

At Home on the Mauna: Ecological Violence and Fantasies of Terra Nullius on Maunakea's Summit

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At Home on the Mauna: Ecological Violence and Fantasies of Terra Nullius on Maunakea's Summit

IT WAS THE MIDDLE OF SUMMER in Hawai'i, and snow was falling on the summit of Maunakea.¹ Screen grabs taken from webcams bolted to the exteriors of the powerful telescopes that stand sentinel up there showed the unseasonal blanket of white that drifted down from the sky on July 17, 2015.² One view, taken from the vantage of the Canada-France- Hawai'i telescope, appeared on the Instagram feed managed by @protectmaunakea with a hashtag that read #PoliahuProtectingMaunakea (Figure 1).³ The commenters agreed that the timing seemed purposeful, with one writing, "The Mauna is protecting itself—at least for a while." These reactions to the snowfall celebrated the fact that freezing conditions had temporarily halted activity and access to the construction site for the Thirty Meter Telescope (TMT), which protesters had been occupying for nearly four months.⁴

Attributing the snow to Poli'ahu, an important akua (god) of the cold who is known to reside at the top of Maunakea, many Kānaka Maoli recognized the event to be an exercise of her desire to protect the sacred mountain from desecration. The snow and reactions to it importantly signal Kanaka Maoli perspectives on the agential forces of the elements as not just atmosphere, precipitation, and temperature but as intention, ancestor, and spirit. In the context of the TMT controversy and Native Hawaiian resurgence more generally, animacy has emerged as a potent point of resistance that contends with Western colonialism's effects on land and knowledge formations. In contrast, much of Maunakea's development, from earliest Western contact to the present day, has been predicated on an idea of its emptiness. This article analyzes how elemental agency takes on particular importance on the summit because it is there that animacy most challenges how modern-day formations of terra nullius have been employed toward capitalist ends in the name of science. Such an argument is not limited, however, to Hawai'i: the superimposition of Western spatial imaginaries—particularly emptiness—upon Indigenous geographies has been used to justify a number of development projects, from uranium mines and the Nevada nuclear test sites, to the construction of oil pipelines across unceded Native territories.



protectmaunakea • Following

protectmaunakea In the height of summer snow is falling upon Mauna Kea, the road to access the Mauna is currently closed. Image by the Canada - France - Hawai'i Telescope. More images available at www.cfht.hawaii.edu

#hoailona
#PoliahuProtectingMaunakea
#snowinsummer
#kapahau
#notanitsscience
#areprocommunitydialog
#protectmaunakea
#kukiaimauna

FIGURE 1. Snowfall on the summit of Maunakea, July 17, 2015. Screen capture of Instagram post.

Speaking, then, to the fields of Indigenous studies, settler colonial studies, critical science studies, and geography, this article focuses on historical and contemporary narratives of human and nonhuman activity on Maunakea in order to contextualize the logics of scientific and capitalist development on the summit beyond present-day protectorship. Specifically, I pay attention to how its landscape has suffered a process of deanimation across the nineteenth and twentieth centuries, when discourses of absence have systematically produced the Mauna as a place without humans, spirituality, nation, or even atmosphere. I locate this process in three phases: first, in the nineteenth century, when the earliest Western visitors summited the mountain and communicated written accounts of its desolation to Western audiences; second, in the mid-twentieth century, when U.S. military infrastructures increased access to the mountain and consequently facilitated a boom in both leisure and scientific activity, particularly in the form of winter sports framed as tourist novelty and NASA space walk simulations; finally, in the present moment, when the astronomy community and other political and economic beneficiaries have cast Maunakea as a crucial point of access to the galaxy, using the summit as both a place for celestial observation and an ongoing earthly simulation for Mars and the moon. Each of these moments is a plot point on a timeline of cumulative efforts to frame

Maunakea as empty and thus available for occupation by enacting Indigenous erasure through the recasting of place itself.

Background

While snowfall is relatively unusual on Maunakea's summit in the summer months, the impressive altitude of the dormant volcano produces its characteristically cold and dry conditions year-round. At 32,000 feet from ocean floor to summit, Maunakea is the tallest mountain on the planet, with an altitude of 13,796 feet from sea level, rising above 40 percent of the earth's atmosphere. Since the 1967 establishment of the Mauna Kea Conservation District (now known as the Mauna Kea Science Reserve), it has also become one of the world's premier sites for astronomy.⁵ With low light pollution, low humidity, and high atmospheric stability, the mountain provides ideal conditions for celestial observation.⁶ Today there are thirteen telescopes operating on Maunakea, which are collaboratively funded by government agencies from eleven different nations.⁷ The land upon which they sit is leased by the University of Hawai'i (UH) from Hawai'i's Board of Land and Natural Resources. In 2011 UH approved a new sublease for the construction of TMT, slated to become the most powerful telescope on the planet. Named for the diameter of its mirror lens, TMT is a giant among its peers, to be housed by a cycloptic dome standing eighteen stories tall at a cost of \$1.4 billion.⁸ While Hawai'i residents had been protesting development activities on the mountain since at least the 1960s, resistance to the building of TMT garnered international attention in October 2014, when the telescope's groundbreaking ceremony was halted, surrounded by protectors bearing protest signs, chanting, and waving Hawaiian flags.⁹ Since then, the construction project has languished while courts examine and reexamine master leases, subleases, environmental impact statements, and testimonies in a series of contested case hearings.¹⁰ At the heart of the argument are several core issues: the construction of TMT would contribute to significant negative environmental impacts that go against stewardship agreements held by UH, the lessor; industrial development of the summit has already desecrated, and will continue to desecrate, one of Hawai'i's most sacred sites; the ongoing mismanagement of the Mauna Kea Science Reserve is but another act of the ongoing violence against Kanaka Maoli and the pae 'āina (archipelago) at the hands of the settler state.¹¹

To date, there have been several excellent analyses published on the spiritual importance of Maunakea, also known as Mauna a Wākea, and the cultural significance of the TMT controversy for larger efforts toward Indigenous sovereignty and self-determination.¹² Here I build upon and extend

these critiques by focusing on specific elemental discourses that have made possible TMT's continued development in the name of science. Characterizations of atmosphere and environment have privileged the occupation of the mountain by certain bodies and for certain purposes, effectively dismissing the deep histories of Indigenous knowledge and presence at the summit. Rhetorics of absence thereby operate as a function of settler colonialism rather than its product: in the state's refusal to recognize ancient and ongoing Indigenous presence on Maunakea, Kānaka Maoli are forced to make themselves "visible" and thus vulnerable to the dispossessive violence of U.S. state power. Within the current context of Maunakea's ongoing development with TMT, it is possible to locate the politics of recognition that Glen Coulthard articulates within liberal settler states that seek ways to accommodate Native resistance without dismantling colonial structures themselves.¹³ In this case, erasure extends beyond human bodies and is pushed into the cosmological networks that connect Native Hawaiians to the very elements of place itself.

