

the last oil

students respond



the last oil: students respond

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UNIVERSITY of
NEW MEXICO
ART MUSEUM

the last oil

a multispecies justice symposium on Arctic Alaska and beyond

students respond

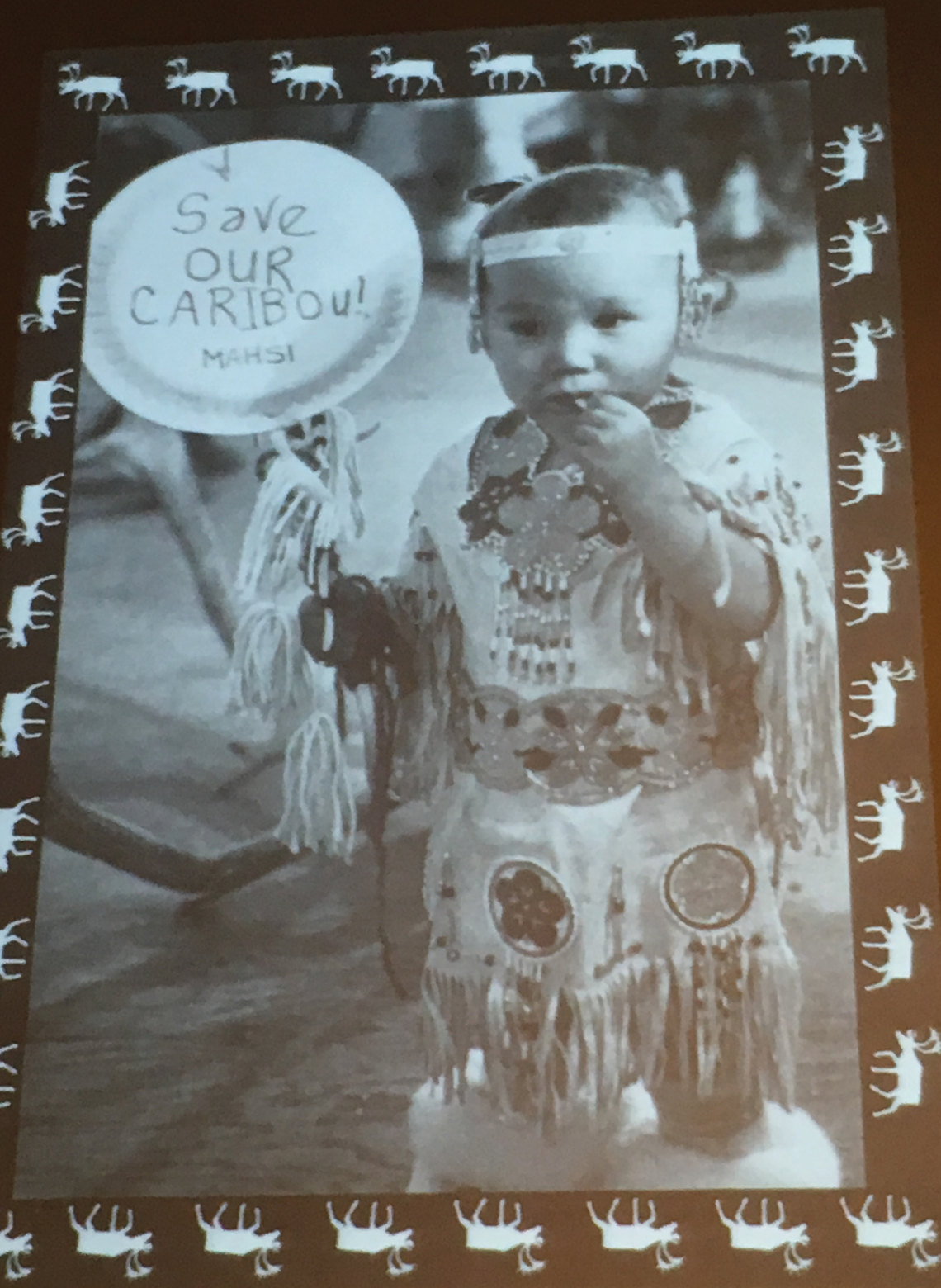
I found myself wondering what would happen if the environmental racism
in the Arctic received as much traction in the media as Standing Rock did.

What if the nation—even the world—stood in solidarity with the native
communities there? I have no doubt that people would be in support of the
Gwich'in and Iñupiaq communities, as they are facing injustices that would
rightly enrage anyone.

—GABRIELLE HINDS-BROWN

the last oil: students respond is a humble publication with which we signal
the need for and the significance of interdisciplinary (arts, humanities,
sciences) and intersectional (race, class, gender) pedagogy and praxis—to
apprehend (perception, emotion, action) our precarious ecological time.

—SUBHANKAR BANERJEE



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the last oil

a multispecies justice symposium on Arctic Alaska and beyond

The University of New Mexico will host *the last oil*—a symposium to address the catastrophic US Arctic energy policy, which violates indigenous human rights and threatens to derail efforts to mitigate climate change and the Sixth Extinction.

This gathering will also bring northern indigenous struggles into conversation with similar struggles across the West, including the Diné-Pueblo solidarity to protect the Greater Chaco Canyon in New Mexico from fracking and the indigenous Sioux people's campaign "Mni Wiconi: Water is Life".

27 artists, activists, attorneys, historians, biologists, climate scientists, conservationists, curators, policy experts and writers will unite in Albuquerque for this public forum.

thelastoil.unm.edu

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Geography & Environmental Studies
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February 21-23 2018
University of New Mexico
Free and Open to the Public

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The Department of Art and Art History

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The symposium is supported by Lannan Foundation, Andrew W. Mellon Foundation and the UNM College of Fine Arts Dean's Office

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Figure 3. the last oil symposium poster. Design by Ragini Bhow.

Building Bridges

SUBHANKAR BANERJEE

On August 15, 2016, I joined the Art & Ecology faculty at the University of New Mexico (UNM). After having spent nearly two decades as an independent activist, artist, writer and public scholar, I realized that, if we are to effectively address our precarious ecological time signified by the climate and the extinction crises, it is essential that we build bridges across the silos that surround the academic disciplines today and abolish the town-and-gown divide by bringing academia into conversation with the communities in which we live.

In spring 2017, I taught my first class at UNM, Integrative Ecology & Social Transformation; 39 students from fifteen departments took that class. In April of that year, we hosted an interdisciplinary and intersectional public forum, Decolonizing Nature: resistance | resilience | revitalization (<http://decolonizingnature.unm.edu>). The forum included: (1) a four-day conference at the National Hispanic Cultural Center; (2) a two-week-long exhibition at 516 ARTS; (3) and culminated on Earth Day, with a “toxic tour” led by environmental justice pioneer Richard Moore through the South Valley of Albuquerque, followed by participation in “Abrazos: A Community Celebration of Environmental Justice” at the Valle de Oro National Wildlife Refuge.

The forum proved inspiring and generative, based on comments we received from students, speakers and participants. But before I could get some rest and recover from the exhaustion, Arif Khan, Director of the UNM Art Museum suggested that we continue the momentum to bring people together across our campus with a modest exhibition of my Arctic work. Six weeks later, *Long Environmentalism in the Near North: Activism—Photographs—Writing*, opened (see page 7). With the leadership of Traci Quinn, Curator of Education and Public Programs at the museum—the exhibition became a gathering place and a spark for—first, a modest Environmental Arts & Humanities Speaker Series in Fall 2017 and finally in February 2018, the last oil: a multi-species justice symposium on Arctic Alaska and beyond (see page 11).

Twenty-nine artists, activists, attorneys, scientists, conservationists, curators, scholars, and writers from across the United States and Canada, gave talks and/or did creative performances—and ten colleagues from UNM and beyond chaired various sessions. Because of the hard



Figure 4. Sarah James, “Protecting the Sacred Place Where Life Begins.”

work of a committed team and support from a large number of departments across campus, community organizations and foundations—with mere six weeks of planning we were able to host the gathering. the last oil was the first national convening to apprehend the reckless U.S. federal Arctic policy, and also brought impacts of climate change and Indigenous rights concerns in Alaska into conversation with similar impacts and struggles in New Mexico and the west.

The symposium opened with a prayer by elder and Indigenous rights leader Petuuche Gilbert from Acoma. The Honorable United States Senator Tom Udall sent us a moving welcome letter that included the long history of his family members' support for conservation and Indigenous rights in Alaska's Arctic (I read the letter as the Senator could not attend the event). Over the course of three days an estimated 806 people participated, according to the museum's count.

The symposium website (<https://thelastoil.unm.edu>) includes an overview; the program; speaker bios; videos of all sessions; a resources section with articles, reports, maps, interviews, and a proclamation; and, Scholars for Defending the Arctic Refuge—a letter campaign, which was endorsed by more than 500 scholars from 20 countries representing more than 40 academic disciplines.

Usually, a publication that results from an academic symposium includes contributions by the speakers. But this is different. I asked my students to write responses to the symposium as a midterm assignment. I was curious to know what kind of impacts the gathering had on them. What follows (after Arif and Traci's texts) are largely unguided and unedited responses from all the sixteen students in the class—textual and visual. To gather varieties of responses, not a polished academic product, is our aim.

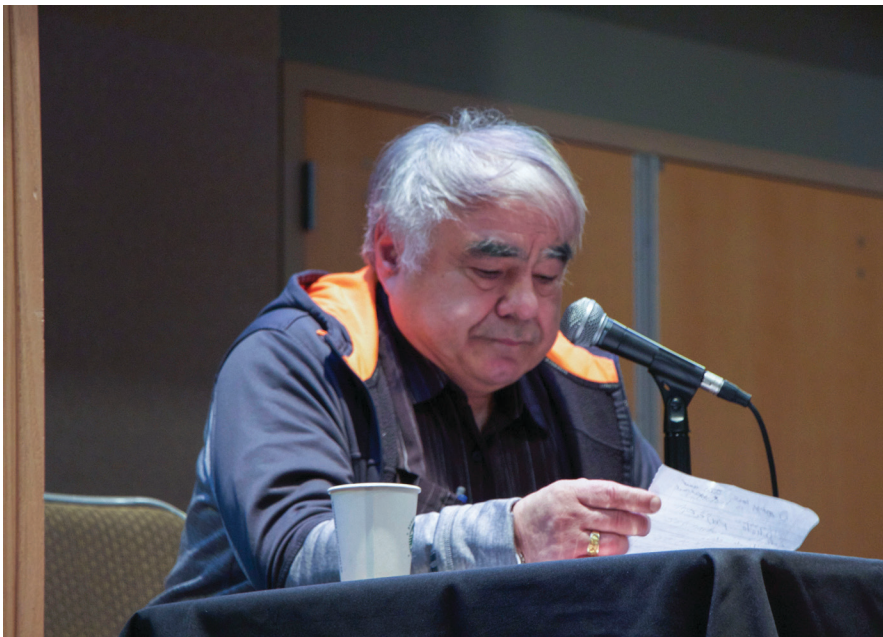
the last oil: students responds is a humble publication with which we signal the need for and the significance of interdisciplinary (arts, humanities, sciences) and intersectional (race, class, gender) pedagogy and praxis—to apprehend (perception, emotion, action) our precarious ecological time.

the last oil symposium was made possible with generous support from the Lannan Foundation, the Andrew W. Mellon Foundation, UNM College of Fine Arts Dean Professor Kymberly Pinder, Associate Dean Professor Mary Tsiongas, and Chair of the Department of Art Professor Justine Andrews.

There are so many people who made all of these initiatives possible over the past couple of years. I'm deeply grateful to everyone. We acknowledge the contributions of many of these dear colleagues on the two symposium websites, but here, I want to mention a few names without whom the symposium and this publication would not have been possible: Arif Khan and Traci Quinn at the UNM Art Museum; Professor Maria Williams at the University of Alaska-Anchorage,



Figure 5. Cheyenne Antonio, "Rise of the Red Nation."



Dr. Julie Decker at the Anchorage Museum, and Professor Joseph Cook at UNM; Kevin McDonald of KNME who video recorded and livestreamed the symposium session; Danette Petersen, Nancy Beth Treviso, Ellen Peabody, and Isis Lopez—staff members in the Department of Art; A.J. Carian in the College of Fine Arts; graduate students in Art & Ecology: Viola Arduini, Ragini Bhow, nicholas b. jacobson; and laura c carlson, who was the key research coordinator for the symposium and the designer and co-editor of this book.

the last oil: students respond is published on Indigenous Peoples' Day, October 8, 2018.

Mahsi' choo~Quyanaq~Thank you!

Subhankar Banerjee. "Drilling, drilling, everywhere... Will the Trump administration take down the Arctic Refuge?" *TomDispatch*, November 9, 2017.

Subhankar Banerjee. "Resisting the War on Alaska's Arctic with Multispecies Justice" in "Beyond the Extractive View," Macarena Gómez-Barris, ed. (*Social Text* online, June 7, 2018).

