



Using the pandemic to decolonize nature: Interrogating pragmatic education

William J. Foley Jr.¹

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Abstract This article seeks to use Dewey’s interpretation of pragmatism and education as a model for how dominant notions of school exemplify a colonizing theory of nature. The article argues that Dewey sought to commodify nature as a tool for human progress. This aspect of Dewey’s beliefs is further demonstrated in the kind of schooling that is being implemented through globalization. The article draws on Indigenous concepts of the nature and the Earth, for decolonizing science instruction in an elementary classroom.

Keywords Anthropocene · Dewey · Colonialism · Indigenous people · Nature · Pandemic

Introduction

Would it be too outlandish to suggest that we brought this pandemic upon ourselves? Too brusque to presume that we are the cause of our own harm? One might argue that this is not the right moment to critique, that humanity demands a moment of solidarity, and not politics. That right now, educators should do what we can to support students and families. Many teachers have already taken up this call. New York City educators responded by fighting to close schools while the state government insisted they stay open (Toure 2020). Universities likewise have stepped forward by allowing medical students to graduate early, dedicating dorm rooms to hospitals, and much more (Abrams and Ducharme 2020; Diep 2020). These responses are testimony to the unwavering humanity of educators. They are beautiful. But they are not enough. We must consider if and how education has played a role in determining how our society is interpreting and engaging the natural world and if the pandemic is a response from the planet itself. This is a moment to consider how we have used the classroom to teach ourselves what our place in the universe is. We must be proactive, not reactive.

✉ William J. Foley Jr.
williamfoleyjr@gmail.com

¹ Teachers College, Columbia University, 525 W 120th St, New York, NY 10027, USA

In this article, I offer alternatives to the idea of linear socio-economic development through schooling. Maori scholar Linda Tuhiwai Smith (2013) writes that “Indigenous people offer alternatives to the dominant form of development” (p. 187). I read these words from Florida, where I walk from the beach, past the governor’s private home, and back to my father’s neo-Spanish colonial house. Two ospreys dip down toward huge patches of brown earth, torn asunder for new homes to be constructed between former marshlands and the Atlantic Ocean. As I walk by land made private by the laws that govern the earth and water of homeowners’ associations, similar looking people walk about similar looking properties. We spray pesticides and wash cars. We blast air conditioning to stave off 80-degree Fahrenheit temperatures. When the heat becomes intolerable, many will retreat to the northern US, where they were born and raised. They will use campers, RVs, and second homes in gated communities, replicating the same artificial lifestyle throughout the winter that they pursue during the summer. They will do everything possible to avoid the harshness that is mother nature’s reality. The luxury lifestyle is the apex of Western learning. I now write from New York City, which was for a time the epicenter of the global pandemic. In my 13th-floor Manhattan apartment, situated on land that was once the forest of the Lenape people, I have never felt so distant from the Earth. I breathe recycled air. I look out my barred window to see one of the buildings of the Columbia University Earth Institute, where the term *global warming* was coined (Schiffman 2020). I open Instagram and see a meme that says: “We are the virus, Covid-19 is the cure”.

In this article I will provide an overview of how American-styled education, the Anthropocene, and coloniality exist in the binary between man and nature. Herein *Anthropocene* is defined as the time in Earth’s history when “human activities have become so pervasive and profound that they rival the great forces of Nature and are pushing the Earth into planetary *terra incognita*” (Steffen et al. 2007, p. 614). The Anthropocene era began in the 19th century with the broad advent of mechanization and grew increasingly more global with ever-increasing population and their reliance on hydrocarbons to feed human beings’ expanding economic activity (Steffen et al. 2007). Not all of humankind’s activities directly contributed to this current geological moment (Haraway et al. 2016). Anna Tsing (using the anachronistic *man* to describe this agent of epoch change) writes:

“Man” does not mean humans, but a particular kind of being invented by Enlightenment thought and brought into operation by modernization and state regulation and other related things. It is this “Man” who can be said to have made the mess of the contemporary world. It was “Man” who was supposed to conquer nature. (Tsing, in Haraway et al. 2016)

The diaspora of this version of man across the world during the Age of Exploration disseminated this construct through the physical movement of bodies across the planet. The project of compartmentalizing human life began in Western philosophy long before the 19th century. In the Western view, beings are not just differentiated, they exist in a hierarchical scheme that, at varying times, has placed certain humans above non-humans (Malm and Hornborg 2014; Walsh and Mingolo 2018).