Indigenous Animacy at the Summit

For many visitors to Hawai'i who have come to know the islands for their sunshine and beaches, Maunakea offers a stark and often overlooked geographic contrast. Since the 1900s, when American capitalism firmed its grip on the archipelago, Hawai'i has been subject to environmental idealizations that have sustained the agricultural and tourist sectors of its economy: its temperate climate permits a year-round growing season for commodity crops like pineapple and sugar and has created a fantasy land for honeymooners. Indeed, these two economies form a symbiotic relationship through advertising and packaging that sell the idea of a "tropical paradise."¹⁴ Together, interlocking tropes stand in contrast to representations of Maunakea as empty or desolate. First, Hawai'i is a place of natural abundance: lush, sweet, and life giving. Second, Hawai'i is a place of leisure: romantic, languid, and pleasure giving.¹⁵ In addition to the colonial utility of such notions of paradise or even an earthly Eden, which worked to both racialize Native Hawaiians and empower haole, these characterizations produced a vision of Hawai'i relegated to shorelines and lush valleys, where "natural" elements assert themselves in the service of aesthetic beauty and sensory pleasure.¹⁶ And just as Hawai'i has been relegated to its sunny shores, so have Native Hawaiians: as beach boys and girls, resort performers, and agricultural laborers.

In contrast, Western characterizations of Maunakea describe an inverse landscape. From early encounters to present-day developers, the summit

has been rendered a profoundly empty space: a desolate hinterland not quite of Hawai'i. Indeed, the uninhabitability of the summit for humans, nonhuman animals, and plants has long been a common refrain in descriptions of the landscape. Take, for example, a 2013 astronomy textbook published by Springer, which captions a photograph of Maunakea's summit by stating, "Although Hawaii has a reputation as a tropical paradise, the mountain of Maunakea is a desolate volcanic site. This view of Maunakea can easily be mistaken for a picture of the surface of a lifeless Mars."¹⁷ Indeed, in the early 1970s, when Maunakea's development was still in its infancy, scientists deployed this rhetoric in order to confirm the site's ideal conditions for stargazing. "Mauna Kea is an extinct volcano. . . . [A]bove 3000m there is little vegetation and the summit area is a barren alpine desert," went one 1973 evaluation published in the journal of the Astronomical Society of the Pacific. "The low population density [of Hawai'i] together with the high elevation effectively insulate Mauna Kea from most sources of atmospheric, electronic, and light pollution."¹⁸ While such observations are meant to simply act as notations, it is nevertheless arresting to see how observatory construction has been predicated upon ideas and measurements of absence: of geologic activity, of bodies, of humidity, and of light. Descriptions like these reify a particular notion of terra nullius that has been reformulated in order to legitimize its use as one of the world's premier sites for modern astronomy. Mo'olelo (stories, histories, literatures) about the mountain, however, refute claims of its desolation: not only are the elements on the summit animate, but the agency of those elements exceeds the space of the mountain itself and extends across the pae 'āina (archipelago).

Life at the Summit

In ancient times only a portion of the island chain's inhabitants—those standing in view of the mountains on Hawai'i Island—would have seen the white caps, and even fewer would have come into contact with the frozen water on the summit. Traditionally, spiritual leaders and royal elites used these mountaintops as highly restricted sacred spaces for healing, worship, and burials. This historic usage is reflected in archaeological records that have identified at least 263 historic and culturally significant properties on Maunakea.¹⁹ Understandings of summit conditions nevertheless permeated Hawaiian consciousness as a central point for Kānaka Maoli origin stories, as the piko (navel) of the universe and a dwelling place of important ancestors and akua.²⁰ Mo'olelo of akua and the spaces they inhabited circulated widely throughout the islands, acting as a framework for cultural memory and place making.²¹ Prominently located within this framework is Poli'ahu, a god

known to reside on the snowy summit of Maunakea. She figures centrally in the well-known “Ka Mo’olelo o Laieikawai” (The story of Laieikawai), which S. N. Haleole initially recorded in his journal in 1844 and later published as a Hawaiian-language serial in *Nupepa Kuokoa* between 1862 and 1863.²² In one particular version of the mo’olelo (I use Martha Beckwith’s here, though there are several), Aiwohikupua, a young chief from Kaua’i, is traveling between the islands when he falls in love with a chief from Maui, Hinaikamalama, whom he encounters surfing waves at Puhele in Hana. Later she falls in love with him too when he bests her at a game of kōnane (Hawaiian checkers). Quickly they are betrothed, and he promises to return to her after a journey to Hawai’i Island. However, upon arriving there he meets and falls in love with Poli’ahu, who has come down from her abode on the mountain and appears to him as a chief. Aiwohikupua regrets his recent commitment and “claps his hand before his god” to relieve himself of it. Soon he and Poli’ahu are happily wed, and they return to Kaua’i in celebration. The jilted Hinaikamalama, not to be forgotten, hears of what has happened, arrives from Maui to assert her prior claim, and compels Aiwohikupua to renounce his union to Poli’ahu.