Scholars for Defending the Arctic Refuge—a letter campaign, June 19, 2018, <https://thelastoil.unm.edu/scholars-for-defending-the-arctic-refuge/>

Subhankar Banerjee, Joseph Cook, and Samuel Truett. "The border wall endangers the future of humanity and nature," *Albuquerque Journal*, August 19, 2018.

Subhankar Banerjee and Lois Epstein. "The Fight for Alaska's Arctic Has Just Begun," *Technosphere Magazine* (Haus der Kulturen der Welt, Berlin, forthcoming),



Figure 6. Robert Thompson, "Truth to Power."

Figure 7. Rosemary Ahtuanguaruak, "Protecting our Seas and Coastal Communities."

Museums as Forums for Community Engagement

ARIF KHAN

Subhankar Banerjee and I started our positions at the University of New Mexico the same day in 2016. The exhibition, *Long Environmentalism in the Near North* is the first exhibit organized since I became director. As we met to discuss the structure of the exhibit, we quickly realized the potential for using it as a call to action to engage students, faculty and staff from across the university. That then led us to want to engage a larger audience, which led to the last oil symposium.

As a former curator and now director, I always strive to keep in mind the audience for exhibits and programs. Thankfully, there is finally data driven studies regarding museum visitation. One of these studies really resonated with me, the National Awareness, Attitude & Usage Study of Visitor-Serving Organizations surveyed of over 100,000 visitors to art museums, history museums, zoos and aquariums. In this survey, the data revealed that museums are viewed as highly credible sources of information, more so than NGOs, federal agencies, and even the daily newspaper. The data also revealed that people believe that museums should suggest or recommend certain behaviors or ways for the public to support their causes and missions

It is my belief that museums have the potential to be an active participant in contemporary cultural and political issues. I also believe that University museums have an extra responsibility to be responsive to those cultural and political issues that are discussed by students and faculty on campus.

Exhibitions such as *Long Environmentalism in the Near North* and the last oil symposium are models for how museums may play a role in leading us all toward a more educated, connected, and inspired world.



Figure 8. Brian Adams, Julie Decker, Arif Khan, and ASL Interpreter, "Next North."



Figure 9. UNM Art Museum exhibition *Long Environmentalism in the Near North: Activism – Photographs – Writing*. Photo by Viola Arduini, 2017.

Un-Disciplining the Museum through Collaborative Practice

TRACI QUINN

Museums are often disciplined spaces—and by this I mean that they operate within a specific category (e.g. art, anthropology, history, geology). This siloed approach to representing ideas is limiting and in many ways problematic, yet many museums continue to operate as such. What inspired me most about working with Subhankar Banerjee and the rest of the team to organize the last oil symposium was the fact that this way of conceptualizing the museum broke down. Disciplined boundaries were crossed, multiple perspectives shaped the story, and conversations expanded beyond a single understanding of the current climate crisis. The symposium, with powerful and wide-ranging perspectives, amplified the photographs in *Long Environmentalism in the Near North* and brought the issues to life.

Arif and I often have conversations about the need for UNM Art Museum to organize exhibitions and programming that are relevant to our communities. Being that the museum is located on a university campus, it is especially important to understand the interests of students and faculty. Listening to our university constituents has become key to my practice as a museum educator. It is a critical step in my planning. In fact, the idea for the “Act Now!” workshop came from the previous semester’s speaker series on environmental arts and humanities, when students constantly asked the invited lecturers “what can I do?” In hearing these questions, Subhankar and I talked at length about how to present students with practical tools to advocate for climate justice.

At the heart of such collaborations lies the foundation for how we want to position the UNM Art Museum in our community. It is a foundation that is responsive, pertinent to peoples’ lives, and lends itself to a multitude of ideas.



Figure 10. Bernadette Demientieff, Photo by Keri Oberly, 2018.



Figure 11. We Are One. Drawing by Jerome Louis, 2018.

TAKE ME BACK TO WHERE I BELONG

Long before *they* had seen the light for the first time, I was there.
 Long before dinosaurs had step foot on you, Mother, I was there.

I was small but alive, drifting through your vast ocean.
 Zooplankton, tiny marine organisms, plants – I was all of these,
 three hundred million years ago.

I began to decay. Slowly, gradually, ceaselessly.
 Layers upon layers, year after year, I had covered the bottom of your
 swamps and oceans.

Sand and mud had become part of me.
 Intense heat and tremendous pressure had made us one.

I was kerogen.

The restless forces of nature kept its course.

She broke me down, she transformed me.

I was atoms of carbon, I was atoms of hydrogen.

And I kept on changing. Slowly, gradually, ceaselessly.
 Heat and pressure played with me but, would I have let them play
 if I knew *they* were coming?

I am coal, I am oil, I am gas.

They began to take me away from your womb, Mother.

Who is transforming me now?

I am no longer where I used to belong, Mother.

I have become the addiction of their insatiable appetite.

Black gold for them, a murderer to you, Mother.

Tell me, what can I do?

Burned forests, bleached corals, severe droughts.

Shrinking glaciers, flooded towns, severe hurricanes.

Please tell me, what can I do?

Destroyed agriculture, wounded communities, severe heat.

Biodiversity loss, traditions lost, severe erosion.

Stop me, please.

Can't *they* see what I am doing to you?

Sorrow, grief, avarice, pain, hunger, voracity, pain, misery.

Stop me, please.

Keep me in the ground. Take me back to where I belong.

LAIMA A. DÍAZ VEPSTAS



Figure 12. Petuuche Gilbert, "Opening Prayer and Welcome to Our Homeland."



Figure 13. Joel Clement, "Truth to Power."

Resilient Voices of a Wounded Gaia

LAIMA A. DÍAZ VEPSTAS

Indigenous costumes and languages, images of strikingly beautiful wildlife, scientific data on climate patterns, chants and prayers, maps of the oil industry legacy, recordings of chirping birds, sounds of broken but powerful voices. These elements are solely a minuscule illustration of what *the last oil* encompassed, a far-reaching and comprehensive three-day event held at the University of New Mexico in Albuquerque. Running from February 21st through the 23rd of 2018, the symposium focused on our current climate crisis, addressing more specifically the Trump administration's unreasonable energy policy on the Arctic.

In contrast to what most of us are accustomed to when it comes to panel discussions, "the last oil" brought together multiple speakers from entirely different realms and still managed to draw an inextricable connection throughout the entire narrative. It is not often that we see indigenous activists, singers, conservation biologists, environmental law experts, museum curators, science professors, and college undergraduates sharing the same space to collectively raise awareness and call for action on numerous interconnected issues.

Perhaps because of its unusual nature in the ways it was convened, unfortunately, there was a scant number of attendants during some of the panels. Most lamentable was the lack of young adults among the audience. As a young undergraduate student myself, I believe this is a problem of much concern. Those who will have to continue dealing with the arduous and complex issues of human-induced climate change and global warming are the younger generations, as they will have to take on the work already initiated. Although we can observe some action led by young activists, as is the exemplary case of those who founded The Red Nation, there is still a striking difference in age group participation: elders still exceed young people in numbers when it comes to attending and supporting these kinds of actions. I am not implying elders should not participate but rather engage with the youthful crowd, as they can help them lead the way. So, what can be done to attract younger audiences, especially those who are un-



Figure 14. Jennifer Marley, "Rise of the Red Nation."

aware of the detrimental effects of the fossil fuel industry on indigenous communities and wildlife across the globe?

Despite this shortfall, the key to “the last oil” success in conveying its message was the integration of multiple mediums. One of the most remarkable examples was native Gwich’in David Solomon’s act of slipping out of his Western attire to slowly dress up in his indigenous clothes. It was visually powerful. He appeared on stage wearing dress pants, a pale brown button-up shirt, a dark vest, a tie, a baseball cap, and white tennis shoes. “I learned how to dress in the Western world”. As he began to speak, he took off the tie and the vest. “But I went back to live the way I had lived when I was growing up in Fort Yukon.” He unbuttoned the shirt and took off the cap. “We can never, ever forget the way we grew up and the way we hunt.” He put on a beautiful brown leather vest, a vest made with caribou skin embroidered with green, orange and yellow flowers. Fringes hung below the flowers and circled the bottom of the vest. He substituted the tie with a body ornament, covering his chest like a delicate but symbolically powerful armor. He tied a black bandana around his head and crowned himself with a pair of dark feathers. An orange ribbon with tribal designs crossed his chest diagonally. “I grew up with my dad hunting caribou, the porcupine herds. When we hunt up there, we get on a boat and travel all the way up the Porcupine River.” He adorned his chest with caribou bone necklaces. He took off the white shoes and put on a pair of moccasins made of caribou skin. “I learned from our elders how we the Gwich’in people live the life of hunting, trapping, fishing.” He continued to describe his way of life, the way of life of the Gwich’in. “My dad fought the fight to no drilling in Arctic Refuge: ‘They will never drill while I’m alive’”.

While transforming himself on stage, Solomon showed a critical connection between the mindful way their people have hunted caribou for millennia, and the manner in which the community respects the elders. When they hunt caribou, they let the leaders of the herd to continue, and only aim at those that come after. The first ones are not to be hunted, as they will lead the rest of the herd through their migration route. Similarly, the Gwich’in cherish their elders, especially in moments such as the ones they are facing now, since they will lead the younger ones in the fight to protect their way of life. This should be a lesson learned by everybody, as it exemplifies the importance of youngster-elder interaction in terms of valuing experience and knowledge, and transmitting the concerns of older generations to the younger ones. Could this be the answer to the aforementioned question?

Perhaps even more important than the message of treasuring the elders as the leaders of the fight is the act of resilience shown through his performance that is worth discussing. European settlers subjugated the indigenous people of what is now Alaska and Canada, as well



as other pre-colonial inhabitants of the continent. Not only were the people exploited but also the land and other natural resources. Nonetheless, communities living in the Arctic have demonstrated their tenacity over and over again, not only by thriving in an extremely cold climate, but also by not letting their traditional ways of life disappear completely under the influence of Western culture. That is what David Solomon beautifully expressed by shedding his “white men’s clothes”. That outfit represented the oppression they face: this new form of colonialism that continuously attempts to eradicate their traditions, their knowledge, their language, their ways of hunting, harvesting, and dressing. He showed that they are still fighting. By wearing traditional Gwich’in clothes, he illustrated the community’s resilience to the asphyxiating hands of neocolonialism.

Likewise, Gwich’in Elder Sarah Agnes James gave an exceptional speech, voicing the concerns of their community in terms of the energy policy that threatens to disrupt the vibrant ecosystem of the Arctic National Wildlife Refuge. Dressed up in Gwich’in clothing, bead work embellishing her outfit and a traditional hairpin adorning her hair, she transmitted a visually forceful message. Her attire, made of caribou deer skin, protects her, sheltering her from the cold and, most importantly, it represents the culture to which she belongs. James wrapped up her talk with a singing ritual while she played a tambou-

Figure 15. BP’s Deepwater Horizon blowout prompted the Gwich’in Nation to send an aerial message with their bodies to protect the caribou calving grounds in the Arctic National Wildlife Refuge and the salmon habitats in the Yukon Flats National Wildlife Refuge. Courtesy Gwich’in Steering Committee. Photo by Cammy Roy, July 21, 2010.



rine, also made of caribou skin. By bringing these elements together—her clothes, her prayer, her musical instrument—she showed the audience the importance of protecting the caribou for the survival of the Gwich'in as a nation. The dangers that the caribou (the base of their food, clothing, and spiritual practices) are facing would result in a total annihilation of their way of living.

One other remarkable performance of a similar nature was that of Allison Akootchook Warden. Being an Iñupiaq, her words as a native Alaskan—and like many other indigenous people across the globe—are not taken into consideration to the same degree as those of non-indigenous people when trying to voice the concerns of her community. In spite of this, she has taken her talent to the next level by not only fighting for the rights of her people but also by giving a voice to those who are taken into even less consideration than indigenous communities: the fauna of the Arctic. She did so by slipping into the role of a bowhead whale, a polar bear, a caribou deer, and voicing their struggles through singing and rapping. She used the first person throughout her songs, which had the powerful effect of bringing the audience closer to all that is important for the Iñupiat and making it easier to relate to their worries and anxieties. She gave a voice to the voiceless.

