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Chapter 8

Andean Entifications:

Pachamamaq Ajayun, The Spirit of Mother Earth

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In memoriam

Elías Delgado M., Eugenio Bermejillo, Rodolfo L. Meyer

Qallarinapaq: To Begin

In this article, my purpose is to foreground recent discussions on reontologizing the notion of “socionature” as a way of critiquing modern thought and practice, which subverted the original hylozoism of Andean peoples. The term “socionature” acknowledges a critique of anthropocentrism. As we know, the introduction of modes of ecocidal extractivist capitalism as an economic strategy of “accumulation by dispossession” legitimized the deontologization of nature by making it dispirited and deprived of agency. Such a process instigated disruptive colonialist “acts against nature”; the perpetrators were and are humans who, as inheritors, provoked and sustained ecocidal interventions on native peoples’ nature(s) considered alive. Nowadays, the Anthropocene scores recognition of such intrusion(s).

A conscious retrieving of pluricultural and multinatural worlds

thus involves a rejection of the full commoditization of nature(s), an ethics that inspires a vibrant environmentalist consciousness that re-establishes dialogues with variants of radical Western deep ecology, Gaiastories, GMO critics, and indigenous thought regarding global warming today. This attitude, based on the assumption of *many natures* and one culture (rather than one nature and *several cultures*), is ethical (i.e., derived from ethics) in the sense that, as a grammar of the dignity of socionature, it proposes a larger spiritual and radical (that is, from the “roots”) reappraisal that hopefully re-evaluates humanity’s stance on “eARTh.”

We find substrata of this decentering thinking and of issues of permanence on “eARTh” if we especially highlight parts of the world where indigenous cosmicentric and chorographic convictions were, and are, retained despite colonialism’s fury layered as anthropogenic heritage. Here I am referring to Karen Barad’s discussion on “agential realism”:

All bodies, not merely human bodies, come to matter through the world’s performativity—its iterative intra-activity. Matter is not figured as a mere effect or product of discursive practices but rather as an agentic factor in its iterative materialization, and identity and difference are radically reworked. (Barad 2011, 125)

The indigenous peoples of the Andean area of South America offer clear examples of this “agentive factor,” and the term “entification” which I added to the title, illustrates nature’s ontological status, considered to be alive rather than inert. Beware that ontology, in Western philosophy, refers to the specificity of *being* human, *ente* (from the Latin *ens* and the Greek *onto*; in Spanish, *ente*) but without nature; in other words, it is anthropocentric. Such centrality can be seen as an accident, as in “the accidental culture” or as in “accidental rationality.” On the contrary, the notions of entification, hylozoism, and perspectivism constitute the corresponding cosmicentric concepts that define the sensory character of non-Western, indigenous philosophies around the world.¹ These terms expose a cosmicentric world in its spatial-chorographic depth of intra- and interconnections or relationalities. Here, I will analyze four instances of Andean hylozoistic concepts as contemporary examples of an ontologized nature. Given that Andean cultures, and for that matter, all indigenous peoples, resisted or negotiated the imposition of European modernity and the full deontologization of nature, such quincennial resistance materializes in the actual recurrence to and sustenance of hylozoistic convictions.

Despite unrelenting presence of Christianity in its varieties, the Andean area has preserved clear hylozoistic spiritual principles that

are perceived to coincide with notions of the sacred shared by other non-Western religions. Transmitted throughout these last centuries, the reaffirmation of hylozoistic notions of pre-Columbian origins is detectable,² contesting the one-directional nomos and centrality of the modern, with its exhausted teleology of progressionism and development (as high risk, uncertainty) we identify as the Anthropocene.

Sumaq Orqun Illakuna: The Energy of Mountains

Taking a bird's-eye view of the Andean territory, what else, hidden or visible, do the materiality of mountains feature? Mountains are considered to be the residence of gods, enlivened by *K'ama*, spaces of energy that animate the *Illi* or *Illa*³ of the telluric gods *Achachila*, *Apu*, *Wamani*, and *Jillaranataka*. In ancient times, mountains were like people: they enjoyed themselves, they fought with each other; they visited and talked to each other; and today, in memory of the past, several are still called by their proper names. Ancient Andean space designers adopted innumerable *Wak'a* and *Apacheta* throughout the mountain range, and spiritual leaders *Yatiri*, *Chamaq'ani*, *Laiqa*, *Paqu*, *Jamp'iri*, which have been mistakenly homogenized as shamans, were (and are) in charge of keeping the *Wak'a* alive. The *Wak'a* can have different aspects and needs, but they are generally natural sculptures, prominent boulders, stones, and rock outcrops (*Wank'a*) that have

unusual shapes, often revealing to the naked eye images of majestic birds (such as the *Kuntur*), heads of llamas or alpacas, human faces, human or animal body parts, gigantic ants, a mythical petrified snake, or a large toad. The *Wak'a* marked the ancient Inkan *ceque* system that perceptually radiated from Cuzco, the navel (*Q'usqu*) or center of the world. *Ceques* are imaginary lines that cohesively membered four *Suyus* or four constitutive parts of the Andean territory of the Inkas. The *Wak'a* signaled the interconnected relationality of the *ceques*, a whole ecology of telluric selves. Several scholars who have discussed the *Wak'a* have treated them merely as remnants from the past, devoid of life, and references to something that existed centuries ago—in short, as archeological “ruins” (Bovisio 2011, 53–84; Bray 2015).

