

# **Erasure**<sup>i</sup>

Kriti Sharmaii and Pavithra Vasudevaniii

# **Erasure: On the (Incomplete) Obliteration of Sacred Matters**

A prayer to the sacredness and sentience of all that is sacrificed to the engine of capital. To all our relations misrecognized as "resources." All that is liquefied to currency, yet overflows the banks. All that is lost, forgotten, erased, yet persists, stubbornly refusing these repetitive redactions. All our relations.<sup>1</sup>

We hunger for lives at once easy and ambitious. Flying machines carry us across the planet at dizzying speeds. We sip liquid delights previously reserved for royals out of disposable cans and philosophize about the earth's carrying capacity in our increasingly vertical urban abodes. Aluminum, abundant and cheap, promises us an endlessly recyclable material to satiate our worldly hungers. But convenience comes at great cost.<sup>2</sup>

The crystal came to me from Greenland. Canada and Greenland were once embroiled in a strange cold dance called World War II.<sup>3</sup> The cryolite was crushed and used to extract a fierce light metal: aluminum. How I love aluminum now, knowing how much it cost; how the cost was not mine to bear; how I myself did not die but paid and pay in breath for metal; how the cold bright quarry hid a vibrant and vibrating heart, almost empty now, but not quite yet.

Aluminum was once a precious metal, more precious than even gold.<sup>4</sup> It is abundant in the earth's crust, but only in the form of hybrid ores. Aluminum clings so firmly to her elemental kin that tremendous – which is to say, very costly – amounts of energy were once required to break these chemical bonds so that aluminum might emerge pure, supple, and alone, ready to mold to the shape of our desires.

It was cryolite crystal that made commercial aluminum production a reality<sup>5</sup> by lowering the amount of energy required to separate aluminum from other elements. Cryolite - sodium aluminum fluoride – is a rare crystal, its primary quarry in Ivittuut (formerly Ivigtut) in Southwest Greenland, where it was first discovered – which is to say, mapped by colonists – in 1798.6 Running an electric current through a molten bath of cryolite and aluminum oxides allows pure aluminum to emerge at relatively low temperatures, rendering aluminum production inexpensive. For this process, known as smelting, sodium aluminum fluoride in

<sup>2</sup> Evenden, "Aluminum, commodity chains."

<sup>&</sup>lt;sup>1</sup> LaDuke, All our relations.

<sup>&</sup>lt;sup>3</sup> Berry, "Cryolite, the Canadian aluminium industry."<sup>4</sup> Kean, "Blogging the Periodic Table."

<sup>&</sup>lt;sup>5</sup> American Chemical Society National Historic Chemical Landmarks, "Production of Aluminum."

<sup>&</sup>lt;sup>6</sup> Abilgaard, "Norwegische Titanerze."

any form will do, and synthetic cryolite began to be manufactured and used in 1961. However, through the peak of aluminum production, the crystal was mined extensively and exclusively from Greenland, until its depletion in 1987. Cryolite has the dubious distinction of being the only mineral mined to commercial extinction.

Now there's a ghost town at Ivittuut,<sup>7</sup> and an empty quarry where hundreds of tons of cryolite used to be. Crushed, powdered, residual, the quarry of cryolite is lost in the shadows, another place devastated by capital and (largely, but incompletely) erased from our collective memory.<sup>8</sup>

Cryolite crystal and synthetic cryolite share a chemical formula, but they have different physical properties. Where the synthetic molecule is an amorphous white powder, naturally occurring cryolite has a crystalline structure, its molecules arranged to interact with light in a specific way. While the synthetic powder is opaque, the crystal is clear; when placed in water, its edges disappear, as light passes through both water and the crystal at the same speed. For this reason, scientists can use cryolite as a "transparent soil or sediment," to observe the burrowing movements of sea snails or the swimming of bacteria in their small and sandy environments.<sup>9</sup>

The crystal came to me as a blessing – rare, cold, from a wayside gem store. Inexpensive, yes, but I held it carefully with both hands. In the dark of the microscope room, I excited the crystal with a laser and murmured my gratitude when it sang back to me in ordered wavelengths. To the market, the crystal and its powdered replica are the same. But I have observed them both deeply, holding each to my forehead and my chest, and as a human being – my society's only credible witness – I testify that they are no more interchangeable with one another than my grandfather is with my sister. The crystal is as specific as anything mortal, and so near total death. In this late hour of its existence, I have come to know it as a sacred stone.