These significant performances were even more impactful thanks to the speakers' use of their indigenous languages. The speeches were

Figure 16. David Solomon "Multispecies Solidarity."



given inside the University of New Mexico, an institution located in a country in which the most widely spoken language is English. Yet the speakers, native to both Alaska and New Mexico, intertwined English with their indigenous languages throughout their talks. Petuuche Gilbert, Nick Estes, Cheyenne Antonio and Melanie Yazzie introduced themselves in indigenous languages, then continued in English. Rosemary Ahtuanguaruak and Allison Akootchook began their speeches in Iñupiat, then continued in English. David Solomon and Sarah James started in Gwich'in, then continued in English. By walking up to the podium and speaking the first words in their indigenous languages, these individuals were showing resilience. They showed that despite all the hardship they have endured as indigenous people, their traditional ways of communicating have not been lost. Their language still belongs to them as an integral aspect of who they are. Catastrophic colonialist practices may have deprived them of much of their basic human rights, but they have not forgotten their voices, which they skillfully demonstrated by first talking in Diné, Iñupiat and Gwich'in and only afterwards switching into English. It was another form of resistance against oppression, against cultural imperialism, and against colonialism.

Similarly, author and conservation advocate Debbie S. Miller demonstrated her concerns about the issue of oil and gas development in the

Figure 17. David Solomon "Multispecies Solidarity."

Arctic Refuge by sharing the charming sounds of the various species residing in this area. She combined beautiful imagery of the landscape and wildlife, while at the same time playing the recorded voices of birds such as the American tree sparrow or the eastern yellow wagtail, and of various mammals, including the gray wolf and the porcupine river caribou. Debbie Miller gracefully made the audience feel closer to these living creatures. Delighting them with the sensation of being physically present in middle of this delicate wilderness, she attempted to emotionally appeal to the listeners and remind them of the tragic and heartbreaking consequences that the Arctic Refuge would face if fossil fuels were to be extracted from there.

Sadly, the gas, oil and coal industries have completely distorted our perceptions of these natural resources. Besides the serious health and environmental impacts that the extraction and burning of fossil fuels entail – topics thoroughly discussed by all the speakers at the symposium – these industries have also managed to make us automatically link the term oil with something toxic, dirty, ugly and extremely dangerous. Yet crude oil is nothing more than the remains of microscopic animals and plants that accumulated in the Earth's crust over an extensive amount of time. These small organisms were buried layer after layer at the bottom of the sea, eventually turning into oil as a reaction to enormous amounts of heat and pressure (BBC.co.uk). Oil is an element that belongs to Mother Earth, the same way a rock, a flower, an insect or a drop of water does. Why does something that was created by the forces of nature have to be transformed by humans into “the Devil's Excrement”? This extraordinary substance that took millions of years to be created, an amount of time almost impossible for the human mind to envisage, is now rapidly being consumed by humans to keep feeding our addiction to fossil fuels.

This human tendency of profoundly altering an ingredient that is natural to Mother Earth and converting it into something that harms and kills us while, paradoxically, also ‘fueling’ an addicted society is nothing new. As author Breeze Harper wisely points out in the passage *Addiction to Unprecedented Consumption*, for many centuries in the last millennium, white people enslaved Africans and indigenous Americans “to chop cane for the production of sucrose and rum for addicted Europeans” (23). She explains how those who were originally enslaved to harvest sugar cane have now become enslaved as “consumers of sucrose” and other addicted foods, resulting in a higher rate of health imbalances, including obesity and diabetes, among people of color than among the white people (Harper, 23).

Whether it is sugar cane, sugar beets, crude oil or natural gas, these are all natural elements that we have transformed into socio-political toxins, and into our own poison and addiction. An addiction that, not surprisingly, has resulted in our current human-induced global warm-

ing phenomenon by continuously releasing greenhouse gas emissions from the burning of gas, oil and coal. This phenomenon is causing more frequent wildfires, longer periods of drought, increased polar ice melting, sea rising and more extreme heat waves. All of this is causing an unprecedented loss of biodiversity across the globe.

Equally alarming, global warming has become, as John H. Bodley rightly argues in his work *Victims of Progress*, “another way in which indigenous people are losing control over their territories” (259). In other words, global warming has become a modern form of colonialism. We wrongly tend to associate the notion of colonization with past practices of the colonial era, which stripped the native people from their land and disrupted their centuries old ways of living. Indigenous people have had to arduously fight to protect their sacred lands from the hands of avaricious colonizers, and now face the consequences of a warming and wounded planet that threatens to exterminate them. Through the words, chants, acts and symbols of those who took part in the symposium, we are reminded again that the acts of colonialism are far from being over.

Although the symposium skillfully synthesized multiple dilemmas related to indigenous rights, environmental justice, suppression of science, climate change and grassroots activism among others, it seemed to fall short in explaining how alternative energy sources could be the key in order to effectively address the main problem: oil and gas development in Arctic Alaska.

I do think that the panel “Act Now!” was a smart plan to provide the attendees with some valuable ideas on how to engage in grassroots activism. However, if 90% of Alaska's revenue still originates from oil, as professor Maria Williams explained at the very beginning of the event, how are we going to address this problem? If the US military is the largest single consumer of fossil fuels in the world, as human rights activist Steve Martinot exposes in his work *Militarism and Global Warming*, how are we going to fight this fight? If the US Department of Defense is the largest oil consuming government body in the world, as Martinot also discloses, how can Americans possibly help halt the release of greenhouse gas emissions? In order to effectively address these issues, we would need to completely eradicate the US military and the corporate structure, two of the main pillars that drive our current rates of fossil fuels consumption. In other words, to preserve the Arctic, indigenous communities and all of our magnificent world ecosystems, we will need to thoroughly dismantle the United States as we know it.

I am fully aware of the complexity of the situation, but perhaps more discussion on the unethical practices of the US military and the corporate body, and how they are fueling our current dirty energy economy, could have added more substance to “the last oil” multispecies justice

symposium. All in all, the courage and determination shown by all the panel speakers was, in my opinion, the jewel of the event. They were able to energetically transmit their spirit, motivating the audience and encouraging us to take action. I am hoping that this fire will not dwindle in the days to come, and that we will all keep on fighting together to protect our precious Mother Earth from the dreadful impacts of this climate breakdown.

REFERENCES

- Ahtuanguaruak, Rosemary. Protecting Our Seas and Coastal Communities: On Marine Ecology, Environmental Justice and Indigenous Rights. 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- Banerjee, Subhankar. "the last oil". A Multispecies Justice Symposium on Arctic Alaska and Beyond, 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- Bodley, John H. Victims of Progress. Rowman & Littlefield, 2015.
- Harper, A. Breeze. Sistah Vegan: Black Female Vegans Speak on Food, Identity, Health, and Society. Lantern Books, 2010.
- James, Sarah. Protecting the Sacred Place Where Life Begins: On the Arctic National Wildlife Refuge. "the last oil". 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- Martinot, Steve. " Militarism and Global Warming." S/R 42: Militarism and Global Warming (Steve Martinot), 2007, www.greens.org/s-r/42/42-06.html.
- Miller, Debbie. Rights of Nature: On Environmental Conservation, Justice, Law, and Ethics. "the last oil". 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- Williams, Maria, David Solomon, and Allison Akootchook Warden. Multispecies Solidarity: An Evening with History, Music, Performance. "the last oil". 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- Yazzie, Melanie, Nick Estes, Cheyenne Antonio, Jennifer Marley. Rise of The Red Nation: Diné-Pueblo solidarity. 21-23 February 2018, University of New Mexico, Albuquerque, NM.
- "Standard Grade Bitesize Chemistry - How Crude Oil Was Formed: Revision.", BBC, 2014, www.bbc.co.uk/bitesize/standard/chemistry/materialsfromoil/how_crude_oil_was_formed/revision/1/.



Figure 18. Melanie Yazzie, "Rise of the Red Nation."



Figure 19. Workshop participants, "Act Now!"

A symposium of intergenerational celebration, outreach, and healing

ANDREW G. JONES



The last oil symposium was an enlightening series of presentations, conversations and workshops that seems to have been aimed as much at increasing awareness of an issue as it was at providing inspiration for young indigenous people and allies to rally to the cause of preventing detrimental oil and gas exploration in the Arctic National Wildlife Refuge in northeast Alaska.

Some of the recurring themes I observed while engaging with the symposium revolved around the intergenerational relationships and expectations of leaders and activists involved in the struggle to save the coastal plain of the Refuge and maintain the way of life for the Gwich'in and other tribes who call northern Alaska and northwest Canada home. In addition to this notion of generational outreach — an effort that extends to Native people everywhere, and to allies of the struggle to keep oil and gas exploration from the Refuge — I will also discuss the intergenerational trauma imposed upon the Gwich'in, Iñupiaq, Tlingit and Haida, and other tribes in Alaska. This trauma stems from the rapid colonization of Alaska, that has primarily taken place

Figure 20. Brian Adams, "Next North."

Figure 21. "The Native languages and people of Alaska," alaskool.org



during the last 150 years. As part of the outreach to younger Natives, a process of healing and discussing this trauma is necessary, and many speakers during the symposium are working to facilitate this healing process by reestablishing connections to culture through writing, speaking, food, music, and art.

A third prong of this effort to engage the youth community and to reconnect young indigenous to their culture and heritage is to recognize the disconnect between indigenous ways of life and institutionalized systems of modern, western education. I will discuss how the symposium addressed these issues, and note how allies such as scientists and environmentalists can employ this western education to make a strong case for extended wilderness protections for the entire Arctic National Wildlife Refuge. As “the last oil” symposium was conducted in New Mexico, I will address some of the similarities between Alaska and New Mexico, as discussed by numerous presenters over the course of the event’s three days.

Finally, I plan to tie these threads together to illuminate how each component is critical in the very real and present threats to the Refuge from our current political administration, and to discuss how these political actions are rooted in neo-colonialism that perpetuates itself through the alliances of politicians, oil and gas companies, and their shareholders.

Figure 22. Bernadette Demientieff, “Act Now!”

Intergenerational outreach: Three days of outreach and calls to action

From the first night of the symposium, it became clear that many of the speakers were highly aware that the people who originally took up this cause, including the still-living original members of the Gwich’in Steering Committee, were not getting any younger. Most of the presenters at “the last oil” symposium struck a good balance between showing reverence to the elders — those who possess what ecologist Ken Tape described as “integrated knowledge” (Tape, “the last oil”) — and highlighting the work of impressive young people who have already dedicated themselves to the effort to stave off present-day attempts to open up the Arctic National Wildlife Refuge to further oil and gas development.

From David Solomon’s moving depiction of his family history (including his father, Jonathan Solomon, one of the original members of the Gwich’in Steering Committee) to the panel of Red Nation activists that ended the conference, the symposium’s most succinct message seemed to be, “The fight is only just now beginning. Let’s honor those who have dedicated their lives to this cause by continuing to engage in the struggle. Come one, come all. We need all hands on deck.” As Subhankar Banerjee noted toward the end of the “Alaska and Beyond” segment of the symposium, “We have to amplify our collective voices” (Banerjee, “the last oil”).

Thirty years after the Gwich’in Steering Committee was formed “in response to proposals to drill for oil in the Sacred Place Where Life Begins” (Gwich’in Steering Committee), the coastal plain of the Arctic National Wildlife Refuge (the calving grounds of the Porcupine Caribou) is under a new series of threats from Congress and the Trump administration. In December 2017, a provision to open the Refuge up to oil and gas exploration was attached to the already controversial tax overhaul bill.

Notably, most mainstream news reports cited environmentalists as the primary objectors to drilling in the Refuge, failing to even mention the Gwich’in or the opposition from Native people in Alaska. A Dec. 12, 2017 article from *The Atlantic*, however, leads with the story of Gwich’in Steering Committee Executive Director, Bernadette Demientieff. The article uses Demientieff’s story — that of a formerly disconnected Gwich’in, who came home to reconnect to her culture and wound up joining the fight against oil and gas exploration in a very significant way — to highlight the human element that most news outlets leave out of the controversy surrounding the possibilities of oil and gas exploration in the Refuge (Meyer, Dec. 2, 2017).

“No one will be more affected by the opening of ANWR than Alaska’s indigenous people, who will live among—and work on—the rigs,



drills, and pipelines that would follow the discovery of any oil or gas reserve. The discovery of oil or gas in the region could bring an economic windfall to the subsistence tribes that live on Alaska's North Slope, the coastal plain that faces the Arctic Ocean. But if a major disaster—like an oil spill or gas leak—were to occur in the area, it would devastate their only homeland." Elsewhere, the article observes, "... drilling in the calving ground isn't just an attack on the Gwich'in way of life. It's an attack on the Gwich'in" (Meyer, Dec. 2, 2017).

As Banerjee noted in the opening remarks to "Protecting Our Seas and Coastal Communities" segment of the symposium, "the fight is just beginning" (Banerjee, "the last oil").