Archaeologists continue to climb and reach Andean mountaintops, often to “discover,” or rather, uncover the *Wak'a* and ritual offerings that involved human beings in ancient times. Today, it is scientists collecting DNA who are interested in retrieving the remains of human sacrifices. However, not being direct beneficiaries of such taphonomic contents or remains—interrupting affairs that disturb the *Ch'ullpas* or ancient burials—the *Yatiri*, Andean specialists of the sacred, think that removing such ancient buried remnants undermines the telluric energy of the mountains, their *Illá* and *K'ama*. Note a coincidence: the tragic receding of Andean glaciers due to global warming has been observed by many *Yatiri* who are conscious of

foreign hands rummaging and removing ancient offerings. Such actions are interpreted as causing emaciation of the *Achachila* or the *Apu* found in mountains. The *Yatiri* are not so wrong (and they never were), because their reasoning departs from the perspective of relationality. If the *Yatiri* recognize the animism of a mountain, they know that offerings enliven the *Illla* making them be; the *Illla* is a symbol of their and our lives, its *K'ama* or energy.

Seasonally, Andean peoples adopt the task of caring for the *Wak'a* or the *Apacheta* (Figure 8.1). They become attached to one of them (and vice versa), presumably reproducing a historical correspondence of place and space (what we might call “sp[l]ace”), and human, other than human, and nonhuman community (Castro and Aldunate 2003, 73–79).

<insert Fig. 8.1 about here>

Figure 8.1. A *Wak'a* of the Pachapurichej on the Oruro–La Paz route. Sojourners, herders, and modern travelers stop to offer libations. Photo: Guillermo Delgado-P.

To keep a *Wak'a* alive,⁴ Andean devotees travel long distances to salute and feed them following the commendations of spiritual leaders. For example, Mount Illimani, in today's city of La Paz, Bolivia, is

considered to be the *Jach'a Wak'a*, *Jach'a Apu*, *Inka Achachila* (major *Wak'a*, major Inka *Achachila*) amid the ones found in the area who have proper names: *Mururata*, *Illampu*, *Wayna Potosí*, *Janq'uma*, *Sajama*, *Chörölque*, *Quimsa Cruz*, *Chakalt'aya*, *Ch'uruq'ella*, *Siqa-siqa*, and the like. Healers, or specialists of the sacred,⁵ called *Chamaq'anis* are in charge of rituals offered to such entities, since they have the power to talk and to listen to them in the dead of night—hence the term *Chamaq'ani*, is translated as “those who sense animated energy *K'ama* in darkness.” All these ritual activities resonate with the desire to heal the sustained damage inflicted by enduring anthropogeny. In this sense, the healers' activities, in their many specialized forms, end up affirming the earth's politics of mutual bioregeneration.⁶ The healing of the eARTH reflects the spiritual awakening of the human but no longer as the center of a “dominated” planet.

This awakening can be detected amidst Andean peoples, who had seemed to be destined to disappear in the *mare magnum* of globalization. Areas of uninterrupted habitation that anthropologist Stefano Varese calls bioregions or ethnoregions, such as the Andean and Mesoamerican cradles of civilization, are showing a remarkable resilience. The archaeologist Brian M. Fagan observed that in the Andes,

The altiplano was [and is] a cosmic landscape, the home of

Pachamama, Mother Earth. Local farmers have always believed the earth gives them crops. In return, they give elaborate offerings to her. For all this harshness, two ancient cities flourished here in antiquity, Pukara inland from the northern edge of the lake, and later Tiwanaku to the south. Lake Titicaca [Titiqaqa] deep waters trap and release warmth, which reduces frost damage on agricultural land close to the lake. (Fagan 1995, 213)

Today, the Aymara people of the *Ayllu* Qaata in the Bolivian Andes studied by anthropologist Joseph W. Bastien suggest that in their perspective, their *Ayllu* assumes a shape of a human body, and they think of themselves as constitutive part of such body-territory. Recently, Bastien's research documents the cultural resilience of the Uru-Chipayans, described as "a small group of people who continue to practice rituals and tell stories that are concerned less with Protestantism and Catholic beliefs and more with Lake Coipasa, flamingos, irrigation canals, towers, earth shrines, graves, and ancestors" (Bastien 2012, 195). They offer us clear signs of the cosmicentric nomos, cultural resilience, and adaptation of this ancient Andean population, which during the 1980 and 1990s, faced alienating forces and displayed disturbing anomic trends (analyzed in Wachtel 1992). However, they have revitalized their culture and are

alive.

Kawsaq, Wañuq: Life and Death, an Ontologized Nature

As I stated earlier, my purpose here is to engage in recent discussions about the reontologization of socionature, specifically among Andean people. Socionature can be considered a tenacious perspective and critique of Western modernity that contests and destabilizes the centrality of anthropocentric assumptions, which constitute such a detrimental episteme that, in thought and practice, has challenged Andean hylozoism.

The *Wak'a*⁷ are tutelary stone shrines spread throughout the Andes, located at prominent rocks or boulders on specific mountain sites. People establish reciprocal exchanges of onomastic recognition with such rocks or boulders. As we saw, each of the *Wak'a* bears a proper name and serves as a reminder of a nature that is alive rather than inert. Periodically, the Quechua and Aymara pay offerings as a way of keeping the *K'ama* or energy of such shrines alive. This illustrates that the spirit world is “both beyond the phenomenal world as well as integral with materiality,” as the introduction to this volume affirms.