Capitalism cannot and does not know what a precious metal is, nor a sacred stone. For a system reputed to encourage materialism, it does not truly know or appreciate matter. In abstracting value from matter, capitalism increasingly alienates the very material upon which it depends. ("We live in a consumer cult, we worship things" – oh, were it only so.)

I was three months old the first time I rode in an airplane. I can narrate my life story through airplane rides - the one that carried my family across the sea as migrants to new worlds, the ones that returned us to visit elders, the one that took us to our new home when our other was destroyed. The improbable extraction of aluminum made my life possible.

Aluminum hides the cold quarry gone quiet. It also hides the lives and losses of Black working families in the company town of Badin, North Carolina. Being Black, taken to mean not-quite-human, they were experimental subjects in the process of perfecting smelting's ratios – of cryolite and aluminum oxide, of cruelty and complicity – that made commerce

\_

<sup>&</sup>lt;sup>7</sup> Lockhart, "How This Abandoned Mining Town Helped Win World War II."

<sup>8</sup> Plumwood, "Shadow Places."

<sup>&</sup>lt;sup>9</sup> Josephson and Flessa, "Cryolite."; Zhu, et al., "Packed-Bed."; Sharma, et al., "Transparent soil microcosms."

and war viable and profitable.<sup>10</sup> The light of aluminum casts deep shadows in the poisoned land and waters of Badin.

Every time I ride an airplane, I map the aluminum's route backwards, from the airplane, to the assembly plant, to the smelter (perhaps in Badin), to the innumerable devastated landscapes that once held bauxite. Where else did the aluminum come from? Who else was sacrificed? I aspire to gratitude; it tastes like grief.

Capitalism operates through erasure, the active and repetitive obscuration of the preciousness of matter(s) that make our lives possible. We become ignorant of how our being comes to be through all our material relations -- mineral, (in)human, ecological.<sup>11</sup> First, we erase the matters that matter, and then we erase evidence of these relations. Thus do we lay claim to separate and self-made selves.12

What would it mean to remember our relations? How might we refuse erasure?

In the Niyamgiri Hills in eastern India, the Kondh tribes have fought the violent erasure of their sacred home for seventeen long years. For U.K.-based Vedanta Mining and the Odisha state government, the hills are a literal treasure chest, holding an estimated 88 million tons of bauxite – aluminum ore – that could supply the nearby Lanjigarh refinery for seventeen years and replace expensive imported bauxite. 13 For the Dongria Kondh people, bauxite cannot be extracted. It is part of the body of Niyam Rajah, the mountain deity and ancestor who granted them the slopes they farm and tasked them with protecting the forests and waterways. So precious is this relation that in 2013, twelve villages voted by referendum to reject open pit mining, and with it, the promise of jobs, roads, hospitals and schools – namely, the tools of capitalist seduction. For the Kondh, no compensation could suffice for the devastations of mining, whose shadow places "are best described as lunar: pocked, mineralized surfaces, devoid of topsoil, flora, or fauna."14

What you are willing to pay for a thing is not equal to what it really is. What you are willing to listen to is not the limit of what is being said. Just because you could not hear, does not mean that there was silence - only that perhaps you considered them beneath notice.

Aluminum's cheapness derives from the destruction of lives and materials that can never be accounted for. The stealth of sacred lands from Indigenous peoples makes aluminum cheap; cryolite makes aluminum cheap; and so does the ability to freely expose Black families to lethal toxins. The Kondh remind us that the abstraction of materiality, the equivalence of matter with money, is itself an erasure of the preciousness of relations.

What would it mean to care about the preciousness of earth as much as we care about precious metal? What would it mean to care about lives rendered (in)human, as much as those sanctioned precious by law and practice?<sup>15</sup> What would it mean to really care about the

<sup>&</sup>lt;sup>10</sup> Vasudevan, "An Intimate Inventory."<sup>11</sup> Vasudevan, "Brown Scholar, Black Studies."