That night, as the reunited Aiwohikupua and Hinaikamalama lie in each other’s arms, a biting cold settles over them. Poli’ahu has draped her snow mantle over them to make her displeasure felt. Hinaikamalama responds with a chant that asks the reason for this “very strange cold.” “Perhaps,” she wonders, “sin dwells within the house” (Ua hewa ka paha loko o ka noho hale).²³ It is important to note here that Beckwith’s translation, offered in her book side by side with the *Nupepa Kuokoa* text, makes choices that privilege certain interpretations that flatten or abridge the original meaning (e.g., in this line Beckwith translated the Hawaiian word *hewa* as “sin” rather than using a less doctrinal rendering such as “wrongdoing” or “error”). The lovers embrace tighter and are once again assaulted by freezing temperatures. Hinaikamalama then knows where the cold is coming from, chanting, “It is cold, cold as the snow on the mountain top. . . . [I]t presses upon my heart.”²⁴ Alternating burning heat with freezing cold, Poli’ahu punishes the couple until they relent and separate.²⁵ Poli’ahu’s command of the heat and the cold thus emplaces her at the summit of Maunakea, where the characteristics of the mountain blend with her appearance; the white mantle of snow she famously wears either travels with her or returns to the mountain when she casts it off. In another version of “Ka Mo’olelo o Lā’ieikawai,” the wedding party is overcome with coldness after Poli’ahu wraps her betrothed in her mantle to signify their union. After the procession is, essentially, frozen—“aole e hiki aku lakou no ke anu”—she sets aside her cape, and the snow is returned once again to its usual place on Maunakea.²⁶ Newspaper

readers of the mid-nineteenth century would have appreciated multiple layers of meaning encoded within this story, including lessons about the natural world, social and ancestral relations, and history.²⁷

In this way, Kanaka Maoli came to know the conditions of Maunakea intimately, even if they were not able to clear the summit. Just as Poli'ahu is not confined to her snowy realm, Kānaka Maoli need not go to her realm to comprehend the ecological and spiritual importance of Maunakea. The altitude and the ice are thus embedded within a complex genealogy that connects akua, humans, and nature under a single worldview. Beckwith explains through the example of Laieikawai that for Hawaiians

the supernatural blends into the natural in exactly the same way as to the Polynesian mind gods relate themselves to men, facts about one being regarded as, even though removed to the heavens, quite as objective as those which belong to the other, and being employed to explain social customs and physical appearances in actual experience. In the light of such story-telling even the Polynesian creation myth may become a literal genealogy, and the dividing line between folklore and traditional history, a mere shift of attention and no actual change in the conception itself of the nature of the material universe and the relations between gods and men.²⁸

References to Poli'ahu today, through the retelling of mo'olelo, to the affirmations of her animacy through snowfalls that halt construction crews, reveal that Maunakea embodies a living history through its elemental forms and vibrant and peopled mo'olelo.²⁹ This presence is further explained by the Hawaiian concept of kino lau, "a literature of body forms that moves stealthily and metamorphically within the Western preoccupation with the human and the animal (and plant as well as land, sea, and sky forms)."³⁰ This concept, elaborated by Jonathan Goldberg-Hiller and Noenoe K. Silva, is central to understanding how interconnectedness between human, nonhuman, and spiritual beings creates an epistemological fabric by which Hawaiians weave ideas of belonging within their ancestral homeland. In turn, Western characterizations of Maunakea as a lifeless void produce violent erasure by circulating narratives of emptiness at the summit rather than recognizing the beings that have occupied Maunakea since time immemorial, enacting wants, needs, desires, and displeasure. Today, Native recognition and celebration of the cultural significance of kino lau and spiritual presence on Maunakea present challenges to the settler state's ongoing development and desecration of the summit through continued insistence of cosmological relations to spiritual beings, plants, and elemental land forms.

Depeopling and Then Repopulating the Mauna

By the nineteenth century, barriers to summit access instituted in ancient Hawai'i began to change when curious foreign visitors to the islands employed Native guides to accompany their treks to the summit.³¹ Authors of travelogues unsurprisingly depicted Kanaka Maoli as being averse to or uncomfortable in the cold. Describing one such expedition in 1841, American Charles Wilkes describes his party's descent from Maunakea as a hurried affair. "Every one [sic] was engaged in taking down and packing up the instruments and equipage," he wrote, "loaded with which the native laborer scampered off. Some of them, indeed, were unable to bear the cold any longer, and hoping to obtain loads afterwards, withdrew without burdens."³² The idea that "natives" would not go to Maunakea was established as early as 1823, when William Ellis, a British missionary, reported that "they [Hawaiians] have numerous fabulous tales relative to its being the abode of the gods, and none ever approach its summit—as, they say, some who have gone there have been turned to stone. We do not know that any have ever been frozen to death; but neither Mr. Goodrich, nor Dr. Blatchely and his companion, could persuade the natives, whom they engaged as guides up the side of the mountain, to go near its summit."³³ Framing spiritual belief as superstition, Ellis offers one of several explanations for why Hawaiians should not, or could not, claim the summit as their own: they simply refused to occupy it. Echoing similar refrains from the continental United States that based Indigenous claims upon the literal counting of visible bodies (and ignoring the conditions under which Native people are subjected to violent processes of erasure), he instead suggests that only monetary compensation would induce guides to go with them.³⁴

In 1825, not two years after Ellis's travelogue, another account produced by James Macrae more deeply entrenched these same ideas about whether or not Indigenous bodies belonged on Maunakea, even after locating evidence of Native Hawaiian human activity near the summit. After declaring the summit "too cold for natives" and then paradoxically narrating severe bouts of altitude sickness experienced by the haole (white) contingent of their party, Macrae describes a discovery made at the peak (which is worth quoting at length here):

On 26th August 1823 [Goodrich] reached the summit of Mauna Kea. This is the first recorded instance of the ascent of this mountain, although Mr. Goodrich mentions that on reaching the top of one of the terminal cones that encircle the main plateau of Mauna Kea, he discovered a heap of stones, probably erected from some former visitor. Who this former visitor was is unknown, but he was probably one of the white men that in the early years of the nineteenth century got a living by shooting wild bullocks. . . . [I]t is very unlikely

that any native had reached the top of the terminal cones on the summit, owing to being unprovided with warm clothing to resist the great cold and also to the fact that the natives had a superstitious dread of the mountain spirits or gods.³⁵

The passage, added as a footnote to his lengthy journal entry, marks an important pivot in Western perspectives about life and liveliness at the summit. First, it memorializes Western conquest of the mountain's temperatures and altitudes and establishes an originary presence of white bodies at the summit. The intentionality of establishing such a presence is underlined by Macrae's interpretation of the ahu (a shrine) as a simple cairn found at the highest point. Dismissing a logical presumption that the stones signal a longtime Native Hawaiian presence, he instead attributes them to a vague notion of nineteenth-century haole hunters who wouldn't have any reason or need to venture that high. A commitment to white presence on Maunakea thus makes it easy to ignore the struggles of all bodies to adjust to the summit and instead focuses on only Native shortcomings (despite the fact that on the day of Macrae's summiting, the infamous Goodrich was "laid up with mountain sickness").³⁶

