand, counting the eight thousand who died within weeks of the disaster and the approximately eight thousand who have died since as a direct consequence of their exposure to methyl isocyanate (Eckerman, 2005).
13. Tens of thousands are affected to this day, having had to live with their injuries without fair compensation or rehabilitation for more than three decades.
14. *Parens patriae*, Latin for “parent of the nation,” refers to a state’s power to intervene on behalf of citizens unable to protect themselves. It is commonly invoked in cases of parental abuse of

minors. In this case, the Indian government decided that hundreds of thousands of women, men, and children could not defend themselves against Union Carbide, which prevented the victims from independently suing the company and defending themselves on their own terms. Arguably, this served the purposes of Union Carbide (and the Indian government, which was interested in minimizing the fallout from the disaster in the form of a decline in foreign investment if the price Union Carbide paid was too high) rather than the purposes of the victims and those seeking justice for them.

15. In his book *Bhopal: The Inside Story*, T. R. Chouhan (1994), a former UCIL worker, enumerated the many ways that UCIL and its mother company, Union Carbide, failed to maintain a secure environment at the plant: through negligence, underinvestment and lack of training, and by flat out breaking industrial rules and regulations. Many of these accusations have been independently corroborated (Varma & Varma, 2005), which gave the workers' claims credibility (Fortun, 2001).
16. Pesticides were also seen as central to the Green Revolution (Shiva, 2016), which was to raise India's agricultural productivity and liberate it from its dependence on American food imports. The idea of "development," in other words, was seen as central to the welfare of India's people, but this could only happen on the back of specific technological innovations (such as fertilizers needed to support the Green Revolution, which were made at Bhopal).
17. The colonial past shaped the notion that the lives of people of color are worth less than White lives and the belief in humankind's ability to master nature, including human nature (cf. J. C. Scott, 2008). It also gave rise to the assertion that human progress is equivalent to "development" in its post-Enlightenment, postindustrial revolution rendition, along with the associated paternalistic theory of state in which the citizen was to serve the country rather than the country catering to its citizens' needs (cf. S. Roy, 2007).
18. At the press conference following a seminar on the changing investment climate in post-liberalization India in 1991, "reporters were reminded that the handling of the Bhopal case was evidence that India is an amiable site for foreign investment, symbolizing Indian commitment to the New World Order" (Fortun, 2001, p. 148).
19. The ideological contradictions at the heart of the newly born Indian state call attention to the agency of intrastate actors in shaping educational policy and delivery, as recognized in some of the most recent research into the role state bureaucrats played in educational development in India (Mangla, 2015, 2017).
20. Modi's political awakening can be traced back to his time in RSS youth camps, which "introduced volunteers to the vast pantheon of villains who had plundered and emasculated India down the ages and exhorted them to shed their Hindu impotence"; heeding this call, Modi "wandered through India as a catechist for the Hindu nationalist cause" (Komireddi, 2019, p. 98).
21. Many contemporary proponents of *Hindutva* argue that the assassination of Gandhi was an act of a rogue ex-member of RSS and that the organization is not to blame. Such views are captured in Anand Patwardhan's film *Reason* (2018); in one of the documentary's scenes, the filmmaker enters a heated debate with participants in a political rally who make this argument

and confronts them with what he sees as historical facts about RSS's involvement in the assassination plot. While there is no consensus on direct links between the organization and the killing, a number of historians argue that the RSS, at the very least, spread an ideology that was conducive to such an act (Ramachandran, 2016).

22. See P. S. Ghosh (2000) for the evolution of Hindu nationalism over time.
23. There is also evidence of Hindu nationalism's interference with judicial and state inquiries into the incident, as discussed by Jaffrelot (2012).
24. In another twist of irony, one of the preoccupations of Indian newspapers at the time was how the health of one individual—Barack Obama—would be affected by inhaling Delhi's polluted air during his three days in India; according to scientists' calculations, it would likely shorten his life by approximately six hours ("World's Worst Air," 2015).
25. INC led the government following the 1991 election, but this was a minority government with the support of smaller political parties on the left.
26. This style of government has been dubbed "Moditva," as discussed by Mehta (2010) in the context of a legal battle between the state of Gujarat (at the time Modi served as its chief minister) and the Indian sociologist Ashish Nandy. Mehta uses this case to point to both the personality cult surrounding Modi and the associated suppression of free speech and academic freedom.
27. As Ishizaka (2006) points out, since the 1980s, the construction of large dams has decreased considerably. Based on Singh's (2002) and Khagram's (2004) work, Ishizaka (2006, p. 79) identifies three key reasons for this: "Firstly, the problems of large-scale dams (for example, low level of cost-benefit ratio, adverse influence upon the environment, problem of evacuation, and so on) came to be widely known. Secondly, many anti dam movements started to join forces with each other. Thirdly, notions of environmental protection and preservation of human rights (especially of tribes) came to have much more power in the process of policy making in India." However, as Tehri Dam attests, the age of the large dam is not yet over.
28. Following the earthquake, Sunderlal Bahuguna, the leader of Chipko, went on an indefinite fast, which led the Indian government to order a review of the project, ultimately concluding the dam design was safe (Verghese, 1994, p. 85).
29. According to Bisht, "The rural population displaced by the Tehri Dam is mainly Hindu and is organised on the basis of the caste system. The patrilineal, patrilocal joint family is the functional unit and the basis of the organisation of property and land . . . Prior to displacement, village communities were mainly subsistence farming communities" (Bisht, 2009, p. 304).
30. While the work by Mawdsley (1999) is more than two decades old at the time of this book's publication, these descriptions of the socioeconomic situation of the area resonate with my own fieldwork observations and the insights shared by my interlocutors.
31. The Chipko's history is complex, and it is not my goal in this book to heroize the movement or its leader. It is important to note that the "protests gained wider audiences through simple, populist narratives that pitted peasants against the state and markets, but glossed over the

heterogeneity of classes, interests, and constituencies within the movement. This skilled interweaving of state discourse and populist rhetoric made Chipko the unquestioned icon of grassroots environmentalism in India and international environmental circles” (Rangan, 2004, p. 382). As a result of these limitations, Chipko’s actual successes do not necessarily live up to the enthusiasm with which journalists, academics, and environmentalists spoke and wrote of the movement at the time. See Dogra (1993) for further detail. Sunderlal Bahuguna has been “diversely acclaimed as the father of the Chipko movement, a freedom fighter, a true disciple of Gandhi and Vinoba Bhave, an environmental thinker and writer, a gentle crusader, an unobstructive messiah, a rishi, the face of TBVSS, convenor of Himalaya Bachao Andolan [The Save the Narmada Movement]” (Sharma, 2009, p. 36). I met Bahuguna and his wife, fellow activist leader Vimla Bahuguna, in their house in Dehradun during my fieldwork in Pashulok in 2017. While we could not engage in a detailed discussion about the anti-Tehri Dam movement, because of the Bahugunas’ advanced age, their charisma and unwavering commitment to protecting the natural environment of the Garhwal Himalayas shone through their eyes as they talked to me about the future challenges they foresee for the region. See James (2013, pp. 171–186) for an overview of the Bahugunas’ struggle against Tehri Dam.

