

Provincializing Energy Transitions

Larry Lohmann¹
The Corner House

Abstract

The colonialism inside today's practices of *energy transition* becomes evident both from experiences of close listening to participants in grassroots struggles over extractivism and livelihood and from an engaged examination of the histories of *energy* and *transition*. In turn, greater awareness of the colonial nature of *energy transition* can fruitfully feed into movement-building around climate change. One key to the process is slow, respectful translation and continual, collaborative re-translation back and forth among communities with radically varying understandings of energy and time, whether those communities are contemporaries of one another or not.

1. Introduction

My topic is one of the main narratives describing international responses to climate change: that of *energy transition*. I argue that this narrative, or concept, is intrinsically colonialist, and that social movements cannot afford to ignore this reality in their attempts to build new alliances and strategies in the face of the climate crisis.

Today, there is no lack of recognition that energy transitions are “fundamentally political” (Burke and Stephens, 2018, p. 79). Scholars have succeeded brilliantly in connecting the shift to a fossil energy regime to, for example, the spread of wage labor across the world (Huber, 2009) and to class struggle, modern democratic power, imperialism and growth (Mitchell, 2013; Malm, 2016). Dominic Boyer (2022, p. 16) emphasizes how energy infrastructures, whether they

¹ larrylohmann@gn.apc.org

involve coal and oil or wind and solar, come to form an “energopolitical apparatus reinforcing both the inertia of a particular organization of fuel and a particular organization of state-based political power” (see also Goldthau, 2014; Scheer, 2006). Concurrently, movements for “energy democracy” have become widespread, along with calls to redefine energy commodities, provision and infrastructure as public or common goods (Fairchild and Weinrub 2017; Sweeney, Benton-Connell and Skinner, 2015; Pirani, Lohmann and Schwartzman 2022; Thompson and Bazilian 2014). While insisting that “energy” and “politics” influence each other and must be viewed together, however, most urban-based, left and ecological movement intellectuals have been extremely reluctant to see politics as going all the way down into energy itself. The idea everywhere is that of a politics *of* energy, not a politics *inside* energy. There is plenty of talk about democratizing energy provision, distribution and development, but little discussion about how, and whether, energy itself might be democratized.

This persistent walling off of *energy* in a semantic field separate from that of, say, *colonialism* is understandable for reasons beyond that of the familiar “modern” split between nature and society (Latour 1994). To grasp energy *itself* as colonialist threatens a whole range of shibboleths in which many leftists and environmentalists worldwide are deeply invested, such as the *just energy transition* enshrined in various Green New Deals. After all, who would want to be heard talking about a “just colonialism”? Or a “just transition to an improved colonialism”? Better, for now, to see if it might be possible instead simply to purge colonialism from energy transitions without directly interrogating the latter. Hence today’s activists often point out the colonialism in specific energy transition schemes while holding off from questioning the energy transition project itself (Hamouchene, 2022). In much the same way, their elders often held open the door for “development alternatives” rather than trying to articulate what, in retrospect, might have been more fruitfully interpreted as resistance *to* development. Indeed, it is probably fair to say that the concept of *energy* developed in 19th-century Northern Europe is even more entrenched in the

“common sense” of the formally-educated classes, including those of the global South, than that of *development*, or of *nutrition* or *education*, all of which have been subject to a great deal more anticolonialist deconstruction since the 1960s (see, for example, Sachs, 1992). To adapt the words of Dipesh Chakrabarty (2000, p. 43), energy “has been made to look obvious far beyond the ground where it originated.”

Seeing the colonialism inside the *other* concept in the dyad “energy transition” (namely, *transition*) carries additional deep challenges for Northern intellectuals. It demands reflection on the diversity of practices of time, simultaneity and event as well as historical relations of domination and subordination in their interactions (Visvanathan, 2007, 2021; Mills 2014, 2020; Hunfield, 2022; Rifkin, 2017; Martineau, 2015). Again, these relations – for example, the political dominance of industrial capitalism’s temporal frameworks in today’s practices of “energy transition” – have become almost invisible to many environmentalists. Excavation is required to make them visible again and available for movement-building. But as everyone knows, excavation causes disruption. All the more so in that excavating the colonialism inherent in the concept of *transition* involves digging even deeper into the rubble hiding the imperialism of *energy*. It remains difficult for many to acknowledge that the hegemony of the particular form of time implied by the phrase *energy transition* is intimately related to the dominance of the times of the colonial plantation; the extractive economy; the repetitive, accelerated rhythms of capital’s industrial machines; and industrial paid and unpaid labor (Fiori, 2020; Whittaker, 2023; Smith, 1997; Ouma and Premchander, 2022; Schivelbusch, 2014 [1979]; Thompson, 1964; Glennie and Thrift, 2011).

The purpose of this note is to lend a hand in the patient, ongoing work of trying to make today’s concept of *energy transition* seem odder to mainstream North Atlantic intellectuals than it is today, so that it becomes easier to see it from “outside”, or from the point of view of those who continue to struggle against the widespread delusion that these two terms are “apolitical” or “universal.” The idea is to encourage greater interenergetic and intertemporal literacy among, in

particular, the intellectual left in the global North, and perhaps help stimulate among them an “appetite for different narratives that do not transform history into fatality” (Stengers, 2010, p. 130). To my mind, this work is necessary if new climate alliances are to be made with the hundreds of millions of ordinary people to whom *energy transition* will remain a threat and an alienating force, a principle of colonial rule.