When I revisited a *Wak'a* in the Bolivian Andes in August 2015 and 2018, two issues caught my attention. One was a landscape infested with discarded plastic bottles and bags tossed out by careless

bus passengers on the La Paz-Oruro-Cochabamba-Santa Cruz route. The other one was the announcement that the high plateau saline Lake Poopó⁸ (90 km by 32 km, with an airway surface liquid of 12,500 feet) had dried up as of December 2015 (Casey 2016). It is now dying. High altitude environmental impacts (Baer and Singer 2014, chap. 5) are dangerously unfolding here and elsewhere to such an extreme we are now talking about thermal expansion and “climate refugees” (Orlove 2016). As recently as August of 2018 as I traveled through the area, I could feel how much the temperatures had decreased, which local inhabitants have been experiencing so excessively that their rates of morbidity and mortality are rising due to extreme weather conditions. Nevertheless, underground mining continues relentlessly, evidence of the last neoliberal arrangements to exploit slowly exhausted ore veins. Whereas rivers in several parts of the intermountain valley of Cochabamba are chock-full of plastic refuse or contaminated by mining sludge.

Landscape ethnography, part of the anthropology of mining, is about knowing all the inhabitants of such landscape, which entails humans, nonhumans, and other-than-humans, such as *Wak’a*, *Apus*, *Achachilas*, and so on. Andean landscape ethnography is a recent posthumanistic proposal that represents a critique of the earlier Andean ethnology that was so formidably anthropocentric. In fact, Andean ethnographers have always paid attention to the environment,

biomes, and ground-level forms of agriculture, so much so that the late John V. Murra once told me that “Andeans have learned to domesticate the cold (*aprendieron a domesticar el frío*).” Likewise, Joseph Bastien thinks that our understanding of Andean occupancy must not underestimate the majestic mountain system of the Andes and the exuberant Amazon as influential forms of ontologized nature turned ethical (from the term “ethos”); the originary inhabitants who continue to sustain persistent cosmicentric views claim them as practice and episteme, that is, as an experience of full relationality: human, nonhuman, other-than-human, as reconfirmed by Denise Y. Arnold recently (Arnold 2004, 145–79). It is not in the scope of this article to revisit the encyclopedic *pensum* of Andean ethnology in its chorographic density; instead, I want to focus on the hylozoistic element emphasized in the ethnography of landscape as “an ecology of memory,” which is also a matter of contemporary archeological research. In a sense, ontology is foregrounded but not from a human angle. Previous modern perspectives that have considered nature as inert or unresponsive, that is, deontologized and essential, are being challenged. Instead, reontologizing pertains to the recognition of entification and relationality.⁹ In 2009, the Bolivian and Ecuadorean constitutions acknowledged the rights of Mother Earth (*Pachamama*), possibly the first legal documents to enshrine such recognition as a subject of rights. This nominal acknowledgment still needs to be

translated into proposals and policies centered on sustainable practices; as yet, they remain declarative, in need of active upholding and implementation.

Mining is an old footprint of the Anthropocene: minescapes are usually carved onto Andean mountains and *Wak'a* often protrude on such mountainscapes. Quechua and Aymara underground miners consciously think about their intrusive and extractivist tasks. Released from the sweating walls of dark and deep galleries, a latent lugubrious concern dwells in their minds, wrapped up in the dense underground odoriferous mist they inhale. Almost instinctively, they become worried and apprehensive, revealing guilt and feeling mournful because they have disturbed nature; they can often foretell an end or outcome of tragic consequences. And so, when geological faults slide or ceilings collapse, miners yell out, "Aysa!" ("Landslide!"), and immediately warning calls follow, alerting everyone that nature as *Pachamama* is now shaking, angry.¹⁰ The chaotic aftermath convokes the whole mining community to restore equilibrium, restoring health by offering special *T'inika* (reciprocal exchanges) to the mine, to *Pachamama*, and to the *Achachila* and *Apacheta* mountain gods. This is because the miners know that they have hurt *Pachamama*, Mother Earth. And so when a tragic *Aysa* occurs, the lethal presence of death invades the mining camps, prompting a call to enact rituals of restoration and regeneration,¹¹ reaffirming an interwoven togetherness, an entangled

life of mine, animal, and human, since miners do not perceive an ontological separation among them. This type of tragedy happens, however, when long-held moral economies and ritual codes have been broken or disrupted, having to do with a sort of fault that destabilizes and “sickens” the relations between the spirit world, humans (*Runa*), nature (*Akapacha, Jallpa*), and other-than-human spirits (*Ajayu*). These relationships are reconstituted through the offering rituals.

Tragic death, in particular, can be devastating for underground miners because they think that the dead are trapped inside *Pachamama's* womb, wandering around, seeking a place to rest in peace. When tragic death is a matter of a fatal accident, it is even more complicated because dynamite, which is normally used to blast rocks after daily drilling, can, if it unexpectedly goes off, tear a human body to pieces. This aspect of accidental death is hard to bear, as miners believe that a miner's *Ajayu* (soul) wanders around in the dark galleries, looking for human limbs to recompose a dismembered body.

As a vital concept, the Aymara concept of the *Ajayu* has acquired geomythical meanings in Andean socionature and language for millennia. In Andean beliefs, the dead are never dead; rather, they are said to “continue living on in an eternal place” (*markaparuw sarxi*). Their loved ones call upon the dead, who come back to visit. As the dead drift around, the forlorn survivors await them on their ritual days to feed them again. In this celebration of life-death and death-life,

family and community members indulge and treat the deceased with offerings, serving their favorite foods and drinks. The dead are free from the impacts of time, inhabiting a sort of no-time time. They are truly free and they come back, *re-membered*, to be with the living, both human and nature.