32. According to Rakesh, the land was previously owned by Mirabehn, a British woman who moved to India in order to devote her life to advancing Gandhi’s principles and India’s independence struggle. She later donated the land to local people, who used it for animal grazing until it was converted into a rehabilitation site for Tehri Dam oustees.
33. As Chikane (2018) points out, even though South Africa’s president announced a zero percent increase in student fees on October 21, 2015, this did not put an end to the activist struggle. “Eventually, #FeesMustFall 2015 ended, but the search for economic freedom did not” (Chikane, 2018, p. 192).
34. Chari (2005, p. 15) provides a detailed account of this apartheid-era activist history: “Steve Biko was once resident at the Alan Taylor Residence [in Wentworth], black student housing for medical students at the University of Natal. Biko had drawn a wide group of young people to transform Alan Taylor into a hub of political activity in the early 1970s, but its connections were primarily into the city centre and, subsequently, to Indian youth from the township of Merebank. It was only after the assassination of Steve Biko and the suppression of Black Consciousness, and after a period of quiet in the late 1970s that Alan Taylor would become a hotbed of activity again in the early 1980s.” Nelson Mandela’s connection to activism in Wentworth is explained in chapter 5.
35. The situation in the country in recent years has led Julian Brown (2015) to call South Africa a “country of protest” and refer to its people as “insurgent citizens.” In his view, which agrees with my findings, “these small insurgencies might be instigated by a recognition of the gap between the lived realities of inequality and the messianic expectations of the immediate past—by the gap between contemporary reality, and the utopian vision of social and economic redress that thrived in an earlier [postapartheid] moment” (p. 149).

36. Struggles over land have led to a number of farmers' murders in the years leading up to my fieldwork in South Africa. Steinberg's (2015) account of one such case in KwaZulu-Natal exposes just how polarizing this issue can be in the context of South Africa's apartheid history.
37. Arendt here quotes directly from one of the judges in the Eichmann case.
38. Excerpted from Arthur Nortje's (2000, p. 37) poem, "Evil Assumes the Guise of Emptiness."
39. As a consequence of the Act, more than half a million Coloured people were forcibly relocated to residential and sometimes business areas, mostly on the periphery of cities and towns (Adhikari, 2005, p. 4). Other pieces of legislation—including the Population Registration Act of 1950, the Prohibition of Mixed Marriages Act of 1949, the Immorality Amendment Act of 1950, and the Separate Amenities Act of 1953—also severely constrained the civil rights of Coloured people.
40. Scott's PhD dissertation (1994) is an important source of historical knowledge about South Durban, as are many of her subsequent publications (Barnett & Scott, 2007a, 2007b; Brooks et al., 2010; D. Scott, 2003a, 2003b; D. Scott et al., 2002; D. Scott & Barnett, 2009; D. Scott & Oelofse, 2005).
41. As Dianne Scott pointed out to me in her interview, the labor reserve of South Durban supported the rise of industrial activity around the Durban port in the early decades of the twentieth century. At the same time, the perception of people of color as racially inferior, disposable workers whose health did not matter conveniently allowed for forcibly moving them to South Durban to provide cheap labor to fuel the engine of economic development.
42. As Trapido (2011) points out, this military effort involved not only securing harbors necessary for trade but also inland agricultural land to supply them. The British thus sought to control large swathes of territory to advance their economic interests.
43. For example, Britain pursued its "scorched earth" policy not only against the Afrikaners but also against Black South Africans; as many as 116,000 were moved to concentration camps, of which fourteen thousand died (Thompson, 2014, p. 143). It also used Black South Africans for military purposes, with an estimated ten to thirty thousand fighting with the British Army. After the war, Milner [British colonial governor] introduced measures restricting the Black Africans' movement, lowering their wages and generally making life more difficult for them (Thompson, 2014, p. 144).
44. An example of the ways in which these paternalistic ideas affected the thinking of educationalists of the time can be found in C. T. Loram's (1917) *The Education of the South African Native*.
45. The goals of the movement can be gleaned from those Biko (1979b, 1979a) expressed in public prior to his untimely death. In his analysis of the movement's political strategy, Hirschmann (1990, p. 22) argues that, "given the predicaments that faced black political leaders in the 1960s, and the cruel responses that their opposition consistently drew from Pretoria, to have confronted some of these issues head-on and in public would have been self-destructive. In other words, the early stress on the psychological, the cultural, and the historical, and on mobilisation and conscientisation, made tactical sense and, more importantly, worked."

46. Biko delivered this statement as a defense witness at the trial of Sathasivan Cooper and eight others in Pretoria in May 1976.
47. In 2016, four decades after the release of the book, the crisis of governance under ANC's Jacob Zuma prompted R. W. Johnson (2016) to write a follow-up titled *How Long Will South Africa Survive? The Looming Crisis*, in which he once again raised the question of fundamental unsustainability of the country's political regime.
48. Not all impacts of globalization are necessarily negative, however. Cock and Fig (2001) have, for example, pointed to the emergence of a global civil society that helped "regalvanise environmental and developmental movements in contemporary South Africa" (p. 15).
49. Among the key arguments of this book is that South Africa at the time of democratic transition was heavily dependent on foreign investment and export for sustaining its economy, which meant the government needed to ensure the country would be seen as an attractive destination for foreign investment. In problematizing this perspective, Freund (2010, p. 7) has sought to put "into a somewhat new light much of the critical literature on the African National Congress governments under Mandela and Mbeki . . . The chief weakness of this thrust of thinking in my view, apart from an idealisation of what the ANC was like before 1994, lies in a tendency to encourage conspiracy theories of subversion." Wolpe's (1972) analysis suggests that, in order to prop up the apartheid regime, the South African government needed to create "Bantustans" to keep Black people from the cities. This strand of scholarship, in other words, traces the economic divide to apartheid-era policies rather than the neoliberalism of the 1990s and beyond.
50. As Bond and Hallows (2002, p. 40) note, "The settler-colonial and apartheid divisions of South Africa's land, codified by the 1913 Land Act and numerous subsequent policies and laws, left 87% of the land under white ownership and control, with millions of African people displaced to overcrowded 'bantustans.'"
51. See Steyn (2005) for an in-depth analysis of the continuities in environmental management practices from the apartheid era into the democratic period.
52. There were multiple reasons for this, but the performance of the economy was arguably a key factor. According to Chipkin and Swilling, "The economic policies of the Mbeki period were widely slated as a self-imposed programme of structural adjustment inspired by neoliberal economic policies. In the wake of Polokwane, and especially after the 2009 election, a search began in earnest for a more 'radical' model of transformation. At the time, the Zuma presidency was applauded in 'left-wing' circles for promising a break with the 'neoliberal' policies of the Mbeki years" (2018, p. 4).
53. The use of rhetoric and propaganda was important in sustaining this political project. "In addition to Zuma's new slogan 'radical economic transformation,' the term 'white monopoly capital' started surfacing all over social media where it was wielded mainly by his supporters . . . British PR firm Bell Pottinger, which was retained by the Guptas [a powerful business family with links to Jacob Zuma] to burnish their image . . . was allegedly the mastermind behind this aggressive social-media campaign, according to numerous media reports. The