<sup>12</sup> Sharma, Interdependence.

<sup>13</sup> Barik, "Dongria Kondhs."

<sup>&</sup>lt;sup>14</sup> Evenden, "Aluminum, commodity chains," 83.

<sup>15</sup> Jackson, "Animal."

(in)animate world, as much as we care about the living world?<sup>16</sup> What does it mean to understand ourselves as already in relationship, despite capitalism's erasures of the very relationality that the system depends on?<sup>17</sup>

This is a prayer to the sacredness and sentience of all that is sacrificed to the engine of capital. The aluminum foil wrapped around last night's pizza is a sacred matter. Hold the aluminum in your hands. See your face reflected, however distorted. If you look into one thing, you will find every other thing, each in its own specificity and power. Look into the aluminum. Do you see them? The ice, lattice, light, tears, mass, stone, laughter, dirt, lungs, sweat, mountain, guardians, hands, river, breath, knowledge of place, of mineral, of spirit, of life otherwise. All this was smelted together, shone briefly, and is tossed aside. Hold it all with care, the foil, in both your hands. Add it to the litany of erasures, like a pebble to the heap, like a crystal on the altar. To look and listen deeply and with reverence, to remember inconsolably, is to refuse erasure, to know the material world as it is – otherwise, otherwise, otherwise.

### References

- Abilgaard, Peter C. "Norwegische Titanerze und andre neue Fossilien." *Allgemeines Journal der Chemie* 2 (1799): 502.
- American Chemical Society National Historic Chemical Landmarks. "Production of Aluminum: The Hall-Héroult Process." No date; accessed January 2, 2020. <a href="https://www.acs.org/content/acs/en/education/whatischemistry/landmarks/aluminumprocess.html">https://www.acs.org/content/acs/en/education/whatischemistry/landmarks/aluminumprocess.html</a>.
- Barik, Satyasundar. "Dongria Kondhs continue to fight bauxite mining in Odisha's Niyamgiri forests." *The Hindu*. March 16, 2019; accessed January 2, 2020. <a href="https://www.thehindu.com/society/dongria-kondhs-continue-to-fight-bauxite-mining-in-odishas-niyamgiri-forests/article26544621.ece">https://www.thehindu.com/society/dongria-kondhs-continue-to-fight-bauxite-mining-in-odishas-niyamgiri-forests/article26544621.ece</a>
- Berry, Dawn Alexandrea. "Cryolite, the Canadian aluminium industry and the American occupation of Greenland during the Second World War." *The Polar Journal* 2, no. 2 (2012):219-35.
- Evenden, Matthew. "Aluminum, commodity chains, and the environmental history of the Second World War." *Environmental History* 16, no. 1 (2011): 69-93.
- Josephson, Robert K. and Karl W. Flessa. "Cryolite: A medium for the study of burrowing organisms." *Limnology and Oceanography* 17, no. 1 (1972): 134–135. <a href="https://doi.org/10.4319/lo.1972.17.1.0134">https://doi.org/10.4319/lo.1972.17.1.0134</a>.
- Gergan, Mabel Denzin. "Animating the sacred, sentient and spiritual in post-humanist and material geographies." *Geography Compass* 9, no. 5 (2015): 262-275.
- Hanh, Thich Nhat. *The heart of understanding: Commentaries on the Prajnaparamita Heart Sutra*. Parallax Press, 2009.

<sup>&</sup>lt;sup>16</sup> Gergan, "Animating the sacred."

<sup>&</sup>lt;sup>17</sup> Sharma et al., *Relationality*.

<sup>&</sup>lt;sup>18</sup> Hanh, *The heart of understanding*.

- Jackson, Zakiyyah Iman. "Animal: New directions in the theorization of race and posthumanism." *Feminist Studies* 39, no. 3 (2013): 669-685.
- Kean, Sam. "Blogging the Periodic Table." July 30, 2010; accessed January 2, 2020.

