

# Climate & Language: An Entangled Crisis

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*Rising ocean levels threaten entire communities with relocation. The continued erosion of Arctic coastlines due to melting ice sheets and thawing permafrost has forced Inuit communities to move to more secure locations. Each move dislodges Indigenous peoples and their languages from ancestral landscapes and ways of knowing, obligating communities to adopt colonial or majority languages. Scholars and activists have documented the intersections of climate change and language endangerment, with special focus paid to their compounding consequences. We consider the relationship between language and environmental ideologies, synthesizing previous research on how metaphors and communicative norms in Indigenous and colonial languages and cultures influence environmental beliefs and actions. We note that these academic discourses – as well as similar discourses in nonprofit and policy-making spheres – rightly acknowledge the importance of Indigenous thought to environmental and climate action. Sadly, they often fall short of acknowledging both the colonial drivers of Indigenous language “loss” and Indigenous ownership of Indigenous language and environmental knowledge. We propose alternative framings that emphasize colonial responsibility and Indigenous sovereignty. Finally, we reflect on emergent vitalities and radical hope in Indigenous language movements and climate justice movements.*

Peoples and entire communities are experiencing anguish and displacement due to climate-related disasters. The proliferation of media images makes palpable a growing crisis that may engulf all of us. The shock on people’s faces expresses the paralysis of trauma and the disbelief that “it could happen to them.” Even in communities where there is no risk of “language endangerment” – a problematic term, as Wesley Y. Leonard notes in his essay in this volume – there is still a loss for words to describe the horror of displacement and uncertainty.<sup>1</sup> The entanglement between “climate” and “language” creates a difficult challenge to tease apart as ideologies of language, climate change, and social justice are intertwined in unequal and unforgiving knots. One critical knot to disentangle is the difference between our expectations of climate and our expe-

riences of weather. Another is between our expectations of a just society and our uneven experiences as citizens in a global system that favors some over others (as recently laid bare by the COVID-19 pandemic). The concurrent global crises of the late twentieth century – global language endangerment and global warming – did sound the alarm for many researchers and activists. These crises are intertwined, with climate change driving language endangerment.<sup>2</sup> However, well into the third decade of the twenty-first century, we find little comfort in “awareness” of these crises and greater discomfort in the slow violence of colonialism and the endangerment of Indigenous languages, landscapes, cultures, and peoples.<sup>3</sup> This “imperial discomfort” is the disquieting perception that past injustice is buried under current threats to social, political, and economic privilege and security.<sup>4</sup> Therefore, we contend that the knot that most needs to be disentangled is the centuries of the slow violence of colonial systems that created the climate in which we must bear the convulsions of everyday violence and upheaval, which continue unabated. The harm that capitalists and colonists have wrought upon Indigenous communities, along with their languages, cultures, and ways of knowing, is now breaking colonial containment and starting to imperil all.

This essay identifies language, not as an artifact of human communication, but as a source of social action against this slow violence. We assert a positionality that recognizes the inequities of the past as the fulcrum for actions in the present such that the entanglements of language and climate will weave a framework for imagining possible futures. This framework will lay the foundation for social justice as a process of transformation to remediate the systemic violence of the world system.

Linguists and historians have noted that an early stage of imperialism often creates an imagined new land as empty, or *terra nullius* (“virgin land”). Once “discovered” lands are given colonial names, this further creates an imagined geography.<sup>5</sup> Historian Tina Loo has noted several examples of this phenomenon in the Canadian context, where colonial names like the Strait of Georgia, Victoria, New Westminster, and Halifax recreated local places in the image of the colonial homeland and connected them to an imperial whole.<sup>6</sup>

Place names are just one instance of this process of colonial displacement and reimagining, which permeates every aspect of language use. For instance, in English, we refer to living organisms such as trees through the pronoun “it.” In Potawatomi, as author and botanist Robin Kimmerer explains, members of the living world are categorized as animate, a similar effect to speaking about trees, bays, and fruit as “he” or “she” in English, instead of “it.”<sup>7</sup> Across languages, animacy can be understood as a scale between humans at one end and inanimate objects or abstract ideas at the other.<sup>8</sup> The English categorization of many living things as inanimate alienates them from humans, while the Potawatomi categorization places them closer to us. In addition to this difference in animacy, English

uses more grammatically agentive forms for humans – portraying them as actors rather than experiencers – and in so doing, represents them as primary.<sup>9</sup>