While early nineteenth-century visitors to Maunakea were quick to imagine only the presence of white male bodies on the mountain's summit, later excursions seemed to acknowledge evidence of Kānaka Maoli activities, though these activities were always placed in a distant and forgotten past. A report published in the *Pacific Commercial Advertiser* on October 23, 1862, described how Dr. William Hillebrand, physician to the Hawaiian royal family, located Native Hawaiian artifacts during his summit of Maunakea that same year:

About 1500 feet below the top, on a side of the mountain seldom visited by either foreigners or natives, they discovered an ancient manufactory of stone implements. It consists of a cave, in front of which was a pile of stone chips 25 feet high, which had evidently accumulated from the manufacture of stone adzes, maika balls, &c. &c., which lay scattered about in an unfinished state. In front of the cave was found a wooden idol, in good preservation, which with the pedestal attached to it, measures nearly five feet high. . . . Bones of pigs and dogs, kapa, pieces of cocoa-nut shells, fragments of hewn wooden implements, sea shells, and many other curiosities were also found.³⁷

After plundering the site and returning to Waimea with as much "as they could carry," Hillebrand's party reported that the quarry—rich as it was with many signs of everyday living, which suggest a greater significance than their title implies—was unknown to any of the Kanaka Maoli who they consulted: "On inquiry among them, no person appears to have heard of the existence of the manufactory,—even the oldest natives were ignorant of it."³⁸ While it is impossible to know the dynamics at play by which the residents

of Waimea claimed to not know about the adze quarry, it is entirely possible that nondisclosure was chosen as a response to a group of outsiders or simply that Hillebrand spoke to the wrong interlocutors. What is clear is that the group of hikers sought validation for their decision to rob the quarry site by reporting that no person claimed the items or the space. In doing so, we might read Audra Simpson's theory of ethnographic refusal into both a lack of prior knowledge, revealed to Hillebrand by those he queried, and Hillebrand's refusal to see any connection between human-made objects and the presence of Indigenous humans. As Simpson explains, "Historical perceptibility is used, and is still used, to *claim*, to define capacities for self-rule, to apportion social and political possibilities, to, in effect, empower and disempower indigenous peoples in the present. Such categorical forms of recognition and mis-recognition are indebted to deep philosophical histories of seeing and knowing."³⁹ If claiming summit space required apparent emptiness, then early encounters on Maunakea sought to validate a view of the mountain as one without spirits, people, or knowledge itself. This required Western visitors either to ignore evidence of Kanaka activity or to instead explain that evidence away by improbable interpretations of non-Native presence. This refusal to acknowledge Hawaiian emplacement on Maunakea, begun in the nineteenth century, would go on to underpin the logics of Maunakea's development as a premier place of and for Western science, military, and leisure that emerged potently in the second half of the twentieth.

Hawai'i / Not Hawai'i

Astronomy, military, and tourist activity on Maunakea cohered in the mid-twentieth century with the construction of summit access roads meant to facilitate military transit across Hawai'i Island. The Saddle Road, which connects Hilo to Waimea (and then on to Kailua-Kona), was laid in 1943 in order to service the newly established Pōhakuloa Training Area, which continues to be the largest United States Department of Defense training area in the Pacific. In the 1960s, because of interest from the University of Arizona's Lunar and Planetary Laboratory, improvements to the Saddle Road began in earnest, and the newly added Mauna Kea Summit Access Road was dedicated in 1964.⁴⁰ This road offered unprecedented access for those who would capitalize on Maunakea's distinct atmospheric and topographic attributes. In addition to telescope construction, beginning with an eighty-eight-inch observatory for UH, proposed in 1965 and dedicated in 1970, NASA and civilian usage of the slopes flourished. The key activities that emerged were space mission training and skiing, each of which explicitly served to recast Maunakea as a place both not for Hawaiians and, perhaps, not even

of Hawai'i itself. Here I examine these activities as two overlapping articulations of the summit as an exceptional and masculinized space for Western desire that emerged in the 1960s and 1970s and, later, solidified in the 1990s.

Maunakea's use in the midcentury as both outerspace and playspace mirrors Hawai'i's broader militouristic economy, in which tourism at once obscures and scaffolds the American military occupation of the Pacific. As Vernadette Gonzalez explains in *Securing Paradise*, the military man's "masculinized mobilities describe the privileges of imperial governance and desire that positioned [locals] as his de facto hosts, playing out a familiar and enduring relationship of accommodation."⁴¹ Projections of American masculinity, epitomized by the Apollo astronaut and the extreme sports daredevil, took on an expression distinct from the "paradise" narratives that typify Pacific militourism (i.e., helicopter tours and the development of scenic highways).⁴² Namely, the environmental incongruity of summit and shore stoked fantasies of Maunakea as a space beyond Hawai'i.

An analogous relationship between Hawai'i and the moon/Mars intensified between 1965 and 1972, when NASA deployed Apollo Mission astronauts across multiple sites on Hawai'i Island, including areas on Kilauea, Mauna Loa, and Maunakea.⁴³ Photos taken during these years, which resurfaced from the NASA archives in 2014 as part of an effort to celebrate Hawai'i Island's contribution to the American Space Program, show Apollo 14 and 15 astronauts in sunglasses and long-sleeved shirts bumping across lava fields in a makeshift "lunar roving vehicle" from a Jeep and wearing large white space packs and chest-mounted cameras while "collecting" soil samples from a "lunar-like" landscape. While simulation was not relegated solely to Maunakea, its summit represented a key site on the moon, the Taurus-Littrow Valley, where Apollo 17 astronauts would land. Project Apollo manager Donald Beattie later recalled, "This Hawai'i simulation was about as good as we could get in obtaining a high fidelity rehearsal before the real mission was underway."⁴⁴ A lava field located at 11,500 feet became an especially popular area for training and remains so to this day. For half a century now it has been known as Apollo Valley (Figure 2).