The geological warnings that mountains radiate before they shake up constitute a sign that healers¹² must feed the *Achachilas*, *Apus*, and *Apachetas* of the Andes, offering them “*mesas*,” a sort of ritual banquet served to appease the mountain spirits. These include *Wilanchas*, sacrificing llamas and smearing their *Wila* (blood) on mountain and human; *Ch’allas*, drinks sprinkled around; *Kharak’us*, feeding the earth and the community with *Sullu* offerings of unborn llama offspring that are preserved and offered for regeneration and life-giving powers—a clear symbol of “holotropic” fertility. Only then do the *Aysas* settle down and relax, the old *Chullp’as* and *Awicha*, spirits of ancient mountains¹³ are comforted and fed, and *Supay*, the chthonic god, becomes happy (Fernández Juárez 1995). *Supay* (or *Tío*) expects a *Kharak’u*, a banquet, before he is able to reveal the riches again.

Here, an element of Andean cosmicentric ideology is retrieved: *Wak’a* are reminders of how nature is alive rather than inanimate. Industrial mining activities menace, disrupt, and interfere with nature; its extractive and destructive work provide us with more than tangible meaning of the Anthropocene. Humans must recognize that we are not

the main actors in the world and acknowledge the agential realism of matter. It is crucial to restore a sense of reciprocity with this live entity, *Pacha*, since, as humans, we belong to a set of relations that includes nature.¹⁴ We are not superior, and nature is not there to serve us.

Uk'u Pachapi: The World of the Underground

Mining work requires squads of workers to enter earth's entrails on daily schedules of three shifts each, also called *Mit'a* or the *Veinticuatro* (the twenty-four-hour cycle of a day). They form paired units (-*uq*-) that usually work in cadres or *cuadrillas* of ten miners. Before entering to the depths of *Uk'u Pacha*—the dark World of Below—each and every miner sprinkles libations and offers cheologic rites. As they descend into the womb of *Pachamama*, all miners stop and share the reciprocal act of *Akhulli*, chewing coca leaves (*Erythroxylum coca*) and smoking tobacco (*Nicotiana sp.*) together at an underground niche where a shrine holds a clay figure called *Supay* or *Tío*, a priapic and telluric force, expecting daily offerings that join the numen and the human into a single unit (-*uq*-). Miners identify the *Supay* or *Tío* as the real owner of the ores they extract from the underground, so before they go to toil in their daily *Mit'a*, they come together in paired units (-*uq*-) and ask *Supay* or *Tío* for protection. The same character is known in Andean Peru by other names (*Tata Muqui*, *Muyki*, or *Chinchiliqu*) and is often represented by a large block of stone that may be given human proper names (*Wank'a*). They are carved with capricious

shapes, forming a mix of petrous human and animal sculptures (Figure 8.2).¹⁵

<insert Figure 8.2 about here>

Figure 8.2. *Tío* or *Supay*, placed 380 meters down in the Moroqoqala tin mine in Bolivia. Photo: Guillermo Delgado-P.

Each of these sculptures contains the stories of what is rightly called an “ecology of memory,” in this case rocks, boulders, tunnels, passages, and chutes that miners know how to read, retelling stories of interconnection between humans, nature, and detritus (Delgado-P. 1996). Fernando Santos-Granero reminds us about this kind of native practice: “*Topographic writing* constitutes a kind of protowriting system common to other Amerindian societies . . . an important means of preserving historic memory and consciousness in nonliterate societies” (Santos-Granero 2005, 175; emphasis mine).

If we scratch through the layers of mythical time, *Supay* is related to an ancient Andean god *Huari*, whose other name is *Qöqena*, a fertility god sculpted in the shape of Andean camelids who, confronted by the arrival of a new god in the sixteenth century, chose to hide the riches in the *Uk'u Pacha*, the World of Below, to survive and rule. *Supay* or *Tío* is therefore a guardian of the riches, a clear symbol

of fertility and reproduction, a phallic deity. The underground god mediates a reciprocal exchange of damage for restoration, by granting riches and being fed. Miners who enter the underworld before performing their daily extractive work stop at the priapic shrines to feed these figures with coca leaves, make them smoke tobacco, pepper them with sweets and coca, and sprinkle alcohol libations, bestowing this numen with *Q'aytu* or *Wira*—that is, vigor or energy, *K'allpa*. Often, alcohol is considered to be *Tío* or *Supay's* sperm that fertilizes the mine. As Haraway explains, “In the Anthropocene, the chthonic ones are active, too; all the action is not human, to say the least. And written into the rocks and the chemistry of the seas, the surging powers are dreadful. Double death is in love with haunted voids” (Haraway 2016, 295).

In the many versions of his multiple characterizations, *Supay* or *Tío* is depicted with an erect penis because he is ready to engage the *Awicha*, the Old Mountain, who is seen as a female symbol that gives birth to the riches of the mine, which are delivered to the miners. An open, craving mouth represents *Tío* or *Supay's* hunger and thirst, who smokes a cigar and expects to be fed as if were a child, an ancient deity in need of care. Humans take care of this numen, and the numen reciprocates. Although ignored by most Western technicians and geologists, *Supay* or *Tío* is placed on specific geological axes that sustain the mountain's tectonic layers or stratigraphy—a classic

example of traditional Andean geocological knowledge that allows miners to drill the rock and block cave the mines in search of ore deposits that *Supay* and *Awicha* will reveal. Ore deposits are called *sirqa*, meaning “vein,” and miners follow such veins to extract the rich ores. The mountain has its veins, and the riches circulate through its body, just as blood circulates in the human body (Figure 8.3). But *Supay* or *Awicha* can be tricky and often friskily hide the *sirqa*, reminding the miners to reciprocate by feeding the chthonic deity before *Supay* will reveal the *sirqa* to them.

<insert Figure 8.3 about here>

Figure 8.3. A tin miner shows a *sirqa* or “vein” of ore. Moroqoqala mine, Bolivia. Photo: Guillermo Delgado-P.