- firm reportedly made use of fake bloggers, commentators and Twitter bots to manipulate public opinion and divert outrage away from the Gupta family towards other imagined examples of state capture by white monopoly capital” (Bisseker, 2017, p. 33).
54. This report by Chipkin and Swilling (2018), titled *Betrayal of Promise: How South Africa Is Being Stolen*, was originally made public in May 2017 and is widely seen as a key source in understanding the phenomenon of state capture. The report showed that “the struggle today was between those who sought change within the framework of the Constitution and those who were ready to jettison the terms of the transition to democracy” (Chipkin & Swilling, 2018, p. 7). It was the latter group that sought to advance the political project of state capture.
 55. “Milner’s Kindergarten” refers to “the name popularly given to the young British civil servants who served under High Commissioner, Alfred Lord Milner” (Chipkin & Swilling, 2018, p. 1).
 56. ANC’s support in this election stood at 57.50 percent of the vote, down from 62.15 percent in 2014 (“South Africa’s Election Results Reflect Widespread Disillusion,” 2019).
 57. For the Coloured people of South Africa, the Act was a double-edged sword. “The Group Areas Act was something of a blessing in that it offered improved housing to coloureds, and, therefore, it would seem, drew them into a structural relationship of complicity with the planners of apartheid,” Chari (2006b, p. 427) notes. “These contradictions allowed some to seek to exploit the levers of the apartheid state, and others to paint coloureds as intrinsically complicit with apartheid” (Chari, 2009, p. 524).
 58. According to Desai (2017, p. 88), “There is a plethora of churches, with some estimates putting the number at 81, in an area of approximately 30 000 residents.”
 59. This, however, does not mean that the inhabitants of Wentworth lacked political agency. In this regard, Chari’s (2006a, pp. 523–524) observations echo some of the findings of my fieldwork: “On my initial trip to Wentworth in 2002, I thought that this was a subaltern population without a bourgeoisie to represent them. I have since found residents tremendously innovative in using governmental mechanisms to leverage resources from corporate capital and local government, through what Chatterjee (2004) calls a ‘politics of the governed.’”
 60. Chari here references Wacquant’s (2004) definition of “ghetto” in the *International Encyclopedia of the Social & Behavioral Sciences*. “Recognizing that it is a product and instrument of group power makes it possible to appreciate that, in its full-fledged form, the ghetto . . . serves opposite functions for the two collectives that it binds in a relation of asymmetric dependency,” Wacquant (2004, p. 3) writes. “For the dominant category, its rationale is to confine and control, which translates into what Max Weber calls the ‘exclusionary closure’ of the dominated category. For the latter, however, it is an integrative and protective device insofar as it relieves its members from constant contact with the dominant and fosters consociation and community building within the constricted sphere of intercourse that it creates” (2004, p. 3).
 61. While this historical narrative is consistent with the oral history interviews I undertook here, I would hesitate to use the word “ghetto” in connection with today’s Wentworth. The solidarity

- between people within the township—including in the form of environmental activism that cuts across racial lines—is palpable, and at odds with Wacquant’s notion of a ghetto.
62. For a discussion of the violence of forced removals and the subsequent fate of Cato Manor, see Edwards (1994) and Popke (2000).
 63. Although Chari had written a decade before my fieldwork in Wentworth and there may have been demographic shifts since his research took place, the figures he cited resonated with my experience and the information shared by my interlocutors.
 64. “Takkie” is Afrikaans slang for branded sport shoes.
 65. This was not the case with everyone, however. In an interview, the parents of one of the students who participated in the observational filmmaking workshop told me that they did not feel strongly affected by air pollution or by crime. They lived in a part of Wentworth not immediately adjacent to the refinery and their small house was surrounded by a large fence. The creation of “islands of security” through (electric) fencing, barbed wire, alarms, and private security firms was visible all over urban South Africa, including in Wentworth.
 66. At least when it comes to natural environment; if we adopt a broader definition in which the fast violence of crime becomes central to experiencing “the environment,” it may be possible to speak of politicization of the environmental through the spectacles of fast violence. This, however, still comes at the expense of politicization around issues of environmental sustainability related to natural resources, pollution, and the destruction of ecosystems.
 67. The students’ questions to the woman in the scene indeed strongly suggested that they disapproved of smoking; for example, they asked her why she thought smoking was prohibited in public spaces.

CHAPTER 4

1. Later, I started recognizing the limitations of this interpretation as I began to understand the rituals of discipline within the school, which, I believe, had more to do with the children’s propensity to please the teacher.
2. A number of scholars of Indian education have pointed in particular to teachers’ authoritarian tendencies. According to Vasavi (2015, p. 45), “What marks most of the transactions between teachers and children is the socialisation of children into a culture of obedience, of silence and quiet, and of passive hearing, copying and repeating, doing the bidding of the teacher (including under-taking errands and/or acting as the monitor in the absence of the teacher) as the ideal student. These acts and relationships make and force each child to become an obedient child subject. At the end of these transactions and under the imprint of such relationships, the average GES [Government Elementary School] pupil is typically rendered excessively docile, often incapable of independent thinking, and marked for life to being a subservient subject.” Majumdar and Mooji (2011) express a similar view. This phenomenon is also related to the “colonisation of the mind,” as discussed by Ashish Nandy (2015).