Metaphor reveals similar differences across Indigenous and colonial languages. Scholars Matthew Rout and John Reid, for instance, contrast two main metaphors for the more-than-human world: natural systems as “machines,” and more animistic ways of understanding these systems, often used in Māori discourse.<sup>10</sup> They, among others, argue that the metaphor of nature as a “machine” is deeply embedded in English and European philosophy. Philosophers Silvi Funtowicz and Ângela Guimarães Pereira, for instance, present an interpretation of Descartes’s *Discourse on the Method of Rightly Conducting One’s Reason and of Seeking Truth in the Sciences* as holding that a complete understanding of the “machinery” of the biological world would allow humanity to become “the masters and possessors of nature.”<sup>11</sup>

Additionally, scholars have pointed out that metaphors can often mediate scientific concepts in a way that makes them more understandable to nonexpert audiences, while also affecting how those concepts are perceived.<sup>12</sup> Ecolinguistics scholar Arran Stibbe, for instance, has critiqued the metaphor of biodiversity as a “library.”<sup>13</sup> Apart from similar reasons to the ones critiqued below (that is, that such biodiversity exists for the benefit and extraction of humans), such metaphors also imply that a few members of each species would be enough to achieve the purpose of the species. Furthermore, in addition to the use of maladaptive metaphors to describe the environment, metaphors of the environment have been harmfully applied to Indigenous languages. Leonard notes that the metaphor of biological extinction can result in a macabre self-fulfilling prophecy of language “death.”<sup>14</sup> Relatedly, Bernard C. Perley observes that this same biological metaphor of “saving” endangered languages ascribes life to lifeless tape-recorded reproductions of Indigenous language users’ voices, leading to a disjointed “zombie linguistics.”<sup>15</sup>

How we count things also plays a role in shaping environmental ideologies. Linguist Michael Halliday points to potentially contributing grammatical features like the use of mass nouns for finite resources, arguing that terms such as “soil” and “water,” which are grammatically unbounded – unlike count nouns such as “horse(s)” – convey an air of limitlessness that is counter to reality.<sup>16</sup> Linguist Saroj Chalwa goes even further, arguing that the linguistic fragmentation of the mass, the quantification of intangibles, and the splitting of the perception of time into past, present, and future all impact humans’ ability to perceive the natural environment as holistic and interconnected.<sup>17</sup>

In addition to these subtleties of meaning, the overall form and context of language use influences our environmental perceptions and actions. Some scholars propose that the removal of a language from its environmental context can result in more harmful environmental practices by divorcing it from the ecological knowledge in which it arose.<sup>18</sup> Similarly, in an extension of that argument not accepted by all linguists, David Abram maintains that the development of writing,

which allowed the decontextualization of language, also led to harmful environmental practices.<sup>19</sup> Other scholars have observed that modern scientific writing, in particular, uses forms that obscure agentive and affected participants; this feature makes this style of scientific writing ill-suited to recognizing the agents and sufferers of environmental and climate injustice.<sup>20</sup>

The pitfalls of colonial language are evident, not only in how we conceptualize the environment in general, but also in how we talk about climate change. For instance, mass media portrays climate change as uncertain through epistemic markers even as the effects of the climate crisis become more and more apparent; this hedging undermines the clarity of the scientific consensus around the climate crisis.<sup>21</sup> “Global warming” is inadequate to describe the complex repercussions of climate change, while “climate change” evokes no specific consequences whatsoever, and can even suggest that the climate is changing of its own accord.<sup>22</sup> Terms like “climate crisis” and “climate emergency” yield a greater sense of immediacy and alarm, yet these terms, precisely because of their sense of immediacy, risk erasing the connections between the climate crisis and the crisis of colonial violence that Indigenous communities have endured for centuries.<sup>23</sup> Humanist April Anson analyzes these framings as “settler apocalypticism.”<sup>24</sup> And the infamous metaphor of the “carbon footprint” – the product of a marketing campaign by British Petroleum (BP) – sets up a neoliberal framing of the climate crisis as a failure of individuals to be more environmentally conscious, thus distracting from the evildoings of corporations like BP itself.<sup>25</sup>