With a new fight comes the need for new leaders — young people employing a wide range of methods: science, art, music, and culture as a means of environmental activism. People like Demientieff, musician and artist Allison Akootchook Warden (whose opening night presentation and performance had people talking throughout the symposium), photographer Brian Adams, Diné activist Cheyenne Antonio, and Diné author and scholar Melanie K. Yazzie are taking the reins to lead this new series of battles against not only the oil industry, but against the government of the most powerful nation in the world. These young leaders will need a new "coalition of conscious" that includes not only Native allies but non-Native members from the environmental movement, academia, writers, journalists, photographers, musicians, film-

makers, academics and artists to educate the general public on the issue and create enough awareness and opposition to create an uprising against oil and gas exploration in the Refuge. According to many of the speakers at the symposium, the confluence of art, culture, food and music as a means of reconnecting young indigenous people to their culture is crucial. Maria Williams says this reconnection is a critical component of grassroots activism (Williams, "the last oil").

Intergenerational Trauma and Healing

As several presenters pointed out (Williams, Warden, et al), Alaska has had a relatively rapid pace of colonization after the sale of the land from the Russians to the United States in 1867.

Dr. Maria Yellow Horse Brave Heart-Jordan, associate professor of psychiatry/director of Native American and Disparities Research Center for Rural and Community Behavioral Health, developed the model of historical trauma that has been adopted for most indigenous populations. She defined Historical Trauma as "The cumulative emotional and psychological wounding over the lifespan and across generations, which emanates from massive group trauma" (Brave Heart, ihs.gov).

One only has to watch Rosemary Ahtuanguaruak's presentation to fully understand Brave Heart's definition. Her mother's parents died as a result of the tuberculosis epidemic that the foreign whaling ships brought to the isolated coastal villages of northern Alaska and Canada throughout the early to middle part of the 20th Century. Her mother, a young girl, was sent to Washington to be treated for tuberculosis, which she ultimately did not have. In spite of this, she was kept in the hospital for several years because she was able to translate the Inuit languages (Ahtuanguaruak, "the last oil"). Her family, including her mother, also suffered at the hands of the United States Air Force during a series of tests aimed at "studying the acclimatization of humans to cold" (which involved injections of radioactive iodine), among other human-subject tests (Chance, arcticcircle.uconn.edu).

The experiments, as well as the disconnect caused by Rosemary's mother being away from her family and culture at such a young age, is something that still haunts Rosemary's family. "What did that exposure do to my family? To my children? To my grandchildren?" Ahtuanguaruak pondered during the symposium (Ahtuanguaruak, "the last oil"). Ahtuanguaruak's family story is not unique. Thousands and thousands of Native Alaskans were sent south to be treated for tuberculosis and other diseases, disconnecting them from their way of life and their culture, and leaving entire communities stripped of their once-vibrant populations ("Alaska Natives Loss of Social & Cultural Integrity," alaskool.org). "Alaska Native people have survived colonialism, capi-

Figure 23. Pamela Miller & Joel Clement, "Truth to Power."

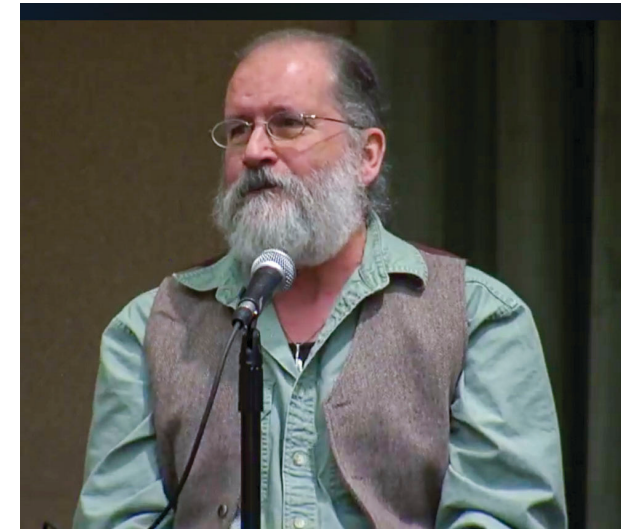


talism, oppression, social engineering and are now facing global climate change,” says Maria Williams (Williams, “the last oil”). The rapid colonization of Alaska means that indigenous people in the state suffer inter-generational trauma that goes back only one or two generations in some instances. The healing has been slow, but part of the process is reconnecting young people back to culture, including traditional foods (which are toxic in many cases due to pollution), music, stories and dance.

“In the 1960s and 70s, the Iñupiat were among the many Native communities who joined together to stand up against the repression of culture and threat on Native lands by the state. A resurgence began and led to a cultural renaissance for many Alaska Native tribes, alongside the civil rights movement and the influential 1971 Alaska Native Claims Settlement Act, which created several Native regional economic development corporations” (Bork, Alaska Public Media). While the positive impacts of the Alaska Native Claims Settlement Act, which Williams says brought capitalism to the Native people of Alaska (Williams, “the last oil”), are debatable, the rest of this movement was positive in many ways, including efforts by many tribes to reclaim their Native languages.

A new renaissance is in the works today in indigenous cultures across the globe. Williams cites the role of artists and musicians as activists at Standing Rock, and encourages more young Native artists to use their art as a means of preserving culture and inspiring more

Figure 24. left to right: Vicki Clarke, Ken Whitten, Sarah James, Michael Dax, and ASL Interpreter, “Protecting the Sacred Place Where Life Begins.” Photo by Jess Peri.



activism for causes such as the fight against oil and gas exploration in the Refuge. At the symposium, we heard first-hand from Bernadette Demientieff, the Gwich’in Steering Committee executive director. She related how she had lost her identity following high school, like so many other Alaskan Natives. But, by returning to her homeland, and working with her elders, she has assumed her responsibility to protect the Gwich’in’s sacred land. “I had to learn how to introduce myself in my language because I lost that,” she shared. “It’s not just Gwich’in, but all Alaskan Natives” (Demientieff, “the last oil”).

The disconnect between the public education system and indigenous culture goes back a long ways, as Rosemary Ahtuanguaruk recalls: “When I came back from my education in Tacoma, I realized my education was just beginning because I had so much to learn about my culture.” Noting the irony that indigenous people have to leave home to learn about their homes, Maria Williams said “Education is weaponized against people of color and is at its core the Trojan horse of colonization” (Williams, “the last oil”). More than 43 percent of Native Alaskans are under the age of 25, and more than 51 percent are under the age of 30 (American Community Survey 2016, U.S. Census Bureau), it is important to engage young people to take up the fight. In this effort, *the last oil* symposium was well organized, and I believe young people were, in fact, engaged and inspired.

NM/AK: Similarities, differences and alliances

A common question about “the last oil” was, “Why is a conference about the Arctic being held in New Mexico?” Of course, the simple an-

Figure 25. Jeff Fair, “Rights of Nature.” Still image from video by Kevin McDonald.

swer is that the primary convener, Subhankar Banerjee is the Lannan Foundation Endowed Chair and Professor of Art & Ecology at the University of New Mexico, but the relationship between the two states goes much deeper than a simple connection to one man.

As Maria Williams pointed out, both states have undiversified economies that rely heavily on the extraction industries, specifically oil and gas extraction (Williams, “the last oil”). Both states’ Native populations have suffered inter-generational trauma due to colonization, although it was a longer, slower process in New Mexico than it has been in Alaska. Both economies rely heavily on tourism as well.

Both populations are engaged in various struggles to preserve special sites like the coastal plain in the Arctic National Wildlife Refuge, and Chaco Canyon in the Four Corners area, and in both instances our political leaders have sought to write those areas off in the name of “energy independence.” And both places have strong connections to art, culture, music and heritage, much of that based in the states’ unique Native populations. As Jennifer Marley pointed out, these Native artists have all too often been exploited in the name of capitalism (Marley, “the last oil”).

Moving forward: Resisting the neo-colonialist efforts of the current administration

While there was a great sense of optimism and renewed purpose by nearly all of the presenters at “the last oil”, there was also a good deal of trepidation and uncertainty surrounding the unpredictable and insensitive presidential administration.

When President Trump makes a speech and he jokes that he didn’t know what “ANWR” was until his “friend” told him about it, then we must admit that we are living under an administration that has no reverence for Native traditions, the landscape, the animals or anything other than the all-mighty dollar, power and ego. “I really didn’t care about it, and when I heard that everybody wanted it — for 40 years, they’ve been trying to get it approved, and I said, ‘Make sure you don’t lose ANWR’” (Joling, *Bostonglobe.com*). As Melanie Yazzie said in her address to the symposium, “Indigenous people live in an everyday state of apocalypse,” which is most certainly heightened in this age of ever-increasing hostility to their ways of life (Yazzie, “the last oil”). But just as the Red Nation finds optimism in the effort to rise above the slow (and sometimes less slow) violence of capitalism and colonialism, and as the Gwich’in and the Iñupiat culture, then more young people will have to join the fight against these destructive forces who

have no thoughts about destroying an entire peoples’ culture as long as it makes them more money. As Cheyenne Antonio said during the Rise of the Red Nation presentation that fittingly closed the symposium, “The elders tell us it’s up to you now.” (Antonio, “the last oil”). And alongside this new generation of indigenous leaders will be allies, old and new, environmental groups and activists, academics, artists, musicians, poets, and writers. The fight is on; it’s all hands on deck.

REFERENCES

- Alaska Natives Loss of Social & Cultural Integrity. (n.d.). Retrieved March 27, 2018, from <http://www.alaskool.org/resources/anc/anco1.htm>
- Banerjee, S., Brown, S., Dunaway, F., & Cook, J. (2018, February). Alaska and Beyond, Presented at “the last oil” symposium, Student Union Building, University of New Mexico.
- Bork, E. (n.d.). Iñupiaq Drum and Dance: A Cultural Renaissance. Retrieved March 27, 2018, from <https://www.alaskapublic.org/2016/10/14/inipiaq-drum-and-dance-a-cultural-renaissance/>
- Brave Heart, M. Y. H. (n.d.). Historical Trauma and Unresolved Grief: Implications for Clinical Research and Practice with Indigenous Peoples of the Americas. *Ihs. Gov*, 43.
- Bureau, U. S. C. (n.d.). American FactFinder - Results. Retrieved March 27, 2018, from https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_16_5YR_B01001C&prodType=table
- Environmental Legacy of the Cold War: The Arctic Aeromedical Laboratory’s Thyroid Function Study. (n.d.). Retrieved March 27, 2018, from <http://arcticcircle.uconn.edu/SEEJ/thyroid.html>
- Gwich’in Steering Committee | Gwich’in Steering Committee. (n.d.). Retrieved March 26, 2018, from <http://ourarcticrefuge.org/gwichin-steering-committee/>
- Historical Trauma and Unresolved Grief.pdf. (n.d.). Retrieved from https://www.ihsgov/telebehavioral/includes/themes/newihstheme/display_objects/documents/slides/historicaltrauma/historicaltraumaintro_011113.pdf
- Joling, D. (n.d.). Trump explains support for oil drilling in Arctic refuge - The Boston Globe. Retrieved March 27, 2018, from <https://www.bostonglobe.com/news/politics/2018/02/01/trump-explains-support-for-oil-drilling-arctic-refuge/XyNoo8MvP5WaChixrrhZnM/story.html>
- Meyer, R. (2017, December 2). The GOP Tax Bill Could Forever Alter Alaska’s Indigenous Tribes. *The Atlantic*. Retrieved from <https://www.theatlantic.com/science/archive/2017/12/senate-tax-bill-indigenous-communities/54735>
- Smith, M., Steiner, R., & Ahtuanguak, R. (2018, February). Protecting Our Seas and Coastal Communities. Conference presented at “the last oil”, Student Union Building, University of New Mexico.
- Tape, K., & Gutzler, D. (2018, February). Climate Breakdown? Presented at *the last oil* symposium, Student Union Building, University of New Mexico.
- Williams, M., Solomon, D., Akootchook Warden, A., & Pinder, K. (2018, February). Multispecies solidarity. Conference presented at “the last oil”, Keller Hall, University of New Mexico.
- Yazzie, M., Estes, N., Antonio, C., & Marley, J. (2018, February). Rise of the Red Nation. Conference presented at the The Last Oil, Student Union Building, University of New Mexico



Reflections

SAMANTHA GUTIERREZ

Throughout my life, I have attended many lectures about climate change. I have heard climate change discussed from many different perspectives, but they have always had one thing in common. At these lectures, climate change was always discussed empirically, with regards to what this means for the future of our planet, our weather, and our animals. People had a role in causing the change, but the effects of climate change were never discussed with the personal effects that it had on humans as the chief object. I had never considered climate change a human rights issue. “the last oil” symposium was such a unique experience because it was an opportunity to come face to face with people who had seen the effects of climate change and pollution of their communities and had the strength to do something about it.

One of the most striking things about the symposium was how it took the topic of climate change in Arctic Alaska and made it personal. I was introduced to people like Sarah James and Rosemary Ahtuanguak, who witnessed the slow violence perpetrated by the oil industry on their villages. I heard David Solomon speak of taking a heavy mantle from his father, to protect their homeland from the continual outside threats to their way of life. These are a few of the countless examples one could use to show the primary nature of the information and stories presented at the conference. There were themes present consistently through most or all of the testimonies. Some of these themes were more pervasive than others, and one that was particularly prevalent was that of the interconnectedness of all living beings. Every Alaskan native who spoke at the conference had elements of this idea in their presentation. It was also a concept touched by people from academic backgrounds, native New Mexicans, scientists, and photographers.