3. It is important to point out, however, that neither site was meant to be representative of state-sponsored education in its respective country. Schools in South Africa and India both have complicated hierarchies with varying degrees of state involvement, and my observations from Pashulok and Wentworth cannot capture this complexity. Many of the social and cultural patterns I observed in the two schools would, however, be likely to manifest in many other schools serving disadvantaged groups in both countries. It is also important to note that these were not boarding schools, so the idea of a “total institution” could not fully apply as children did not spend all their time here.
4. This trend is confronted in some of the literature critical of depoliticization and individualization of responsibility for the natural environment. Maniates (2001, p. 37), for example, notes that his “students argue that the best way to reverse environmental degradation is to educate the young children now in school. When pressed, they explain that only a sea-change in the choices individual consumers are making will staunch the ecological bleeding we’re now facing—and it’s too late to make much of dent in the consumer preferences of young adults like themselves.”
5. I address my relationship with Rakesh and the ways in which he intervened in my fieldwork in India in dilemma 3.
6. There appeared to be an uneven political geography of time as these forces interacted in complex ways with the histories of both dispossession and accelerated discontinuous time (what we may call postcolonial time or Gregory’s [2004] “the colonial present”) that shaped the school’s context and exposed students to contrasting messages about the “temporal arc” of their lives.
7. Hindu monk who lived in the nineteenth century and is credited with spreading Hindu teachings in the West.
8. Hindu mystic and saint who lived in nineteenth-century Bengal, Swami Vivekananda’s teacher.
9. Religious leader whose teachings form the core of Buddhism. It is disputed whether he was born in India or Nepal, as both countries claim to be his birthplace.
10. The founder of Sikhism who lived in the fifteenth to sixteenth centuries.
11. In the mountain regions, both Hinduism and Buddhism are practiced by a significant number of people, many of whom see Buddha as a Hindu god. Even though the list may appear diverse, I believe it reflects a Brahmanical cosmology (one rooted in the Vedas) rather than acceptance of religious diversity.
12. With the exception of one teacher, who was a Rajput, a people historically associated with being warriors.
13. On one level, this observation reflected my own values and the privileged gaze of a researcher from the “Global North.” On another level, however, what I was witnessing also contradicted the values of equality and fraternity in the context of a casteist society encoded in India’s constitution (Jaffrelot, 2005) and the lower castes’ countless struggles for equality and justice

throughout the colonial and postcolonial periods (see, e.g., Ambedkar, 2014; Hardtmann, 2010; King, 2015; Kolge, 2017).

14. A number of scholars of Indian education have pointed to similarities in ideas about education between colonial-era officials and the nationalist elites that governed the country after Independence (S. Basu, 2010; Kumar, 2005; Srivastava, 1998).
15. This seemed to be a rhetorical remark, as I had little sense of the students' academic achievement at this point (given how docile and quiet they were in the presence of teachers, and by extension, me).
16. The idea that the students' agency lies in their "surrendering" to the teachers and that any academic achievements are due to the work of the teachers rather than of the students suggests an almost total dismissal of the children's own initiative and motivation for learning. In trying to understand how pervasive this view was, I tried to establish whether other teachers had a similar attitude. When I asked Pranay whether his views on discipline were shared by his colleagues, he remarked, "We can't create a *mahaul* [environment] of discipline without the support of colleagues . . . We worked hard, for first four or five years . . . You can see the classrooms or you can say gallery you will not see a mark of pencil in the walls, which is a very common thing in schools."
17. The concept of "purity" has a central role in Hinduism; those belonging to the lower castes are considered to be less pure than their upper-caste counterparts.
18. The subject of environmental studies, however, was not conspicuous by its absence. This description of the functioning of Indian government elementary schools by Vasavi (2015, p. 44) seemed apt as I observed how all the subjects were taught at Seema Primary: "Class schedules and teacher-allocated classes are more on paper than in practice. Teachers take classes at times and of durations suitable to them. Children lug all the books to and from home and school, and the class timetable is rarely followed. With lesson plans an idea that is yet to take root, classes predominantly consist of reading from the text, some explanation made on the board, and 'practice' (*abhyas*) sessions for a range of subjects. Where transactions take place at all, they are mostly routinised copying of words, sentences, questions and answers either from the board or the textbook or as dictated by the teacher."
19. By this I mean specializations within education degree programs of the kind available for other subjects. This absence of training came up in a number of interviews with teachers at Seema Primary and was confirmed in a number of my interviews with Indian academics and educationists. It is possible that some programs are available, but neither my informants in India nor I were aware of them.
20. Other subjects in my observation were often seen as routinized to the point that teachers could supervise each other's classes. Teachers' discipline-based identity and subject-specific expertise, in other words, seem to have been lacking across the board, and in this sense environmental studies was not an exception.
21. Padma Sarangapani (2003) explored these cultural landscapes in her ethnography of schooling in a government primary school in "Kasimpur," a village near Delhi. (This is not a real

name, as Sarangapani maintained the anonymity of the community in which she conducted her fieldwork.). Her findings, which echo my own observations in Pashulok, point to a rigid transmission of textbook knowledge from the teacher to the learners who are expected to memorize it, revise it, and later recall it for an exam.

22. They include “A Snake Charmer’s Story,” which “look[s] at the close relationship between animals and human beings” (NCERT, 2008, p. vi) or “Sunita in Space,” which “engages with the challenging concepts of the ‘shape of the earth’ and ‘gravitation’ using children’s intuitive ideas” (NCERT, 2008, pp. vi–vii).
23. A “show” lesson could be seen as a narrative of power expressed through culture and may be of value to an ethnographic study. However, participating in such an exercise could have complicated my ability to build trust with the students, as it could have further added to my being perceived as affiliated with the discipline-enforcing teaching staff. It therefore seemed too risky to do this in the early stages of my fieldwork, and the students were preparing for exams by the time I left, at which point arranging such a lesson was no longer an option.
24. The assumption operating here seemed to be that, through hard work, the children will be able to attain a materially higher standard of living than their parents. Given India’s highly stratified education system and Seema Primary’s position near the bottom in terms of education quality, it is unfortunately unlikely that the kinds of occupations students would imagine for themselves (doctor or engineer) would be available to them. It can be argued that this system was based on peddling a lie of a nonexistent meritocracy.
25. It was the ruling of India’s Supreme Court that led to the establishment of environmental studies as a compulsory subject in elementary schools. The judiciary has proven itself to be somewhat immune to being swayed by ideological currents of bureaucratization, statist developmentalism, and Hindu nationalism that shape the Indian state, as discussed in chapter 3. For a comprehensive review, see Sathe’s (2003) monograph about judicial activism in India.
26. One reason for these continued deficiencies is a lack of funding for education. According to J. B. G. Tilak, viewing education as a public good and a human right “is not ingrained in the minds of our union or state government functionaries, particularly the economic and educational policymakers and planners” (2009, p. 70). As Rao, Cheng, and Narain (2003) note, the Indian state lacked an integrated approach to primary education after Independence and only committed to this agenda more seriously from the 1980s onward. Although new policy initiatives such as Operation Blackboard took off during this time (Dyer, 1996), budgetary allocations remained insufficient and debate about the “public gap” in education spending continued to rage through the 1990s and 2000s (Shariff & Ghosh, 2000).
27. These subjects included science and social science in grade VI and above. The reasons why I was not allowed observation at Seema Primary seemed multiple and complex. The teacher of these subjects repeatedly said she was “not ready” to be observed.
28. Given the sensitive nature of these comments, I am not including any additional information about this particular teacher nor am I using a pseudonym so that these remarks could not be linked to this teacher’s remarks (if any) quoted elsewhere in the book.