2. Surveying the excavation site

Without letting go of our grasp of the gigantic technopolitical literature on energy transitions, let us recruit a few recent anticolonialist thinkers as archaeologist-guides in understanding better what lies underneath. On the colonialist side let us take, for simplicity’s sake, the excellent 2022 United Nations Environment Programme (UNEP) report on the “emissions gap” and the urgent need to close it through a global energy transition. On the anticolonialist side let us try to enlist, among others, the Argentine-Brazilian feminist Rita Segato, the Haitian historian Michel-Rolph Trouillot, the Jamaican philosopher Charles W. Mills, the Peruvian anthropologist Marisol de la Cadena and her US colleague Elizabeth Povinelli, the US historian Richard White, the British-Australian feminist theorist Sara Ahmed, the literary and translation theorists Sakai Naoki, from Japan, and Lydia He Liu, from China, and the Indian thinkers Ashis Nandy, Shiv Visvanathan and the aforementioned Dipesh Chakrabarty.

As implied by the title of the series of which it forms a part, *Emissions Gap Report*, the UNEP publication firmly attributes the climate crisis to excessive numbers of molecules of greenhouse gases crossing the border into the atmosphere. It correctly points out that this tide of border crossings is not at present being effectively stemmed. It does not need to dwell on the horrific climatic consequences of not putting better border controls in place immediately to close this “emissions gap.” Fortunately, however, the report goes on, these controls can, at least in theory, be instituted through transformations “in the sectors of electricity supply, industry, transport and

buildings” as well as the “food system” and finance. The idea is to slow or stop greenhouse gas molecule releases at the boundaries of power plants, factories, farms, ships, airplanes, cars, residences and forests – or at least retrieve some of the wayward molecules that do slip past immigration at these border points and then repatriate them back out of the atmosphere. This can be achieved, the report says, by preventing new fossil fuel-intensive infrastructure, advancing zero-carbon technologies, stimulating “behavioral change,” creating better markets, making finance more efficient, recruiting central banks, expanding carbon markets, and making states pay for every GHG molecule that slips past immigration controls at the border of the atmosphere. Progress in enforcing the energy transition and all its supporting transformations is to be assessed by counting the number of border crossings prevented. It is imperative, the report concludes, that the current rate of border crossings be reduced by 45 per cent within eight years, or at least compensated for with molecule repatriations.

I have paraphrased the UNEP report in this way (and I believe that the paraphrase is strictly accurate in every sense) to highlight the way that it adopts colonialist practice by relegating various alternative realities to the background “in order to sustain a certain direction,” to quote Sara Ahmed (2006, p. 31). Throughout the report, foregrounding molecule border policing means disavowing, for example, the dynamics of the extraction that aims at the enhanced exploitation of labor power via the post-18th-century machines of the industrial economy (Huber, 2009; Lohmann and Hildyard, 2014). Fully prepared to denounce any denial that there are too many carbon dioxide molecules in the atmosphere, the UNEP authors nevertheless maintain an uninterrupted silence about who benefited and who suffered from putting them there. Such omissions are presumably automatic — and on the part of most of the authors, almost certainly unconscious. Yet they are systematic in the most rigorous historical sense. They derive directly from several centuries of what Rita Segato (2019) calls the “anomalization” or “minoritization” of the “other of Europe,” during which “radical difference” has been removed from any arena of negotiation, along with any sense of

historical struggle over the practices of energy and time themselves. During this long process, the thermodynamic energy of 19th-century Northern Europe has become an expression of a “universal subject,” together with — in a not unrelated way — the linear, progressive time of settler societies, which now tends to be viewed as a “container” for all other times.

With respect to energy, the result is plain to see on every page of the UNEP report. Throughout, it is assumed, without the assumption ever even needing to be mentioned explicitly, that the abstract energy developed during the 19th-century colonial era is a universal need of humankind and is recognized as such by everyone. Energy is taken to be so “normal” a feature of the universe that it does not even need to be called normal. The only questions considered in the report are how to get it and distribute it while avoiding excessively adverse climatic effects stemming from molecule migrations. The report’s logic would certainly allow for quantitative decreases in energy use by the rich and quantitative increases for the poor, in the interests of fairness. But it cannot conceive of any contestation of the place of energy use itself in the constitution of a universal subject.

3. The colonialism of *energy*

For a typical white Northern intellectual, it is easy to miss the stupendous extent of the colonial exclusions that this “normality” of energy entails. What is excluded first of all is the story of energy itself. Energy was born (Daggett, 2019) in Northwestern Europe at the end of the heyday of absolute surplus value, when capital’s project had been to move more and more people away from the land and reorganize their lives to increase the person-hours that they could dedicate to capitalist work. One of capital’s challenges at that point was how to cope with opposition to its compulsion to lengthen the working day. One answer was to make concessions to unavoidable resistance but to make up for lost ground by intensifying what became identified as the “productivity” of that working day. Hence industrial machines. Hence the development of an

interconvertible “energy” (chemical-heat-mechanical-electric-magnetic) to drive those machines from an expanded, now interchangeable array of what subsequently become known as “energy sources” in nature. Hence, too, the expertise-laden expansion of the colonial plantations and mines needed to feed the whole process, including the bodies of the living labourers and slaves needed to tend the machines.

Of course, what could be considered retrospectively as fragments of thermodynamics – the science that defines the “energy” that scientists and we Northern intellectuals tend to refer to today – had developed from time to time well outside this particular history of labor struggle. The concept of the steam engine itself originated in Rome and Alexandria more than 2000 years ago, when the machine appears to have been treated as little more than a curious, suggestive toy. Similarly, water-mills were known from ancient times and recruited by capital long before the industrial revolution as normally defined. But energy itself cannot be said to have coalesced into a single “thing” prior to the rise of 19th-century industrial capitalism in France, England and Germany. It emerged as a consequence of – and not as a prelude to – an increasingly widespread entrenchment in the physical and commercial worlds of what only retrospectively came to be theorized as conversion engines. These were engines for converting heat into mechanical energy (steam engines, 1712), chemical energy into electricity (batteries, 1800), electricity into mechanical energy (electric motors, 1830s), mechanical force into electricity (dynamos, 1867 and hydroelectric dams, 1882), magnetism into electricity and back (telegraph lines, 1844 and transatlantic cables, 1858), light into electricity (solar cells, 1839), and so on. Systematizing these interconvertibilities in practice and in theory was what made energy and industrial capitalism possible – including, ultimately, “energy companies,” “energy policy” and the “energy sector” that was first named only in the 1980s.