Using the concept of the Anthropocene as a lens, I discuss how colonial pedagogies reconstruct the same cultural tendencies that have contributed to the zoonotic pandemic. To better understand how American education results from and reconstructs coloniality the world over, I turn to Dewey, because his influence on education in the United States is singular. Though we have not lived up to all his guidance, he remains both domestically and internationally one of the most influential thinkers of the 20th century. During his time, Dewey was renowned, not the least in China, where the current pandemic emerged:

“Dewey’s prestige in China was such that the State Department, in 1942, asked Dewey to write a message to be dropped from airplanes, encouraging the Chinese to keep on resisting the Japanese” (Martin, as cited by Rorty 2003). As the US continues to export educational paradigms the world over via aid packages and liberal economic policy, some of Dewey’s concepts of student-centered learning and democratic education extend their reach even farther. While Dewey was at Columbia University, Teachers College was undergoing one of its massive internationalization periods, and thousands of students from abroad would come to be indirectly influenced by his views of education’s power to eliminate illiteracy and empower marginalized social groups (Cortina 2019). This trend has continued long after his death, with schools throughout the developing world embracing his ideologies (Goodenow 1990). Simultaneously, the internationalization of school has worked to eliminate local philosophies and respect for Indigenous thinking, replacing them with best practices and scientific prescriptions of education (Escobar 1995). After reviewing how Dewey conceptualized the environment, I will look at whether it is possible to integrate decolonial methods with the philosopher’s brand of American Pragmatism education. Finally, I will use my experiences as a classroom educator to broach how a decolonizing praxis may be integrated into the urban primary classroom.

Framing coloniality, the Anthropocene, and pandemic

In considering disease and coloniality, it is first worth investigating how imperialism can cause a pandemic. The World Health Organization (WHO) defines *pandemic* as the “worldwide spread of a new disease”, while Merriam-Webster defines it as “occurring over a wide geographic area and affecting an exceptionally high proportion of the population”. In the early stages of this outbreak, parallels were informally drawn between the Spanish Influenza of 1918 and Covid-19. It seems appropriate here to look at the Spanish flu for two reasons. World War I is somewhat emblematic of the modern colonial condition, in that it resulted from the apex of European nationalism and imperialism, the fallout of which would lead to the decolonizing facade of post-WW II (Maldonado-Torres 2011).

The precise origins of the Spanish flu are debated. What cannot be debated is that the globalizing politics of the day facilitated an escalated spread of the disease. Packed military transports traversed the world and, along with them, the contagion (Byerly 2010). The European powers brought infected laborers from Asia to Europe via the Indian Ocean and Canadian trade routes (Vergano 2014). The disease spread to colonized places—over 10,000 people are estimated to have died in Gambia just a few months after the arrival of British troops, a testament to how vulnerable oppressed peoples, such as Africans, Indigenous Americans, and Pacific Islanders, are to pandemics (Killingray 2003). The spread, mutation, and virulence of the Spanish flu is inextricably linked to the imperialism of the era. Oddly, Dewey does not seem to have been inspired by the flu. While he did write very briefly of its terrible impact on the US (Hume 2000) there seems to be nothing to suggest that the core of his philosophic reasoning was changed by this era-defining pandemic. He was not, however, silent on World War I or the political aftermath thereof (Dewey 1917, 1923b).

Coloniality should also be considered in its relation to the emergence of zoonotic illnesses. Pandemic rates of growth have accelerated over the last century, and outbreaks are erupting more often in places at lower latitudes where poor disease surveillance (Jones et al. 2008) intersects with rapid development—places like West and Central Africa, where

HIV/AIDS emerged as a result of colonial urbanization, newly introduced sexually transmitted diseases from sex work, and increased primate meat consumption (De Sousa et al. 2010). More recently, SARS, MERS, and the H1N1 pandemics derived from similarly unfavorable interactions with animals. While each was frustrated by the unique factors that brought humanity back from the brink, zoonotic illness is a rapidly evolving problem. These diseases are becoming more diverse and more dangerous (Smith et al. 2014). In previous centuries, pandemics nearly annihilated all Indigenous Americans from the planet. Millions died because of European-borne illnesses. Americans (and our schools) tend to neglect this fact because it diminishes the glory of the settling. Many of the illnesses that killed Indigenous Americans were probably anthroponotic, nonetheless biologically induced genocide was a continuation of the divine mandate for domination—ongoing evidence that God wanted Europeans in the Americas to conquer both land and the lazy heathens that had not developed it (Takaki 1992). The result of this devastation was the construction of nation-states across the Americas. In an echo of how colonization decimated populations that were already in North America, it is now believed that the first case of Covid-19 to come to the East Coast of the US traveled from Europe to New York City, where the richest were able to leave the city and largely escape the virus, while Black and Brown New Yorkers stayed behind (Klein 2020). Racial and ethnic minorities there and elsewhere in the US have borne the brunt of Covid-19 (Mays and Newman 2020), while many White and upper-class workers found their wealth increase as the mode of production shifted to virtual services.

The linear path of development is traversed by the viruses and bacteria that leap from animals to humans. In a recent TED talk, Shaikh (2020) describes zoonotic illnesses as a result of how we interact with the planet:

Human choices are driving us into a position where we are going to see more outbreaks. Part of that is about climate change and the way a warming climate makes the world more hospitable to viruses and bacteria. But it's also about the way we're pushing into the last wild spaces on our planet.

Occidentalism, as we physically and epistemically construct it, can make us more vulnerable to catastrophes such as pandemics (Burton 2020). We strive to tame the New World and create an idyllic garden or a city on a hill (Tulloch 2015). We must cut down trees and remove the savages to build the City on the Hill. Coloniality caused a hatred for natural bodies (Green-Stocel, in Cortina et al. 2019), thus contributing to our alienation from the natural world. Coloniality views Indigenous people as strongly associated with nature and innately different from Europeans (Mignolo 2002). The former need to be dominated and evangelized—recreated in the civilized domestic image. Colonial matrices of racial power are inextricable from Western views of the environment (Pratt 2020), a reality made evident in Dewey's language.