In light of these and similar findings, linguist Peter Mühlhäusler and anthropologist Adrian Peace argue that the “lexicon and grammar of individual languages are the root causes of our environmental crisis.”<sup>26</sup> Halliday calls on linguists to “draw attention to it; to show how the grammar promotes the ideology of growth, or ‘growthism.’”<sup>27</sup> Of course, language does not completely determine thought: climate movements have found ways to articulate their visions even through the unwieldy medium of colonial language. This suggests the possibility and necessity of changing, as well as critically examining, our conceptualizations of climate and the environment in colonial languages. We further suggest that, as part of this overarching strategy of regenerative language use, settler scholars and activists lend support to Indigenous communities who are reclaiming their languages – without viewing those communities and languages through the same extractive lens that got us into this mess in the first place.

**R**ecognizing the merits of Indigenous environmental ideologies (as encoded in language) and the flaws of colonial ones, settler climate advocates often propose to adopt Indigenous environmental knowledge and values into predominantly settler-led climate movements. For instance, many prominent mainstream environmental nonprofits, colloquially known as “big greens,” such

as Greenpeace, the World Wildlife Foundation, and the Nature Conservancy, espouse the value of Indigenous knowledge for ecosystem conservation and climate action, and the White House Council on Environmental Quality issued a memorandum detailing the importance of Indigenous knowledge to policy-making.<sup>28</sup> However, settlers' acknowledgment of the usefulness of Indigenous climate knowledge, while potentially decolonial, is not automatically so. Settlers who take up the themes of Indigenous language, environmental knowledge, and climate action often do so in ways that 1) overlook the root causes of climate change and Indigenous language loss (such as colonialism and extractive capitalism) and 2) treat Indigenous languages and knowledges as universally owned property. When we (settlers) speak only of Indigenous language "loss," we erase the history of calculated colonial violence and ignore its clear relationship with both Indigenous language endangerment and the climate crisis. When we classify Indigenous environmental knowledge as universal human heritage to be used against the climate crisis, we frame this knowledge as a climate change lifeline to which we, as settlers, are entitled to cling. As with *terra nullius* discourses, we render Indigenous people invisible and inaudible in order to misappropriate their ideas, as well as their lands.

These convenient erasures of colonial and Indigenous agency recall anthropologist Jane H. Hill's seminal work on "expert rhetorics" in endangered language advocacy.<sup>29</sup> Hill observes similar trends in how settler linguists and linguistic anthropologists communicate about Indigenous language endangerment, naming the strategies of *universal ownership*, or "the assertion that endangered languages in some sense 'belong' to everyone in the world," and *hyperbolic valorization*, such as the comparison of Indigenous languages to "priceless treasures." Building on Hill's critique, linguist Jenny L. Davis examines the strategies of *linguistic extraction*, through which Indigenous languages and language movements are detached from Indigenous people's lives and experiences, and *erasure of colonial agency*, through which the historical and present causes of Indigenous language shift are minimized.<sup>30</sup> Such strategies abound in endangered language advocacy; for instance, in a 2009 National Geographic video entitled *Dying Languages*, photographer and filmmaker Chris Rainier comments, "Every two weeks, around the planet, a language disappears. Completely disappears, forever and ever."<sup>31</sup>

Metaphors of "disappearance" and "loss" obscure settler-colonizers' deliberate destruction of Indigenous languages, lands, and livelihoods. For instance, NDN Collective program officer PennElys Droz details George Washington's burning of Haudenosaunee seed houses, the United States' slaughter of the buffalo on which the Plains Nations relied for subsistence, and California settlers' destruction of oak trees, noting that each of these examples constitutes "a cunning way to suppress and control [Indigenous peoples]."<sup>32</sup> Many scholars have documented how settler-colonizers analogously disrupted Indigenous languages, cultures, and families by sending Indigenous children to abusive boarding schools

in the United States and Canada.<sup>33</sup> Often, colonial disruptions of Indigenous language and land work in concert. For instance, forced migration displaces Indigenous people from their lands, interrupts environmental stewardship, and often leads to language shift.<sup>34</sup> Moreover, climate change itself can be understood as both a result and accelerant of Indigenous environmental and linguistic dispossession: as colonizers have seized Indigenous land, they have displaced people with long-standing knowledge of how to live sustainably on that land, bringing with them a host of worldviews – the division of humans from nature, the myth of consequence-less eternal growth, the totalizing view of lands and peoples as resources to be extracted – that have driven the climate crisis.