The entrenchment of chemical-heat-mechanical-electric-magnetic equivalences in the post-18th-century physical landscape and the need to theorize them for further industrial expansion have always been part of the process of colonial exclusion in multiple respects. The machines that

disciplined, recruited and brutalized labor also needed extended, regimented, colonial mass extraction of vegetable and mineral products from land, as well as the means to transport and convert them in bulk. The physical violence brought to bear at every point of this process was always one with the seeming nonviolence of the gentlemanly physics lab, classroom blackboard and law office. Currently-fashionable academic attempts to set apart “nonmaterial,” “discursive” or “epistemic” colonialism from “material,” “power-laden,” “governance-oriented” or “lifeworld” colonialism are themselves colonialist in origin, one more project of erasure. No incident of violent exclusion of communities from their land and water for reasons of energy can be considered seriously in isolation from the “intellectual” infrastructure of thermodynamic equations, and vice versa.

These equations include the First Law of Thermodynamics, which distilled many decades of practical work on industrial commensuration of what came to be seen later as different forms of the single phenomenon of energy. But they also include, simultaneously, the all-important Second Law. It was the first great genius of thermodynamics, the French military engineer Sadi Carnot (1796-1832), who, long before either law was clearly formulated, spotted the outlines of what we might now see as the contradictory connection between the two. In retrospect, Carnot’s work looks like the beginnings of an understanding that the obverse side of the rampant energy conversions and enactions of equivalence that were developing into such a boon for capital was a distinctive pattern of growing loss and waste. The more conversions, the less *usable* or *available* energy was left over, even if no energy ever actually disappeared through the workings of any water mill or steam engine. At the same time that it was becoming evident that every stream and forest, every underground deposit of coal, every air current, in fact just about anything in the universe, could indifferently be regarded as free food for capital’s machines, it was also becoming clearer that this free food was, alas, in the words of George Caffentzis (2013, p. 14), laced with the “arsenic” of entropy. The new world of “energy” was not only a landscape of increasingly headlong conversions among heat,

mechanical force, electricity, magnetism, chemical reactions and so forth, but also a landscape of growing piles of heat and other wastes with a distinctive evolutionary structure. The particular patternings and rhythms of this conversion/waste dynamic in the geography of the earth were unique to industrial capitalism.

In addition to being a new landscape, the new world of “energy” was also another timescape. The Second Law of Thermodynamics clarified that what capital’s machines needed was not sources of energy, but rather to be situated along gradients from low to high entropy. Over time, these slopes were inexorably flattened out by the machines themselves. Either the machines had to be moved to new slopes, or new slopes had to be brought to the machines. Machinic needs for continual new imports of low entropy and exports of high entropy, in other words, set up a *temporal* dynamic. The frontiers across which low entropy was “imported” and high entropy “exported” to keep the slopes around and in the machines steep enough had to be shifted continually in a specifically capitalist rhythm. This is one of the most important features of modern colonialism, and also the origin of the current climate crisis. It reveals the close links between the exclusions that are necessitated by capital’s overwhelming need to accelerate conversions of one form of energy to another (think of the 20 to 50 million people displaced by hydroelectric dams in India alone) and the exclusions necessitated by the resultant need to find cheap ways of exporting high entropy from the “technomass” of its industrial machines (think of the thousands flooded off their lands by global heating in neighboring Bangladesh, whose experience is also made peripheral in energy statistics).

Once the concept of energy became part of the armament of colonialism’s “universal subject,” what might be called energy’s “moral economy” (Thompson, 1971, p. 79), became entrenched and normalized as well – a specific, if nearly always unspoken, consensus about what was legitimate and illegitimate in the world of energy conversions. To forego converting coal into heat for any reason – or heat into kinetic energy or electricity – began to appear almost shameful in the face of the developing needs of capital’s machines for one or another of these forms of energy.

So did the failure to change a likely river into a “source of electricity.” The inevitable, mounting losses of industrially usable energy at each conversion signified not a reason for interrogating the project as a whole, but only the need to apply the new virtue of “efficiency” (Caffentzis, 2013). Other things being equal, unlimited conversions and unlimited border traffic in entropy became both possible and permitted. Prohibitions rooted in defense of, say, the complementarity among forests, streams, fields and human life faded from view. Over colonial time, they became obstacles to progress, abnormalities, *pachamamista* residues, “misunderstandings” of energy, or matters for mere local “anthropology” as opposed to universal physics. For more than a century, energy idealists like Joseph Conrad’s coal prospector Axel Heyst have dominated the foreground of the debate with vague talk about “great strides forward” for any affected locality and a “convinced wave of the hand” suggesting “tropical distances being impelled onward” (Conrad, 1915).