Supay or *Tío* is sculpted of clay and mineralized mud by native artists. As soon as it is completed, it is secretly placed at a spot notable for its strong geological axes. Usually the sculptor remains unknown to the rest of the mining squad. The artistic expression is numinous and mysterious, an anonymous sample of creativity rather than of alienation. Soon a *Yatiri*, a healer who understands the meaning of these underground deities, is invited to perform

appropriate rituals, sprinkling libations and feeding the telluric shrines, establishing an emotional fusion of mountain, llama, and human being, which has been described as relationality, sacionature, or the pluriverse.

When an underground miner suffers a tragic and violent death, it is said that *Supay* or *Tío* has taken away the deceased's *Ajayu*, or soul, to ensure that others do not face the same deadly risk, at least not on a daily basis. Often, failing to feed¹⁶ the shrine results in the demise of *Pachamama* herself, since her own *Ajayu* faces the menaces of ecocidal activities that are further endangered by *Supay* or *Tío*'s anger. The miners feed the shrines underground by offering not only food, coca leaves, confetti, tobacco and alcohol but also ore samples, called *T'urus*, which are considered to be "seeds" for rich ore sources. This act regenerates both the earth (*Pachamama*) and the benevolence of *Supay* or *Tío*. Once the *T'urus* are selected, they are deposited and exhibited at *Tío*'s feet as if such ore samples were gifts to the god. It is said that *Tío* or *Supay* reproduces them in the veins of the mine "like seeds" to be spread around the *Kay Pacha*, the world of the present. This illustrates the dynamics of environmental destruction and regeneration settled in the consciousness of underground miners. The *T'urus* or *Tinkas* symbolize the mutual exchange or reciprocity between humans, animals, nature, and nonhumans to assure the reproduction of ore deposits and humans. One cannot take out without

putting in. Daily libations ensure the regeneration of the *Pachamama*, and miners see themselves as being part of this numen rather than separate from it.

Pachaq Ajayun: The Spirit of the Nature-World

In what follows, I wish to offer one explanation for why the notion of full proletarianization of Andean miners, that is, the synchronized industrial timing and culture of Western characteristics, is not a fait accompli. Proletarianization, in the words of the Bolivian sociologist René Zavaleta Mercado (1986, 177), suggests the full substitution of one worldview by another. I contend, however, that an element of hylozoistic conventions has not disappeared completely from the cultural beliefs of these Andean underground miners. A large percentage of this rank and file originates in the intermontane Andean valleys, where the notion of land and territory as a living entity constitutes ancient heritage that capitalism has not been able to destroy by fully deontologizing it. Likewise, nature-time is slow and subsists in defiance of the synchronic, homogenizing, and artificial time of clocks we call “industrial time.” Rituals of regeneration subvert disciplinarian industrial time and speed; it is evident that these two concepts of time collide. Here, we must retrieve an important observation that pertains to nature-time in the relation of the words *Ayllu*, and “seed.” In the Aymara language, *Jilaña* means “to grow,” and its derivatives are: *Jilakata*, (authority) and *Jilata* (brother). *Hatha*,

on the other hand, is the Aymara word for “seed” (*Muju* in Quechua), the origin of life. The *Ayllu* (the community at large, including nature, *Akapacha*, *Sallqa*) expresses this mutual relationality; the *Ayllu* grows from a seed (called *Ispalla* or *Malki*), which, when treated with care, becomes a plant¹⁷ with an *Illa* (spirit, energy). The word *Malki* also means corpse and fetus. When a process of Western deontologization entered the Andes, what we have is a history of systematic disturbance rather than the previous sporadic form of disturbing the land. Since the era of colonial mining, Andean mountains have been worked and reworked by uprooted human communities. Disturbance shows layered stratigraphy, enough to lead to the archaeology of mining as part of that disturbance, intensified with colonial extractive mining and worsened by contemporary transnational industrial fracking. In the process, nature, humans, nonhumans and other-than-humans have embraced each other through death and dying and have been buried together ever since, rendering tangible and unfinished, the meaning of the terms “primitive accumulation” and “accumulation by dispossession” (Harvey 2004, 72–74) Rituals are enacted to heal human, animal, nature, and nonhuman (souls such as the *Ajayu*) together, since they do not exist separately from each other.

By adding their own contributions to the process of disturbance, other elements participate in intensifying this anthropogeny. Think of palynologists, who study pollen, both living and fossilized, telling us

about mercury remnants in today's dust of the *Sumaq Urqū*, the Potosi mines so well known to the world market of three centuries ago, as documented by Nicholas Robins (2011). A recent report written by essayist William Finnegan (2015, 56) about a new gold mining fever at La Rinconada, Peru, states that "Mercury poisoning can affect the central nervous system, causing tremors, excitability, insomnia, and a grim range of psychotic reactions. Crime and violence in La Rinconada [Mine] are often attributed, on no medical basis, to mercury poisoning."

Found in the vocabulary of underground mining taking place today, the Quechua term *Qūpaqira* ("liquid trash," from the Quechua root term *Qūpa*, "trash," Hispanicized as *copagira*) designates the contaminated water runoff that is leached through drilling that transforms it into chemical substances, releasing acidic water through long-term, continuous filtering. If this caustic liquid gets on the clothing and rubber boots worn by miners, they are eventually "eaten up," ripped apart, harming workers and the environment alike. This acidic water circulates in small brooks and ends up dyeing the underground with colorful edges: deep yellow, greenish, reddish, black, an obvious association with ores such as copper, antimony, zinc, tin, silver, iron, and so on. As anthropologist Anna L. Tsing (2015, 133) puts it, "capitalist commodities are removed from their life-worlds to serve as counters in the making of further investments." In the Andean case,

disruption and disturbance offer us a toxic colonial heritage to breathe, since mercury is still found in the dust of Potosi today. Tsing points out that