The strategies of erasure of colonial agency and universal ownership are evident, not only in academic discourses of Indigenous environmental knowledge and climate change, but also in the rhetoric of nonprofit organizing and policy-making. The 1987 United Nations report on sustainable development (*Our Common Future*), for instance, employs both strategies in its discussion of the role of Indigenous knowledge in the management of ecological systems.<sup>35</sup>

Tribal and indigenous peoples will need special attention as the forces of economic development disrupt their traditional life-styles – life-styles that can offer modern societies many lessons in the management of resources in complex forest, mountain, and dryland ecosystems.<sup>36</sup>

These communities are the *repositories* of vast accumulations of traditional knowledge and experience that links *humanity* with its ancient origins. Their *disappearance* is a loss for the larger society, which could learn a great deal from their traditional skills in sustainably managing very complex ecological systems.<sup>37</sup>

By referring to Indigenous communities as “repositories” of knowledge that can “offer” modern societies (that is, in the committee’s view, non-Indigenous societies) lessons in resource management, and from which the larger society “could learn” a great deal, the committee paints Indigenous communities in a passive light. This framing sidesteps conversations about Indigenous ownership of knowledge, such as that developed in the Indigenous Data Sovereignty Movement.<sup>38</sup> The term “humanity” further suggests that Indigenous knowledge belongs to everyone. Additionally, the phrases “disappearance” and “loss” erase colonial agency for the disruption of traditional Indigenous knowledge transmission. These insinuations of universal ownership and natural obsolescence mirror the myth that Indigenous people did not own land before colonization – a falsehood that many settlers were taught in school.<sup>39</sup>

Discourses of universal ownership and erasure of colonial agency are also present in more recent discussions of Indigenous knowledge in relation to climate change. For instance, UNESCO’s statement on Indigenous knowledge and

climate change states that “Indigenous knowledge thus *makes an important contribution* to climate change policy.”<sup>40</sup> Similarly, a policy brief from the Water Governance Facility states that Indigenous knowledge “should be *integrated* in dominant climate policies” and “*offer* solutions to both mitigation of and adaptation to climate change.”<sup>41</sup> The relationship between Indigenous knowledge and dominant science and policy is the subject of much dispute, and not all Indigenous people feel that their knowledge should be “integrated” into the dominant paradigms. For example, Eriel Tchekwie Deranger of Indigenous Climate Action has written instead of “a world where Indigenous-led climate solutions are the standard and where colonial structures are doing the work to figure out where their resources and knowledge can offer support to existing Indigenous systems, not the other way around.”<sup>42</sup> Environmental justice scholar Kyle Whyte warns that, given the breakdown of relationships between Indigenous and non-Indigenous societies and governments, it may be too late to achieve Indigenous climate justice through coordination with settler-led initiatives.<sup>43</sup>

In her discussion of the rhetoric of endangered language advocacy, Hill frames her critique not as an attack on the character or motives of those engaged in said advocacy, but as a self-critical suggestion intended to hone existing rhetorical strategies and not undermine their advocacy goals.<sup>44</sup>

Likewise, we do not argue that the texts cited above – particularly the more recent ones – are intentionally bolstering colonial worldviews in their discussions of Indigenous knowledge and climate change, in which they make many compelling points about the impacts of climate change on Indigenous people and the specificity and rigor of Indigenous environmental knowledge. This is an unintended consequence of the rhetoric that has become commonplace for describing the relationship between climate and Indigenous language. Avoiding the language of universal ownership and passive “loss” of Indigenous knowledge can strengthen appeals for the consideration of Indigenous environmental knowledge in climate change policy. More agentive terms, such as *ecocide*, *epistemicide*, and *linguicide*, may be helpful in acknowledging the intentionality and violence of colonial incursions into Indigenous land and knowledge, though we note that some Indigenous linguists see such death-laden metaphors as ways of precluding Indigenous linguistic and cultural survivance, preferring metaphors of language dormancy.<sup>45</sup> The variety of perspectives on how to discuss Indigenous language vitality highlights the need to understand the preferences of individual Indigenous communities and community members.