29. From these comments, it was clear that—whether any genuine censorship by the government was operating in Pashulok—at least one teacher would self-censor her views about the dam out of fear of possible repercussions.
30. This was visible, for example, in the detail with which they observed and filmed *aarti* rituals performed on the banks of the Ganges. As the children explained to me, the intention behind this was to point to the contradiction between the rituals of worship local people engaged in and the sewage and trash with which they polluted the river.
31. The adult who appears in this photograph is one of the translators who helped me with the observational filmmaking workshop.
32. After all, at the time the films were being made, I myself was not aware that intergenerational knowledge transfer would become an important theme in my research. The learners did this in spite of the obvious difficulties in engaging with people beyond their immediate social circles. They often shared with me that they were shy and found it difficult to approach strangers for permission to film them. Intergenerational dialogue clearly mattered to them.
33. Given that Durban is home to many South Africans of Indian origin and that a number of the teachers at Durban South Primary fell into this group, I am using mostly Indian names for teacher pseudonyms in this section.
34. She expressed this perspective in our conversations, but in light of this belief, I often struggled to make sense of her teaching practices. As I discuss later in this section, some of these practices were similar to Pranay's.
35. In 2017 the South African government spent 18.73 percent of its budget, or 6.1 percent of its GDP, on education (UNESCO, 2019b)—the sixth-highest percentage in the world—which compares to India's 14.1 percent of the government budget, or 3.8 percent of GDP (UNESCO, 2019a). This figure, the most recent available for India, is for 2013, whereas the South African figure is for 2018. In 2013 the South African government expenditure on education stood at 19.17 percent.
36. Historically, however, the school had exclusively served the Coloured population of Wentworth, which changed after the fall of apartheid, opening up opportunities for Black children from nearby townships to attend the school.
37. This could be seen as the continuation of an apartheid-era trend of schools serving non-White pupils having deliberately substandard levels of quality and performance.
38. As secondary education was not within the scope of my project, this point is based on conversations with teachers and academics rather than systematic research.
39. Treasure Beach is one of the most affluent areas in South Durban, separated from the oil refineries by a hill and overlooking the Indian ocean.
40. Intergenerational knowledge transfer played little role in these aspirations, as did any concept of the environment that did not see it as a site of exploitation for economic growth.
41. They were also often aware of how slow violence affected them personally. For example, in one of my conversations with one of the students who made *Pollution Kills*, the student told

me about an LO lesson in which the topic of pollution came up. “He [the teacher] said that’s why he doesn’t want to live in Wentworth, . . . That’s why he went to another place because it’s much safer because in Wentworth things happen; fire comes out any time.”

42. Joseph Skido, who had a history of anti-apartheid activism, was one of the artisanal labor unionists who founded the Metalworkers’ Cooperative in Wentworth (Chari, 2007, p. 260). Chari (2008, pp. S68–S69) recalled: “I drove around with the late Skido Joseph as he put together his portfolio as a ‘development consultant,’ to transform his situation as an unemployed person who seemed genuinely interested in helping the lot of his neighbourhood. [. . .] What was clear, as he drove around Wentworth in his old car blaring anti-Apartheid ‘struggle music,’ was that he was bitter about not being able to use his struggle credentials to access jobs in the post-Apartheid state, as many of his former comrades had.”
43. For above-ground political activity in Wentworth during apartheid through unions and other organized groups, see Chari (2005, p. 16).
44. By this I do not mean apartheid politics but the kind of politics that emerged as a result of the antiapartheid struggle and extended into the early days of the post-1994 dispensation.
45. The process indeed led to many disagreements among the students—from everyday logistics of arranging where and when to meet to go filming, to deciding who would keep the camera overnight, to figuring out how to translate the broad theme of the film into shots that could realistically be captured. The students also had to find a way to harmonize their visions during the editing process, which was sometimes tedious, but ultimately the two groups were able to reach internal consensus on the final edit of each film. This is how Collin described the process within his group, which made *Pollution Kills*: “We spoke in a group and then if one person didn’t like it then we wouldn’t film it. And if all of us liked it then we would film it because we can’t put something in the film that we’re making that somebody like Tanya [another member of the group], if she didn’t like something we wanted to film we couldn’t because we don’t know if what if her opinion is better? What if she wants to take us to a better place?”
46. Luke lived in Wentworth but did not go to Durban South Primary; the drawings and quotes come from one of the focus groups I conducted at another school in the community. These focus groups did not seem to point to any systematic differences between the perspectives of students at Durban South and the other school, and the two schools were similar in terms of size, the demographic they catered to and their exposure to social and environmental issues in Wentworth.

CHAPTER 5

1. The Democratic Alliance (DA) was, at the time of my fieldwork, the largest opposition party in South Africa.
2. One of the speakers at the event was a scientist from the University of KwaZulu-Natal’s Department of Occupational and Environmental Health, who highlighted SDCEA’s commitment to science and its ability to bring scientists on board its agendas.

3. SDCEA sometimes asked me to participate in its events, including as a speaker at the People's Economic Forum, an alternative event organized during the World Economic Forum on Africa that took place in Durban in May 2017; this exacerbated my dilemma about how much involvement was appropriate. Being seen as too closely aligned with the activists could affect the way I was perceived in local schools and how much access I would be allowed.
4. Including terrorism in the name of environmentalism (J. V. Carson et al., 2012; Vanderheden, 2005).
5. Here the concept of ecotopia refers to an aggressive pursuit of a utopian world (a radical political project), as coined in Callenbach's (1978) novel by the same name.
6. With the exception of those explicitly identified as scholars or journalists.
7. Including New Delhi, Ahmedabad, and rural areas of Maharashtra state in India, and Johannesburg, Pietermaritzburg, and Cape Town in South Africa.
8. In this context, it is useful to think of a generation as people alive at a particular point in time. By applying this definition, intergenerational agonism becomes a bridge to the dead and intra-generational agonism a force unifying those alive in the present across lots of often rigid divides.
9. This logic became visible to me thanks to the comparative dimension of my work. The Indian activists' conscious effort to preserve the cultural heritage of their now submerged worlds to allow the past to shape the future alerted me to agonizing with the dead as crucial to activism that seeks to heal intergenerational trauma. The activists of South Durban, on the other hand, with their history of organizing across groups that had been pitted against each other by the apartheid regime brought into sharp relief the importance of agonizing with living others who are socially constructed as fundamentally different from ourselves. It was only after leaving one research site and reflecting on it from the vantage point of my other site that these patterns became visible, allowing me to deepen my understanding of both the vertical and the horizontal on my follow-up visits and to understand that the two kinds of cultural logic operated in both spaces.
10. While Chipko has been characterized by scholars as a powerful critique of the Indian state's project of modernizing India (Gadgil & Guha, 1992; T. Weber, 1988), concerns with employment and local economic development were also an integral part of the movement (Rangan, 2004; see also Mawdsley, 1998), a complexity also reflected in the struggles against the Tehri Dam.
11. Some of my interlocutors disagreed with the activist perspective. Apart from the representatives of the Tehri Hydro Development Corporation (THDC, which operates the dam) who praised the project in an interview with me, teachers at Seema Primary and a number of people I spoke to in the community approved of the project. The most common reason offered for supporting the project was the need for India to keep developing, and many conversations reflected a good deal of national pride in India's economic progress since the 1990s.
12. The issue of culture loss is not merely of concern to anthropologists; it has been conceptualized within legal frameworks with respect to "cultural property rights" (Kirsch, 2001).

