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Cover Page Footnote

My sincerest thanks to the School of Transborder Studies, Program for Transborder Communities at Arizona State University for their support of this work. I am grateful to the small farmers across the Andes, and specifically communities of my family origin in Junín, Huancavelica, and Cusco. Isisi sulpay kayami to those who maintain our cultural practices and language wherever they are, to my brilliant Mamallay Hortensia D. Huaman Carhuamaca, the Huaman, Carhuamaca, Salazar, Yaurivilca, Tueros, Rodriguez, and Manhualaya families, to Liz Toribio Salazar for research assistance, and urpillay sonqollay to my Tia Ines Callalli Villafuerte for lovingly sharing her Quechua worldview knowledge with me.

Indigenous Rights Education (IRE): Indigenous Knowledge Systems and Transformative Human Rights in the Peruvian Andes

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Abstract

This article focuses on the relationship between Indigenous places, rights, and education. In the context of the Peruvian Andes, historical ideological impositions reveal the trajectory of environmental exploitation, which have contributed to major ecological threats that collectively contribute to the aggressive re-making of the Andean world as sacrificed lands. With a focus on Quechua peoples, the link between Indigenous knowledge systems and human rights education is explored. Drawing from discourses of Indigenous rights, place, rights, and transformative human rights education, Indigenous rights education (IRE) is proposed.

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Introduction: Environmental Shifts in the Andean World

“Esto es grave, sobre todo para los que vivimos solo de la agricultura. ¿Quién nos repone eso? Nadie.” [This is serious, above all for those of us who live only from the agriculture. Who will replace that for us? No one.] Antonio Lupa Mamani, Asilla union leader, 1 Feb 2016¹

In early 2016, Peruvian news media² reported widespread damage to agricultural crops across the Andean highlands caused by inclement weather, including drought, frost, and ice. Typically agriculturally rich and productive regions experienced devastating losses that led to local governmental declarations of states of emergency and national recognition of rural zones in crisis.³ Cited as one of the worst phases in the history of the El Niño weather system, known as a “Super El Niño,” upwards of 90% of corn, potato, and other crops perished. Economically speaking, crop death means impact on multiple levels: loss of local subsistence (food for families and livestock), lack of crops for local trade (access to non-Andean harvests) or sale (access to cash and commercial goods), and shortage of crop distribution to cities (interruption of national markets and reduction of foods to urban areas). Due to these economic considerations in recent years leading up to this loss, national and regional governments⁴ appeared to be bracing for the direct and indirect impacts of quickly changing weather patterns, which although unpredictable in terms of specific damage, are now part of a broader discussion on environmental issues and climate shifts in these areas and elsewhere. Indeed, for at least the past decade, the Peruvian Andes has been the subject of research by agencies interested in environmental transitions linked with economic and social impact, including subtropical glacier retreats due to global warming (Trigoso Rubio, 2007; World Bank, 2014). For Peru whose

¹ “Declaran en emergencia sector agrícola en Azángaro por fenómeno El Niño,” [Agricultural sector state of emergency declared in Azángaro due to El Niño], *La Republica*

² Sources: *RPP Noticias*, *La Republica-Sur*, *Diario El Comercio*, and <http://www.huancayoonline.com>

³ The crop damage caused by the Super El Niño has continued into 2017, impacting the new agricultural season in the Andes.

⁴ As an example, see the regional government of Junín: <http://www.agrojunin.gob.pe/?paged>

economy is heavily reliant upon agricultural production, there is no doubt that environmental issues present newly troubling situations. At the same time, for Indigenous farmers living with legacies of 16th century colonialism and whose material and cultural livelihoods are based on subsistence farming, loss of crops raises questions about how place-based peoples are impacted by environmental shifts.

In addition to irreplaceable food and monetary losses for Indigenous farming, environmental issues challenge the cultural balance between humans and their environment. It is important here to make the distinction between farmer resiliency to tough agricultural conditions and climatic uncertainty experienced over time and issues like chemical contamination, industrial pollution, and climate change that present widespread challenges for all life. Regions like the Andes are especially threatened because they hold great biocultural diversity, are ancestral territories to distinct peoples and natural resources experiencing ongoing exogenous development, and are sites of intense environmental damage. As such, environmental challenges are exacerbated with resounding implications beyond the local, including the growth of poverty linked with national insecurity (U.S. Department of Defense, 2015). Thus, questions posed by Andean farmers like Lupa Mamani are as much about Indigenous and human rights as they are about environmental protections and sustainability.

There are severe environmental problems in the Andes and across Indigenous communities worldwide. At the same time, there are strong cultural and spiritual ideas and practices embedded in people's senses of place. This article aims to transcend crisis narratives by proposing the critical work of expanding our thinking about Indigenous places as critical spaces of connectivity and intellectual, social, cultural, and educational innovation (Sumida Huaman, 2015)—more than just areas of preservation for Indigenous traditions or locations of environmental, economic, and sociopolitical crises. As Bebbington argued (2001), crisis narratives are dangerous if they only tell a story of inevitability: rural Andean regions bound for destruction under development, Andean ecosystems and cultures as fragile, and Andean peoples as the newest victims of globalization and capitalism rather than resisters, negotiators, and actors; rather, I am interested in “the conditions under