**L**et us return to the heart-wrenching images of people displaced from their homes by severe flooding, extreme wildfires, and unprecedented winter storms. These images document the worsening environmental and climate crises. The despair etched onto anguished faces in the moment of catastrophe is

often followed in the media by graphic images and videos of victims as they survey the ruins of devastated landscapes and the debris that were once homes. These tragic upheavals have become part of our everyday experience and have amplified anxieties about our collective future. The immediacy of climate crises circulating in the media calls attention to the severity of the events and provokes consideration of causes and mitigation strategies for future events. Lost in the public display of devastation is the slow violence against Indigenous and at-risk populations over decades and centuries. The impulse to find some relief for recent victims of climate-related extreme weather events is laudable, but the inattention to antecedent and ongoing threats to Indigenous and at-risk communities is unconscionable. Equally unconscionable is the failure to recognize the collateral injustice of language loss in the face of these climate disasters for Indigenous communities that have been grappling with these entangled catastrophes for centuries.

Mary Robinson, former president of Ireland and UN special envoy on climate change, writes: “But with the advance of climate change, common Yupik words such as *tagneghneq* – used to describe dark, dense ice – are becoming obsolete as Alaska’s melting permafrost turns the once solid landscape into a mushy, sodden waste.”<sup>46</sup> Robinson cautions, “Some experts warn that many coastal Alaskan villages will be completely uninhabitable by 2050, the year my eldest grandson, Rory, and his burdened generation may be forced to reckon with the challenge of housing tens of millions of climate refugees.”<sup>47</sup> The looming humanitarian crisis Robinson outlines is a projection of costs associated with anticipated outcomes of upheaval resulting from climate change. Though Robinson uses Yupik as an example of collateral loss due to climate change, she does not link language vitality as a social and climate justice focus.<sup>48</sup> Instead, she anticipates that Rory and his generation will be “burdened” with challenges in the form of climate refugees. She does, however, offer a personal reflection that may seem like hope: survival through resilience.

Robinson ends her account of the long-term global warming disaster in the Arctic with a note of optimism by quoting her interlocutor, Patricia: “We have always been resilient, adaptive, creative, amazing people – which has helped see us through the darkest times in the past. That resilience, that spirit, will help us in the times yet to come.”<sup>49</sup> Is this an evocation of hope? Patricia expresses an embodied experience of resilience, and Robinson suggests her grandson’s generation may take solace in finding hope against the threat of ontological vulnerability. Philosopher Jonathan Lear’s argument for *radical hope* is that “it is directed toward a future goodness that transcends the current ability to understand what it is. Radical hope anticipates a good for which those who have the hope as yet lack the appropriate concepts with which to understand it.”<sup>50</sup> Perhaps Robinson quotes Patricia to suggest that we must be “resilient, adaptive, creative, amazing people” if we are to imagine surviving the existential crises that climate



change can initiate. Absent from current media coverage of upheaval is the slow violence of colonial processes that continue to undermine Indigenous worlds. If there is a lesson from Indigenous pasts, it is that resilience and radical hope are stances that take time to adapt to ontological vulnerability. Many at-risk communities grapple with displacement and erasure of intimate knowledge of their heritage landscapes.<sup>51</sup> The slow violence of colonialism has disrupted the continuity of cultural knowledge, linguistic heritage, and social relations; the growing silence is a reminder of the social injustice community members continue to endure while trying to maintain community cohesion.<sup>52</sup> The disintegration of languages from the richness of social interconnectedness (such as religion, ecological knowledge, oral histories, and ceremonies) is paralleled by the disintegration of interconnected forms of justice. Social justice must consider linguistic justice as well as climate justice. These are not separate domains.