In the US, schools hold the civilizing mandate because of Dewey, even if the philosopher did not share in the nefarious intent of all his American forebears, and even if American education has not fully lived up to his hopes. At this moment, where our interactions with the planet are resulting in existential threats to humanity, we must address the fundamental structures of the society that we have built on these interactions. Pragmatism itself may demand that we apply rational methods to solve the problems we find ourselves stuck with. If our views on nature are to cause ecological collapse, if the taming of nature is causing it to strike back with a pandemic, we must question why we have positioned ourselves and nature the way we do. Dewey, as a central figure in the modern West's ideological narrative, provides an entry point to do just that.

Interrogating Dewey and the colonial Anthropocene

Dewey was entrenched in the industrialization of the US. His epistemology is demarcated by the growth in the scientific method that structured a then-new systematic approach to social science and philosophy. In his *History of Western Philosophy*, Bertrand Russell, writing of American Pragmatism as conceptualized by James and Dewey, remarked, “It has seemed to me that the belief in human power, and the unwillingness to admit ‘stubborn facts’, were connected with the hopefulness engendered by machine production and the scientific manipulation of our physical environment” (Russell 1945, p. 854). A disgruntled Dewey snapped back that Russell was unfairly linking Pragmatism with “obnoxious aspects of American industrialism” (Russell 1945, p. 855). Russell’s analysis of Dewey’s philosophy is anchored by social context and made evident by the pragmatic interpretation of reality. Dewey is from New England, the center of the Second Industrial Revolution and some of the earliest British settlements in the Americas. He may not have appreciated Russell’s critique, but that does not diminish its deconstructive value.

In *Experience and Nature*, Dewey outlines a theory of knowledge that posits neither idealism nor materialism but rejects dualism: We derive what we know from experience. There is a tangible real world that certainly exists in some fashion and projects reality unto us. The process of knowing, that is drawn from perceiving objects, affects what we come to know as real. This process is socially coordinated. Our concept of what is is predicated on our relationships with others. In this framework, knowledge is socially constructed and not permanent. Intellect, the honing of specific knowledge for a purpose, derives from a trial-and-error process (Hlebowitsh 2006). Dewey sought to train students in the scientific method to give them the tools for life-long learning. In contrast to other philosophers, the Pragmatists argue that humanity’s habits are a normal expression of nature (Shook 2017). In this way, Dewey configures the human being into the natural world (Shook 2017). The interconnectedness of things and how they present themselves to our perceptions are the underpinnings of what is real (Dewey 1958). In this mature view, Dewey does not totally disassociate humanity from nature. His metaphysics synthesize the relationships between natural real objects, psychological idealism, and social constructs that create intelligence (Shook 2017).

Nonetheless, Dewey does follow the Cartesian tradition by articulating a difference between nature and human life. Twice in *Experience and Nature* he defines human and animal learning as different. First, he compares a parrot’s understanding of language to a human’s, noting that the former is limited to simply mimicking language acquisition. Later, Dewey argues that both a human being and a dog can learn to be fearful of fire or a stick, but only a human can also find joy in playing with fire. These examples do not do justice to the animals Dewey uses as examples. A dog may fear a stick, but as everyone knows, it may find joy in one, just as a child, Dewey points out, may find joy in the fire that burned them (Dewey 1958). A parrot crying out for food must certainly know on some level why it is vocalizing, despite an iconoclastic belief that parrots are merely able to mimic. Dewey posits a dichotomy between animals as part of nature and human beings, who are a different kind of metaphysical entity. The *Quest for Certainty* (1929) begins with the discussion of how the human being’s tendency to overcome nature is what makes them human. Art, science, and the phenomenon of culture are, in Dewey’s view, attempts at making the world safer in the face of nature working against humanity.

In the battle between humans and animals, humans win. Dewey’s philosophy situates humanity’s development—which is arguably the cause of the Anthropocene—as the

primary ethical pursuit. As a humanist, the philosopher rejects theism and even the capitalism of the industrial era, seeking to replace both with *humanitas*, the insertion of the logical, thoughtful human who should center the educational process (Karier 1969). His Pragmatism functions to serve the humanist goal of “an expansion, not a contraction, of human life, an expansion in which nature and the science of nature are made the willing servants of human good” (Dewey 1987a, p. 266, emphasis in original). In this view, nature is subservient to humanity. It seems somewhat far-fetched to presume that the natural world willingly subjects itself to the human world. Dewey’s view might even be likened to the Book of Genesis call for humans to be the rulers of the Earth. Atheism aside, Dewey is reconstructing the common understanding of what it means to be a human in the world. Although he is critical of Aristotle’s axiomatic categories (Dewey 1958) and does not systematically apply value to different objects (or cultures), he does exacerbate the difference between humans and the rest of the world. Dewey inherited a view of linear development that he was also a part of. The philosopher developed his views from an evolved understanding of the works of Francis Bacon (Dewey 1987a). Bacon had solidified the philosophic distinction between human beings and nature (Lugones 2010), a dichotomy that is commonplace in the colonial framework:

Bacon was the kiss of death for the living reduced to what became ‘natural resources’ and more recently ‘human resources’. He was riding a different wave: that of the secular humanist. Nature, for Francis Bacon, was out there, separated from him—something to be dominated and exploited. (Walsh and Mingolo 2018, pp. 162–163)

In this view, man is not a part of nature. As in the Biblical and industrial interpretation, nature is a thing apart. Following Bacon, a secular humanism that placed humanity as the center of morality emerged. Secularism does not necessarily define nature as second to human progress any more than every perspective of Christianity. It is the philosophy of Dewey and those in his same mindset that cast nature so. Consequently, the value of the natural world derives from its interaction with human work (Dewey 1958). What is sacred is the developmental task—the growth of the world from what was into what man needs it to be. The world cannot be anything it might have been prior to what it must be made into.

During the rapid industrialization of Dewey’s time, the US was bringing to bear further colonial expansion and development, and this is emblematic of Russell’s critique. The continental US was nearing completion, and populations boomed along with manufacturing. New challenges the world had not yet grappled with became more pronounced. The Progressive Educator was triangulating the moral place of the school in a moment of great tumult. Already, he believed that the moral end of humanity was the expansion of industrialized democracies, which are reliant on education to facilitate the self-actualization of the person (Dewey 1922). The educative aim is the ongoing growth of the individual people themselves (Dewey 1923a), and a good education habituates the underdeveloped child into the civilizing methods of adulthood. Similarly, expanding education toward minoritized peoples has the power to draw them away from “decadent” social interactions that have frustrated their social growth. Dewey writes in *Democracy and Education* that “the savage is merely habituated. The civilized man has habits that transform the environment” (Dewey 1923a, p. 37). The well-educated human has climbed the ladder of the civilizing hierarchy. The undereducated continue to dwell below, ensnared by their own cultural malaise. The binarization of civilized and savage as opposites is a typical colonial habit (Walsh and Mingolo 2018). The categories human being/savage are juxtaposed alongside the categories human being/nature and human being/child. For Dewey, savages are akin to children: Both are closer to nature

than civilized grown human beings (McReynolds 2018). The more advanced individuals use and improve upon the world around them. The savage merely exists in a space. Dewey thought they should be afforded the protections of a democratic system so they can actualize themselves through schooling. The Brazilian philosopher Paulo Margutti (2013) maintains that this demonstrates Dewey's ethnocentric ideology, commenting that Dewey believed "the underdeveloped need to free themselves of the limitations of their social groups" (Margutti 2013, p. 75) in order that they may engage with the linear process of pragmatic and scientific social development. Mastering nature is the core of the Anthropocene. Dewey argues that it is also a basic ethical obligation.

In likening the savage to the child, Dewey permits what would become the development industry's merging of pedagogy with quality. International development and human development as science become conflated in the educational development field. Once again, therein exists an axiological stance, this time regarding how human beings and culture interact with nature. Thomas Fallace notes that Dewey "awarded the savage with all the potentials of the civilized man and considered his lesser degree of culture as a contingent outcome of his isolation from technology and his exposure to a deficient social environment" (Fallace 2010, p. 472). This kind of prejudice centers on the habits of a society that has developed to build and recreate the world around itself. One society is deemed more advanced than the other because it has taken greater pains to manipulate nature for its own ends. In this context, "advanced" is a linguistic tool of a systematic philosophy indicating that scientific and social advancement on a historically linear model is also a moral good. Constructing others as less innovative creates the need to advance the development-as-Anthropocene discourse. In labeling a people as savage or behind developmentally, there arises a need for industrialism to abolish poverty (Escobar 1999). The other needs to be developed (Frank 1966). Savagery is a social condition that can be educated away by teaching people to manipulate nature for their own interest.

Dewey was conscious of the alternatives to industrialism. Describing totemism, he wrote:

By these various agencies we have not so much destroyed or left behind the hunting structural arrangement of mind, as we have set free its constitutive psych-physic factors so as to make them available and interesting in all kinds of objective and idealized pursuits – the hunt for truth, beauty, virtue, wealth, social well-being... (Dewey 1902, p. 230)

Societies that have progressed, Dewey maintained, have done so by making a choice to pursue higher ground. This discourse centers Indigenous peoples as infantile (Dei 2000), requiring, like the child, a guide toward civilization. Accepting that Indigenous people are underdeveloped because of their relation to nature necessarily implies that their frustrated progress is due to their cosmology. The savage's tendency is to live alongside nature, just as the child is fine with his chaotic habits. The mature, well-educated, civilized adult masters the world and makes it better for himself.