which people find new and multiple sites of resistance and response” (Bebbington, 2001, p. 431). With this in mind and based on long-term Indigenous educational and language⁵ research with Andean communities in the regions of Junín and Cusco, recent work on environmental issues and Indigenous education, and my own stance as a Wanka and Quechua educational researcher, this article examines the connections between Indigenous knowledge systems and human rights education. First, discussion of impositions in the Andes contextualizes the trajectory of environmental exploitation. I review ecological threats to Indigenous places and peoples today comprised of historical, environmental, economic, social, and political threads, which collectively contribute to the aggressive re-making of Indigenous lands as sacrificed lands. Next, with a focus on Andean Quechua peoples, discussion is provided on Indigenous community, including relationships within the human and natural world, and Indigenous knowledge systems and educational considerations. I ultimately provide a proposition for building *Indigenous rights education* (IRE) inextricable from Indigenous knowledge systems and including local priorities, discourses on place rights and human rights education (HRE) and more specifically, transformative HRE (THRED) practices that recognize and encourage the “productive plasticity” of HRE (Bajaj, 2014).

Prolonged Colonization in the Andes

By the authority of Almighty God conferred upon us...which we hold on earth, do by tenor of these presents, should any of said islands have been found by your envoys and captains, give, grant, and assign to you and your heirs and successors, kings of Castile and Leon, forever, together with all their dominions, cities, camps, places, and villages, and all rights, jurisdictions, and appurtenances, all islands and mainlands found and to be found, discovered and to be discovered. (from Inter Caetera, 1493)

⁵ This article uses the Quechua Wanka variety from the Mantaro Valley region of central Peru, Junín. Any errors in translation or spelling representation are my own.

Conquest of Indigenous places was an essential task towards establishment of enduring Spanish power over land as *boundable territory and personal possession* versus Quechua conceptualizations of land as a *gift in the creation of the world and that which gives to the people*. Stripping of land and forced labor of non-Catholics and Indigenous peoples can be traced back to the issuance of Papal Bulls (or edicts) starting in the 1400s, including Dum Diversas of 1455 and Inter Caetera of 1493, which validated the expansion of European empires through the authority of the Catholic church. These represent some of the earliest records of justification for land-grabbing, natural resource extraction, and slavery in the Americas.

Historical examination demonstrates deeply entrenched European ideals of imperial expansion through colonization and the religious, economic, and political justification for the violence that ensued. An ideological basis is shared among other long-standing justifications of conquest and extraction, including the Doctrine of Discovery still debated in international law. Miller (2011) argued that the ideological foundation for the Doctrine is rooted in European-Christian supremacy—beliefs of racial and religious superiority linked with direct action and policy. Most disturbing about these beliefs is that they were secured through resolute policies. Starting with the *encomienda* system (large swaths of land and Indigenous peoples given to Spanish elites), land grants created *haciendas*, where Quechua people worked to serve the *hacendado*, the Spanish landowner and master. This system of ownership continued into the 1960s until agrarian reform under the Velasco administration. While today, rigid ethnic and religious dichotomies are not always accurate, the implications of racial and class superiority are difficult to deny. Translated into current realities, conquest of place has transitioned into projects of development based on dominant notions of civilization, modernization, and Westernization and enacted through neoliberalism.

In Peru, the question of how the present and future are shaped by Quechua peoples in spite of the colonial project remains pressing. A first step is understanding that colonization was driven by European economic gain reliant upon the exploitation of Indigenous land and labor, and that these processes did not disappear during independence from Spain, estab-

lishment of a republic, or the drafting of a Constitution, nor have they disappeared due to international human rights or environmental pressures. A shift towards revisiting definitions and practices of place and nationhood is also crucial towards rethinking mutualistic interactions that simultaneously serve to protect vulnerable areas and people, rectify injustices, and imagine society for the betterment of the natural world.

Threats to Andean Lands

The history of life on earth has been a history of interaction between living things and their surrounding... Only within the moment of time represented by the present century has one species—man—acquired significant power to alter the nature of his world. (Carson, 1962, p. 5)

Peru's greatest environmental conundrums now are natural resource extraction and damage to land and natural resources and deterrence to agricultural/ecological sustainability caused by pollution, contamination, and climate change (Perez, 2010). Environmental events like crop losses and the rapid retreat of glaciers in Peru are not isolated incidents but rather part of a global and interconnected chain of shifts with direct and indirect impacts: Food shortages, local flooding and mudslides, loss of sustainable water sources for agriculture, rise in sea levels and global temperatures accompanied by severe weather phenomena are realities that will be felt well into the future. In the 1960s, Rachel Carson warned that DDT was destroying the environment and human life. Hers was among the first Western-based scientific research to popularly demonstrate the repercussions of industrial contamination. She remained skeptical of power harnessed by humans that she believed would continue to create dire circumstances from which we would not be able to recover. Indigenous peoples have also long contended that environmental life *is* human life, and that humans and nature have agency. Quechua ontology is based on recognition of an interdependent contract between human beings and environment where agency is exercised for holistic benefit.

Based on work with Quichua peoples in the Ecuadorian Andes, Bebbington challenged dominant narratives of development that limit explorations of human agency among Andean peoples who he believed could not be categorized into either neoliberal or poststructural paradigms (2000). Neoliberalism, he argued, focused solely on people's relationship to labor, product, and markets, while poststructuralism, though interested in meaning-making, tended to view development as homogenization and cultural destruction. Neither of these paradigms alone offers solutions to environmental conundrums and Indigenous participation. Furthermore, environmental conundrums are linked with the "discourse of viability"—the ability of people to labor and natural resources to yield economic benefits. Bebbington saw this discourse as inherently flawed in the sense that viability is understood only as economic competitiveness and where poverty is defined by income (2000, p. 499). I add that viability to Indigenous peoples also applies to local and regional, governmental national, and international ideas and proposals, particularly those that seek to address injustices that Indigenous peoples face.