Climate disasters today share media space with the COVID-19 pandemic. The term “doom scrolling” reflects the preoccupation many experience in regard to our collective ontological vulnerability. Social justice movements also compete for our attention; the images and videos of protests, demonstrations, and police violence outrage many citizens. Social justice has become the overarching call to action, alongside calls to mitigate the devastation related to climate change. Resilience may be our only option. Creative thinking offers some hope, but hope is aspirational and implies delayed results. The vitality of many languages continues to be undermined by processes that have contributed to the state of our collective world. Returning to a “normal” that we imagine was in place in pre-pandemic times will be a return to the same system failures we have observed following the pandemic. We need to conceptualize the present as the catalyst for possible futures. In contrast to “doom scrolling,” we must actuate “emergent vitalities.” Such a stance allows us to “promote vitalities in the present as they unfold in the intersubjective unfolding of being in the world.”<sup>53</sup> Not only does this stance promote language vitality, it also applies to imagining forms of climate justice as a transformative process that emphasizes equity over equality as a system of fairness.

Wave after wave of pathogens (smallpox) spread along the Massachusetts coast between 1617 and 1619 and killed nine-tenths of the Indigenous populations.<sup>54</sup> Those losses of human life also contributed to the silencing of the Massachusetts language and undermining of many others. Today, wave after wave of COVID-19 has contributed to the entangled loss of Native American lives and associated heritage languages. Some commentators characterize this moment as the “new normal,” but for Indigenous peoples, this moment is the structural continuation of “the colonial normal.” The uneven costs of the pandemic are reflected in the statistics suggesting that Native Americans between the ages of 40 and 64 suf-

ferred a mortality rate of 1 in 240, whereas the mortality rate for Hispanic people is 1 in 390, 1 in 480 for Black people, and 1 in 1,300 for white people and for Asian people. COVID has threatened not only Native American lives, but Native American languages as well.<sup>55</sup> These losses are threaded into the weave of climate change and the injustice of inaction by neoliberal regimes of extraction and exploitation.

A recent report by the Intergovernmental Panel on Climate Change states that the uneven consequences of climate change expose the criminal injustice of failed leadership.<sup>56</sup> Writing about the report for *The Washington Post*, Sarah Kaplan and Brady Dennis state, “The report makes clear, however, that averting the worst-case scenarios will require nothing less than transformational change on a global scale.”<sup>57</sup> The prospect of transformational change must be entangled with transformational justice. Language and climate justice is not an endpoint proposition. Rather, it is a necessary realignment of discourses, commitments, and social movements. Promising in-progress climate and social justice actions include the LandBack movement, the Red Deal, and the Red Black and Green New Deal.<sup>58</sup> Are these actions enough? Do they represent transformative justice or are they isolated convulsions of conscience-cleansing before “returning to normal”? We offer this provocation: Returning to normal is a dead end for all of us. Perhaps it is time to think about climate and justice in Indigenous terms. Philosopher and environmental law scholar Laura Westra writes, “It is obvious, and largely undisputed in international and domestic law, that justice for aboriginal communities *starts* with environmental justice: not only their right to the historical territories and lands they have occupied, but, equally, if not more important, with the ecological health of those lands.”<sup>59</sup> Now is not the time to return to normal. Now is the time to evoke the common Yupik words such as *tagneghneq*, not as a lamentation of lost words and environments, but as a reminder it will take our collective wisdom to imagine justice that transforms our world as entangled modes of being.

Instead of concluding this essay with a full stop, we propose that settler climate advocates do not shy away from calling for more recognition of Indigenous climate wisdom, and keep the following principles in mind as they do so:

1. Name colonialism, and the historic and present actors thereof, as a driver of both the climate crisis and Indigenous language shift;
2. Support Indigenous-led climate actions and policies, not just ones that draw on Indigenous knowledge;
3. Acknowledge Indigenous sovereignty over Indigenous language and environmental knowledge; and
4. Cite Indigenous thinkers’ perspectives on Indigenous language, environmental knowledge, and the climate crisis in general.