In some ways, Dewey stands apart from the industrialists of his time. He did not advocate for wanton ecological destruction for the sake of capital. Indeed, his ecological advocacy was not unlike what we hear today around eco-justice. In his essay *Freedom*, he wrote:

Conservation of not only the public domain but restoration of worn-out land to fertility, the combating of floods and erosion which have reduced vast portions

of our national heritage to something like a desert, are the penalties we have to pay for past indulgence in an orgy of so-called economic liberty. Without abundant store of natural resources, equal liberty for all is out of the question. (Dewey 1987b, p. 251)

This progressivist view continues to position nature as something in service to man. It presumes that the Earth's resources are meant to be reaped by mankind and that governments should manage their equal distribution. Dewey views conservation as integral to sustaining democratic rights (Dennis and Knapp 1997). Among other progressives of his day, he argued for an egalitarian land policy that he thought would help to eliminate a level of inequality that seemed to him illogical in an age of technological advancement (England 2008). His cause is not the unification of *humanitas* with *naturalis*. He is arguing for a scientific use of nature to sustain humanity.

Science and humanism underpin our environmental education. Nature is itemized by the science classroom to be used as a tool for student understanding. The scientific use of nature for man's purposes is often the telos of the science curriculum. Nature is sterilized and secularized, its heart and soul removed by laboratory learning and science experiments. As Walsh and Mignolo (2018) argue, the reinterpretation of the Euro-Christian cosmology into secularism was widespread "From being a local totality, Christian cosmology became a universal totality (as redundant as this may sound). In eighteenth-century Europe, it was translated into Western secular cosmology having science and philosophy as its two pillars" (p. 164). Dewey wielded both science and philosophy to compel linear historicism. In an almost emblematic testament to the two pillars, his doctoral thesis (now lost to us) was entitled "The Psychology of Kant". His love for the beauty of science (Karier 1969) and his personal morality inspired him to create a philosophic system that argued for a scientifically sculpted egalitarian cause. In the science curriculum, student-centeredness ensures that nature cannot be the basis for instruction; other subjects share in this student-centered bias. The totality of the impulse of the Western school, standing on the two pillars, is toward the development of the individual. Underneath and bearing the burden of these two pillars is the Earth.

Western philosophy may not be the solution to fixing the issues education has with the natural world. The current stage of Western thinking may be unable to resolve the problems it has itself caused. Toward the beginning of *Experience and Nature*, Dewey (1925, p. 47) writes: "Quarrels among existing types of philosophy are thus family quarrels...[they] can be resolved by venturing further afield and out of doors". This suggestion encapsulates Dewey's method: Looking for solutions should be bound not by mindless habits but serious inquiry. To better illustrate this point, I look beyond common instructional methods for other ways to create an ecologically centered educational model. This critique of Dewey is not a condemnation but a recognition that, as a philosopher, he was inculcated with some of the failings of industrialization and, as a person, was still captivated by the social constructs of the colonial nexus. The ensuing suggestions are in the spirit of Dewey's call to ensure that we look at every avenue for the betterment of our culture and perspective.

Dewey and decolonizing Indigenous thinking

Dewey implicitly contributes to the underlying cultural frameworks that created the Anthropocene by viewing nature as that which humanity must master. Human development is aligned to science's linear progression. The child progresses into the adult. Groups

of human beings have developed from primitive to civilized. Herein colonial pedagogy and the exportation of pedagogy through modern coloniality are a unique duality we may redress by answering Dewey's anthropogenic and pragmatic version of education. This redress requires a massive leap for the educator inculcated into Pragmatic thinking or the development agent ingrained in their profession. We have to leave home and experience the discomfort of something else in order to relearn (Pinar 2006). This requires us to move away from linear progressivist thinking and embrace the margins of thought (Smith 2013). To consider another ethical stance is to make a conscious decision to move away from center—to destabilize. Decolonizing Dewey's work seems improbable because he wrote from the center of the colonial matrix of power. Pragmatism and Indigenous thinking may be incompatible; the former concerns itself with scientific progressivism, in contrast to many Indigenous cosmologies. Yet, pragmatists may argue that there is a method for decolonizing their work. While writing about the woes of industrialization, Dewey noted: "Thus we increase the disease in the means used to cure it" (Dewey 1958, p. 296). While we may often look toward technological solutions to solve modernity's problems, they may not be the answer. Modernity brought depression, pollution, and urban blight, which Dewey experienced in Chicago and New York City, where he was far removed from his home of rural Vermont. As mentioned, he also considered that some of the problems of philosophy and science may not be answerable through the same methods by which those problems evolved (Dewey 1958, p. 296). Dewey knew that fidelity to the pragmatic method meant looking outside his own *Zeitgeist*.

Perhaps Dewey's works can be decolonized to a certain degree because the colonial method has undoubtedly harmed human beings, and pragmatism is intrinsically humanist. In this, we must be conscientious in order to avoid commodifying Indigenous thinking to perform White-harm reduction (Tuck and Yang 2012). Appropriation is one of the colonial processes Quijano outlined whereby settlers adopt Indigenous peoples' practices and reclaim them as our own (Quijano 2007). To try and reform a practice that was built by the colonial matrix of power may serve only to enhance coloniality. On the other hand, learning from Indigenous ways of knowing in order to disrupt colonial thinking is a possibility (McDonnell 2003). Such a task may here be useful (if somewhat presumptuous, as the author is not Indigenous and has benefited from the systematic discrimination that Indigenous people in the US face). It remains necessary for dominant peoples to have uncomfortable conversations around our place in the state. In this moment of catastrophe, it is equally important to engage in conversation with our own flaws.