There was also an echo of a darker theme that shadowed the interconnectedness throughout the conference. Almost every speaker mentioned the effects western culture has had on the Native Arctic concept of all beings connected in spirit. They spoke of cultural rifts opening before their eyes in the form of loss of language and tradition. The effect of this view of communion between all beings juxtaposed against a western view of capitalism and the almighty dollar ran



Figure 27. Maria Williams, “Multispecies Solidarity.”



so deep through the conference, across such a large array of speakers from such diverse backgrounds that it warrants further investigation.

“the last oil” symposium was a brilliant collection of minds that came from backgrounds so diverse it is remarkable one could pick out any strands of cohesive thought connecting the presentations. The fact that clear concepts, not strands so much as heavy ropes, connected speakers who share so little in common, speaks to the true interconnectedness of all human beings. Nowhere was this theme stronger than in the opening session, shared between Petuuche Gilbert and Subhankar Banerjee. Petuuche Gilbert is a New Mexico native. He spoke of the pueblo people and their geographical borders, as well as the energy problem in New Mexico. He also spoke of a belief that his people hold dear, stating, “All people are indigenous to this earth”. This concept was echoed in Subhankar Banerjee’s portion of the presentation in several ways.

Subhankar Banerjee spoke of Project Chariot, which he describes as “the first major grassroots environmental justice campaign in the United States and likely around the world, was led by indigenous people of Arctic Alaska, with assistance from white scientists and white conservationists. It was an inclusive movement in which indigenous people, scientists, and conservationists worked together as allies.” He goes on to state that the idea behind Project Chariot was the guiding principle of this symposium, the collaboration of indigenous and non-

indigenous peoples from a variety of backgrounds. This principle guided the conference well, and resulted in a unique opportunity to display the connection inherent in all human beings.

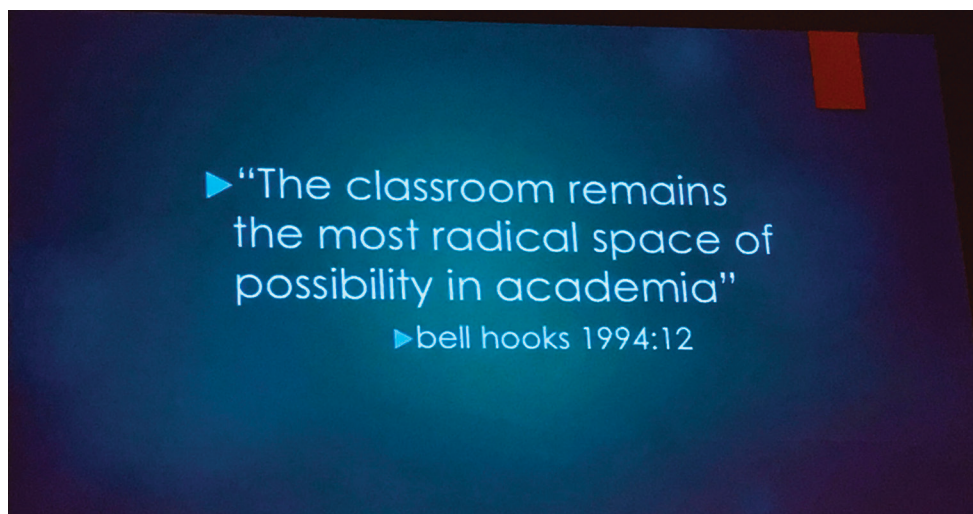
Subhankar Banerjee also spoke on an aspect of western culture that counters the idea of communion between all people. He spoke of his experience in academia and denounced it for the implication of “silos” which keep all subjects separate and make interdependence and collaboration difficult. He states that while this has progressed the depth of knowledge in each subject, it will be of very little use to us as the earth continues to be increasingly unlivable and unjust. This increasing division and competitiveness in academia shows a stark contrast to the gentle Inuit concept that all come from one spirit, and the resources and knowledge available to us are ours to share. This was the first of many hints of the contrast between the outside world and the Inuit culture and heritage.

The next session in the conference that really spoke to the themes of interconnectedness and its opposition from western culture was Multispecies Solidarity, which included presentations by Maria Williams, David Solomon and Allison Akootchook Warden. I appreciated how this session’s panel consisted of speakers with such different presentation styles. Maria Williams opened this session with a powerful and informative talk, which laid out the history of Alaskans’ fight with the U.S. government over their land and resources. She spoke of the native’s motivation for fighting so hard to preserve their land and environment, stating, “all animals are from one spirit- this is shown in Native Alaskans masks and ceremonies. Their culture shows honor to animals.” This honors the same theme of communion between all creatures that is present throughout the entire conference.

It also speaks to how consistently this view is present in the Native Alaskan mindset and how far they are willing to go to live that belief out. Maria Williams also spoke of the Alaskan Native Settlement Act (ANSA), which was signed by president Nixon in 1960. She describes it as “capitalism with a Native American culture aspect”. This shows that despite the damage that has been done to the Native culture through involvement with the western world, Inuits are still willing to take the best ideas of western culture and incorporate them into their own infrastructure.

The next speaker in the session was David Solomon. He had a unique presentation during which he connected himself with his native tribes by putting on different articles of clothing that are indigenous to the different areas he is from. He spoke of their purposes, and what they represented. This was an effective method of showing us a part of his beautiful culture, which kept his listeners very engaged. David also spoke of the power of having elders and learning from them. This concept shows the native belief in our interconnectedness across genera-

Figure 28. Kymberly Pinder, “Multispecies Solidarity.”



tions. To illustrate this point, David Solomon spoke of hunting with his father. He described seeing great caribou herds flowing over the mountains and surrounding them as they hid with bows and arrows. He said that his father taught him not to shoot the “elder” caribou in the front of the pack so the pack would have someone to lead them along the same migration routes the next year.

In the same way, he noted the importance of the Native Alaskans being led intergenerationally, with young people and elders working together in this fight for preservation of their land and customs. He cited his own life as an example, noting that the mantle of responsibility for campaigning to protect his people’s lands had been passed from his father to his uncle to himself. Here the idea that we are all connected not only with each other in the present but also throughout time is shown clearly as it appears in Native Alaskan culture. There was also a tone of dissonance from this session that opposed these strong themes of unity. Maria Williams touched on them when she spoke of how oil companies only care about the dollar. She goes on to say that the oil companies have “invaded the Alaskan government so it will never be diversified enough to be free of oil.”

The theme of western culture’s opposition to the Alaskan concept of unity is present even in her proposed solution to this “invasion”. She states that education is power, and emphasizes how critical it is that the next generation is prepared to take up the fight of which Alaska will probably never be free. However she also notes, “The western classroom is not conducive to native traditions”, noting that only 42% of Alaskan Natives graduate high school. This is another example of the negative effects of western culture on native traditions, and one that will end up hurting Alaska in the long run.

Figure 29. Maria Williams, “Multispecies Solidarity.”



The strong themes of the Native Alaskan idea of unity between all people and the Western culture’s natural conflict with this idea were prominent throughout the symposium. Present was in the session “Protecting the Sacred Place Where Life Begins”, Ken Whitten, began the session with a practical talk about the importance of the sacred place to the caribou. He notes that caribou return to this same geographical location time and time again as a calving ground, to bear and nurture their young. What a beautiful example of connection across generations, as animals once born in this sacred place return to bear their young there. Parallels can be easily drawn between the return of the caribou to their calving ground, and return of someone like David Solomon to the call of protecting Native Alaska just like his father. The unity of all creatures reaches across space and through time, uniting us globally and generationally.

Sarah James was the next presenter in the session. She led by stating she has her grandmother’s names, and noting how they ground her to her past and the rich heritage of her native traditions. She went on to continue the theme of communion between all living creatures. She describes a traditional Gwich’in diet of caribou, whale, moose, and duck, stating, “what we eat there is our medicine”. She notes that in her people’s origin story, all beings (including caribou and humans) came from one heart. This emphasizes the theme of interconnectedness between creatures and shows us the root of such a belief. Sarah

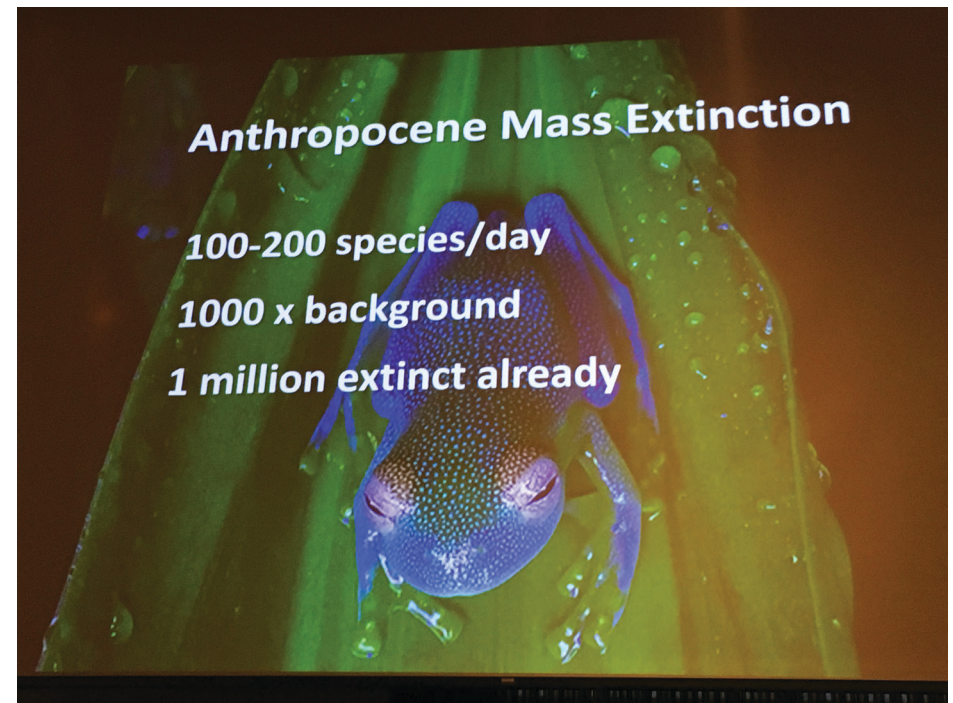
Figure 30. Vicki Clarke & ASL Interpreter, “Protecting the Sacred Place Where Life Begins.”

James also gives a root purpose for the importance of the fight to protect the Sacred Place to the Gwich'in. She states, "A threat to the caribou is a threat to the Gwich'in. We share one heart with the caribou". This gives purpose to the desperate battle she has waged for so many years to protect the Sacred Place Where Life Begins. She wants her caribou brothers and sisters to have the same clean quiet private place to give birth that she herself desired when she had her own child. This was a touching perspective, which made the fight to protect the Sacred Place very personal and real.

Vicki Clark offered a different perspective on the fight to protect native Alaskan resources. As a member of the Alaskan Lawyers, her very presence is a testament of the power of oil companies in Alaska and their ruthlessness in the pursuit of the almighty dollar. Vicki Clark spent some time in her presentation reviewing the history of the organization, including its founding by William O. Douglas. She spoke of the vision of the organization, which included protecting Alaskan wildlife and recreation, as well as protecting and preserving the area around the Sacred Place. She stated this idea is "antithetical to development". It was clear in this session that the native Alaskan idea of unity being the central purpose of the fight for Alaskan land and resources is in direct opposition to the Western cultural idea that money is more important than other living creatures, and if you are in a position to take money you have the right to do so, even at someone else's expense.

"Rights of Nature" was another session in the symposium that carried on the idea of the interconnectedness of all living beings as it is presented in the Native Alaskan culture. Even the title supports the idea that all living things are equal and therefore have inherent rights. This concept is supported by the Alaskan Natives in their fight to come alongside their fellow creatures who are incapable of speaking up to protect their homeland. It is also counteracted by the actions of big oil companies, as they show no consideration for the value of life, even other human lives and cultures, in their blind pursuit of another big payout. This session included speakers and artists who, although they are not native Alaskans themselves, came alongside the Inuit and Gwich'in peoples (among others) in the fight to protect Alaskan lands and resources.

Nicole Whittington Evans, who is a member of the Wilderness Society, led this session. She spent some time reviewing the history of the organization, including its establishment in 1936 with the goal of "protecting wild land from development." The founders of the society (including Bob Marshall, Aldo Leopold, and Margaret Murie) varied greatly. This was a wonderful example of people of diverse backgrounds and knowledge sets were capable of reaching across academic silos and banding together for a common goal. Even though the Wil-



derness Society and its founders do not have direct connections to Native Alaska, they have been able to adopt the idea of communion between all creation and use it effectively in the legislative battle to protect wilderness.