At the same time that astronauts "explored" Maunakea's "lunar landscape," military veteran Richard Tillson led efforts to map out the summit's potential ski runs by spending two months camping on the slopes while conducting an independent survey. As he saw it, the newly constructed access road also opened up promising avenues for tourism. In an interview with Tillson for *Ski* magazine, for example, he explained that if one added the number of residents in Hawai'i who already knew how to ski to "the number of tourists who would love to say they have skied in Hawaii and there is a good potential for ski development."⁴⁵ Over the next twenty years,



FIGURE 2. Apollo Valley, Hawai'i Island, December 1970. NASA Photo Archives via *Big Island Now*, May 9, 2014.

downhill skiers populated Maunakea's slopes through regularly organized meets and competitions comprised of residents and visitors who characterized their sport as a natural extension of Hawai'i's ocean sports, which had been recently appropriated on the American continent.⁴⁶ To that end, a featurette in the February 1992 issue of *Skiing* magazine, entitled "Hawaii Not?," reported that "Hawaii has a long tradition of reveling in speed, spray, and smiles. After all, surfing was invented there, as was an early form of the water slide. So it's only natural that, despite the tropical climate, Hawaiians would take to snow skiing in whatever way they could." The text is accompanied by a photograph of two men in snow suits whizzing past one of the Keck Observatories, which the caption jokingly calls "the world's largest high-altitude macadamia nut storage facility" (Figure 3).⁴⁷ Although written in jest, the caption highlights how images and discourse are layered to produce an idea of "Mauna Kea" as the simultaneously natural and exceptional backdrop to a host of exercises of American masculinity—military, sport, and astronautic—filling up raw space.



FIGURE 3. Maunakea skiing photo detail from Josh Lerman, “Hawaii Not?,” *Skiing*, February 1990, 30.

Terra Incognita, Terra Nullius

Across the course of its development, the summit of Maunakea has been systematically recast as a space both otherworldly and anational through its utilization for scientific research. This reflects discursive practices within the science community at large, where research sites like Maunakea often become valued as places that transcend international politics in the name of the greater good of humanity: belonging to no one in particular and everyone in general.⁴⁸ It is here that Western perceptions of climate and landscape have historically been mobilized to presume availability via the appearance of emptiness. Affinities (as well as distinctions) might be drawn here to the case of Antarctica, an international research site born from frontier narratives of colonial settlement as a terra incognita appendage to Australia

in the early twentieth century.⁴⁹ Of course, several key points distinguish Maunakea from Antarctica, including how claims to occupation are legitimized, geospatial scale, and material culture evidence of human presence. Even so, for both sites, a presumed lack of human habitation has emboldened international claims to “ice deserts” that can be amicably shared among those who benefit from the material and knowledge resources of those spaces, thereby enacting colonialism in fundamental ways. Even so, Antarctic international society envisions itself as exempt from postcolonial critique, “in large part because of an absence of an indigenous human population and an absence of race-based violence.”⁵⁰ The equivalences between people and possession, drawn starkly in the Antarctic context, can then be easily superimposed onto sites like Maunakea, where scientific research, landscape, and climate similarly intersect if and when Native prior claims are ignored.

The practice “moon walks” of the Apollo missions pantomimed twentieth-century American manifest destiny, which drove astronauts beyond earth toward the “final frontier.” Astrophysicist Martin Elvis likened the moon missions to the settlement of the American West, posing a metaphor for explaining why the United States should maintain a robust space program into the twenty-first century: “Imagine that the United States had ignored the territories acquired in the Louisiana Purchase. At first, this was a hostile territory and much of it was considered a desert. Ignoring the American West might have left the Native Americans better off, but the United States would be radically reduced. Other European nations were then actively exploring the territory, as other nations are today exploring space. In the hostile territory of space there is, fortunately, no indigenous population to abuse, and we already know that the resources are there.”⁵¹ In a clear parallel to the violence of elimination perpetuated against Native Americans throughout the nineteenth century, Elvis envisions space as an uninhabited resource primed for exploitation—if not by the United States, then by another global power. It is, he explains, “time to unleash capitalism in space.”⁵² With Maunakea operating as an earthly simulacrum of outer space, such desires for capitalism were extended to the summit space through the TMT and UH’s promises that development of the mountain will attract revenue, employment, and prestige for Hawai‘i’s people (though, as many have shown, these alleged benefits are limited in scope when compared to institutional and corporate benefits).⁵³

In both cases, scientific research is mobilized as a rationale for more permanent occupation. Klaus Dodds and Christy Collis argue, in the case of Antarctica, that techniques of measurement, surveying, taxonomizing, and observation are hallmarks of scientific research and are not without

colonial politics, even if those politics are not enacted in direct relation to human subjects. “Viewed through a postcolonial perspective,” they write, “this ostensibly neutral scientific engagement becomes more complex, and the articulation of scientific practice and colonial geopolitics becomes clear.”⁵⁴ (Indeed, it is possible to find echoes of colonial impulses to measure in one of the earliest Western accounts referenced earlier when the author laments, “We could not but regret that we had no barometer, or other means of estimating the actual elevation of this mountain.”)⁵⁵ Within the formulation that Maunakea’s environmental conditions are ideal for scientific observation and data collection, that idealism can then be interpreted as one that supersedes Native claims, that what Maunakea can provide humanity in general absolves developers and the scientific community from obligations to respect sacredness and environmental conservation needs.

This orientation toward the summit of Maunakea serves to put its environment in the employ of humankind’s greater good by abstracting its emplacement within Hawai’i and Native Hawaiian culture. Such an attitude dovetails with a more general late twentieth-century internationalization of science, which seeks to work in a vacuum of geopolitical conflicts toward the advancement of global research and has been embedded within the trajectory of the summit’s development, particularly in regard to the telescopes that currently litter the Mauna Kea Science Reserve. A 2013 paper in promotion of TMT boasted the level of international cooperation that the project would engender, stating that “with the partnership of the astronomy communities, and their sponsors, of India, Canada, China, Japan, and the USA, TMT represents a scale of global collaboration well beyond the previous . . . projects in Chile and Hawaii.”⁵⁶ These articulations of the benefits of international cooperation underscore the inherent muddiness of imagining who the “greater good” serves and how that shifts between Hawaiian and global contexts. This reliance on “greater good” narratives over Indigenous self-determination is further reflected in statements made, too, by Native Hawaiian representatives, who must appeal to notions of the greater good to advocate for environmental protection. In the wake of the contested hearing for the TMT’s sublease from UH, Office of Hawaiian Affairs (OHA) trustee Rowena Akaka remarked, “The University has taken license to do many, many things that are way out of their jurisdiction. . . . [T]his isn’t just the mountain, it’s the oceans, and it’s everything. Ceded lands belong to all of our people, and we have to be the fiduciaries.”⁵⁷ In another instance, former OHA trustee Don Aweau has explained, “The ‘āina [including Maunakea’s summit] should be preserved in perpetuity as a public benefit, not only for Hawaiians like myself, but as a public benefit for all.”⁵⁸ For those concerned with the impact of the TMT upon Maunakea’s fragile

ecosystems, considerations of the greater good—for knowledge of the universe, as well as for the protection of endangered flora and fauna—hinge upon appeals to ideas of benevolence rather than obligations toward Native communities.