13. Bigha is a customary unit of measurement used in Nepal and across a number of Indian states. Its size varies by location.
14. The activist narratives directly contradicted the statements of a representative of THDC, the government-controlled company that built the dam and was in charge of operating it, who claimed in an interview that the rehabilitation of the resettled population in Tehri was not only carried out in accordance with all legal frameworks and that all promises were met, but that this effort was in fact so exemplary that the Indian government based its nationwide rehabilitation policies on the example of Tehri. Indeed, some of the community members I interviewed in Pashulok who had no history of involvement with the activist movement claimed that the compensation was generous, one even going so far as to liken it to “a true Marxist revolution” because oustees received the same amount of compensation regardless of their caste, class, and wealth before resettlement.
15. A veteran of antidam protests in different parts of India, Rakesh offered a perspective that reflected a long history of working with local communities. Yet his engagement with the Pashulok community had been sporadic, which made him simultaneously an insider and an outsider among local activists. Rakesh appeared to be motivated by his convictions about social and environmental justice; to him, Tehri Dam was a manifestation of a larger system he has dedicated his life to fighting against.
16. The activist groups I interacted with did not appear to be concerned with the rich history of struggle against dams on the holy river Ganges on religious grounds by Hindu activists (Drew, 2017; Mawdsley, 2005; Sharma, 2009, 2012).
17. Organized resistance to the project is almost as old as the idea of the dam itself. In the late 1960s, shortly after the project was conceived, the emerging antidam movement had the support of Kamlendumati Shah, the local member of Parliament and wife of the Maharaja of Tehri-Garhwal Narendra Shah (James, 2013). A “massive antidam rally” took place in 1977, one activist told me, and the *Tehri Bandh Virodhi Sangharsh Samiti* (Anti-Tehri Dam Struggle Committee) was formed. It was, however, not until after the death of Indira Gandhi in 1984 and Gorbachev’s visit to India in 1986 that the project took off, to a large extent because of Soviets’ interest in the dam and their provision of technical expertise to build it (Dogra, 1992). As construction moved ahead in November 1989, Sunderlal Bahuguna and his wife set up a *kuti* (a small hut) near the construction site and remained there in *satyagraha* (nonviolent resistance), insisting that theirs would be the first submerged dwelling if the dam proceeded, which helped attract nationwide media attention to the struggle against the dam (James, 2013, p. 175). In his foreword to an edited volume on environmental protection, written while living in the *kuti*, Bahuguna (2000, p. v) observed: “I am writing these lines sitting on the bank of the River Bhagirathi (Holy Ganga). About 200 metres downstream, the construction of the 263-metre high Tehri Dam, the highest in Asia, is proceeding on a war footing. The running of trucks, moving of bulldozers and the thundering sounds of heavy blasting, day and night, makes me feel as if I am sitting in a battlefield, where man is at war with Nature in the name of development.” While resistance continued well into the 1990s, the movement ultimately did not manage to stop the dam project.

18. It is possible this timing had something to do with the election season. As one of my activist informants told me in March 2017, “in Pashulok they fight for land rights in last 5–6 months, I feel that was also supported by some, one political party . . . because the election is happening.” Remembering events preceding the local election, another activist noted that “the Election Day was also nearing, and we had said that if we are not given land ownership then we will boycott the elections and no one from us will vote. We had a slogan, ‘No Land Ownership, No Votes,’ and we took out a huge rally.”
19. New Tehri was affected by the construction of the dam in different ways from Pashulok. Being located in the vicinity of the dam, many of the complaints mentioned to me in interviews were related to poor water quality (which was pumped from the dam) and the spreading of disease, as bodies were often cremated on the banks of the dam. For a more comprehensive overview of the difficulties suffered by oustees who were moved to New Tehri, see Newton (2008).
20. *Purana* is an ancient literary text of the Hindus; the Puranic literature consists mostly of myths, legends, and traditional folklore.
21. *Yaksha* is the name of a broad class of nature-spirits, usually benevolent, who are caretakers of the natural treasures hidden in the earth and tree roots. They appear in Hindu, Jain, and Buddhist texts.
22. *Gandharva* is a name used for distinct heavenly beings in Hinduism and Buddhism.
23. It could be argued that what was happening in Pashulok was likely to lead over time to the “tragedy of the commons,” a situation in which individuals who act in their self-interest end up undermining the common good by damaging shared resources (Hardin, 1968). This is one lens through which the emergence and continuance of slow violence can be viewed.
24. Even Rakesh, an “outsider” in this community, recalled personal experiences of shared solidarity. He told me that at the time of the Gujarat riots of 2002 (discussed in chapter 3), he was campaigning in Tehri. Scared about the possibility of an outbreak of communal violence, he braced himself for the worst. But he felt heartened when “one person, he said, he assured me, he’s from a Brahman family, if something will happen, this will happen on our shoulders, these are our brothers, nothing will happen with them. Such a big thing.”
25. The idea of “progress” being not fully forward-looking and partly rooted in looking back was first suggested to me by Newton LaJuan in 2010, when he was the director of the Alele Museum in Majuro, Marshall Islands, and I was working on my documentary film *The Undiscovered Country* about development and education in the islands. Newton invited me to his property on a remote island, where we spent several days talking about how quickly the place was changing and what progress meant in this context, and where he demonstrated to me how he was combining agricultural practices of the old with lifestyles of the new. Newton convinced me that it was possible to get away from the modernity/tradition dichotomy often seen in academic texts, and that his version of “looking back” was very different from the romanticism and Orientalism (Said, 1979) of the colonial gaze. These insights, for which I remain grateful, have accompanied me through my work and research ever since; at times

during my interactions with activists in both Pashulok and Wentworth, I felt as though I was speaking to Newton. For all the place-based wisdom of his words, they seemed to transcend place and reverberate across space.