Another speaker in this session who spoke to the theme of the unity of all beings was Debbie Miller. As an author who lives in Alaska and has observed both native culture and the effect of Western colonization on it, she offers a unique perspective in the conference. She led her presentation off by stating that she is a member of the Alaska Wilderness League. She also won the Voice of the Wild award in 2012 for her work in writing that led to increased awareness of the need to protect and preserve the wild in Alaska. This shows her dedication to the idea that wilderness is important and has value beyond how we are able to use it for our own gain. One touching story from her testimony at the conference was when she described bringing Alaskan Native students to New Mexico on a trip. She described their wonder at seeing a culture so foreign to their own.

However the turning point in the story came during the group's visit to a pueblo. She states while they were walking around some of the students from her group overheard some Native New Mexicans speaking in Navajo. To her amazement, the students from Alaska were able to understand some of the words the New Mexicans were speaking. In

Figure 31. Rick Steiner, "Protecting Our Seas and Coastal Communities."

her words, this amazing experience brought the two groups together, made her students feel more at home in a place so different from their native land, and “made us all seem like distant cousins”. This was a beautiful example that ties our homeland of New Mexico to the far-reaching outskirts of Arctic Alaska.

Debbie Miller also went on to speak about patterns in nature that tie the Arctic to every other part of the earth. She states it has been found that birds migrate to Alaska from six different continents. They migrate there from the very edges of the earth, live and coexist with native species, and then head back from whence they came, year by year, season by season, in a never ending and generational cycle. This gives one the impression that there is a little bit of the Arctic culture everywhere there are living things on this earth. The same footprints pressed into the Alaskan snow are pressed into the red New Mexican clay, the sand in the Sahara, and many places in between.

The final session of the symposium was well chosen, as it tied New Mexico, climate change, and native Alaska together cohesively. The session started with Nick Estes. He immediately launched into the concept of native lands, and borders imposed by white people as they colonized New Mexico and forced Native Americans onto reservations. He also states, “When you think of climate change, you don’t think of indigenous peoples as a part of that”. It is true that throughout history, native populations have been unnoticed in their battle to protect the earth, although their belief that we all stem from one spirit makes them one of the cultures in the world most likely to see the necessity of such a battle. Nick Estes also pointed out that in “the last oil” symposium there was a lack of native people from cities presenting that point of view. He states this was a failing of the symposium because although many natives live directly on the land they want to protect, 4 out of 5 native people in the U.S. live in urban environments. However, Nick also addressed the idea that “movements transcend borders.” This concept is essential to the theme of this session, that although in New Mexico and Alaska, Natives live in a world where western colonization and imposed borders have the upper hand, it is possible for them to cast off these ideals and participate in something like “the last oil” symposium, which shows how a movement to protect the Arctic can unify diverse peoples under the banner of the interconnectedness of all beings. Native peoples in the Arctic and in New Mexico are being taken advantage of every day by big companies, governments, even police forces, who doubt the Natives’ ability to overcome the western culture to which they have been subjugated for so many years. They assume that things will be as they have been since colonization, the people in power will stay there, and those who hold no influence will be unable to stop it. They are wrong. “The last oil” symposium is a literal representation of the ideas it drew together and presented: that

people from all walks of life can share one common goal although they may have nothing else in common.

The time I spent at “the last oil” conference has been formative for me. My eyes were opened to ideas that had not crossed my mind before I attended the symposium. Climate change is a human rights issue. While it affects many parts of the ecosystem, this is perhaps its most important consequence. Slow violence is real, and it is not made any less destructive or unjust because of its lack of media attention. The goal is protection and preservation of Alaskan land and resources. This goal is like the common spirit shared by all as it is referenced in Native Alaskan culture. Alaska is worth protecting, and she needs protection today. She needs protection from big oil and development companies, who do not value life. That is why we gather, though we are of different nations, peoples, and languages. We gather because we may not have any power to fight these organizations on our own, but movements transcend borders. “The last oil” symposium is part of a larger movement. It is a collaboration that reaches as far as the colonized west extends. Borders are a concept that came with colonization, and in the same way movements transcend borders, people will transcend power given indiscriminately by western culture to those with money. People united for one cause will overcome companies in pursuit of the almighty dollar, and band together to protect what is sacred to us and to our brothers. Interconnectedness versus western opposition, as it was portrayed throughout the conference, is the battle we face going forward into the future.





BARREN:
3 Minute Last Oil
Campaign

BARBIE ROBERTSON

Figure 33. Allison Akootchook Warden, "Multispecies Solidarity."

EXT. NEW MEXICO - LANDSCAPE - DUST STORM - DAY

A desaturated desert stretches out in front of us.

Super: "New Mexico"

A wall of wind moves across the land with a ferocity that rips shrubbery out of the earth.

EXEC

(V.O)

Who cares? There's nothing there.

PAN OVER an arroyo

(cont.)

It's just a barren, brown,
nothingness.

EXT. FARMINGTON, NM - APS FOUR CORNERS POWER PLANT - DAY

Metal towers jut out of the surrounding landscape, thousands of orange lights glow through the smoke and steam billowing from their tops.

INT. OFFICE - DAY

PETER'S POV

THE EXEC (40's) leans on a conference table with a casual air about her while she sips on a coffee. PULL FOCUS to the SLIDESHOW behind her, where potential revenue is charted in the millions.

(cont.)

I'm telling you, no one is going to
care what we do there. No one
important.

We turn to look out the window at a nondescript concrete skyline and let out a pensive "I'm about to invest 5 million dollars" sigh, and then we are back to the EXEC:

EXEC:

Its a no brainer, Peter.

CUT TO:

EXT. ABIQUIU LAKE - LATE AFTERNOON

HIKER POV

The sun, to our back, beats its final rays down on a ridge, heat shimmers off the rocks. WE HEAR cicada hums begin to fill the silence. A labored and measured breath guides our POV as we make our way up the hill. It's steep, and we slip a couple times, and end up on all fours more than once before we reach the top. The lack of moisture in the air is intense. We take a swig of water, and push on. So close. WE SEE colors more and more vividly as we climb. One last rock.

And we are there. COLORS IN FULL SATURATION. A Northern New Mexico valley consumes the expanse of our vision. Down below, thousands of trees fill the floodplain and in the distance, the multi-colored mesas drop off into a wide basin, bordered by blue mountains and red canyons. The Sky has never been so vibrant, the colors seem like they've been doctored, or are memories from a dream.

ON THE HIKER:

He takes it in. This is what you live for. A little laugh of joy escapes between breaths.

HIKER

Ah, Yeah.

A LIVELY STRING AND PERCUSSION PIECE SWEEPS IN AS WE CUT
TO:

EXT. DIXON FARM - IRRIGATED FIELD - DAY

A FAMILY stands by the acequia, shaded by rows of apple trees as DAD works to open the canal lock. He cranks the lever one final time and water rushes from the gate, filling the irrigated field beyond.

THE KIDS squeal with glee and run after the man-made flood, slip-and-sliding down rows of alfalfa.

PAN UP to the apple tree and TIGHT on an apple, which then

TAKES US TO:

INT. COCHITI HOUSE - FEAST DAY - CONTINUOUS

TIGHT:

AN APPLE is passed from the hand of THE MAN to the hand of THE GRANDMOTHER

PULL BACK to REVEAL:

A table full of food is surrounded by FRIENDS, FAMILY, and STRANGERS alike. People talk and laugh as THE GRANDMOTHER ushers GUESTS through the door and talks to THE MAN holding a box of apples.

WE BACK OUT OF THE HOUSE to let the decorative fabric slide over the door and take up frame. As it moves in the breeze we zoom out and:

EXT. SANTA FE PLAZA - NIGHT

WE SEE it is the skirt of a DANCER (30's). She is being twirled around by her partner, onlookers watch, elated. Some join in.

It is a balmy summer night. Teenagers walk around in groups, laughing, running, skateboarding. An older couple claps along from their bench.

At the front of a LONG LINE fajitas are being served from a HAND-PAINTED CART. THE COOK smiles at a patron as he hands over a plate of steaming food.

Off camera, a FRIEND yells:

FRIEND
Hey Joey!

COOK
Hey Man!

During the above we PUSH PAST the COOK all the way into the fire in the STONE OVEN burning behind him until we are in:

EXT. COUNTRYSIDE - NIGHT

All the MUSIC is gone. WE HEAR crickets, frogs, maybe an owl or a coyote howl. But it isn't noisy; it's serene.

WE RAISE UP out of THE FIRE to find a COUPLE quietly sitting back on an old hammock. WE FOLLOW THEIR GAZE to face a magnificent sky.

SUPER: "Barren... is a matter of perspective."

END OF SERIES

EXT. ALASKA NATIONAL WILDLIFE REFUGE - DAY

ARIEL VIEW

SUPER: ALASKA NATIONAL WILDLIFE REFUGE

A white landscape stretches out below us, fierce mountains create the distant horizon. Wind makes miniature tornadoes of snow across the expanse.

FORMER SECRETARY OF THE INTERIOR
(v.o recording)
It's just a barren, white,
nothingness.

A HERD OF CARIBOU make their way across the frozen tundra.

We are now in the midst of the herd. Thousands of caribou move past us, the ground shakes with the force of their numbers.

INSIDE THE BRUSH, 1000 meters away, a group of Gwich'in HUNTERS solemnly watch the numberless herd. Veterans and rookies alike are enraptured by the sight.

EXT./INT. ALASKA - VARIOUS - MONTAGE

A WOMAN fashions a CARIBOU SKIN into a pair of gloves.

A MAN teachers his YOUNG DAUGHTER to lay a net for salmon.

AN ELDER performs ceremony in a group of her peers.

THE TRIBE stands out in the snow in front of their town, exuding resilience, beaming contentment, imploring ally-ship.

SUPER: "Barren is a matter of perspective. We know that best."
"visit thelastoil.unm.edu to learn more"



*NORTHERN NEIGHBORS
SOCIAL MEDIA
CAMPAIGN*

BARBIE ROBERTSON

Figure 34. Pamela A. Miller, "Truth to Power."

EXT. ALASKA / OTHER LOCATIONS - SIMULTANEOUS - DAY

ALASKA:

A MAN teaches his YOUNG DAUGHTER to lay a FISHING NET out over the Porcupine river

THE MAN lugs a net full of salmon off his sled in front of the house, as THE WOMAN and other FAMILY MEMBERS come outside to help.

The following is shown simultaneous split screen, with the left taking place in ALASKA and the right in NEW MEXICO

EXT. DOCK - EARLY MORNING

THE WOMAN from earlier sells her fish at a market dock. A MERCHANT takes her relatively small catch and loads it up onto a mountain of SALMON. He hands her a small amount of money, which she counts and accepts with a humble smile.

INT. ALASKA HOME - NIGHT

THE FAMILY cooks together in their small kitchen, laughing. A TEENAGER brings wood from inside to add to the stove.

EXT. COASTLINE - DAYBREAK

The TEENAGER Leads a CAUCASIAN PHOTOGRAPHER over a hill to the shoreline. As we crest over, we are surrounded by a multitude of STORM PETRALS. The Photographer excitedly snaps pictures:

POV CAMERA:

CLOSE UP on a bird, WE SEE a PINK ANKLE TAG.

The massive colony strikes awe into both of them.

INT. CLINIC - DAY

The TEENAGER and his GRANDMOTHER talk with a NURSE, who hands them an INHALER.

EXT/INT. GROCERY STORE - DAY

A YOUNG WOMAN enters the grocery store and looks over the seafood. WE SEE the LABEL "Wild Alaskan Salmon"

INT. NEW MEXICO HOME - NIGHT

She cooks dinner at home, anxiously following a cookbook recipe. Her BOYFRIEND enters the kitchen and gives her a squeeze from behind. She smiles.

EXT. CAR - NEW MEXICO ROAD - DAWN

The YOUNG WOMAN and BOYFRIEND drive down a road SUPER: "Bosque Del Apache Wildlife Refuge."

EXT. BOSQUE DEL APACHE - DAYBREAK

BOYFRIEND sets up his tripod over a man-made lake filled with thousands of birds.

POV CAMERA:

He snaps pictures of the Various species beginning their morning Ascent. A SMALL BIRD pops out of the water nearby. He ZOOMS IN. WE SEE a pink ANKLE TAG. It is the same bird.

EXT. GAS STATION - LATER

BOYFRIEND waits as the car fills up with gas.

WIDE SHOT of the car driving down the two lane highway.

The New Mexico side of the split screen is wiped out, and we are back to Single screen on ALASKA

EXT. ARCTIC VILLAGE - DUSK

The TEENAGER walks with his GRANDMOTHER, who wheezes in the frigid air. She stops to catch her breath, steadies herself, and continues on.