In order for there to be investment, there needs to be secured property, but we have fallen into the trick of turning over small lots of land to poor families that do not have one cent to invest, and so apart from the land, they must ask the State for fertilizer, seeds, irrigation technology and furthermore, protected prices. This smallholder model and without technology is a vicious cycle of misery. (Alán García, former President of the Republic of Perú, *El Comercio*, October 28, 2007, author translation)

The effects of neoliberal practices of development and viability have been present in public discourse in Peru for generations, exemplified by former President Alán García whose views on Indigenous peoples remain controversial.⁶ García advocated for land and natural resource development under privatization and increased corporate benefits that he believed would

⁶ While there is a new administration under President Kuczynski, the stance and actions of the national government on Indigenous peoples and land and natural resource development agendas remains evolving.

serve all Peruvian citizens—in other words, the common good. Among other Indigenous constituents, he criticized the small farmer (primarily Indigenous) for what he viewed as their ignorance of broader markets, promoting cycles of consumerism often mistaken for productivity. Instrumental in his pronouncements were characterizations of Indigenous peoples as “irrational” and resistant towards growth, progress, and national development.

Negative characterizations and dismissiveness of Indigenous peoples in political discourse by those in power are replete throughout Peru’s history—from the Spanish colonial period in the 16th century through Independence in the 18th century and well into the 21st century era of globalization (Sumida Huaman & Valdiviezo, 2012). Aside from being racist and classist, these characterizations reveal differences in thinking, which inform policy and action, and an inability to agree that diverse beliefs about life that include more than just a focus on capital gain have any place in negotiations with Indigenous peoples. Some of the most salient tensions between Indigenous peoples and dominant society include distinct ways of thinking about land, poverty, and nationhood.

How we construct notions of land informs the way we treat land and natural resources. If land is seen as existing only for human gain, this is a parasitic relationship and not a reciprocal one. Researchers and practitioners who are Indigenous or work closely with Indigenous peoples, such as the founders of The Andean Project of Peasant Technologies (PRATEC), have argued that Quechua epistemologies of land and environment are culturally and scientifically significant—for example, Indigenous farming methods responsible for the immensely rich crop diversity in the Andes (Valladolid & Apfeel-Marglin, 2001). The small landholder whom García criticized is part of a larger system and cooperative of Indigenous farmers who network with each other and with natural resources across the vast Andean landscape. Furthermore, attention to small-scale, family-scale or community-scale farms, adherence to ancestral methods, or resiliency to environmental changes developed over generations does not mean that Andean farmers are isolated from the desire to advance, improve, or experiment techniques while also protecting biodiversity (Bebbington, 1990,

1999). Quechua conceptualizations of land in the Andes are broad enough to include conservation and protection of existing Indigenous knowledge and cultural practices; innovation and creativity through further knowledge and skills development; and promotion of Indigenous-directed growth in ways that are determined by Indigenous peoples and with their full knowledge and consent.

With regards to poverty, there has been debate on definitions and measures—especially since Escobar’s critique of the making of the Third World (1995) and Esteva’s (2000) calls for alternative constructions of development challenged development as a way out of poverty. Bebbington (1999) also called for more inclusive notions of capital: human capital (assets of body, knowledge, skills, and time); social capital (relationship assets that can lead to other resources); produced capital (physical and financial assets); natural capital (quality and quantity of natural resources); and cultural capital (resources and symbols based on one’s social structures). Thus poverty and its supposed cure of financial capital are not so simplistic. In addition, if Quechua peoples view poverty as lack of value for human and environmental life, then how might others measure up to a Quechua assessment of poverty?

Such questions stem from alternative imaginations (Chhetri and Chhetri, 2015) that inform the ways in which we see ourselves and others and challenge us to explore how members of society contribute to nation and (re)define nationhood through those contributions. If we assume that Indigenous peoples are tethered to land in unproductive ways that maintain them in García’s “cycle of misery,” then the assumption might also be that Indigenous contributions to Peruvian nationhood are nil.

I would like to make a sincere plea to the youth of Peru for whom we want to forge a better nation. Those of us today living in our adult years, receive a world full of imperfections and of injustices. For those who will come after us we want a legacy of a free and just society, the inheritance of a nation that does not have capacity for the resounding inequalities and the disgrace of the world that it is our turn to live. (excerpt from President Velasco’s Law of Agrarian Re-

form speech, Lima, 1969, autor translation)

However, at least since the 1920s, *indigenismo*, indigenism social movements have drawn attention to the ways in which Indigenous cultural practices and languages are foundational for the construction of national identity. Nationhood is contingent upon full incorporation of Indigenous peoples into a society that is at once Indigenous and non-Indigenous, traditional and modern, cultural and technological, where divisive binaries are not useful for the nation as a whole. Politically-speaking, a coup led by Indigenous advocate General Juan Velasco Alvarado resulted in his presidency from 1968-1975. This military reign, while controversial, saw the reversal of the colonial stripping of Indigenous land holdings and the acknowledgment of Quechua people and language as significant to national identity through a series of laws. While laws took effect, they could not protect in perpetuity Indigenous lands from dominant trajectories of natural resource exploitation.