26. Botanical Survey of India conducted a survey of flora affected by Tehri Dam prior to flooding the valley and concluded that twelve rare species were likely to be “disturbed.” The government certainly was not disturbed about the flora: “None of these have any medicinal or commercial use. In any case, a botanical garden is being developed to preserve these rare species of plants” (Govardhan, 1993, p. 293).
27. As it is the activists of today who are engaging in the hermeneutics of memory, they are identifying values in past worlds that they see as relevant to the challenges they (and their children) face today or are imagined to face in the future. The “surplus meaning” therefore lies not only in the “hidden ontology” of the past (i.e., the values the dead possessed without being consciously aware of them) but also in contemporary interpretation of the past, as captured in memory through the “detour” of distanciation. The latter has the potential to generate meanings independent of the ontology of past worlds or historical “truth.”
28. The pace of sociocultural change was arguably slower for many generations who lived in Tehri before resettlement than for the current generation, which went through the trauma of relocation and the related cultural dislocation. It is therefore possible that the dead were not fully aware of some of the values and beliefs that now appear lost, as they only became conspicuous by their absence (or, rather, the absence of material and social environments needed to nurture them) after the damming of Tehri and resettling of the local populations.
29. The history of racial discrimination indeed shaped South African environmentalism well before 1994. As Beinart and Coates (1995) point out in their comparative study of the rise of environmentalism in the United States and South Africa, “in South Africa, opposition to the older resource-based conservation policies did not originate initially from American-derived 1960s environmentalism with its accent on amenity and ‘rights of nature.’ Rather it was expressed in black popular movements opposing government conservationist measures in the African reserve areas” (p. 99). See Carruthers (1995) chapter, “‘The Other Side of the Fence’: Africans and the Kruger National Park,” pp. 89–102, for an overview of the impact of early government conservation efforts on the Black population and the work of the historian Farieda Khan (1994, 2000, 2014) for a wider overview of the impact of the end of apartheid on South Africa’s environmental movement.
30. My informants often referred to groundWork as SDCEA’s sister organization. It was founded in 1999 by activists with a view toward influencing the international discourse on development. “The mandate of groundWork has been to address three major concerns: oil and air pollution with regard to chemical industries, health-care waste and incineration, and hazardous waste” (Chari, 2006b, p. 435).
31. Culture has also played a role, although it is difficult to assess this in depth as my data only allows tracing cultural change back in time to a limited extent, through the memory of my participants.

32. Countercultural, in this context, does not mean antistate, as I argue later in this section.
33. Not all countries on the continent are, of course, plagued by all these issues, and my preconceived notions about “Africa” were among the assumptions challenged by my fieldwork.
34. The working definition of “sustainable development” at the conference was “development which doesn’t destroy its own future” (Hallowes, 1993, p. ix). But the point of the conference in some ways was to find a new definition, as national and international figures were brought together in an effort to understand what the concept may mean in the context of a rapidly changing South Africa.
35. Yet, elsewhere in his essay, Albertyn’s writing betrays a growing realization of what this critique may mean in the context of 1992 South Africa. “Francis Bacon’s injunctions with regard to our relationship with nature also said much about the position of women and the poor in this reality,” he wrote. “Nature was to be ‘bound into service,’ made a ‘slave’ and our purpose was to ‘torture nature’s secrets from her.’ These injunctions to dominate, divide, control, and compete have become the very fabric of the Western way of life” (Albertyn, 1993, p. 217). In this part of the essay, Albertyn continues his attack on an essentially high modernist (J. C. Scott, 2008) view of development, albeit with an emphasis on “women and the poor.” This perspective could be seen to mirror the environmental movement’s growing openness to the agendas of the groups fighting for the rights of the poor, women, and other marginalized groups at this time.
36. See Cock (2006), Koch (1991), and Crompton and Erwin (1991) for analysis of the coalitions formed within the environmental movement after the fall of apartheid.
37. This type of activist mobilization appears to have operated separately (through different actors, at different times and in different spaces) from the antiapartheid mobilizations in South Durban linked to Biko, the African National Congress (ANC), and *uMkhonto we Sizwe* (MK). Sparks (2006, p. 207) has traced the contours of this history: “Earlier civic mobilisations around public health and civic amenities by white landowners on the Bluff found newer, more powerful expressions in the 1950s with the establishment of Stanvac. Landowner interests, founded on a conception of the Bluff as a neighbourhood with an attractive ‘natural’ character, conducive to comfortable living, leisure and a high standard of civic amenities, informed the character of mobilisations from the beginning, though health concerns (still vaguely articulated) became increasingly prominent. This civic culture also had traces of a critique of corporate greed and powerful layman discourses which betrayed its roots among white railway and municipal workers on the Bluff.”
38. In Sparks’ (2006, p. 218) account, “President Mandela’s ribbon-cutting visit in late March 1995 to dedicate the new expansion of the refinery, was a watershed in the controversy. He was greeted at the gates by a protest organised by the WDF [Wentworth Development Forum]. Mandela stopped to speak with them, and refinery pollution was thrust onto the national stage in a way that had not occurred since the 1950s. Three days later, a government delegation, led by Mandela, met with leaders of the area’s civic organisations and the refinery’s management. The Deputy Minister of Environment and Tourism (DEAT), Bantu Holomisa,

was tasked by Mandela to convene a 'multi-stakeholder' *indaba* [conference of principal men of the Zulu people] in May."

39. More than two decades on, this story figured prominently in the consciousness of activists across South Durban. Sometimes they would invoke it with a tinge of nostalgia, as if they were missing the times when the government was listening to the activists; at other times it served to legitimize the activist struggle which aimed to fulfill the promise of the constitution.
40. The term "rainbow nation" is attributed to Archbishop Desmond Tutu and represented a key political goal of Nelson Mandela while president.
41. Along with groundWork and other organizations, including the Centre for Environmental Rights, which has been active in recent years in the realm of judicial activism and has worked with both SDCEA and groundWork.
42. Aside from the Settlers epidemiological study, SDCEA collaborated on a range of scholarly investigations. For example, a 2002 report, "Comparison of Refineries in Denmark and South Durban in an Environmental and Societal Context" (Danmarks Naturfredningsforening & SDCEA, 2002), highlighted Shell's double standards of acceptable environmental footprint, with its Danish refineries being much "cleaner" than Sapref in South Durban, also owned by Shell. Another study that compared the asthma rates of children in South and North Durban found a statistically significant relationship between attending a school in the south of the city and suffering from respiratory illnesses including asthma (R. Naidoo et al., 2007).
43. SDCEA regularly offers "toxic tours" of the area. These involve driving to several viewpoints around the industrial basin and listening to SDCEA staff recount the history and current state of the struggle. In my fieldnotes from the tour I went on in the beginning of my fieldwork, I wrote, among other observations, "Stopping in front of the chemical storage facility on the Bluff; Bongani asked me to park the car across the road from the entrance gate, as we got out he says this industrial complex still under 'apartheid' laws for objects of 'national importance' that almost turns it into its own 'sovereign state'; Bongani visibly afraid that he might get spotted and get in trouble; he whispers to me that he is known to the management of the facility and it's better they don't see him."
44. While "conflict" mostly remained confined to marches, demonstrations or words uttered in conference rooms behind closed doors, sometimes it got much more serious. During one of our conversations, Des recalled an incident in which "they petrol-bombed the flat after midnight . . . So I still bear the scars of it, and fighting the fire off. Lucky enough I was trained, so I fought the fire off, put the electricity off. My kitchen was completely burned, the lounge was burned somewhere at the bottom—I didn't really care. After I went to hospital, I came back the same morning and walked back and showed those that I wasn't scared of them. And show them that now I'm still going to fight even harder."
45. Historically, systemic constraints have limited such participation (Leonard, 2014a), something SDCEA has challenged, with some success.
46. My observations were consistent with Chari's (2007, p. 264), based on his fieldwork over a decade before mine, suggesting a consistent pattern of a mixture of engagement and

confrontation: “Given that SDCEA does not have a mass base but that it can bring together a strong crowd around issues like incineration and relocation, it has found it necessary to deepen the links between campaigning and episodic militancy. One of the challenges the alliance faces is to forge a tighter link between labour and fenceline communities, to bring together questions of environmental pollution and jobless growth in the expansion of the South Durban industrial basin.”