PAN OVER to the horizon. It is pink with light and smoke pollution. It looks like the sky in LA, out of place here in the Arctic.

WE SEE smoke billowing from towers that peak through the tree tops several miles away.

CLOSE UP on TEENAGER, who glares at the cause of his family's suffering.

SUPER: "Our Northern Neighbors are closer than we think."
"visit thelastoil.unm.edu to learn more."

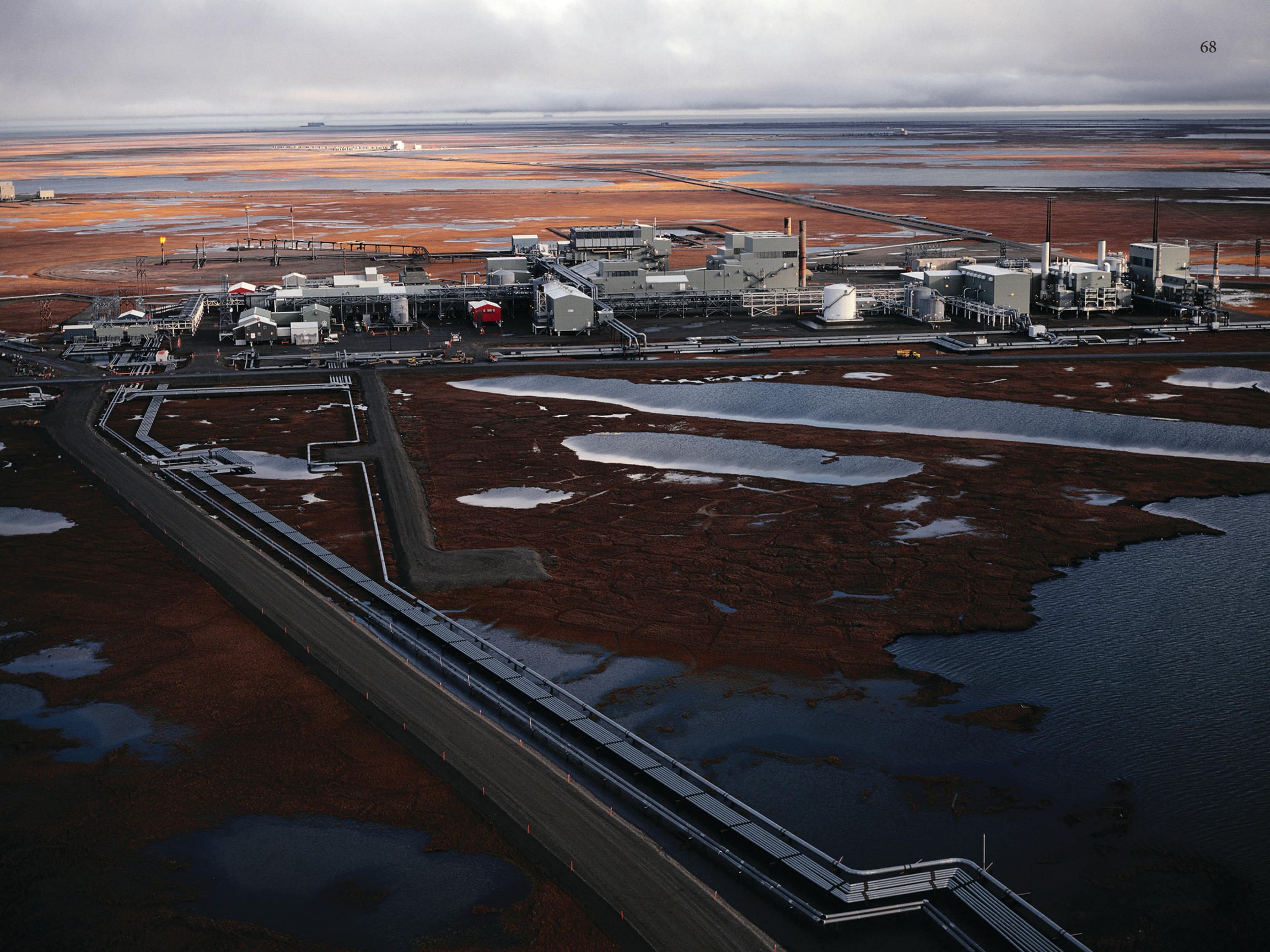
Figure 35. Snow Geese at the Bosque del Apache National Wildlife Refuge, New Mexico. Photo by Subhankar Banerjee, 1997.

Figure 36 (following spread). Oil field infrastructure at Prudhoe Bay. Photo by Subhankar Banerjee, 2002.

Figure 37 (page 71-72). Known and Unknown Tracks—bold 3D-seismic tracks overlap with faint caribou tracks on the Teshekpuk Lake Special Area. Photo by Subhankar Banerjee, 2006.

Figure 38 (pages 73-74). Arctic Checkerboard—extensive recent 3-D seismic exploration just outside the western boundary of the Arctic Refuge—a tight grid of 200 meters x 400 meters. Photograph by geophysicist Dr. Matt Nolan, July 2018.









Response

GABRIELLE HINDS-BROWN

I find one of the main faults of academia is the obligation to read and write about dire issues and the struggles of various communities, while never putting forth the actions necessary to directly address these issues. We praise the actions of those on the front lines, actively fighting against extractive industries, racism, and colonial violence, but as academics, we ultimately play a passive role. We do not interact with affected communities in a productive manner, and through this, their voices are often subjugated by academia. For this very reason, “the last oil” symposium was a groundbreaking feat of integrating different communities, knowledge bases, and cultures to work towards a common goal—protecting Arctic Alaska and other areas affected by the oil industry. The symposium broke down the walls between academia and activism, science and spirituality, and humans and the natural world. As the world changes rapidly and daily acts of violence are imposed on us and the environment, it is imperative that academia moves towards a more progressive and integrative model. The symposium demonstrated a type of praxis through which academia can achieve this.

It is important to acknowledge that indigenous people are, and have always been, at the forefront of environmental movements across the world. This is especially important in both Alaska and New Mexico, as oil development is a direct threat to the indigenous communities who live in both places. “The last oil” symposium elevated indigenous voices in a profound way that connected the oil industry to settler colonialism. Personal narratives, art, music, organizing and research were all showcased as a testimony to how diverse and effective indigenous activism can be.

On the opening night of the symposium, Gwich’in elder David Solomon delivered a powerful performance that offered both an insight into his culture and a call to action. “I speak from the heart,” Solomon said as he crumpled and discarded a piece of paper. That statement was evident throughout his presentation. Solomon not only delivered a speech, but as he was speaking, he dressed himself in traditional Gwich’in attire, offering a visual of how he embodies both western and traditional cultures within himself. Solomon’s performance came to be emblematic of the symposium as a whole. Knowledge from western scientists and advocates was comprehensively integrated with the



Figure 39. Debbie Miller “Rights of Nature.”

traditional knowledge of indigenous activists, artists, and scholars. This type of integration is crucial as climate change becomes more of an ominous reality every day, indigenous lands and cultural sites are threatened by extractive industries, and animal species are dying out at an alarming rate.

David Solomon was not the only presenter to speak genuinely from the heart. Rosemary Ahtuanguaruak, an Iñupiaq elder, delivered a poignant speech about her own experiences living in an area affected by oil and gas development. She spoke of the history of environmental racism her family has endured; from her mother being injected with radioactive material as a test subject in Cold War military experiments, to her current village relatives battling respiratory illnesses and struggling to obtain food the traditional way. What she spoke of came purely from her own observations and experiences. She knows the oil corporations lie, because they interact directly with her, making claims and promises only to break them. She knows the whales and caribou are driven away by seismic exploration and oil development activities, not because she tracks their migratory patterns, but because her relatives have been unable to hunt for food since oil development started. She knows oil development has health effects on her community, not because she read a health impact assessment, but because she has seen firsthand the ailments in her community that grew exponentially as the gas flares increased.

Scientific data is important when examining these effects, but how much weight can numbers carry without the human experience behind them? Rosemary Ahtuanguaruak's speech was one example of why science must be decolonized and reconstructed, so traditional knowledge and lived experiences can coexist with western science and scholarly research. Neither forms of knowledge are more legitimate than the other, and neither more important in the study of climate change and human interaction with the environment. By placing Alaska natives, like Ahtuanguaruak, on the same panel as scientists like Rick Steiner, we as an audience can paint a more holistic picture of what is at stake in the Arctic.

Most of the scientist speakers approach the issues at hand in a more logic and data based rhetoric. However, despite their research-heavy presentations, the information was never inaccessible or hard to understand. This is an important point, keeping in mind that the audience was a diverse group of students and academics from all fields, activists, and community members. Oftentimes science is highly specialized to the point where only a select few with the proper knowledge background can understand the information. By providing simple overviews of their research, causes and effects, photos, personal stories, and examples, the scientists who presented made their field of study accessible to a wide audience.



As someone who is not in the field of science, I was not expecting some of the science-focused presentations to have such a significant impact. I can point to one panel in particular, “Climate Breakdown?” that really grabbed my attention. Ken Tape, an Arctic ecologist, had a simple yet extremely impactful method of conceptualizing the effects of climate change in the Arctic, in which he takes “repeat photographs” of sites in the wild that have changed ecologically over the past six decades. Visual evidence of retreating glaciers, increased vegetation growth, and unusual animal populations can give even the least scientifically-minded person an idea of what is behind the term “climate change.” For many of us, climate change is an abstract concept. We are supposed to believe in its global catastrophic effects, yet it is an entity that is not visible in everyday life. Particularly in the Southwest, where hot weather is the expected and droughts are the norm, how can we better understand how climate change functions and how it affects us?

David Gutzler, a UNM climate scientist, answered this question in a very clear and comprehensive way. Through diligent tracking of environmental changes in the Southwest, he hypothesizes that Albuquerque's climate will resemble El Paso's current climate by the year 2100. To make this claim even more alarming, he went on to explain that the change will not be gradual in a way that would allow plants and animals to adapt to the new climate. Rather, there will likely be de-

Figure 40. Ken Whitten, “Protecting the Sacred Place Where Life Begins.” Photo by Jess Peri.



struction through wildfires, with the trees not being able to regrow in the warmer climate. Gutzler's presentation was a realistic portrayal of how climate change will affect those who live in the central region of New Mexico. In order to get people to think of climate change as a real, tangible force, it must be portrayed in a way that can be visualized. Both Tape's and Gutzler's presentations were exceptional examples of how this can be done.

The "Climate Breakdown" segment, among others, brought up questions of how the Alaska is connected to New Mexico. Ecologically, they are polar opposites. However, because they are both in the top five oil-producing states in the country, they are facing many of the same issues concerning the fossil fuel industry. First, it is important to examine how policy-makers regard both the Arctic and the Southwestern U.S. They are commonly deemed as "national sacrifice zones," a term that characterizes sparsely populated areas that can be "sacrificed" for the pursuit of natural resource extraction and other environmentally toxic activities. Though they are sparsely populated, as in far from major towns and cities, these areas are still inhabited primarily by people of color and/or those of a low socioeconomic class. In New Mexico, both the Pueblo Indians and the Navajo Nation are severely threatened by oil and gas development. Similarly, the northern Alaska tribes are affected by both coastal and land based oil drilling. The sus

tenance lifestyles, health, social fabric, and cultures of these communities are endangered by the designation of their land as national sacrifice zones. There is a disquieting paradox that lies in the idea of a national sacrifice zone; rural and native communities do not reap the benefits of the industries that exploit them and their land. Alaskan native tribes live almost solely off the land. Gas prices are inflated and largely unaffordable for the people who live there. In the Southwest, many rural indigenous communities, including much of the Navajo Nation, are without electricity. It is safe to say that these groups of people are among the lowest consumers of energy, and contribute the least to climate change. Yet it is evident that they are suffering the effects of both energy extraction and climate change at disparate rates.

Discussions of climate change in the Arctic must take into account the rest of the planet. Earth operates as a system, and everything is interconnected. The effects of greenhouse gases and harmful chemicals are not localized; they will inevitably affect the health of the planet as a whole. The Arctic is especially important in this conversation because it serves as the "barometer of health of the planet" (Watt-Cloutier, *The Right to Be Cold*). Studies have shown that the Arctic is essentially the most toxic place on the planet, as chemicals used around the world end up concentrated in the bodies of Arctic animals and humans, at a higher rate than anywhere else in the world (Cone, *Silent Snow*). In addition, the Arctic experiences warming temperatures at rates twice as high as the rest of the planet, according to the *Snow, Water, Ice, and Permafrost in the Arctic* report published in 2011. Rising temperatures in the Arctic thus creates a cycle, as sea ice melts and ocean levels rise, coastal communities around the world are threatened. Despite these urgent concerns, oil companies continue to drill in the Arctic, contributing to an industry that will ultimately further pollute and warm the planet.