Indigenous Lands, Sacrificed Lands

Gaining momentum in the 1990s and rooted in Civil Rights were environmental justice movements that exposed environmental racism in the U.S. (Bullard, 1993). Unwavering evidence correlating pollution, contamination, hazardous waste, and their resulting social, environmental, and economic harms on communities of color—primarily Black, Latino, and Native American—was heavily debated. Bullard’s argument was one of benefits distributed and costs absorbed based on race, less class (1994a):

Environmental racism refers to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color. Environmental racism combines with public policies and industry practices to provide *benefits* for whites while shifting *costs* to people of color (p. 451, Bullard emphasis).

Similarly of the Andes, extractive industry has ensured the transfer of benefits to other places (typically areas with high demographic concentration) at the expense of rural and historically disadvantaged Indigenous places (Bebbington & Humphreys Bebbington, 2011). Bullard argued that in order to address environmental racism, five principles needed to be adopted by governments: the right to protection from environmental degradation; prevention of harm and not just treating the problem manifested; shifting the burden of proof to polluters; obviating proof of intent in order to move away from emphasis on proving intentional or purposeful discrimination; and redressing inequities through targeting action and resources (1994b, p. 244-253). He pointed out that Native American communities in the U.S. were most vulnerable and threatened sites, constituting special cases in environmental racism (1994b). Of other countries, specifically those in the global South, Bullard argued that they were increasingly targeted and had become locations of toxic colonialism due to waste disposal and the introduction of risky technology by more highly industrialized countries (1993).

Despite missing early analysis of Indigenous environmental issues in the global South, as in the case of Peru, Bullard's notion of environmental racism remains significant in that it draws attention to the role of race, where the greatest health and environmental risks are assigned to Indigenous lands while the greatest benefits are relocated. In the Andes, mining meets local monetary needs, yet is viewed as the "resource curse" where limited financial gains distributed to regional governments create local divisiveness and political tensions (Arellano-Yanguas, 2011) while environmental and human health impacts compound. The classic work of anthropologist June Nash in the 1960s also drew attention to this paradox in the Bolivian Andes tin mining industry in her aptly titled seminal work, *We eat the mines and the mines eat us* (1993).

Because of Indigenous regions targeted as sites for development based on availability of natural resources, as sites for waste, and as regions hit hardest by climate change (OHCHR, 2015), environmental racism is a powerful lens for examining Indigenous community intersections with environmental concerns. In particular, the dilemma of nuclear waste disposal

on U.S. Indigenous lands has yielded useful literature on the identity of Indigenous lands based on contrasting perspectives. Endres's (2012) work on ongoing arguments for and against Yucca Mountain as a site for nuclear waste reveals the clash between government classification of the region as a national sacrifice zone and Shoshone and Paiute views of this land as sacred. She applied the notion of polysemous value term to Yucca Mountain in order to demonstrate the ways in which this site has "multiple meanings based on differing (often cultural) premises" (p. 332). In this case, Yucca Mountain is attractive to the federal government as a region that can serve as a wasteland essentially for however long it takes for nuclear waste to decay. Meanwhile, Yucca Mountain is also ancestral homelands for the Paiute and Shoshone whose cultural practices and tribal existences are rooted in place.

Polysemous value terms can also be applied to other Indigenous lands, including landmarks like mountains, lakes, and forests because from the start of any discussion of these places with those who wish to exploit and drain them for financial gain, epistemological differences of their very conception are inevitable. While "sacrifice zone" is reserved for areas identified for nuclear waste disposal by the U.S. federal government under the premise that these areas are sacrificed for the benefit of the nation, the idea of Indigenous lands as sacrificed lands in Peru is appropriate because of dominant arguments that exploiting and extracting from Indigenous lands, apart from nuclear dumping, is for the common good, whether or not Indigenous peoples agree or consent. The power of the lens of environmental racism and the usefulness of polysemy applied to Indigenous lands can provide us with a framework for understanding what is happening to Indigenous places and peoples, but this understanding does not alleviate the realities caused by underlying epistemological tensions.

Quechua Community and Knowledge Systems

Much of the discussion thus far has focused on tensions in conceptualizations of land, projects of development, and the trajectory of environmental exploitation in the Andes. However, most significant is what

is at stake—places and cultural practices, which are also sources of inspiration, strength, and hope for interventions.

Kay halallayishpiman

Amamarikayasasi

Amamariasallakangachu

Halallaishpillachun

Wawiachkam

Wawikayangari

Chaymikunampami

That this corn may grow well

Do not come ice/frost

That this corn grows healthy/blessed

I have many children

I have children so

This corn is for them to eat

(Quechua Wanka planting song, author translation)

In the Quechua worldview, environment, language, and cultural practices shape what is taught within communities, constituting education rich with pedagogy and content. In the Mantaro Valley in central Peru, planting songs are common during the agricultural cycle and reflect *conversation* between humans and the environment. The “Kay halla” song sung by my grandmother who worked in the *chakra*, farm field, her entire life is an example of this conversation in which Quechua peoples speak with the universe, acknowledging the power of the forces of nature through a humble prayer.