Disturbance brings us into heterogeneity, a key lens for landscapes. Disturbance creates patches, each shaped by diverse conjunctures. Conjunctures may be initiated by nonliving disturbance (e.g. floods and fires) or by living creatures' disturbances. As organisms make intergenerational living spaces, they redesign the environment. (Tsing 2015, 161)

Being that mining as extractive economy has redesigned such environment—foundational in the Andean horizons since pre-Columbian times—it is crucial to recall that Inkan mining restrained its metallurgic practices to the minimum, centered largely on gold and silver mining to make jewelry or tools rather than weapons. Even the pre-Columbian *Wayra*, which in Quechua means “wind,” the Andean small-scale artisanal smelting oven invented for metallurgic activity, was mostly used only sporadically and occasionally. The Inkan *Mit'a* system of corvée labor was taken up and adapted by the Spanish to satisfy their labor demands at Potosí and Huancavelica, where the main silver, gold, and mercury mines were located. Suddenly smelting,

using pre-Columbian paleotechnology *Wayra* ovens, expanded during colonial times, intensifying a process of disturbance. Gold (Au) was ransacked early on, but silver (Ag) became dominant for at least three centuries, until its collapse in the international market by the end of the nineteenth century.

The world system next assigned Bolivia the task of focus on newly discovered tin (Sn₂) deposits in the 1890s, the only sources found in the Americas. Tin became Bolivia's "wage," its main export, until the bust-and-boom cycle came to an end with the collapse of the market and the International Tin Council in 1986. Andean minerals, it can easily be said, contributed to the making of Europe, the classic example of the "accumulation by dispossession" process that David Harvey (2004, 72-74) talks about. When the international tin market collapsed due to the emergence of cheaper substitutes (freezing, plastics, aluminum, chemical and nuclear arms, and, nowadays, drones), miners returned en masse to the fields and were said to have been "relocated." By this time, the world's economic appetite was, graphically speaking, addicted to a new subproduct, which originated in the harvesting and processing of coca leaves (*Erythroxylum sp.*) into cocaine, a substance that provoked its own world economic disturbance and toxicity (see also the introduction to this volume).

Surprisingly, that same year, the "relocated" former "industrial" miners energized a process of re-peasantization in Bolivia, challenging

the evolutionistic view of societal change that Marx had portrayed as “progress,” passing from a nomadic to an agriculturalist to an industrial-urban stage (Delgado-P. 2018). Undoing Marx’s prediction, the miners returned to the land as peasants, answering to yet another demand in the world system by harvesting coca leaves, the raw material that is processed into a white dust that is eagerly consumed in affluent societies and often serves to add speed to the system. But it was uncontrollable speed in the form of *flash trading* that triggered the market crash of 2008. Some say that the consumption of cocaine was behind it. Charlie Chaplin had already portrayed this issue in his silent film *Modern Times* of 1936, the very first cinematic reference to cocaine consumption and criminalization in popular culture, which was inspired by another crash, the 1929 collapse of Wall Street.¹⁸

But once again, a pre-Columbian story about coca leaves, called *Mama Qüqa* by Andean indigenous peasants (dangerously misidentified as a “narcotic” or *aphrodisiacum* by Sigmund Freud in his *Über Coca* [1885]), represents it as being nurturant and healing to Andean natives but a scourge to those who abuse it. *Qüqa* has been central to Andean spiritual and ritual life since ancient times. The story says that *Qüqa* was an offering of such leaves, a *Q’intu*, made by *Mama Qüqa* herself to a lost herder who was dying of thirst and hunger. No wonder, then, that miners view *Qüqa* as a main offering to *Tío* or *Supay*. The leaves are spread out on a *Tari*, a square cloth

representing the four cardinal points, to be shared with the telluric numen as well as chewed by miners themselves to quench their thirst and hunger and, like the lost and hungry herder of the past, receive *K'ama*, reviving energy, from the *Wak'a* shrines. *Qüqa* becomes central to the life-affirming rituals of Andeans and Andean ecology. The physiological explanation is that *Qüqa* chewing adds extra oxygen to the red cells, which Andean people need in larger quantities to avoid pulmonary edema or hypoxia while living at such high altitudes—after all, we are talking about human settlements found between twelve and sixteenth thousand feet above sea level. The highest mining settlement I ever visited, the camps of Mina Alaska, Caracoles and Pakuni, is located at 17,000 feet above sea level. There, tungsten and antimony miners often say that they live inside the *Jach'a Achachila Illimani* Mount.

The coca leaves, as a symbol of green exuberance, warm valleys, and living off the land, are thus transferred to mining environments as part of the “industrial” practices of miners, who often talk about ores as having the qualities of tubers, *Llallawas*, *Iraqhas*, *Ch'uqi*. They appreciate these ores because of their beautiful shapes and talk about the taste, color, and sweetness of the rocks; some have told me that ores are like the large pool of potato varieties harvested in the Andes. Samples of these *T'urus* or *Tinkas* as the most beautifully capricious *Ispallas* often end up at the local church, where they

symbolize seeds (*Muju*) deposited to the feet of Christian saints, in the same way that *T'urus* are offered to *Supay* or *Tío*—to reproduce themselves (like seeds) with their theurgic assistance. As *Qüqa*, the *Ajayu*'s persistence parallels the indigenous demographic resilience that today has led to the population regaining the same size that Europeans found when their first contact with Andeans occurred five centuries ago. Despite the initial demographic decimation of indigenous peoples that followed, contact did not kill the *Ajayu*, which, as in the case of *Ispalla*, *Imillwawa*, *Phurixa Yuqalwawa*, *Malki*, survived and spread as rhizomes by way of feeding the shrines of Andean *Ayllus* that are like rhizomatic plants.