Partly because energy itself, now recognized as a universal necessity of life, could no longer be either historicized or questioned, an extraordinarily boring dialectic took hold. The growth of sacrifice zones exporting low entropy and importing high entropy to fill “energy needs” met anticolonialist resistance. Insofar as it became taboo to implicate energy itself, the anti-anti-colonialist strategies that evolved tended to center on an ideology of “better distribution” of energy, which continued to be regarded as innocent in itself. Later on, this energy also became “green,” “benign” or “net-zero” – further indirect means of disavowing its political nature. Then came anti-anti-anti-colonialist resistance to, for example, the opening of the new lithium, cobalt, copper, nickel and balsa (Bravo, 2021) frontiers required by that “green” energy. Anti-anti-anti-anti-colonialist policies are now being developed featuring “responsible lithium” and “responsible green hydrogen” as well as new military interventions to safeguard supply chains of rare earths (Williams, 2021). As spatial and temporal “fixes” fuse into one, each step in this unending story brings new colonial exclusions typically characterized as temporary “sacrifices” to be redeemed at some ever-receding future date. Energy, in other words, has supplied what Elizabeth Povinelli (2021: 8) calls

“late liberalism” with one concrete means of “superficially acknowledging the racist and paternalist foundations of its colonial and imperial practices” while treating radical critiques as calls for “inclusion into the liberal polis of the worthy.” Disrupting this tiresome “normal” dialectic at the root – breaking up the pattern of endlessly augmenting the colonialism of thermodynamic energy with ineffectual “reforms” – cannot but include refreshing our memories about the history of energy itself.

How, in practical terms, might the story of colonial hierarchies and exclusions accompanying energy’s acquisition of universal status come to exercise more of a role in the political practice of scientifically-educated activists, especially in the global North? It will certainly not be by claiming that thermodynamics is untrue, or merely “relative” to the society that produced it. Nor will it work to say that energy is “baaaaad” while there existed something that “preceded” it which is “goood” (Lohmann and Hildyard, 2014) that it “belongs” only to Europe or to capitalism, that its native neutrality has somehow been “deformed” by capitalism, or that actually there is no such thing as energy. Such barely-intelligible claims constitute nothing more than the flip side of the same colonialism that holds that thermodynamics can be credible only if it somehow floats free of its capitalist origins, being instead a feature of a universal background limned for us by a disinterested technical priesthood. Repudiating thermodynamics or abstract energy can play no serious role in attempts to engage critically with the colonialisms and status hierarchies in question.

A more consistent way forward is to carve out wider spaces for reverse translation by those who have been made subaltern by thermodynamic energy. In 2022, the Ecuadorian Indigenous leader Blanca Chancoso was asked during a webinar how *her* community conceived of energy (Acción Ecológica, 2022). Her reply subtly shifted the ground underneath any listener who might have assumed that she was going to consent to talk about the “energy” of later 19th-century Northern Europe. It was that a dammed or polluted stream “lost energy.” It became less a part of the life of the *territorio*. Accordingly, it was *resistance* to dams or mines that was the real “source of

energy.” This was not in any way a blanket condemnation of energy conversions: the conversion of wood into heat for cooking, for example. Rather, it was an allusion to what might be translated as a particular framework for *governing* and *thinking about* conversions that is typically occluded by industrial-era colonialism. In this framework, it is (loosely speaking) the commons rather than a machine-enabling infrastructure embedded in capital accumulation that places moral and political conditions on where and when one form of (19th-century thermodynamic) energy is to be converted into another. If a river’s flow is “wasted,” it is not when its large-scale hydroelectric potential is ignored, but when it is exploited. And the “waste” involved is not waste in the thermodynamic sense either, to be accepted and quantitatively reduced as far as possible with efficiency, but something else. This “something” can be conceived of in various ways, but one of them might be characterized as the brutal eclipsing of the complementarity mentioned above rather than just the “contradiction” between the canonical statements of the First and Second Laws of Thermodynamics.

Only through such implicitly anticolonialist interventions, commonly but not exclusively from non-European perspectives, does the suggestion that modern energy has an inherent political and moral economy begin to become fully articulable. In addition to thermodynamic energy being treated as a universal, neutral, nonpolitical matrix “containing,” or occupying a status superior to that of, specific community practices, it can now also be seen as being itself one provincial political figure standing out against a newly-stipulated (and similarly political) background of energy as conceived in a Kichwa-Otavalo community. The contrast intervenes in the (self-)descriptions of both of these practices of energy in a way that only radical translation can do as conducted under certain power conditions (White, 2010 [1990]; Lohmann, 2020). It is not just that Kichwa *energy* might be seen as a term and condition for consolidating interchanges on what James C. Scott (1990) calls “protected sites,” in preparation for future struggle. It is also, more importantly, that Kichwa energy, like 19th-century thermodynamic energy, emerges and re-emerges incessantly in varying

forms during slow processes of translation of thermodynamics into the Kichwa terms of a Kichwa “background,” and vice versa.

Under anticolonialist conditions, such processes of open-ended mutual translation (which is to say, concept formation) – in which “one addresses oneself as a foreigner to another foreigner” (Sakai, 2006, p. 75), and in which makeshift hypothetical “equivalences” created, rejected and re-created “in the middle zone of translation” are discouraged from hardening into what Lydia He Liu (2006) calls reified “supersigns” whose political evolution is disavowed – would characterize the everyday practice and self-understanding of physicists themselves. Only via what Sakai Naoki (1997) calls the “heterolingual stance” is the observation that abstract thermodynamic energy is colonialist likely to stimulate fresh, peaceful movement-building inquiries instead of the bewildered, uncomprehending outrage and violence of the formally educated: for example, the “white rage” of middle-class environmental activists who cannot believe the stupidity of ordinary people who protest against massive wind or solar developments on their territories without laying out other “viable energy alternatives” for the convenience of state and corporate planners.