The plants and animals that they nurture with dedication and love are members of their families. When the small shoots emerge in the *chacra*, they are their children; when they flower, they are companions with whom they dance and to whom they sing; and when they give fruit at the time of harvest, they are their mothers. Andean peasant agriculture is this nurturance, full of feeling as for their own family. (Valladolid & Apfeel-Marglin, 2001, p. 660)

Quechua worldviews are observable through farming-as-cultural-practice, interwoven within an understanding of the broad universe expressed through Andean agricultural and seasonal cycles (Sumida Huaman, 2016). Each cycle—from preparing the earth for planting to harvesting—involves pre-Columbian spiritual teachings from grandparent to parent to child, shared philosophies about the environment, agreed upon human responsibility within and to the natural environment, and community and family daily rituals and special ceremonies rooted in Quechua ideas about equilibrium, justice, harmony, and goodness. These collectively constitute the Quechua knowledge system—of philosophy, emotion, and responsibility—sustaining what Quechua people call “the Andean world,” which is experienced through continuous engagement with environment. In this dynamic, knowledge and practice are never removed from heart, as observed by Valladolid and Apfeel-Marglin.

Agricultural cycles for the corn plant, Saramama or Grandmother Corn, involve the preparation of the earth for planting, planting season, maintenance of the emerging and growing crops, the harvest, drying and storage of the crops, and new seed selection. These stages signal individual participation in family and community work as well as designations and responsibilities of community leadership. Dominant society labels this farming life “backwards” and the only work for which the “uneducated” are suited. Quechua peoples though, hold relationship to land and the ability to work this land as a cultural value, despite the fact that farming is a hard life. The chakra and its surroundings are part of the Andean world, which according to Quechua cosmology is the upper world of skies and heavens, this world of the living—plants, animals, elements, and humans, and the inside world—the world of our ancestors. Community is not just human community bound by territory; rather, community is both space and respect for all things—the land, flora and fauna, all beings, natural deities like mountains and waters, ancestors—and for the life force that runs through everything everywhere, pacha.

Like community, Quechua knowledge, *kaymiyatayninchik*, our knowledge, is broad and complex theoretically and linguistically. For example, in Quechua Wanka, *yatay* means not only to know, but also to live.

Literature on Indigenous knowledge systems (IKS) yields a general understanding of IKS as environmental knowledge embodying these characteristics: place-based and local; accumulated over time; responsive to the environment and therefore malleable; shared within community by Indigenous peoples; and for the purposes of not only survival, but also thriving and contributing to sustainability and success of all beings in a particular place (Bebbington, 1991; Battiste, 2002; Materer et al, 2002; Barnhardt & Kawagley, 2005). However, lacking in portrayals of IKS is extensive scientific knowledge that Indigenous peoples hold regarding their environment. There is dominant skepticism in labeling Indigenous knowledge as scientific, which has led to separate categorizations of “Native science”—a process that reveals more about the power and limitations of Western constructs of science (Medin and Bang, 2014; Chhetri and Chhetri, 2015). On the other hand, Indigenous science has been claimed by scholars who contend that Indigenous science, continually evolving, has much to teach Western science, not only about the physical properties and calculable parts of our shared world, but also about Indigenous principles, including metaphysics and morals, that have sustained life for millennia (Battiste, 2002; Kawagley, 2006; Aikenhead & Mitchell, 2011; Simpson, 2014; Medin & Bang, 2014).

These considerations are useful when considering the Quechua knowledge system, and because the dominant feature of IKS is place-based and local (and scientific), the idea of a singular knowledge system can be misleading as there are six Quechua South American countries (Bolivia, Ecuador, Peru, Colombia, Argentina, and Chile) with approximately ten million Quechua peoples in the Andean highlands and bordering jungles. Each original village will have its own understanding of local knowledge and observations of Quechua cultural practices, as well as Quechua language family varieties. My attempt to capture observations regarding the Quechua knowledge system therefore serves a heuristic purpose, containing features that Quechua peoples and speakers will find familiar (Sumida

Huaman, forthcoming⁷):

- 1) *The Quechua knowledge system is an organized system of knowledge for living*—Tukillaktam yaakuna limapaku.: Ours is an agreed-upon system living a beautiful life for all beings. No element functions on its own; all are interdependent. Language is inextricable from philosophy, and philosophy from values. Everything has a cycle and purpose, and there are clearly defined responsibilities for human beings and protocols for engagement with all elements in the universe.
- 2) *The Quechua knowledge system is local paradigm of place and being with universal pragmatism*—Yatashanchik kaytuimi kayan.: The Quechua knowledge system is a way of viewing the world as an Andean living within a particular context, and the Quechua knowledge system regards the entire universe. Local worldview is also matched with conscientiousness and concern for life in other places.
- 3) *The Quechua knowledge system is flexible and adaptable*—Allintam kawsakuyta munanchik.: Knowledge is not bound by space and time, and the Quechua knowledge system is based on fluidity of life and notions of equilibrium. Knowledge contained in other cultures and practices can be gained if deemed useful and respectful of the Andean world. Further, impacts of the conquest and current environmental threats to the Andean world are processed and become part of what is known, kaymiyatayninchik, as well as what is has been experienced and remembered, yalpanchik, where solutions to problems can be explored.
- 4) *The Quechua knowledge system is vital* Llapan imapis kawsayniyo yaakuna waytanantam munanchik.: The Quechua knowledge system is concerned with the flourishing of all life in the Andean world through maintaining balance. This system is intertwined with other knowledge systems. Pedagogies are rooted in the idea and practice of relationship through conversation with the universe—that humans

⁷The Quechua knowledge system is also discussed in the forthcoming *Yachayninchis* (our knowledge): Environment, cultural practices, and human rights education in the Peruvian Andes in the *Handbook of Indigenous Education* (Linda T. Smith and Elizabeth McKinley, Eds.).

and other living beings maintain a relationship with each other through conversation and reciprocity.