Tukunanpaq: Conclusion-The “Pachacene”

In the 1970s, when James Lovelock and Lynn Margulis (1973, 1) proposed the Gaia hypothesis,¹⁹ they argued that: “the Earth regulates itself, and responds to change, in the same sort of way that a single living organism does.” However, the Earth’s synergistic self-regulation does not necessarily “benefit” humans; we are just part of it, and not the most important one, although the most damaging. Contextualizing the discussion today, indigenous peoples have always offered a critique of Western rapacity by acknowledging socionature and proposing the pluriverse for a post-humanistic ethics. As one can see, Andean (or, for that matter, indigenous) synergistic ritual work faces

an uphill battle against the Anthropocene. Their ritual and sustained spiritual activity could also be named the Pachacene, just as some native peoples in the Maya area propose the Mayacene, both pointing to the renewed cycles of spiritual regeneration. This regeneration implies the restoration of the multiple forms of intricate life: nature, humans, and other-than-humans acknowledging each other as equal, possible “alter-Natives” to the Anthropocene.

As a step in this direction, a small but significant sustainable paleotechnique is being retrieved and restored, one that pays attention to ancient systems for regenerating nature, centered in the *Yana Allpa*. This is a proposal to revive the use of the ancient indigenous *terra preta* of the Amazon Basin, the main theme of the persistent work of Sach’amama, the project that Frédérique Apffel-Marglin directs with the collaboration of her Quechua counterparts in Peru. Their goal involves restoring this *Yana Allpa* and recreating

a special type of charcoal in it . . . called *biochar* . . . a porous and, in human terms, it never decomposes. . . . Its porosity and its durability meant that nutrients attach to it forever and are not washed away by the torrential Amazonian rains, thus explaining the truly astounding longevity of the productivity of these soils. (Tindall, Apffel-Marglin, and Shearer 2017, 79)

Old ceramic offerings found in the *Yana Allpa* assure the intricate regenerative process of this embodied *Pacha*.²⁰ This rediscovered paleotechnique challenges the self-inflicted damage caused by the conscious practice of cosmic destruction that is sponsored by the current notions of progress as ecocide and development as lethal extractivism and burning, which result in entropy, crises, and excess. In fact, plastic, the main oil derivative culprit of the Anthropocene, has infested land and oceans, provoking alarming eutrophication, endangering the very life of water and the creatures in it, since the resistance of plastic lasts virtually forever. Plastic is not biodegradable but disintegrates into microscopic detritus that ends up in ocean ecologies; it has even been found in the stomachs of marine animals that are eventually killed by the hypoxia it provokes.²¹ The stratum of plastic refuse in the Andes menaces llamas and alpacas (Geyer 2017), while birds and fish are endangered at Lake Titicaca by the same disturbance. The modern teleology behind notions of progress and development along with the risk and excess they entail, has reached a point of no return (Jenkins and Rondón 2015; Delgado-P. 2014, 125-36). Indeed, both alternate contributing in a process of conscious entropy.

Nevertheless, in dispersed nuclei of inhabitants such as the Andes or the Amazon, human, nonhuman, and other-than-human come

together, offering respite through the hope that such *Illa* dwelling in *Pacha* and in her *Yana Allpa*, mountains, *Jillaratanaka*, *Machulas*, and *Ajayu* continue to radiate healing sunrays of coexistence and regeneration. Mediated by rituals of cosmic restoration, it is above all this regenerative, cosmogenetic perspective that can be called an emergent anthropology beyond the human.

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Notes

¹ Frédérique Apffel-Marglin (2011: 30) offers a seminal contribution to this discussion when she states, “The category of hylozoism gathers a motley group of Renaissance movements, occult philosophies, and peasant practices. What they all have in common is a non-dualist view that matter could move itself, that humans were part of nature and part of the cosmos, and that God pervaded the material world as well as the souls of humans.” Eduardo Kohn (2013: esp. chap. 2) dwells extensively on this issue.

² On the pre-Columbian record, the archaeologist John R. Topic (2015) offers a reliable summary of this issue. Despite centuries, several features that Topic mentions can be detected in the contemporary *Wak’a*.

³ Claudette Kemper Columbus (2012) studies the diachronics of this key term of Andean cosmicentricity and hylozoism when she engages the work of Quechua anthropologist and novelist José María Arguedas and his philological analysis of the onomatopoeic Quechua term *Yllu* and *Ylla*. Marcia Stephenson (2010: 29–39) discusses and complements the deep and complex symbolism of *Illa* and *Enqa*.

⁴ Bruce Mannheim and Guillermo Salas Carreño (2015: 47–72) clarify the linguistic, historical, and ethnographic record on the concept of *Wak’a* and its relationality to the term “entification.” See also the work of Ricardo Valderrama and Carmen Escalante (1988).

⁵ On the issue of “knowledge accumulated for centuries by ethnic communities” and “economies of reciprocity,” see Zerda-Sarmiento and Forero-Pineda (2002: 99–114). See also Luis Morató Lara (2005: 193–213), a poet who dedicates a language of telluric healing in his Quechua hymn “*Kallawayá simi mancharisqata jamp’inapaq*.” The German anthropologist Ina Rösing (1995) compiled Aymara healing ceremonies and sacred recitations.

See also Apaza (1999: 118–53).

⁶ The *Amawt'a* Policarpo Flores Apaza, along with Fernando Montes, Elizabeth Andia, and Fernando Huanacuni, offers a detailed dialogic autoethnography on Aymara thought, hylozoism, and perspectivism (Apaza 1999).