To put it another way, European thermodynamics can begin to be understood and respected in its various dimensions only through the heteroglossic (Bakhtin, 1981) application of the practical knowledge inhering in, say, community-territory-bodies such as those referred to among Mexico’s Totonac as *chuchutsipi* (water-hill-village where life is possible), or among the Nahuatl as *altepetl* (derived from the pre-Columbian *altepetl*), or by peasant groups as the relations between *la milpa y el monte* (Ellison, 2020; Smith, 2007). It is only when, for example, residents of southwest Timor in Indonesia who tie climate change to moral failures of respect for land become situated in the same (potentially very long) debate as, say, activists in Brussels eager to compile detailed carbon budgets for corporations that some real progress is likely to be made in breaking the most important logjams in current discussions about energy and global heating. It is only when, say, Australian state functionaries and Karrabing kin-groups or concepts are pushed into an unstable relation of constant

intra-translation that there can appear at least the ghost of a fruitful encounter between a colonialism that assumes that, because rock cannot die, it must always be “surrounded by disregard in an equal and opposite way to how life is swarmed with the problematic of care” (Povinelli, 2021, p. 45) and an anticolonialism within which it is equally obvious that this presumption can and must be contested (see also de la Cadena, 2010). In short, only by struggling against what Segato calls “minoritization” can we collectively start to reinterpret the phrase “energy transition” along the anticolonialist lines that can identify meaningful climate action with liberation.

The point, in other words, is not to dismiss “the energy transition,” but rather communally to help (re)write into its history the “ambivalences, contradictions, the use of force and the tragedies and ironies that attend it” (Chakrabarty, 2000, p. 43) so that climate change can be differently understood and addressed. This project, again, is as close as can be to the opposite of “cultural relativism,” which is itself a colonialist, hierarchical construction. Instead, it constitutes what in Latin America might be termed “territorializing” energy transitions; or, in India, following Chakrabarty’s famous book *Provincializing Europe* (2000), “provincializing” them. It is an unceasing visibilization of what has been made invisible, but also a necessary militancy against naivete. Trouillot (2015 [1995]), p. xix) puts it well:

“The ultimate mark of power may be its invisibility; the ultimate challenge, the exposition of its roots. We are never as steeped in history as when we pretend not to be, but if we stop pretending we may gain in understanding what we lose in false innocence. Naivete is often an excuse for those who exercise power. For those upon whom that power is exercised, naivete is always a mistake.”

4. The colonialism of *transition*

The mainstream “energy transition” is conceived of as taking place in a linear, progressive, Newtonian time whose status as purported neutral background is typically no more “distanced” by its proponents than is thermodynamic energy. The linear time in question is a resource, internally

interchangeable, untouched by complementarity. The eight (now seven) years that the UNEP report estimates are left to us to reduce greenhouse gas-molecule migrations by 45 per cent are identical (as abstract time) to the seven years that ended in the present moment. That is likely only to add to a sense of urgency and despair among the report's readers. If the world has "wasted" the previous seven years, what chance is there that we can use the next seven years more "efficiently" to institute better molecule border controls? The classic modern apocalypse – the catastrophe that is perceived as *coming* rather than *ancestral* (Whyte, 2018; Povinelli, 2021; Caffentzis, 2013; Lohmann, 2014) and that has always been picked out for particular love and dread by the messiahs of 19th-, 20th- and 21st-century capital – immediately looms as a likely fate for Everyperson.

The UNDP report signals that while the concept of *development* may well have been long ago reduced to little more than a "ruin in the landscape" (Sachs, 1992), the practices of linear, progressive (and ultimately apocalyptic) time that partly constituted it remain hegemonic today under the rubric of *energy*. To what extent can anyone continue to talk seriously about "Third World development" these days? Although still spelled out in the names of many ministries, agencies, banks, university departments, UN organizations and academic journals and bulletins, mid-20th-century fantasies of "international development" stand in the desert sands of neoliberalism only as ignored Ozymandian relics around which ordinary people and *apparatchiks* alike, unheeding, continue to scratch a living. Yet during these long years of decay, thermodynamic or abstract energy has never ceased to organize and reorganize our lives forcibly, yet to many of us invisibly, along the same colonialist timeline or "inclined plane of history" (Nandy, 2016) that *development* once presupposed and reinforced.

We used to be told that it was a feature of our ancestors' lives that they had always craved development. Now we are told that our forebears always used energy but just never had enough of the substance, or enough of the right kinds. In both cases, time is conceptualized as a matter of quantitative variations on underlying, eternal qualities mapped onto commensurated units of

duration: the very definition of “linear.” Just as the trajectory of development might be measured according to income or degree of “people-centeredness,” energy might become more or less carbon-intensive or “decentralized.” Some savvy participants in today’s Whiggish energy debate, such as Amory Lovins (2023), qualify this consensus slightly. They object that actually it is not energy as such that we covet, but rather “hot showers and cold beer,” as well as other mundane “end-uses of energy.” But the abstract noun *energy* remains in place to remind us of what is supposed to be the sole, universal, fixed source of all these goodies. The birthday of energy (Daggett, 2019) recedes into a time before prehistory, and its birthplace (Smith and Wise, 1989) vanishes into an undifferentiated empty space. To this day, countries are often ranked according to how much energy they use. To this day, energy experts often challenge anti-extractivists to come up with alternative proposals for supplying the 80 gigajoules of energy that an “average” world citizen consumes. The phrase “energy transition” hammers into our minds the notion that no transition *from* (or *to*) energy is possible, only a transition from one fuel to another, just as “development alternatives” hammered into our minds the idea that no transition *from* (or *to*) development could ever happen, only a transition to a development that is “sustainable” or maybe “just.” Instead of the very presuppositions of the “energy sector” coming into question, the most that could ever happen is that the sector is “reclaimed” for “workers, households, communities, and the public” (Burke and Stephens, 2018, p. 79) and its unchallenged product distributed more fairly. Today, instead of underdevelopment giving way to development, we have the nonrenewable past disappearing into the renewable future. There can be few sharper illustrations of how a past that exists only to be conquered occludes alternate images of memory and time itself.