In this reflection, two separate problems emerge. If coloniality is harming people, then pragmatic thinking, applying Dewey's approach, would look at the evidence and engage in reform. That alternate solution may indeed lie with an Indigenous ecocentric philosophy. However, in doing so, the pragmatist would be engaging in ongoing coloniality through appropriation. The acquisition of knowledge without consent or attribution is in one way a theft and, in another, specifically harmful to the originators of that culture. Acculturation into the local ecosystems using Indigenous knowledge was what made the initial American colonies viable (Quijano 2007). Later, colonizers would present this knowledge as their own, using ownership to convey superiority (Quijano 2007). How can a pragmatic method use its deductive logic to reduce harm to the planet and Indigenous communities when that same logic is by necessity wielded to appropriate knowledge? How can a classroom educator use knowledge without harming the source, without commodifying it as we have natural resources?

Concurrently, albeit separately, a paradox emerges within the pragmatic framework: The Indigenous method is not considered progressive. Indigenous progress, Dewey

argued, is stymied within scientific development by their own social habits. Embracing a localized knowledge might turn Dewey's characterization of social progress abruptly around. It would be the very opposite of what he argued in *Democracy and Education*, where he devalued Indigenous societies that he did not consider advanced. What constitutes being advanced is somewhat nebulously defined as the application of methodical experimentation. The savage, Dewey argues, does not do this (Dewey 1923a). The totemist habits of savage cultures limit their ability to engage in life-long individual and social development. This would not be a broad pragmatic concern if the wider philosophical circle were committed to the experimental method and applied pragmatism to Indigenous thought. Yet, even in the broadest interpretation, pragmatism is progressive, grounded in and aimed at the version of human development that has played out in the Americas parallel to the destruction of Indigenous societies. How can scientific progress embrace a regressive philosophy? How can humanism answer its claims of bettering humanity if it decenters humanity from its ethical ends?

There is one possible immediate intersection between Dewey and some aboriginal methods. Dewey championed student-centered learning because he argued that knowledge lies in doing. For pragmatists, the interplay between action and object was a method for the substantiation of knowledge. In this way, Dewey's epistemology is pluralist: Unique actions account for unique sets of knowledge (Pratt 2002). The workshop model derived from Dewey's work (Dewey 1958) sets the classroom abuzz with students actively working. As with life, students should have their hands and their minds engaged in creating and doing. Many Indigenous cultures share in the experiential learning mode (Battiste 2002). The gaining of practical knowledge is through work, and certain Indigenous methods and Dewey share a definition of work as the learning process (Aikenhead 2006). Experiential learning is also not dominant in many Eurocentric classrooms, where the focus is on the dissemination of knowledge presented as atemporal scientific fact (Battiste 2002). With respect to this similarity in pedagogy, Dewey's pragmatism is comparable to Indigenous methods. This somewhat superficial pedagogical comparison, however, points to a deeper epistemological loophole in scientific certainty. Dewey understood that learning needed to be unique to the learner (Hlebowitsh 2006) and promoted multicultural education. As a point of comparison, this may reveal the ability of pragmatism to recognize that it is not totally distinct from ideologies that it may consider savage.

"Dewey critically reconstructed the conception of nature" (Shook 2017, p. 14) by repositioning human beings as a part of the natural world, wherein their social and mental constructs are natural. The epigenetic synthesis of nature and human understanding was the closest we can come to understanding a real world independent of human knowledge. This process of experiencing is entirely rooted in the American tradition of Dewey's time, which may have found some of its origins in the interchange between Indigenous and European cultures along the emerging borders of the US (Pratt 2002; Shook 2017). But Dewey's reconstruction of nature nonetheless divides the natural world from the experiential/social reality that human beings construct. While there is no discreet dualism in Dewey's work, he does position human beings differently than other beings. His examples of the dog and the parrot differentiate humans and animals according to how they use language and experience emotions based on the categorization of extrinsic objects. He also uses these examples to contrast the more limited intelligence of animals to that of human beings. Highlighting the similarities of emotion and language would have signified the underlying oneness of humanity with animals. Dewey's arguments and their flaws are instead part and parcel of Western theories of knowledge.

Gonzales and Gonzales (2010) write about the effort to reconnect Indigenous Andean culture to a pre-colonial state of nature. In contrast to Dewey, they write that “whereas the ontology of Western thought would halve the world between being and beings, the Andean world order renders the world as a whole...where all are alive and are equally important for life to be regenerated (p. 89). Their theory argues that the method for knowing is conceptually linked to the specific conditions of the land; a body of knowledge cannot be grounded in ultimate truth, existing in essence as scientific or philosophic law. The wholeness of this cosmology defeats Cartesian dualism by limiting humanity’s ability to codify reality into itself. Russell’s critique of pragmatism could similarly be applied to the Andean example because it rejects a unified theory for truth. The Andean concept finds reality in more than just the physicality of the land; it finds it rather in the spirit of the land as lived on by its people (Gonzales and Gonzales 2010). In some ways, this completes the unification that Dewey sought in *Experience and Nature* because, in the construct of reality, the interplay between land and humanity is definitive.