Conclusion

Stakeholders in the Maunakea science community have, in the past few years, come up against insistent reminders that the summit's emptiness is a historical fiction. Dismissals of Maunakea's significance for Kanaka Maoli, whether as a site of worship for ali'i (royalty) and kahuna (spiritual leaders) or a dwelling place for akua, remain deeply implicated in a commitment to imagining the summit as an empty space without Native peoples or Native worlds to contend with. The violence of such counternarratives about Maunakea and the beings who do or do not occupy the summit surfaces clearly in discussions of sacredness by Kanaka Maoli cultural practitioners, who endeavor to explain the mauna's importance from every conceivable vantage point, from ceremonial rights to natural resources. Outstanding in a cacophony of voices protecting Maunakea from development is the mana'o (wisdom) of Pua Kanaka'ole Kanahele, who explained in an interview with Iokepa Casumbal-Salazar that

the tops of the mountain have never belonged to man. In the mind of intelligent Hawaiians, it's never belonged to man. . . . [T]hat's the different hierarchy in sacredness. So there's that sacredness that's totally natural, that totally belongs to the elements and our elemental deities. We have nothing to do with shaping it. And we have nothing to do with it being a benefit to us. . . . We have nothing to do with the snow that falls up there and the water that it gathers. So, it's out of man's realm. That's the whole idea to me of the sacredness of Mauna Kea.⁵⁹

Indeed, beyond the spiritual significance of the summit, researchers have today come to grasp what Native Hawaiians have long articulated through mo'olelo: Maunakea is full of life forces, even if they are not immediately observable. As journalist Jamie Winpenny explained in the *Big Island Weekly*: "Despite its severe, arid environment, Mauna Kea's summit is a rich ecological system. It is home to numerous, uniquely adapted native plants and creatures that include moths, caterpillars, spiders, and the tiny, predatory wekiu insect, which can survive temperatures far below freezing. The habitats in which these species thrive are fragile and delicate in the extreme. A single human footfall can cause irreparable harm. The construction of the TMT will irrefutably accelerate the loss of species and habitats that are even now on the brink of extinction."⁶⁰ Thus, TMT development has the potential to

fully realize a colonial project that has been in motion since the early 1800s, when Westerners first set foot on the summit: a final blow to the “hidden,” nonhuman animacies of Maunakea. In his essay on gender, sexuality, and the settler-colonial project, Scott Lauria Morgensen describes an image from a portrait series by Taskigi/Diné artist Hulleah J. Tsinhnahjinnie that shows a photograph of a young Native child collaged over an image of an astronaut walking on the moon.⁶¹ The portrait, Morgensen explains, suggests “juxtapositions that interrupt any narrative of the moon as *terra nullius*.”⁶² His analysis powerfully resonates with the assessment that this article outlines: not only that the ongoing presence of Native bodies and epistemologies refutes an imagined emptiness of the moon or any of its earthly analogues but also that ideas of *terra nullius* continue to be perpetuated in spaces deemed unoccupied and available for settlement and/or development. As Morgensen eloquently shows in his reading of Tsinhnahjinnie’s portrait, “The ontology of settler colonialism has been premised on its own boundlessness: always capable of projecting another horizon over which it might establish and incorporate a newest frontier.”⁶³ Over the course of more than two centuries, it is possible to track discursive strategies to empty Maunakea, thereby setting the preconditions by which the possibilities of the TMT can be imagined.

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Notes

1. In this article I have chosen to spell Maunakea as a single word that denotes the mountain as a proper noun, since in the Hawaiian language, Mauna Kea could refer to any “white mountain.”
2. Image from the UKIRT webcam, owned by the University of Arizona, published in Colin M. Stewart, “Rare July Snowfall Blankets Mauna Kea; Protesters Say It’s a Sign,” *Hawaii Tribune-Herald*, July 18, 2015, <http://hawaii.tribune-herald.com/news/local-news/rare-july-snowfall-blankets-mauna-kea-protesters-say-it-s-sign>.
3. protectmaunakea, Instagram post, July 17, 2015, <https://Instagram.com/p/5PyWQIPwJB/>.
4. Stewart, “Rare July Snowfall.”
5. John Stickler, “Thirty Meter Telescope Could Boost Hawaii Island’s

Economy,” *Hawaii Business*, September 2013, <http://www.hawaiibusiness.com/thirty-meter-telescope-could-boost-hawaii-islands-economy/>.

6. “About Mauna Kea Observatories,” University of Hawai‘i Institute for Astronomy, https://www.ifa.hawaii.edu/mko/about_maunakea.shtml.

7. For a complete list of telescopes, including mirror size and national and institutional affiliation, see “Mauna Kea Telescopes,” University of Hawai‘i Institute for Astronomy website, https://www.ifa.hawaii.edu/mko/telescope_table.shtml.

8. Dennis Overbye, “Under Hawai‘i’s Starriest Skies, a Fight over Sacred Ground,” *New York Times*, October 3, 2016, https://www.nytimes.com/2016/10/04/science/hawaii-thirty-meter-telescope-mauna-kea.html?_r=0.

9. David Millward, “Protesters Halt Groundbreaking Ceremony for Mammoth Hawaiian Telescope,” *Telegraph*, October 9, 2014, <http://www.telegraph.co.uk/news/worldnews/northamerica/usa/11152624/Protests-halt-ground-breaking-ceremony-for-mammoth-Hawaiian-telescope.html>.

10. For a comprehensive timeline, see “Timeline of Mauna Kea Legal Actions Since 2011,” Kahea, the Hawaiian-Environmental Alliance, <http://kahea.org/issues/sacred-summits/timeline-of-events>.