Both the development and the energy transition narratives, moreover, build their delusions around a structurally identical end-point. As everyone knows by now, there could never be a point at which everyone becomes “developed” or “leveled up.” On the contrary, the more development, the more inequalities and the slimmer the chances of global flourishing. But so too there will never be a

point at which 19th-century thermodynamic energy – a geography of expanding frontiers of exploitation, appropriation and waste – somehow overcomes itself via the emergence of an impossible “circular economy.” On the contrary, the industrial-scale “renewable energy” now being pursued on all fronts is nothing more than what Alexander Dunlap (2018) calls “fossil plus,” with all the entailments of progressive degradation that implies. In both development and energy, what is commonly mythologized as a “bug” is in fact a “feature.”

How is this colonialism of time to be contested in practical terms? One underexplored option is to create more political openings for continuous translations not only into and from languages like Blanca Chancoso’s Kichwa but also into and from the supposedly “past” languages of Northern Europe itself (which, of course, become definitively “past” only under the hegemony of linear time). Before about 1800, none of these languages featured *energy* as a vocabulary item. Rather, they were replete with terms indicating how commons were organized in ways that would in fact become obstacles to the rule of abstract, 19th-century energy. At the turn of that century, no one in Europe could have “suspected that a horse pulling a treadmill and a coal fire heating a lime kiln were in some sense doing the same thing” (Mokyr, 1999, pp. 20-21). But instead of imagining that this state of affairs has been superseded or eliminated without remainder by time itself, so that we no longer even need to remember it, why not seek ways of pushing more Europeans into having to try to *explain* to their forebears their expert belief that a burning candle, an electric battery and a steam engine “unanimously confirm universal convertibility” into measures of mechanical “work” (Stengers, 2010, p. 192)? And in so doing, to expose them to the dismissal, curiosity, contempt, fascination, enthusiasm, stupefaction or critique that might issue from their own ancestors, making an extended discussion unavoidable?

The question is how the class, racial and gender politics of such open-ended translational encounters would proceed. Respect for the ancestors, and respect of the ancestors for us, would mandate going slowly to allow both sides to feel their way into each others’ worlds. That process of

cognition would require an openness to the mutual inhabitation of a time different from progressive, accelerable, linear time, which allows no such hesitations. That openness in turn could well bring about a gradual implosion of the contemporary Europeans' self-image. Instead of benefactors filling a "gap" in their forebears' knowledge, they would be forced to re-comprehend themselves as having unconsciously normalized an exploitative political/geographical settlement. Yet there would have to be an equally slow implosion of the ancestors' initial belief that the contemporary Europeans simply could not be serious in their wild claims about the commensurability of coal and motion or wind and electricity. And with that double implosion might well come an equally slow mutual recognition of the class, racial and gender biases inside energy, as well as a growth in the awareness of oppression that Nandy once identified as the only defensible sense that can be assigned to the notion of progress.

Just because the social movement-organizing methodology that I have been describing happens to be unfamiliar to many European environmentalists and political activists does not mean it would be incomprehensible in the majority world. Among South Asians, as Nandy (1995: 63) reminds us, it is common to regard the past-present-future sequence not as "given or pre-formatted," but rather as "an open-ended enterprise." Among many Indigenous peoples of the plurinational Americas – the Aymara, for instance – the past, peopled by our forebears, is always in "front" of us and the future "behind." Nick Estes of the Oceti Sakowin Oyate nation has even put such a perspective into the title of his English-language book about energy resistance *Our History is our Future: Standing Rock Versus the Dakota Access Pipeline, and the Long Tradition of Indigenous Resistance* (2019). Nor is there any shortage of further materials for resisting attempts to exoticize or minoritize such majority attitudes – or to make them into mere "alternatives to the mainstream." The late Jamaican philosopher Charles W. Mills (2014), for example, identifies as one of the key reasons why he and many other black philosophers find standard views about justice in contemporary analytic philosophy so profoundly strange is the exclusionary framework of "white

time” within which they operate. For example, the celebrated justice theorist John Rawls starts from the idea that society is, ideally, a “cooperative venture for mutual advantage” (1999 [1971], p. 4). In so doing he exempts his program from the need to engage black people’s historical, bodily experience of a society inexplicable in terms of consent, contract or cooperation. Treating a white person’s utopian vision of what society is “for” as a neutral starting point for a transition toward a just future, Rawls’ “exclusionary sociohistorical framework” (Mills, 2014, p. 27), instead of engaging the ancestors of black people in dialogue, in effect “disappears” both their struggles and their ways of organizing time. As Mills (2005, p. 171) notes with an air of astonishment, this can hardly be the “best way to bring about an end to oppression.” This close connection between movement strategy and anticolonialisms regarding time and transition may be one reason why E. P. Thompson’s famous 1960s attempt to “rescue the poor stockinger, the Luddite cropper, the ‘obsolete’ hand-loom weaver, the ‘utopian’ artisan” of English working-class history “from the enormous condescension of posterity” can sometimes resonate almost as much with anticolonialist organizers in the global South as with radical social historians in Northern Europe (Thompson, 1963, 1990). Instead of imagining that their ancestors have been vanquished forever by a universal subject and its practices of energy and time, is it impossible that Europeans might learn to recognize in themselves the inevitable survival of what they imagine to have vanished, just as they learn to acknowledge that the Maya (for example) have not “disappeared,” as imagined by so many pop historians, but in fact live on in struggle down to the present? Could they too not benefit from overcoming the minoritization of other times – retrogressive, spiral, circular, cyclic, glacial and others, relating to “soil, seed, seasons, rituals, fast, feast, rest, work, domestic and communal space” (Visvanathan, 2007) – whose presence has continued to play such a central role in liberation struggles?