⁷ The term has been written in three ways: *Wak'a*, *Huaca*, or *Guaca*. The first corresponds to the Aymara and Quechua pronunciation, which I use in this chapter. The latter two are Hispanicized versions.

⁸ Located at 18° 33'S 67° 05'W and south of the city of Oruro, Bolivia, its primary inflow is the Río Desaguadero, approximately three meters deep, with an extension of 1,000 sq. km. Not far from this lake, the Swiss-based multinational Glencore and the Bolivian company Sinchi Wayra operate mines that release heavy silver, zinc, and lead *copagira* (contaminated acidic leach) into the lake. As of May, 2019, Bolivian anthropologists Angela Lara D. and René Orellana M., confirmed the lake's partial resilience due to unprecedented rainfall.

⁹ I would like to acknowledge dialogues with Javier Sanjinés and Bruce Mannheim on issues pertaining the reontologization of nature (pers. comm., Ann Arbor, November 2014).

¹⁰ According to Javier Medina (2001: 138), *Pacha* is a central concept that summarizes Aymara and Quechua archetypical depth and complexity. The word derives from the phoneme *-pa* (which translates as “bi,” “two,” “duality,” “pair”) and *-cha* (meaning “strength,” “energy in movement”). Recently, the journalist Héctor Tobar (2014) wrote about the thirty-three copper miners who were trapped in the San José mine in the Atacama desert, near Coquimbo, Chile, in 2010. Tobar makes a clear reference to this aspect of nature as alive: “The mine is ‘weeping’ a lot, the men say to each other. ‘*La mina está llorando*

mucho'. . . . This thundering wail is not unusual, but its frequency is" (2014: 15).

¹¹ Apffel-Marglin (2011: 191) notes that "*Regeneration* alludes to a non-linear and more cyclical process in which elements circulate, generating, degenerating, and regenerating with the possibility not only of renewal, but also of loss and creation."

¹² The terms "healer," "sorcerer," or "shaman" homogenize the multiple curing specialties these men and women of the Andes perform. They are so specialized in the specific rituals they may convoke that, by homogenizing them, their particular forms of knowledge of the sacred are lost or distorted. The researcher Claudia Brosseder identified a list of about forty-four "Andean religious specialists." She affirms that, "The commemoration of the power of *huacas* lost something of their reach to organize a larger community; however they survived intact in small communities and among individuals" (2014: 265). Although her list is not exhaustive, a closer look at each would constitute a formidable study of healing-related bioknowledges. Contemporary ethnography must retrieve and respect such ritual specialties by collecting their proper names or titles. By identifying the lexemic roots of the titles *Yatiri*, *Ch'amaq"ani*, *Qulliris*, *Qapaqchaqëra*, *Layqas*, *Paqüs*, *Jamp'iris*, and *Ch'aqtiris*, their intimate meanings are revealed: for instance, *Yatiri* is associated with the term *Yachaq*, "to know"; *Chamaq"ani* means "to see in darkness"; in *Qapaqchaqëra*, the term *Q'apaq* (to not be confused with *Qapaq*) is associated with the act of burning or producing a purifying, cleansing smoke; *Jamp'i* means "to cure"; and so on.

¹³ The journalist Héctor Tobar mentions a current example in Chile: "One legend has it that the mountain itself is a woman, and in a sense 'you are

violating her every time you step inside her,' which explains why the mountain often tries to kill the men who have carved passageways from her stone body" (2014: 12). Since Chile is a conservative Catholic country, rituals of restoration among miners are now absent, but as we see, hylozoistic elements persist in the minds of Chilean miners.

¹⁴ A provocative and complementary reflection on this issue is offered by Javier Sanjinés (2009: 99–153).

¹⁵ In some northern Argentine Andean communities, stone heaps or *mojones* similar to *Apachetas* are considered the place where *diablos* reside. During Carnival time they are awoken and at the end of it, they are "returned" to the *mojones* "to rest" (Costa and Karasik 1996). Carmen Salazar Soler studies this issue in her book (2006), which is a summary of her twenty-year research on Julcani, a silver mine in an area of Peru where lead, gold, tungsten, cadmium, and zinc are also mined.

¹⁶ The anthropologist Gerardo Fernández Juárez (1993: 85–115) has written on the symbolism relevant to the *mesa*, the act of feeding the Andean gods and on the meaning it has for the Aymara. The term *mesa* is often mispronounced "misa" by Aymara speakers both entail the holy, *mesa* (an offering on a table) and *misa* (a Christian Mass).

¹⁷ The Argentinean ethnographer Rodolfo Kusch (1998: 295–366) noticed this association when he conducted fieldwork in Oruro, located on the Bolivian altiplano, from 1967 to the 1970s. The root words *Jila* and *Ylla* are also found in the term *Jilaratanaka*, "sacred mountains"; *Jilawarani*, "staff bearer" or "authority"; and *Jilaqallu*, the head representative of a Parciality, a moiety within the Ayllu. See also Ayllu Sartañäni (1992: 198).

¹⁸ See the editor's introduction concerning this issue. See also Gold 2018.

¹⁹ Lovelock however, rethought the issue and offered to “disenchant” his earlier proposal (see Lovelock [1988] 1995).

²⁰ The notion of biocultural regeneration is extensively discussed in Apffel-Marglin (2011: 167–204) and thoroughly explained in Tindall, Apffel-Marglin, and Shearer (2017: chaps. 2–5).

²¹ See also Schlossberg (2017): “Scientists estimate that five million to 13 million metric tons of plastic enter the ocean each year . . . New data suggests contamination in rivers and streams, as well as on land, is increasingly common, with most of the pollution in the form of microscopic pieces of synthetic fibers, largely from clothing.”