  <a href="http://www.slate.com/articles/health">http://www.slate.com/articles/health</a> and science/elements/features/2010/blogging

  <a href="http://www.slate.com/articles/health">the periodic table/aluminum it used to be more precious than gold.html</a>
- LaDuke, Winona. *All our relations: Native struggles for land and life.* Haymarket Books, 2017
- Lockhart, Katie. "How This Abandoned Mining Town Helped Win World War II." December 27, 2019. Accessed September 15th, 2020.

  <a href="https://www.smithsonianmag.com/travel/how-abandoned-mining-town-greenland-helped-win-world-war-ii-180973835/">https://www.smithsonianmag.com/travel/how-abandoned-mining-town-greenland-helped-win-world-war-ii-180973835/</a>
- Plumwood, Val. "Shadow Places and the Politics of Dwelling." *Ecological Humanities* 44 (2008). <a href="http://australianhumanitiesreview.org/2008/03/01/shadow-places-and-the-politics-of-dwelling/">http://australianhumanitiesreview.org/2008/03/01/shadow-places-and-the-politics-of-dwelling/</a>
- Sharma, Kriti. Interdependence: Biology and beyond. Fordham University Press, 2015.
- Sharma, Kriti, Márton Palatinszky, Georgi Nicolov, David Berry and Elizabeth A Shank. "Transparent soil microcosms for live-cell imaging and non-destructive stable isotope probing of soil microorganisms." *eLife* (2020). https://elifesciences.org/articles/56275.
- Sharma, Kriti, Michal Osterweil and Arturo Escobar. *Relationality: Re-weaving the Story of Life.* Bloomsbury Publishing UK, forthcoming in 2021.
- Vasudevan, Pavithra. "An Intimate Inventory of Race and Waste." *Antipode* (2019). <a href="https://doi.org/10.1111/anti.12501">https://doi.org/10.1111/anti.12501</a>.
- ———. "Brown Scholar, Black Studies: On Suffering, Witness & Materialist Relationality." In *Feminist Geography Unbound: Discomfort, Bodies, and Prefigured Futures*, edited by Banu Gökariksel, Michael Hawkins, Christopher Neubert and Sara Smith. Morgantown: West Virginia University Press, 2020.
- Zhu, Peixi, Qing Wang, Yuly A. Jaimes-Lizcano and Kyriakos Papadopoulos. "Packed-Bed Capillary Microscopy on BP-Oil-Spill Oil in Porous Media." In *Oil Spill Remediation: Colloid Chemistry-Based Principles and Solutions*, edited by Ponisseril Somasundaran Partha Patra Raymond S. Farinato Kyriakos Papadopoulos, 189–219. Hoboken, NJ: John Wiley & Sons, Inc., 2014. <a href="https://doi.org/10.1002/9781118825662.ch8">https://doi.org/10.1002/9781118825662.ch8</a>.

An A to Z of	Shadow	Places	Concepts

## © 2020 Kriti Sharma and Pavithra Vasudevan

This work is licensed under a <u>Creative Commons Attribution-NonCommercial-NoDerivatives</u> <u>4.0 International License</u>



<sup>i</sup> Sharma, Kriti and Pavithra Vasudevan. "Erasure." *An A to Z of Shadow Places Concepts* (2020). <a href="https://www.shadowplaces.net/concepts">https://www.shadowplaces.net/concepts</a>

ii Kriti Sharma is a Postdoctoral Scholar in Geobiology at the California Institute of Technology (Caltech) in Tovaangar (traditional, ancestral, and unceded territory of the Tongva people, aka the Los Angeles basin and South Channel Islands, California, USA). <a href="mailto:ksharma@caltech.edu">ksharma@caltech.edu</a>, www.kritisharma.net

iii Pavithra Vasudevan is an Assistant Professor of African and African Diaspora Studies and Women's and Gender Studies at the University of Texas at Austin. UT Austin was built by enslaved and indentured laborers on occupied Indigenous lands. The state now known as Texas is home to the Alabama-Coushatta, Caddo, Carrizo/Comecrudo, Coahuiltecan, Comanche, Kickapoo, Lipan Apache, Tonkawa and Ysleta Del Sur Pueblo peoples. <a href="mailto:pavithra@austin.utexas.edu">pavithra@austin.utexas.edu</a>, pavithravasudevan.com