- 5) *The Quechua knowledge system nurtures individuals and community through learning*—Kaytui llapami yatayanchik.: Experiences within the Quechua knowledge system are facilitated by community members of all ages who learn and participate in its practices—from the community healer to the youth learning to irrigate a field for the first time, each community member is recognized for talents, characteristics, and for their abilities to benefit the Andean world.
- 6) *The Quechua knowledge system is concerned with what is right*—Yaakuna kaytui tukillaktam yatapakuyta muna.: Quechua people hold as paramount harmony and justice to a beautiful life. In the chakra, teaching and reinforcement of values during every stage of the growth of the corn plant, values of respect, love, humility, thankfulness, and sharing are shown to the elements in the universe, to the crops, and to other community members through daily and ceremonial practices.
- 7) *The Quechua knowledge system is Quechua illumination and innovation*—Yaakuna kaytui isisipami imaktapis yata. Yaakuna kaytui imallaktapis yatayta munapakuyalkami.: The Quechua knowledge system affirms the existing knowledge of Quechua peoples in the areas of science, technology, engineering, art, mathematics, philosophy. In addition, there is always potential for learning new pathways towards sustaining Quechua ways of life.

Dominant Education

Due to gaps in mainstream education, creative educational interventions are important prospects. In the Andes, education has served Western domination and assimilation through parent, community, and student participation in a system that aims to produce good citizens valued for their contributions to the national economy (Luykx, 1999). In Carnoy's classic *Education as Cultural Imperialism* (1974), he argued that Peruvian education was defined during the colonial period as a strategy to produce Indigenous workers who were to receive just enough education to maintain uneven power

relations without rebelling. As a result of its early mission, education is almost exclusively school-based where Indigenous peoples are dictated education that satisfies the needs of the state. Critics of lack of authentic Indigenous direction of education have therefore consistently challenged dominant agendas that marginalize Indigenous peoples and invalidate or attack Indigenous knowledge.

Valdiviezo (2014) examined public political discourse in Peru that posed an impediment to the consideration of Indigenous knowledge in formal education. She identified four features: 1) Indigenous people’s beliefs as absurd and backward; 2) Indigenous people as obstacles to development; 3) Indigenous people as not ‘real’ citizens whereby Peruvian citizenship is awarded as a privilege, not a right, based on race and socioeconomic status; and 4) the purpose of education is to correct Indigenous peoples of their silly beliefs and to civilize them through [dominant] culture. Through this analysis we see that those authorized to design, fund, and execute formal education structures and strategies in Peru may have problematic views of Indigenous peoples. However, formal education does not have a monopoly on learning and achievement in life; there are other ways to learn and succeed as a human being, which is what the Quechua education in situ promotes (see Table 1).

Table 1. Dominant and Quechua education

Dominant education	Quechua education
Concept of schooling constructed by the colonial other	Concept of learning constructed by Quechua community members
Situated in state-designated spaces (i.e. school buildings)	Situated in Quechua community spaces (i.e. homes, farms, central gathering places, religious spaces)
Takes place during designated times and scheduled according to state events and the Gregorian calendar	Takes place during cultural practices and scheduled according to the Andean calendar of seasonal change and environmental and agricultural commitments
Funded, maintained, and overseen by state-sponsored powers	Perpetuated intergenerationally by Quechua community members and

	leaders
Based on the social contract and economic development: to accommodate dominant notions of nationalism, progress, and citizenship development	Based on a Quechua worldview: to live with all things in accordance with principles of equilibrium, balance, harmony, and beauty
Curriculum is geared towards individual production of capital in society (i.e. skill-building and technical training for employment)	Curriculum is geared towards individual contributions towards a good and sustainable life and the development of intelligence towards stewardship

Although Table 1 is an exercise, these educational concepts demonstrate potential for complementarity if Quechua knowledge and ways of knowing are embraced as valid and meaningful.

Indigenous Rights Education (IRE)

My final words are to recommend to you, that when you are in a community like this, very original [Indigenous]—because not only in the highlands but also on the coast there are legends that explain the origin of things—and these legends will give to you an idea...of what each individual in the community thinks about who is man, which is the origin of man, where he is going, who is God, how is God, why is God. If we do not know what they think of...for what purpose man lives, and like that, where man is headed, if we do not know what each community thinks about these problems, how can we educate? Education does not only consist of giving instruction, instruction in a very routine way. We must teach according to the spiritual incentives and characteristics that in each community moves man. (José María Arguedas, “The Importance of folklore in education” talk, author translation)

In the 1930s, Peruvian literary giant, José María Arguedas, argued as part of *indigenismo* that the incorporation of Indigenous peoples in Peruvian society involved recognizing that Indigenous peoples offered humanity

profound philosophies and teachings about place and the cycles of life through stories, which he referred to as folklore. As an educator, he traveled through the Andean highlands and later worked with teachers in his capacity through the Ministry of Education—perhaps reminiscent of his upbringing when he accompanied his lawyer father throughout the Andes, where he was cared for by Quechua people. Arguedas asserted that Peruvian nationhood was dependent upon the appreciation of Indigenous cultures as foundational to Peruvian identity and advocated for the uplifting of Indigenous languages and cultures, which he believed could be achieved through folklore-as-education. This is his legacy in Peru—resistance of oppression by dominant Spanish/European classes and response that each has something to contribute to the other for the benefit of the nation.