5. Conclusion

Nearly fifty years ago a young Indian activist named John Kurien (2020) met some fishermen on a beach in Kerala for a conversation. To this day, Kurien, now a visiting professor at Azim Premji University, remembers their talk, in which he, hoping to contribute to the empowerment of the struggling local fishing community, tried to explain the importance of having a bank account for future security. After Kurien had finished, one fisherman tentatively replied that he thought he could appreciate what Kurien was saying. But what struck him most was the fact that Kurien seemed to be speaking as if one day the ocean behind them, with all its fish, could disappear.

It is in such puzzling moments, remembered and recurring, that processes of slow, mutual translation suddenly become a practical necessity for anticolonialist movement-building. The fisherman's remark took up only a few seconds. But it was a starting point for something much longer for Kurien and some of his students, to whom he continues to relate the story many decades later.

This article has addressed only in an indirect way the issues that might have been foremost in the fisherman's or Kurien's minds a half century ago: livelihood, commons, finance, investment, survival, the nature of nature. But it does emphasize that what Kurien recognized in one remark made on a beach long ago is what also needs to be recognized, cultivated and extended today whenever and wherever the global majority is forced to confront today's *energy transition*: moments of hesitation, concern, reservation, partial incomprehension, disbelief and resistance.

Bibliography

Accion Ecologica (2022). Diálogos ecologistas: resignificar la transición para la defensa de los pueblos y la naturaleza. Tiempo de transiciones, 11 August. <https://m.facebook.com/AccionEcologicaEc/videos/di%C3%A1logos-ecologistas-resignificar-la-transici%C3%B3n-para-la-defensa-de-los-pueblos-y/1121951548434220/>.

Ahmed, S. (2006). *Queer phenomenology: orientations, objects, others*. Duke University Press.

- Bakhtin, M. (1981). *The dialogic imagination: four essays*. University of Texas Press.
- Boyer, D. and Howe, C. (2019). *Energopolitics: wind and power in the Anthropocene*. Duke University Press.
- Bravo, E. (ed.) (2021). *La balsa se va: energías renovables, selvas vaciadas. Expansión de la energía eólica en China y la tala de balsa en el Ecuador*. ASTM.
<https://www.naturalezaconderechos.org/wp-content/uploads/2021/09/LA-BALSA-SE-VA.pdf>.
- Burke, M. J. and Stephens, J. C. (2018). Political power and renewable energy futures: a critical review. *Energy Research and Social Science* 35, 78-93.
- Caffentzis, G. (2013). *In letters of blood and fire: work, machines and the crisis of capitalism*. PM Press.
- Chakrabarty, D. (2000). *Provincializing Europe: postcolonial thought and historical difference*. Princeton University Press.
- Conrad, J. (2015 [1915]). *Victory: an island tale*. Penguin.
- Daggett, C. N. (2019) *The birth of energy: fossil fuels, thermodynamics and the politics of work*. Duke University Press.
- De la Cadena, M. (2010). Indigenous cosmopolitics in the Andes: conceptual reflections beyond “politics.” *Cultural Anthropology* 25(2), 334-370.
- Dunlap, A. (2018). End the “green’ delusions: industrial-scale renewable energy is fossil fuel+. Verso Blog, 10 May. <https://www.versobooks.com/blogs/3797-end-the-green-delusions-industrial-scale-renewable-energy-is-fossil-fuel>.
- Ellison, N. (2020) *Altepet / Chuchutsipi: Cosmopolítica territorial totonaca-nahua y patrimonio biocultural en la Sierra Nororiental de Puebla, México*. *Trace* 78, 88-122.
- Estes, N. (2019). *Our history is our future: Standing Rock versus the Dakota Access Pipeline, and the long tradition of Indigenous resistance*. Verso.
- Fairchild, D. and Weinrub, A. (2017). *Energy democracy: advancing equity in clean energy solutions*. Island Press.
- Fiori, N. (2020). Plantation energy: from slave labor to machine discipline. *American Quarterly* 72(3), 559-579.
- Glennie, P. and Thrift, N. (2011). *Shaping the day: a history of timekeeping in England and Wales 1300-1800*. Oxford University Press.
- Goldthau, A. (2014). Rethinking the governance of energy infrastructure: scale, decentralization and polycentrism. *Energy Research and Social Science* 1, 134–140.
<http://dx.doi.org/10.1016/j.erss.2014.02.009>.
- Hamouchene, H. (2022). The energy transition in North Africa. Transnational Institute.
<https://longreads.tni.org/the-energy-transition-in-north-africa-neocolonialism-again>.
- Huber, M. (2009) Energizing historical materialism. Fossil fuels, space and the capitalist mode of production. *Geoforum* 40(1), 105-115.
- Hunfield, K. (2022). The coloniality of time in the global justice debate: decentring Western linear temporality. *Journal of Global Ethics* 18(1), 100–117.