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#### ENDNOTES

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- <sup>2</sup> Christopher P. Dunn, "Climate Change and Its Consequences for Cultural and Language Endangerment," in *The Oxford Handbook of Endangered Languages*, ed. Kenneth L. Rehg and Lyle Campbell (Oxford: Oxford University Press, 2017); and Anastasia Riehl, "The Impact of Climate Change on Language Loss," *The Conversation*, November 26, 2018, <https://theconversation.com/the-impact-of-climate-change-on-language-loss-105475>.
- <sup>3</sup> Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, Mass.: Harvard University Press, 2011).
- <sup>4</sup> Bernard C. Perley, "Gaming the System: Imperial Discomfort and the Rise of Coyote Capital," in *After Capital: Horizons of Finance, Culture, and Citizenship*, ed. Kennan Ferguson and Patrice Petro (New Brunswick, N.J.: Rutgers University Press, 2016).
- <sup>5</sup> Edward W. Saïd, *Orientalism* (New York: Vintage Books, 1979); and Mary E. Stuckey and John M. Murphy, "By Any Other Name: Rhetorical Colonialism in North America," *American Indian Culture and Research Journal* 25 (4) (2001): 73–98, <https://doi.org/10.17953/aicr.25.4.m66w143xm1623704>.
- <sup>6</sup> Tina Loo, "Making a Modern Wilderness: Conserving Wildlife in Twentieth-Century Canada," *Canadian Historical Review* 82 (1) (2001): 91–121, <https://doi.org/10.3138CHR.82.1.91>.
- <sup>7</sup> Robin Wall Kimmerer, "Learning the Grammar of Animacy," *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (Minneapolis: Milkweed Editions, 2013), 66–80. Third-person personal pronouns in English use both gender and

- animacy categories, but in this case the animacy category is not purely defined as endowed with life, but rather focuses on a more specific “human” category further up the animacy hierarchy. Humans are referred to as “he” or “she” when the gender is known, and “they” when it is unknown. Most nonhuman entities are referred to by “it” regardless of sex. Some nonhuman entities also have special animacy status, often animals most adjacent to humans such as pets or other domesticated animals, and some very specific inanimate objects. See Michael Silverstein, “Hierarchy of Features and Ergativity,” in *Grammatical Categories in Australian Languages*, ed. R. M. W. Dixon (Canberra: Australian Institute of Aboriginal Languages, 1976), 112–171.
- <sup>8</sup> Virve-Anneli Vihman and Dianne Nelson, “Effects of Animacy in Grammar and Cognition: Introduction to Special Issue,” *Open Linguistics* 5 (1) (2019): 260–267, <https://doi.org/10.1515/opli-2019-0015>.
- <sup>9</sup> Michael Halliday, “New Ways of Meaning: The Challenge to Applied Linguistics,” in *The Ecolinguistics Reader: Language, Ecology, and Environment*, ed. Alwin Fill and Peter Mühlhäusler (London: Continuum, 2001), 175–202.
- <sup>10</sup> Matthew Rout and John Reid, “Embracing Indigenous Metaphors: A New/Old Way of Thinking about Sustainability,” *Sustainability Science* 15 (3) (2020): 945–954, <https://doi.org/10.1007/s11625-020-00783-0>.
- <sup>11</sup> René Descartes, *Discourse on the Method of Rightly Conducting One’s Reason and of Seeking Truth in the Sciences* (1637), trans. Jonathan Bennett (2007), available at Early Modern Texts, <https://www.earlymoderntexts.com/assets/pdfs/descartes1637.pdf>; and Silvi Funtowicz and Ângela Guimarães Pereira, “Cartesian Dreams,” in *Science, Philosophy and Sustainability: The End of the Cartesian Dream*, ed. Silvio Funtowicz and Ângela Guimarães Pereira (London: Routledge, 2015), 1–9.
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- <sup>14</sup> Leonard, “Refusing ‘Endangered Languages’ Narratives,” 79.
- <sup>15</sup> Bernard C. Perley, “Zombie Linguistics: Experts, Endangered Languages and the Curse of Undead Voices,” *Anthropological Forum* 22 (2) (2012), <https://doi.org/10.1080/00664677.2012.694170>.
- <sup>16</sup> Halliday, “New Ways of Meaning.”
- <sup>17</sup> Saroj Chalwa, “Linguistic and Philosophical Roots of Our Environmental Crisis,” *Environmental Ethics* 13 (3) (1991): 253–262, <https://doi.org/10.5840/enviroethics199113312>.
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