Taking up this work, anthropologist Rosina Valcárcel argued that Andean myths—that is social and historical knowledge of the Andean world—were themselves a form of resistance to domination (1988). As a reflection of collective conscience, mythology takes on a political power distinct from that which is misunderstood, dismissed, or misappropriated by dominant Peruvian society as merely stories. Although Quechua people understand the Quechua knowledge system to be beneficial to human and natural life, there are considerable struggles to demonstrate politically, socially, economically, and educationally that this knowledge matters. While acknowledging and engaging modes of Andean resistance, Indigenous and non-Indigenous scholars are transcending the discourse of resistance that tends to highlight equally Indigenous knowledges and historical and current injustices; rather, they are concerned with building new discourses that position Quechua knowledge at the center of discourses of progress, development, and nationalism (Hornberger, 1998; Ames, 2002, 2013a, 2013b; Coronel-Molina & Grabner-Coronel, 2005; Valdiviezo, 2013, 2014). In this space, education as out-of-school learning and formal schooling takes center stage even as governmental influence over Indigenous lands (the places where Quechua knowledge system learning occurs) and institutions (the schools Indigenous children attend) is omnipresent. Because the Quechua knowledge system is dependent upon teaching and learning (in) a complex Andean world, and as schooling (though rooted in colonial and industrial

models of citizenship and education) is viewed as a resource for Quechua children to compete for opportunities to succeed in society, both educational experiences are decisive spaces for Quechua peoples. Thus, exploring meaningful learning experiences in both realms is an important undertaking, and global discourses on Indigenous rights as inextricable from place rights and transformative human rights education can serve to validate this task.

Place Rights

Since its introduction in 2007, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) has garnered attention among Indigenous peoples and allies. Containing 46 articles, the UNDRIP outlines themes that have stimulated extensive debate: cultural, land, and language protections; spirituality and religion; media; labor and employment, and education, among others. As themes overlap, Indigenous rights are rooted in self-determination—ultimately, Indigenous peoples’ decisions and actions regarding their lives and lands to live with freedom and the rights afforded to all humans yet with critical recognition regarding their relationships with ancestral homelands, distinct cultural practices and heritage languages, and unique vulnerabilities. Of direct relevance to development are Articles 31 and 32, acknowledging that Indigenous peoples have the right to “maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions” and their “manifestations,” as well as the intellectual property associated. They have the right to “determine and develop priorities and strategies for the development or use of their lands or territories and other resources,” where states must exercise free, prior and informed consent with regards to any land or resource development utilization or exploitation and provide redress while taking measures “to mitigate adverse environmental, economic, social, cultural or spiritual impact.”

Relatedly, Bolivia’s decision to create law stemming from concern over neoliberal capitalism impacts on environmental decline affirmed some local Indigenous epistemologies through their Proposal for a Law of Mother

Earth (2010). Fourteen rights of Mother Earth (land and natural resources) were introduced, including the rights to life and to exist and to respect, to restoration and protections, and “the right to maintain her identity and integrity as a differentiated, self-regulated and inter-related being” (p. 6). Policy proposals were set to impact air, water, soil, biodiversity, forests, alternative energy sources, hydrocarbons, mining, and protected areas. The government also proposed a new model of development based on the idea of *vivir bien*, to live well, related to the Quechua philosophy of *suma qawsay*, or good life. The law of Mother Earth and *vivir bien* were also linked with principles, including harmony, collective well-being, complementarity, and mutual support—based in Andean Indigenous cultural linguistic terms and practices.

Complementing evolving discourse of place rights, language on protection of physical and intellectual cultural heritage has also emerged. Based on the Venice Charter of 1964, which named protection of “historic monuments,” the United Nations Educational Scientific and Cultural Organization (UNESCO) 1968 protection of “cultural property” including movable and immovable sites, and the 1990s description of “cultural heritage,” protection of place has found channels in international dialogue (Ahmad, 2006). In 2003, UNESCO adopted the Convention for the Safeguarding of the Intangible Cultural Heritage and defined intangible heritage as:

the practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. (Article 2: 1)

Although proponents of cultural heritage have advocated for local and universal definitions of cultural heritage that could clarify meaning to inter-

national stakeholders who purportedly have some enforcement capabilities (Ahmad, 2006), there are still questions. Unclear are the conditions of cultural intangible heritage, including recognition only within existing HR frameworks, ideas of mutual respect among other populations, and sustainable development. Similarly, across constructions of Indigenous and place rights there remain tensions regarding how to confront structural inequalities that preclude Indigenous participation in setting the agenda for these discussions. In the case of Quechua, there is also a need for research on how peoples define, practice, and envision lands and exercise of culture within not only ancestral, but also other places—that is, the adaptability of Quechua identities despite migration and relocation, especially due to environmental problems.