Gonzales and Gonzales also note an equality between all kinds of being and beings. The equality between nature and human beings as a part of the natural world is not a part of Dewey’s philosophy. Rejecting dualism also means further embracing humanism. Because humanity is at the center of Dewey’s philosophy, nature can exist only on the periphery. The human center is reflected in all of Dewey’s work. Returning to the examples of the parrot and the dog from *Experience and Nature*, Dewey’s classification stratifies types of knowledge. This is more than an epistemological comparison; it is also an evaluative position. He is limiting the abilities of the dog and the parrot. *Democracy and Education* makes similar evaluative statements about Indigenous peoples. The classification scheme compares human beings negatively to the savage but the savage positively to the animal. The social habits of savages limit their intellect because of the habits they engage in (Dewey 1958; Fallace 2010). In this leap from epistemology to ethics, Dewey recommits to colonization’s habit of undermining the value of Indigenous culture in two ways: first, because the latter does not have a social system that promotes learning, and second, because Indigenous cosmology and thus its ethics are not centered on humanity. This is in definitive contrast to Dewey, who judges harshly.

Dewey’s environmental philosophy inculcates the idea that nature is there for humanity to use because it is we who are engaged in the ultimate ethical pursuit. Although he may have disavowed religion, the lineage of categorization that began with Aristotle played out through Christian Europe until it arrived at American shores (Tulloch 2015; Zhang 2006). The disparity between humanity and nature predicates Dewey’s argument in *Freedom*. “Nature in Western knowledge became a resource, a commodity to be developed solely for the benefit of humans” (Hubbard, 2003, p. 52). This unintentionally summarizes much of what Dewey did. He recognized that knowledge derived from specific usages of nature, which very much intended to be used. The ethical argument presented in *Freedom* (1987b) emerges from this commodification.

The philosophies that have undergirded development thus far are also those that caused the environmental and political conditions that permitted the pandemic (Pratt 2020), and Dewey’s call to use nature to preserve democratic institutions is just as colonial as American democracy. The reapplication of scientific tools that bend nature to human will recreate these conditions over and over again. The commodification of the last natural places for the sake of progress, as Shaikh (2020) argues, facilitates zoonotic pandemics. This intersection between Dewey’s ecological philosophy and the colonizing mechanism is an entry point into decolonizing how American-styled education teaches about the environment. Dewey maintained that policy and science should be used to preserve democratic institutions.

Here it is argued that instead of trying to use the language and pedagogy that arise out of coloniality, we should take a different stance. Thus, while a paradox may exist in the pragmatic attempt at decolonial thinking, it does not reduce the urgent need for decolonization. Re-centering ecology instead of students might be one method for decolonizing the environment in the classroom. The risk of cultural appropriation is quite real, and the paradox of regression for the sake of progress is a problem from the pragmatic standpoint. Nonetheless, through some commonalities and the intrinsic value of Indigenous thinking, it is possible to draw out ways to decolonize some of what Dewey outlined as democratic education.

Notes from the classroom: Thoughts on decolonizing nature

While in a fourth-grade classroom, I taught a thematic unit titled “Designing for Disaster”. The unit was aligned to the Fourth Grade Next Generation Science Standards (NGSS) and motivated by our school’s transition to the International Baccalaureate (IB) Primary Years Programme (PYP). The summative assessment for the unit had students build disaster-proof houses. We aligned this to the NGSS by having students make multiple models and test their designs. The fourth grade NGSS also focuses on geological process, such as plate tectonics and volcanoes. Through reading, writing, play, inquiry, and direct instruction, we frontloaded scientific facts from morning meeting until the end of the day, leaving the math and art/music periods independent. Later, students were released to investigate the topics more thoroughly via curated internet resources and nonfiction texts. The school offers a robust language-immersion program, and instruction occurred in Spanish, French, and English. A majority of the students are Black and Latinx and receive free or reduced-cost lunch (a proxy for low socio-economic status in the US). In reflecting on this unit, I wonder how it would be possible to make “a paradigm shift away from science” (Kulnieks et al. 2013, p. 21) and away from the anthropocentric. Some areas of synergy with Dewey were elucidated above, as were some areas of direct contrast. Educators might address those same ideas—dualism, categorization, and decentering humanity—in the classroom.

Our classroom reinforced the ongoing dissociation between humanity and nature. Almost the entirety of our instruction occurred in a classroom in a major US city. Our aim was to impress students with the magnitude of distant disasters by guiding their minds out of the classroom and into the othered places where natural phenomena occur. We intentionally made them study things foreign to their experience to guide them toward a prescribed body of knowledge. In this way, we used content to sever the connection our students might have developed with the land they actually live on. Unlike the Indigenous method Aikenhead (2006) elaborated, where experiential learning was based in traditions and customs that are a part of identity, we did the opposite. We encouraged novelty and exploration of other ideas and places. The content we delivered was not rooted in the land of our experience. We understood ourselves to be a class, a political unit within our school. These human places that constituted my students’ culture are not the same as the intellectual concept of nature they studied (Walsh and Mingolo 2018). The idea of oneness is not attainable when land, school, knowledge, and home are isolated from another. We reconstructed this divide despite opportunities for interaction with nature. This unit could have used a patch of trees near the campus as a place for inquiry, where students could have reimagined what all the land was like before it was developed. We opted instead to hide from the elements, fearing the rain.