- Kurien, J. (2020). Wise sayings from an ‘ecosystem’ community: reflections from a search for challenging neoliberal worldviews on nature. In Rao, M. (ed.) 2020. *Reframing the environment: resources, risk and resistance in neoliberal India*. Routledge.
<https://doi.org/10.4324/9780367553166>.
- Latour, B. (1994). *We have never been modern*. Harvard University Press.
- Liu, L. H. (2006). *The clash of empires: the invention of China in modern world making*. Harvard University Press.
- Lohmann, L. (2014). Fetishisms of apocalypse. *Occupied Times*.
<http://www.thecornerhouse.org.uk/resource/fetishisms-apocalypse>.
- (2020). *What kind of future for the World Rainforest Movement? Twenty years after “Addressing the underlying causes of deforestation.”* World Rainforest Movement.
<http://www.thecornerhouse.org.uk/resource/what-kind-future-world-rainforest-movement>.
- Lohmann, L. and Hildyard, N. (2014). *Energy, work and finance*. The Corner House.
<http://www.thecornerhouse.org.uk/resource/energy-work-and-finance>.
- Lovins, A. (2023). Amory Lovins. Rocky Mountain Institute. <https://rmi.org/people/amory-lovins/>.
- Malm, A. (2016). *Fossil capital: the rise of steam power and the roots of global warming*. Verso.
- Martineau, J. (2015). *Time, capitalism and alienation: a socio-historical inquiry into the making of modern time*. Brill.
- Mills, C. W. (2005). “Ideal theory” as ideology. *Hypatia* 20(3), 165-184.
- (2014). White time: the chronic injustice of ideal theory. *Du Bois Review* 11(1), 27-42.
- (2020). The chronopolitics of racial time. *Time & Society* 29(2), 297-317.
- Mitchell, T. (2013). *Carbon democracy: political power in the age of oil*. Verso.
- Mokyr, J. (1999). Editor’s introduction: the new economic history and the Industrial Revolution. In J. Mokyr (Ed.), *The British Industrial Revolution: An economic perspective*, 1-127). Westview.
- Nandy, A. (1995). History’s forgotten doubles. *History and Theory* 34(2), 44-66.
- (2016) The politics and metaphysics of intellectual practices: Ashis Nandy and U. R. Ananathamurthy in conversation. In *India and the unthinkable: backwaters collective on metaphysics and politics* (V. Lal and R. Rajan, eds.), Oxford University Press, 92–113.
- Ouma, S. and Premchander, S. (2022). Labor, efficiency, critique: writing the plantation into the technological present-future. *Economy and Space A* 54(2), 413-421.
- Pirani, S., Lohmann, L. and Schwartzman, D. (2022). *Roads to an energy commons*.
<https://peopleandnature.files.wordpress.com/2022/02/roads-to-an-energy-commons.pdf>
- Povinelli, E. (2021). *Between Gaia and ground: four axioms of existence and the ancestral catastrophe of late liberalism*. Duke University Press.
- Rawls, J. (1999 [1971]). *A theory of justice*. Harvard University Press.
- Rifkin, M. (2017). *Beyond settler time: temporal sovereignty and indigenous self-determination*. Duke University Press.
- Sachs, W. (1992). Development: a guide to the ruins *New Internationalist*, 5 June.
<https://newint.org/features/1992/06/05/keynote>.
- Sakai N. (1997). *Translation and subjectivity: on Japan and cultural nationalism*. University of Minnesota Press.

- (2006). Translation. *Theory, Culture and Society* 23(2-3), 71-78.
- Scheer, H. (2006). *Energy autonomy: the economic, social and technological case for renewable energy*. Earthscan.
- Schivelbusch, W. (2014 [1979]). *The railway journey: the industrialization of time and space in the nineteenth century*. University of California Press.
- Scott, J. C. (1990). *Domination and the arts of resistance: hidden transcripts*. Yale University Press.
- Segato, R. (2019). Is Eurocentrism a European problem? Decolonial meditation in twenty theses. *Transtext(e)s Transcultures* 14, 1-4.
- Smith, C. and Wise, N. (1989) *Energy and empire: a biography of Lord Kelvin*. Cambridge University Press.
- Smith, M. M. (1997). *Mastered by the clock: time, slavery and freedom in the American south*. University of North Carolina Press.
- Smith, W. D. (2007). Presence of mind as working climate change knowledge: a Totonac cosmopolitics. In Pettenger, M. (ed.), *The social construction of climate change: power, knowledge, norms, discourses*. Ashgate, 217-34.
- Stengers, I. (2010). *Cosmopolitics I*. University of Minnesota Press.
- Sweeney, S., Benton-Connell, K and Skinner, L. (2015). Power to the people: toward democratic control of electricity generation (Working Paper No. 4), Trade Unions for Energy Democracy/Rosa Luxemburg Stiftung. <http://unionsforenergydemocracy.org/power-to-the-people-toward-democratic-control-of-electricity-generation/>.
- Thompson, E. P. (1963). *The making of the English working class*. Penguin.
- (1967). Time, work-discipline and industrial capitalism. *Past & Present* 38(1), 56-97.
- (1971). The moral economy of the English crowd in the 18th century. *Past & Present* 50, 76-136.
- (1990). *Customs in common*. New Press.
- Thompson, G. and Bazilian, M. (2014). Democratization, energy poverty, and the pursuit of symmetry. *Global Policy* 5(1), 127-131.
- Trouillot, M.-R. (2015 [1995]). *Silencing the past: power and the production of history*. Penguin.
- United Nations Environment Programme. (2022). *The closing window: climate crisis calls for rapid transformation of societies*. UNEP.
- Visvanathan, S. (2007). An invitation to a science war. In *Cognitive justice in a global world: prudent knowledges for a decent life* (B. de Sousa Santos, ed.). Lexington Books.
- (2021). The search for cognitive justice. Association of Commonwealth Universities. <https://www.acu.ac.uk/the-acu-review/the-search-for-cognitive-justice/>.
- White, R. (2010 [1990]). *The middle ground: Indians, empires, and republics in the great lakes region, 1650-1815*. Cambridge University Press.
- Whittaker, M. (2023). Origin stories: plantations, computers, and industrial control. *Logic(s)* 19. <https://logicmag.io/supa-dupa-skies/origin-stories-plantations-computers-and-industrial-control/>
- Whyte, K. (2018). Indigenous science (fiction) for the Anthropocene: ancestral dystopias and fantasies of climate change crises. *Environment and Planning E: Nature and Space* 1(1-2), 224-242.

Williams, M. (2021). Cross-sector partnership to promote sustainable materials sourcing in Chile. *Automotive Logistics*, 11 June. <https://www.automotive-logistics.com/sustainability/cross-sector-partnership-to-promote-sustainable-materials-sourcing-in-chile/41966.article>.