Transformative HRE (THRED)

The need for strategies to address environmental concerns and environmental racism and intersections with Indigenous rights and place rights is clear. Rethinking education provides an opportunity to engage these issues while meeting learning expectations for intellectual and values development in Indigenous communities and in dominant society and where environmental, linguistic, cultural, physical, and spiritual sustainability are fundamental goals. Bajaj's work outlined major baseline approaches in HRE: HRE is education *as* human right, education *with* human rights, education *about* human rights, education *through* human rights, and education *for* human rights (2011, 2014). Scholar/practitioners and educators also identify common characteristics of HRE related to educational and social outcomes and that prioritize linkages with communities: cognitive, affective, and action-oriented (Tibbitts, 2005; Bajaj et al., 2016). These highlight the ways in which HRE is conceptualized and practiced in diverse locations—from after-school programs in San Francisco to classrooms in India—and the diversity with which HRE is defined and practiced is part of its richness (Bajaj, 2011), allows for its expansion as communities and educators reshape discourses of human rights in ways that are grounded in universal ideals yet synchronous with local priorities and knowledges.

Building on HRE, Bajaj et al. (2016) have described transformative human rights education (THRED) as,

a community-based approach to HRE, intended for children, youth, and adults in formal or non-formal settings. It contains cognitive, affective, and action-oriented elements. A contextualized and relevant curriculum is paired with participatory pedagogical activities to bring human rights to life and to foster in learners an awareness of global citizenship and a respect for human rights. Transformative HRE exposes learners to gaps between rights and actual realities, provokes group dialogue on the concrete actions necessary to close those gaps. Learners engage in critical reflection, social dialogue, and individual and collective action to pursue the realization of human rights locally, nationally, and globally. (pp. 3-4)

For Quechua communities, THRED offers educational strategies empirically tested in different regions around the world as models for consideration, and *with* Quechua communities, THRED offers crucial opportunities to rethink and rebuild educational frameworks that not only invite but require local Quechua knowledge and community direction and participation intergenerationally, in formal and nonformal learning settings. Andean lands are transnational landscapes “woven by livelihoods and organizational processes that have themselves been constructed on the basis of opportunities and constraints that derive in part from these transnational linkages” (Bebbington, 2001, p. 430), and discourses of Indigenous rights, place rights, and THRED exemplify meaningful resources.

This is not a proposal for the Quechua knowledge system or other Indigenous knowledges to fit into THRED or to accommodate yet additional stressors, disruptions, or educational experiments; this is a proposal for proponents of Quechua and Indigenous knowledge systems to consider educational practices rooted in Indigenous rights or *Indigenous rights education* (IRE)—reflecting on what Quechua communities prioritize as vital elements needed to continue living and honoring our ancestral places and within our shared universe, and asking ourselves how we can educate for their preservation and growth and measure our successes. IRE can bene-

fit the construction of in-school and out-of-school education as critical interventions in multiple spaces with Indigenous and non-Indigenous peoples who are confronting increasing challenges with regarding to human and environmental sustainability. IRE is founded in local Indigenous knowledge systems and epistemologies and recognizes the distinctiveness of Indigenous peoples, languages, cultures, and environments, including that which collective generations of Indigenous peoples determine is vital to our ability and the ability of the beings and places in which we live to thrive (Sumida Huaman, forthcoming). IRE is an approach to how Indigenous peoples can shape education for all community members across multiple settings, exercising their right to Indigenous self-determination in education and where education is inherently ecological—embodying, reflecting, experiencing, and envisioning all of the environmental dimensions that shape the Andean world. IRE is based on Indigenous worldviews of our own knowledge systems, and like HRE and THRED, IRE is education as, with, about, through, and for Indigenous rights.

Conclusion

In the Peruvian Andes, the Quechua knowledge system and its components and flow of operation represent the richness of the local and Indigenous and shared nationhood. As the magnitude and scope of environmental issues increase and repercussions reverberate across the Andean landscape, innovative and creative ways of thinking about interventions that involve teaching and learning among multiple generations are required. Further, while not the focus of this article but critical to acknowledge is Peru's troubling history of human rights violations due to civil/guerrilla conflicts and forced government-led sterilizations of Indigenous Andean women and men well into the late 20th century. *Indigenous Rights Education* provides an opportunity to reflect and build awareness about historical and contemporary state-endorsed violence, including environmental racism, to understand current social-environmental conditions and threats, and to recall and put into educational practice Indigenous knowledge systems towards solutions. As IRE grows in different places, real educational bene-

fits that are cognitive, affective, and action-oriented can be gained, especially as Quechua and other Indigenous peoples continue to uphold their own identities as intellectual and caring beings concerned for human and environmental life.

We may not be able to replace polluted rivers, contaminated soils and clays, or crops lost to shifting weather phenomena. But we can rethink how we will collectively face oncoming environmental catastrophes while remembering that our knowledge is useful, that we have something to share, and that we belong in this world. Along these lines, the work of poet Mary Oliver (2012) reminds us of life's processes and our universal responsibility to honor them:

Who can guess the luna's sadness who lives so briefly? Who can guess the impatience of stone longing to be ground down, to be part again of something livelier? Who can imagine in what heaviness the rivers remember their original clarity?/Strange questions, yet I have spent worthwhile time with them. And I suggest them to you also, that your spirit grow in curiosity, that your life be richer than it is, that you bow to the earth as you feel how it actually is, that we—so clever, and ambitious, and selfish, and unrestrained—are only one design of the moving, the vivacious many. ("The Moth, The Mountains, The Rivers," p. 33)

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