Categorical knowledge took the place of our students' experiences. The NGSS calls for students to understand the different kinds of plate tectonics, among other seismic terms. Our mid-unit assessment demanded that students diagram different tectonic plates and label various kinds of earthquakes and volcanoes. Our summative assessment judged the quality of their inventions based on how they responded to a particular disaster. Nonfiction texts and documentaries immersed them in the standards on which they were assessed. Peter Cole (2012) questions the value of abstractly quantifying natural phenomena. Through the voices of Indigenous motifs, Cole demonstrates how language positions Western thought to categorize objects into abstractions. "The referentiality sunders breaks away becomes unmoored adrift [sic]" (Cole 2012, p. 21). The subject is forcibly separated from the object by the use of language. This matches the pattern of thought Dewey outlined when he critiqued the savage and defined the knowledge of animals as different from that of human beings. In our unit, we excluded other kinds of knowledge using the determination of worth outlined by the standards. We ignored fiction, oral history, and local knowledge. In following the standard guidance, we committed the same axiological determination as Dewey. We had the opportunity to look toward other ways of knowing but decided not to. Dewey did not advocate for standards based in a concept of truth, but he did argue that intellect was honed through the addition of knowledge using trial and error. The technical knowledge that our students studied was rooted in this same belief in science. The application of standards devalues the idea that there are other worthwhile types of knowing.

The Western kind of knowledge that was presented in our unit was defined as immutable because it exists as the standard form of knowledge. We used this knowledge to pursue Dewey's ultimate ethical goal of advancing humanity over nature. Outside of the humanist ethic, however, education can be used as a "strategy to protect Mother Earth" (Cortina et al. 2019, p. 496). This is one of the movements away from the human center. At one point in the unit, we celebrated the story of a young William Kamwabama, a Malawian who provided electricity and jobs to his community by building wind turbines from scrap metal. Today, there is Netflix documentary about him. His example of using scientific knowledge to overcome the limitations of nature joins the idea of human development to international development. My students were exposed to how Kamwabama solved his villages problems through inventions like their own. The value of this was the access it gave them to new intellectual data. And to The story of how Kamwabama was able to modernize and thus improve living conditions, as humanity does, was meant to inspire them to do the same. Just as Dewey promoted a pedagogy that turned into a development scheme; I was using development as a pedagogy without seeing the consequential ramifications that all kinds of scientific development have (Lupinacci 2013). This critique is not to slight Kamwabama; rather, the intention here is to align our work with the idea of protecting the land we are all a part of. Kamwabama built his wind turbines because of a drought. Teaching students the causes of the drought is one way to understand the problem Kamwabama was trying to solve. Identifying the causes as human habit that needs to be mitigated decenters human development out of respect for the natural world. My classroom was bent on teaching students to build to overcome nature, where a drought caused by climate change may be an example of how we need to deconstruct what we have built in order to protect the natural world we are dependent on. Instead of centering Kamwabama's victory over nature, the center could be the loss nature faces because of humanity.

Conclusions

Coloniality both constructs the world and destroys it. That coloniality and imperialism can cause and worsen pandemics is another violent consequence of a tendency for global domination. What has been written here is part of the discussion on how colonial violence changes over time, how ecocide is essential to linear progress. While Dewey argued for the preservation of the environment, he did so at the expense of the natural world for the sake of human progress. He stigmatized societies that did not live according to his vision of progress. In this, he was emblematic of his era, of an industrial cause that was bent on humanity transcending anew. The Philosopher did position the humanist cause as requiring a more compassionate school, but it was still a school that taught children to use their powers for the betterment of humanity. To master nature, to progress.

This dichotomous thinking that distinguishes human beings as man or savages and separates the world into humanity and nature has caused the rampant harm we see today. In trying to master nature, we have brought the world to the brink of ecological destruction. Covid-19 is a consequence of our attempts at mastering the natural world. The movement of the elite classes that colonial privilege created facilitated the growth of the pandemic. To prevent this from happening again, our thinking must necessarily change. The pragmatist method itself calls for reforming our thinking when it does not suit our needs. While this call to action may reignite the same problems that have led us to where we are presently, we may also use it as an opportunity to remedy the problems that we have caused. To find something new, we may want to look to something older. The most progressive course of action may indeed be a regressive one. We may need to look at how humanity interacted with the world before the emergence of the human/nature dichotomy. So far, our cause has been furthered by the same scientific progressivism that has created and bound us within the colonial matrix of power. We need to look past this, to how we teach our young about our collective place on the planet and what role we are to play in the biosphere itself; about how to tie ourselves to the land instead of pulling resources from it; to imagine what it means to have a spirit grounded in the Earth, not removed from it, even when we live in skyscrapers high above concrete streets. We must consider how to give dominion of the land back to the stewards who kept it so well before colonization. If not, we risk repeating the same unlearned lessons.

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William J. Foley Jr. is an elementary school learning specialist in a Title I Public Charter School in Washington, DC, who is also pursuing graduate work at Teachers College, Columbia University. Their interests are in how embedded ideological systems guide schools, teachers, and students into identity.