11. Marie Alohalani Brown, “Mauna Kea: Ho‘omanawa Hawai‘i and Protecting the Sacred,” *Journal for the Study of Religion, Nature, and Culture* 10, no. 2 (2016): 150–70; and Noelani Goodyear-Ka‘ōpua, “Protectors of the Future, Not Protectors of the Past: Indigenous Pacific Activism and Mauna a Wākea,” *South Atlantic Quarterly* 116, no. 1 (2017): 184–94.

12. In addition to Brown and Goodyear-Ka‘ōpua, see Iokepa Casumbal-Salazar, “Multicultural Settler Colonialism and Indigenous Struggle in Hawai‘i: The Politics of Astronomy on Mauna a Wākea” (Ph.D. diss., University of Hawai‘i, 2014); Leon No‘eau Peralto, “Mauna a Wākea: Hānau ka Mauna, the Piko of Our Ea,” in *A Nation Rising: Hawaiian Movements for Life, Land, and Sovereignty*, ed. Noelani Goodyear-Ka‘ōpua, Ikaika Hussey, and Erin Kahunawaika‘ala Wright (Durham, N.C.: Duke University Press, 2014); and David Maile, “Science, Time, and Mauna a Wākea: The Thirty-Meter-Telescope’s Capitalist-Colonialist Violence,” May 13, 2015, therednation.org.

13. Glen S. Coulthard, *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition* (Minneapolis: University of Minnesota Press, 2014).

14. Krisnawati Suryanita, “Products from Paradise: The Social Construction of Hawai‘i Crops,” *Agriculture and Human Values* 17 (2000): 181–89; Gary Y. Okihiro, *Pineapple Culture: A History of the Tropical and Temperate Zones* (Berkeley: University of California Press, 2009).

15. For an excellent analysis of how those tropes were operationalized through the promotion of Hawaiian culture, see Adria L. Imada, *Aloha America: Hula Circuits through the U.S. Empire* (Durham, N.C.: Duke University Press, 2012).

16. Janeen Arnold Costa, “Paradisiacal Discourse: A Critical Analysis of Marketing and Consuming in Hawai‘i,” *Consumption Markets and Culture* 1, no. 4 (1998): 303–46.

17. Sun Kwok, *Stardust: The Cosmic Seeds of Life* (London: Springer, 2013), 65.

18. D. Morrison et al., “Evaluation of Mauna Kea, Hawaii, as an Observatory Site,” *Publications of the Astronomical Society of the Pacific* 85, no. 505 (June 1973): 255–57.

19. University of Hawai‘i at Hilo, “Final Environmental Impact Statement,” volume 1, Thirty Meter Telescope Project, May 8, 2010, http://www.malama.maunakea.org/uploads/management/plans/TMT_FEIS_vol1.pdf.

20. *Ibid.*, P-1.

21. This definition is extrapolated from Mary Kawena Pukui and Samuel H. Elbert, *Hawaiian Dictionary* (Honolulu: University of Hawai‘i Press, 1986); and Kepa Maly and Onaona Maly, “*Mauna Kea—Ka Piko Kaulana O Ka ‘Āina*”: A Collection of Native Traditions, Historical Accounts, and Oral History Interviews for: *Mauna Kea, the Lands of Ka’ohe, Humu’ula, and the ‘Āina Mauna on the Island of Hawai‘i* (Hilo: Office of Mauna Kea Management, 2005), 18.

22. According to S. N. Haleole’s first installment of “Ka Mo’olelo o Laieikawai” in *Nupepa Kuokoa*, in which he writes, “He umikumamawalu makahiki me ekolu malama ka malamaia’na o keia Moolelo Kaa, e ka mea nana e hoopuka nei keia moolelo maloko o kana Buke Moolelo, e hoomaka ana ma ka malama o Augate, M.H. 1844” (It has been eighteen years and three months that this Mo’olelo Ka’ao has been kept by the person who will publish this mo’olelo in his Mo’olelo Book, beginning in the month of August 1844). His transcription is the earliest known written record of this mo’olelo taken from its oral form, which had been passed down person to person. According to Maly and Maly, “*Mauna Kea*,” the story circulated as a serial in the newspaper *Kuokoa* from November 29, 1862, to April 11, 1863. Martha Beckwith translated the pieces first as part of her Ph.D. dissertation at Columbia University (1918) and then published them. See S. N. Haleole, *The Hawaiian Romance of Laieikawai*, trans. Martha Warren Beckwith (Washington, D.C.: Government Printing Office, 1918). Also see the note in entry 2537 in David W. Forbes, *Hawaiian National Bibliography, vol. 3: 1851–1880* (Honolulu: University of Hawai‘i Press, 2001), 348. Translation of Haleole’s publishing note in *Nupepa Kuokoa* is from Marie Alohalani Brown, “Facing the Spears of Change: The Life and Legacy of Ioane Kaneiakama Papa ‘ĪĪ” (Ph.D. diss., University of Hawai‘i at Mānoa, 2014), 25.

23. Summarized here from Beckwith’s translation of Haleole, *The Hawaiian Romance*, 200.

24. *Ibid.*, 202.

25. Hinaikamalama chants about the heat as well, saying, “The heat, ah! The heat / The heat of my love stifles me. / Its quivering touch scorches my heart, / the sick old heat of the winter, / the fiery heat of summer, / the dripping heat of the summer season, / the heat compels me to go, / I must go” (*ibid.*, 204).

26. There are multiple versions of this mo’olelo with different elaborations. Here I use Maly and Maly’s translation of Haleole’s text from *Kuokoa*, chapter 18 (January 17, 1863). See *Mauna Kea*, 23.

27. For more on the politics of interpretation, the multivalence of ‘ōlelo Hawai‘i, and the circulation of cultural knowledge through Hawaiian-language newspapers, see Noenoe K. Silva, *The Power of the Steel-Tipped Pen: Reconstructing Native Hawaiian Intellectual History* (Durham, N.C.: Duke University Press, 2017).