47. John Dunn House was originally founded as an assisted living residence named after a local reverend by the Durban Senior Citizens Association.
48. The “bucket brigade” is SDCEA’s way of involving the community while collecting scientific evidence of pollution levels in the industrial basin. It involves a bucket, a sealed plastic bag, and a bicycle pump. The pump, attached to a hole in the bucket’s lid, fills the plastic bag with air, upon which the bag is sealed and sent to an independent laboratory for examination. When Bongani demonstrated this to me, he noted that SDCEA used to have to send samples all the way to California, because there were no laboratories within South Africa that were not owned or controlled by industry or industry-associated groups. At the time of my fieldwork, the samples were being sent to a domestic laboratory, which was deemed reliable and independent by SDCEA.
49. If my initial goal was to, in the language of economics, examine the impact of my independent variable (air pollution) on the dependent variable (activism), my fieldwork forced me to contend with the many confounding variables that influence both.
50. The film was made in 2006 by Greg Streak, a South African visual artist. This viewpoint offers a stark vista juxtaposing the ocean, beach, and hill on the one side (which, as Bongani shared with me, was the “beauty” referred to in the title of the documentary) and the smokestacks rising on the other side of the hill (representing the “beasts”).

CHAPTER 6

1. The original quote is from Tagore (1991, p. 71).
2. As Bonneuil and Fressoz (2017, p. 32) argue, “the Anthropocene, as the reunion of human (historical) time and Earth (geological) time, between human agency and non-human agency, gives the lie to this—temporal, ontological, epistemological and institutional—great divide between nature and society that widened in the nineteenth and twentieth centuries.”
3. The poorest are likely to be the most impacted by climate change. According to modeling by Rozenberg and Hallegatte (2019, p. 24), the world is likely to see between 3 and 122 million additional people living in poverty by 2030 (the variation is due to the many possible scenarios of the severity of climate change and other variables influencing poverty). Poor people, particularly in Africa, are also vulnerable to natural disasters such as floods and droughts (Winsemius et al., 2015). Small, low-income island countries, such as the Marshall Islands and the Maldives, are also among the most vulnerable (S.-A. Robinson, 2017), and their inhabitants might soon have, in the words of the Marshallese poet Kathy Jetnil-Kijiner (2014), “only a passport to call home.”

4. Interviews with German citizens in the immediate aftermath of World War II suggest that, while the public at large knew of the concentration camps, they did not know their true purpose or the number of people sent there (Janowitz, 1946).
5. Here I mean action rooted in freedom (which arises through participation) and spontaneity (Schell, 2010, pp. 251–254).
6. This point also echoes the work of Dewey, who reminds us of education's important role in the functioning of democracies. While this theme was explored across a range of Dewey's writings, perhaps the most significant in this regard is his monograph *Democracy and Education* (1916).
7. One such dominant paradigm is "innovation." The barons of Silicon Valley are, perhaps, correct in assuming that the solutions to the challenges of our era lie in innovation (Musk, 2017), in charting paths previously unknown. But excluding billions of people from the process of finding these innovations (which may in fact be rooted in existing knowledge and practices) would be like having billions of supercomputers at our fingertips and not engaging them in solving the most complex of problems—except that humans have much more to offer than mere computing power: a mosaic of their subjective experiences, cultures, and languages, their emotions, their poetry, their genius, their intrinsic care for the species and the planet (however suppressed these may be by the forces of bureaucratization and depoliticization).
8. Such pretense of neutrality is often present in discourses of education in the context of international development, where terms like "access," "enrollment," "literacy and numeracy," and others are used to describe the goals and effects of education without acknowledging the political dimension of schooling. One of the most vocal critics of this trend is Manish Jain (2013), who in his writings refers to education for all as "McEducation for All" and emphasizes the effect of "westernizing" students through schooling and interfering with the transmission of Indigenous knowledge. This theme is also explored in the 2010 documentary film *Schooling the World*.
9. It may well be that, in some spheres of human endeavor, aiming for "the political" may not be the most pragmatic goal in the face of the Anthropocene's challenges, but when it comes to education, pragmatism and politics are on the same side—not least because when Amartya Sen wrote that the aim of development (and education) ought to be ensuring that people lead lives they have a reason to value (Sen, 1999), he was very much imagining a world that embraces politics. This link is evident in much of the literature about the "capability approach" to development coined by Amartya Sen and Martha Nussbaum, specifically in the links between the approach's focus on agency and sense of belonging (Deneulin & McGregor, 2010; Glassman & Patton, 2014; Robeyns, 2005) and Arendt's concept of politics. Mathias and Herrera (2006) have, through hermeneutic analysis, pointed to further links to Arendt and Ricœur, especially between the notion of capability and Arendt's conception of "action" and "power."
10. Bobby Peek made a similar observation about SDCEA's school visits when I interviewed him. Arguably, the age of the students in this particular session had to do with the depoliticized

content, as the class was aimed at lower-grade pupils. But SDCEA activists also shared with me in interviews that, in order to be able to work with schools, the narratives they shared could not be beyond what educators were prepared to accept as part of the schooling process—and this was in turn influenced by the state-sanctioned depoliticized curriculum.

11. Faces of pupils have been blurred in this photograph to protect their identity, as this was a general school assembly and not all students were participating in my research or had granted informed consent.
12. This is consistent with the literature about cultural concepts such as *ubuntu* (“humanity”). Le Grange (2012) has, for example, argued that *ubuntu* is intrinsically linked to the *ukama* ethic of the Shona people in Zimbabwe—which is concerned with the well-being of future generations (Murove, 2007). Therefore, “to become more fully human does not mean caring only for the self and other human beings but also for the entire biophysical world” (Grange, 2012, p. 329). In a similar vein, Behrens (2012, p. 180) has argued that a traditional “African” cultural notion exists, according to which “land is not something that can be individually owned. It belongs to the community, which comprises *past, present and future generations*. Since the ancestors are the guardians of the community, they are also the guardians of the land. The land, broadly understood to mean the environment, is consequently not something we can treat in any way we choose. This entails a direct obligation to future persons, to preserve the environment, since the land is a resource that must be shared with others, including posterity . . . the living need to demonstrate gratitude to their ancestors by following their example and ensuring that their descendants also inherit an environment capable of providing for their basic needs” (emphasis added). Some of this literature could be, however, seen as essentializing culture and generalizing arguments across diverse groups of people, which is why I do not rely on it in advancing my arguments in this book.
13. Including those others we may have never known in the past or the present.

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