28. Haleole, *The Hawaiian Romance*, 20.
29. Peralto, "Mauna a Wākea," 233.
30. Jonathan Goldberg-Hiller and Noenoe K. Silva, "Sharks and Pigs: Animating Hawaiian Sovereignty against the Anthropological Machine," *South Atlantic Quarterly* 110, no. 2 (Spring 2011): 435.
31. There is a strong distinction that should be emphasized between Hawaiian understandings of natural elements and Western commoditization. If one takes an Indigenous approach to thinking about snow, then it becomes clear that landscape and natural elements have active dialectical relationships with Kānaka Maoli; elements like snow and lava are commanded by akua (defined as god, goddess, spirit, ghost). To further strengthen this point, it's important to mention that akua are known to mate with humans and produce human offspring of the highest chiefly rank. Pukui and Elbert, *Hawaiian Dictionary*, 15; Group 70 International, *Mauna Kea Science Reserve Master Plan* (Honolulu: [Group 70 International], 2000).
32. Charles Wilkes, *Voyage round the World* (Philadelphia: Geo. W. Gorton, 1849), 500.
33. Reprinted in William Ellis, *The Journal of William Ellis: Narrative of a Tour of Hawaii, or Owhyhee; With Remarks on the History, Traditions, Manners, Customs, and Language of the Inhabitants of the Sandwich Islands*, reprint edition (Honolulu: Honolulu Advertiser, 1963), 292.
34. Patrick Wolfe, "Settler Colonialism and the Elimination of the Native," *Journal of Genocide Research* 8, no. 4 (2006): 387–409; and Ned Blackhawk, *Violence over the Land: Indians and Empires in the Early American West* (Cambridge, Mass.: Harvard University Press, 2006).
35. James Macrae, *With Lord Byron at the Sandwich Islands in 1825: Being Extracts from the MS Diary of James Macrae* (Honolulu: W. F. Wilson, 1922), 55.
36. *Ibid.*, 55.
37. "Notes of the Week," *Pacific Commercial Advertiser*, October 23, 1862.
38. *Ibid.*
39. Audra Simpson, "On Ethnographic Refusal: Indigeneity, Voice, and Colonial Citizenship," *Junctures*, no. 9 (2007): 69.
40. Sustainable Resources Group International, *Public Access Plan for the UH Management Areas on Mauna Kea* (Hilo: Office of Mauna Kea Management, 2010), sec. 3, pp. 1–2.
41. Vernadette Gonzalez, *Securing Paradise: Tourism and Militarism in Hawai'i and the Philippines* (Durham, N.C.: Duke University Press, 2012), 4.
42. *Ibid.* NASA is technically classified by the federal government as a civilian space agency. Even so, its deeply entangled relationship with the U.S. military, from its Cold War foundations in 1958 to its robust employment of military personnel as astronauts, exemplifies the militaristic underpinnings of an organization that purports (much like astronomy does) to be for the greater good of humanity while simultaneously working to ensure U.S. dominance. Curtis Peebles, *High Frontier: The US Air Force and the Military Space Program* (Collingdale, Pa.: Diane Publishing, 1997), 10.
43. Dave Smith, "Big Island's Role in Apollo Missions Remembered," *Big*

Island Now, May 9, 2014, <http://bigislandnow.com/2014/05/29/big-islands-role-in-apollo-missions-commemorated/>.

44. Donald A. Beattie, *Taking Science to the Moon: Lunar Experiments and the Apollo Program* (Baltimore, Md.: Johns Hopkins University Press, 2001), 187.

45. Luanne Pfeifer, "The Admirable Snowman of Mauna Kea," *Ski*, November 1971, 68.

46. Aileen Moreton-Robinson, "Bodies That Matter on the Beach," in *The White Possessive: Property, Power, and Indigenous Sovereignty* (Minneapolis: University of Minnesota Press, 2015).

47. Josh Lerman, "Hawaii Not?," *Skiing*, February 1990, 30.

48. It is important to note here that the land upon which the Mauna Kea Science Reserve sits is part of the Hawaiian Kingdom's Crown and Government Lands, seized in an 1893 government coup and renamed "Public Lands" after U.S. annexation in 1898. The notion of public land, then, is predicated upon the "perception of [U.S.] legitimacy." Iokepa Casumbal-Salazar, "A Fictive Kinship: Making 'Modernity,' 'Ancient Hawaiians,' and the Telescopes on Mauna Kea," *Native American and Indigenous Studies* 4, no. 2 (2017): 8–9. Thank you to J. Kēhaulani Kauanui for clarifying this point for me.

49. Klaus Dodds and Christy Collis, "Post-colonial Antarctica," in *Handbook on the Politics of Antarctica* (Cheltenham: Edward Elgar Publishing, 2017), 50.

50. *Ibid.*

51. Martin Elvis, "After Apollo: The American West in Devising a New Space Policy," *Harvard International Review*, Spring 2012, 39.

52. *Ibid.*, 41.

53. Stickler, "Thirty Meter Telescope."

54. Dodds and Collis, "Post-colonial Antarctica," 56.

55. Ellis, *The Journal*, 292.

56. Gary H. Sanders, "The Thirty Meter Telescope (TMT): An International Observatory," *Journal of Astrophysics and Astronomy* 34 (2013): 81.

57. Ikaika Ramones, "OHA Backs Down from Contesting the TMT Sublease," *Hawai'i Independent*, July 17, 2014, <http://hawaiiindependent.net/story/oha-backs-down-from-contesting-the-tmt-sublease>.

58. Will Caron, "Mauna Kea and the Awakening of the Lāhui," *Hawai'i Independent*, April 26, 2015, <http://hawaiiindependent.net/story/mauna-kea-and-the-awakening-of-the-lahui>. Quote from Stickler, "Thirty Meter Telescope."

59. As quoted in Iokepa Casumbal-Salazar, "Multicultural Settler Colonialism and Indigenous Struggle in Hawai'i: The Politics of Astronomy on Mauna A Wākea" (Ph.D. diss., University of Hawai'i at Mānoa, 2014), 173.

60. Jamie Winpenny, "Thirty Meter Telescope Could Boost Hawaii Island Economy," *Hawaii Business Magazine*, September 7, 2013, <https://www.hawaii-business.com/thirty-meter-telescope-could-boost-hawaii-islands-economy/>.

61. Cover image for special issue "Karangatia: Calling Out Gender and Sexuality in Settler Societies," *Settler Colonial Studies* 2, no. 2 (2012).

62. Scott Lauria Morgensen, "Theorizing Gender, Sexuality, and Settler Colonialism: An Introduction," *settler colonial studies* 2, no. 2 (2012): 2.

63. *Ibid.*