Upon learning about the dire environmental and social issues both in the Arctic and New Mexico, we are faced with the question of how to take action. How can we mobilize and rise against the industries that are causing this violence or the governments that enable them? How can a small group of concerned people even begin to have an affect on such a large-scale problem? The truth is that every method of examining issues can also be used as activism. As demonstrated in the symposium, science, visual and performance art, organizing, and storytelling can all be used as radical tools of dissent.

Much of the symposium highlighted indigenous resistance and liberation as a focus point for activism. As mentioned previously, indigenous activists are often at the forefront of environmental groups. Unfortunately, their efforts are frequently overshadowed by the work of larger NGO's, who get funding, media traction, and support from affluent individuals. It is because of this that it is vital to give Native groups and individuals a platform to speak about their experiences and

Figure 41. Workshop participant, "Act Now!"



groups and individuals a platform to speak about their experiences and activism. After all, it is the Native communities who are facing the burden of government negligence.

The panel, “Rise of the Red Nation”, offered a comprehensive overview of what indigenous activism looks like, particularly in the Southwest with its current pressing issues of the nuclear industry and oil and gas development. Indigenous activism operates differently than mainstream environmental activism, in that it has a focus on how power is enacted through modes of colonialism. The solution to environmental destruction is not only ending reliance on fossil fuels, but also working towards liberation from the Western colonial ideals that allow for environmental destruction to happen in the first place. We have seen victories come from indigenous resistance; from the halting of Project Chariot in the 1950s to court case victories against oil corporations in the Arctic. However, as speaker Melanie Yazzie put it, indigenous people “live in a constant state of apocalypse.” Individual victories do not end the legacy of colonial violence the United States

will inevitably continue to pursue. That is why a focus on liberation is so important.

Melanie Yazzie also brought up another point that relates to the discussion of integration. She said that the pessimistic attitude that is pervasive in academia must be in a dialectical relationship with revolutionary optimism in order to collectively work towards liberation from violence. I thought this statement perfectly captured the essence of what radical activism must look like. Examining, critiquing, and deconstructing power structures is important, especially when looking at how colonialism and environmental destruction work together. However, anger and despair must not be the only attitudes that fuel dissent. A sense of relationality and community through shared struggle can also be a powerful source of hope and freedom through the process of liberation.

In the “Rise of the Red Nation” panel, the speakers frequently brought up the NoDAPL movement, including their own experiences at the camp in Standing Rock, South Dakota. When the DAPL protests were happening, I followed it closely through media coverage it was getting at the time. It was not until later that I realized that this movement was one of the few environmental justice movements that has ever received such extensive mainstream news coverage. The media coverage and widespread support this movement was getting was a positive thing, however, because of the way mainstream media operates, it leaves out the “big picture.” Oil development is a multi-step process, and violence can be inflicted on people and the land at nearly every step of that process; the pipelines are just one part of the whole system. I found myself wondering what would happen if the environmental racism in the Arctic received as much traction in the media as Standing Rock did. What if the nation— even the world— stood in solidarity with the native communities there? I have no doubt that people would be in support of the Gwich’in and Iñupiaq communities, as they are facing injustices that would rightly enrage anyone.

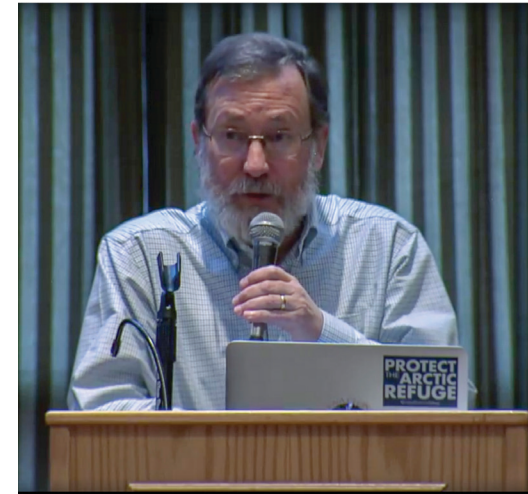
Yet, perhaps this is an unproductive way of thinking about this movement. What native Alaskans are facing is slow violence, defined by Rob Nixon as a type of violence “that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon, *Slow Violence*). Additionally, this slow violence the communities are facing is a systemic problem in which structural

Figure 42. Jennifer Denetdale, “Rise of the Red Nation.”

modes of oppression are allowing this violence to be inflicted. Slow violence does not give the media what it wants— a story to sensationalize, a list of casualties, and an obvious villain. There is nothing sensational about abnormal migratory patterns of whales and caribou, or the silent suffering of a community plagued with respiratory illness, birth defects, and cancer. A temporary spotlight is not what these communities need. They need continual alliances with organizations and policymakers, ways to preserve their culture in the face of violence, and most importantly, they need a sense of hope. The only way to address slow violence is through persistent resistance against every action that perpetuates the slow violence cycle. Every hearing, court case, petition, and vote contributes to a long-term, multi-generational movement to address environmental injustice. Long environmentalism is what best describes the Northern Alaskan communities' activism. Long environmentalism, as defined by Subhankar Banerjee, functions by "illuminating past injustices, highlighting the significance of resistance movements to avert [...] violence, showing how communities respond to slow violence, and pointing towards social-ecological renewal after devastation" (Banerjee, *Long Environmentalism*).

Because slow violence takes place over multiple generations and is not confined within borders, education and advocacy must aim to do the same. "The last oil" Symposium served as a model for how this may look. The symposium exhibited voices from all generations. In fact, many of the indigenous speakers spoke of their ancestors, extending the voice of multiple generations to the beginnings of humanity. The symposium also brought in speakers from multiple academic disciplines and professions. Finally, the symposium framed the issues in the Arctic in a way that connected it to the rest of the globe, as no environmental tragedy of this magnitude can ever have an isolated effect. Long environmentalism is made possible through "sincere listening, giving rise to radical hope" (Banerjee). Through my observations, this is what made the symposium successful. The collaboration and integration of so many voices created a space for radical hope to emerge. It made room for dialogue between unlikely allies; the artists and the scientists, the scholars and the activists, humans and the animals.

The symposium was a one-time event, and only a small portion of the long environmentalism that has and will continue to take place. I like to think that for at least some attendees, this event served as an introduction to either environmental justice, indigenous activism, Arctic ecology issues, or even just environmentalism as a whole. That perhaps this event will lead them down a road of advocacy and activism, so they too can join the long environmentalism movement. We spent some time as a class discussing why the turnout of the event was not as good as it was anticipated to be, but in the long run, that is not so important. The impact of this event goes far beyond just those who



attended. The symposium provided the audience with the knowledge to speak about these issues to their families, friends, classmates, and educators. There is no telling who else may be inspired to learn more about these issues and take action themselves.

Admittedly, this is an optimistic way of looking at the symposium, and the effort to shed light on oil and Arctic issues must be continued beyond this event. Something that I envision is an Alaskan-New Mexican alliance of grassroots activists, scholars, and artists, bringing to light the similarities in environmental destruction and colonial violence both are simultaneously facing. The environmentalist movement can often be very divisive, but by creating alliances between different communities and areas of the country, we can start creating a larger community of activists who are able to support each other's local efforts as well as addressing the larger causes of these issues. To put it in a broader perspective, integration is what we need; in activism, academia, and science. These three things can no longer operate on their own if we want to see productive, sustainable, and radical change.

REFERENCES

- Cone, Marla, *Silent Snow* (2005)
- Nixon, Nixon, *Slow Violence and the Environmentalism of the Poor* (2011)
- Subhankar Banerjee, *Long Environmentalism: After the Listening Session* (2016)
- Watt-Cloutier, Sheila, *The Right To Be Cold* (2015)

Figure 43. David Gutzler, "Climate Breakdown?" Still image from video by Kevin McDonald.



Figure 44. Bernadette Demientieff speaking at the Arctic Refuge rally in Washington, DC. Photo by Subhankar Banerjee, June 15, 2018.

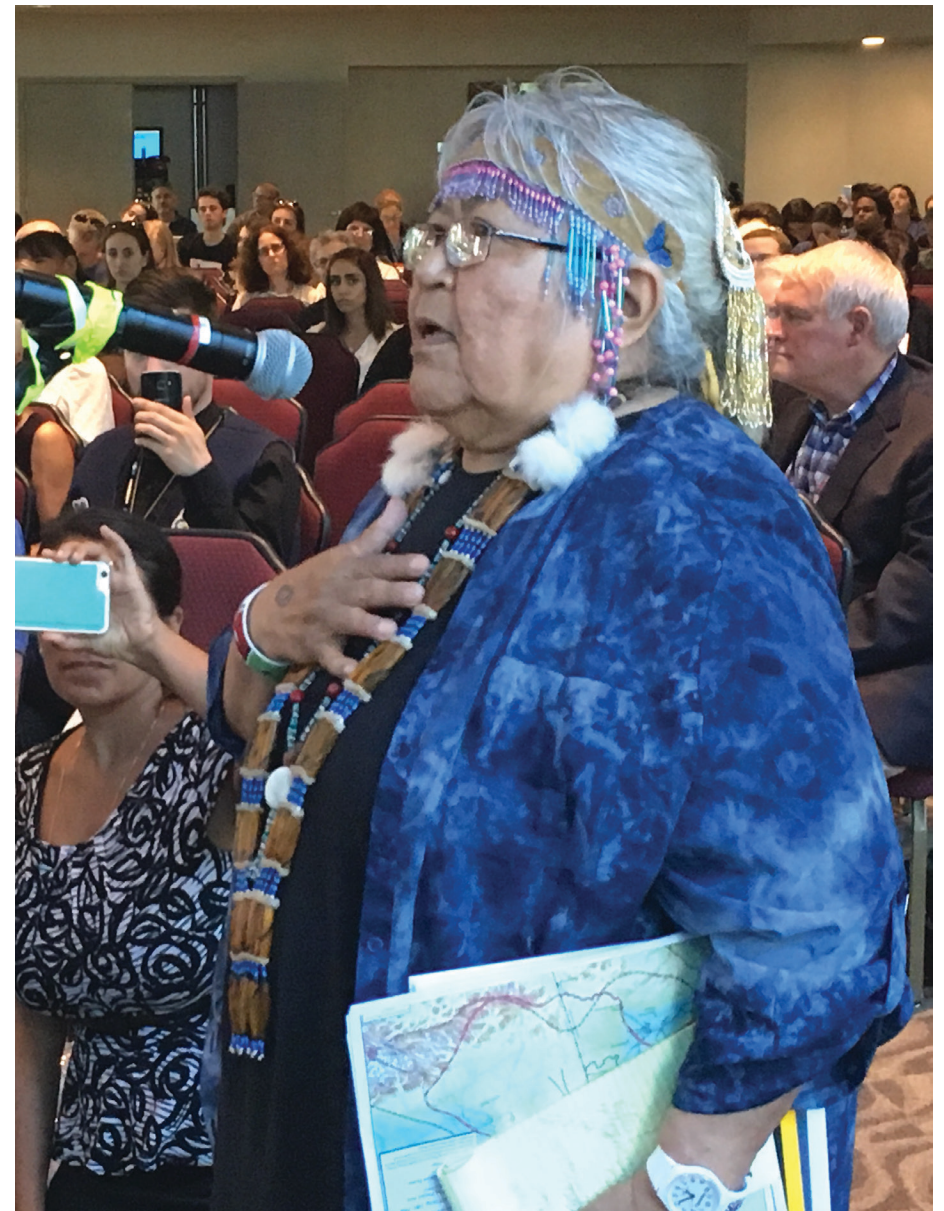


Figure 45. Sarah James speaking at the Arctic Refuge public hearing in Washington, DC. Photo by Subhankar Banerjee, June 15, 2018.



Figure 46. Defend the Sacred Alaska rally, Fairbanks, Alaska. Photo by Pamela A. Miller, 2018.

Response

WYATT POTTORFF

What role does visual communication play in social activism? This question arose out of my reflections on how contemporary technology and media harness the ability to emotionally detach populations from worldly issues. I began to ponder just how an individual can separate themselves from the destruction of the planet, the provider of every experience an individual has ever had. The common saying, “A picture is worth a thousand words” resounds and reverberates in the most basic cultural makeup of the 21st century. After ascending to the peak of Half Dome in Yosemite Park, the impulse of many people is not to gander in humility at the miles of ancient forest that have preceded humanity in million-fold, but rather... to make a individualistic record of their existence on the land (a selfie). The Millennial’s inseparable attachment to virtual reality, television, and social media cannot be looked at as a harmless method of entertainment, but needs to be looked at as an enablement of utter alienation from the outer world.

Climate change is a complicated set of environmental reactions that culminate in “external” ecological disharmony. The “internal ecology” of a person consists of their education, friends and family, neighborhood, and standard of living. In urban areas of the Western world, clean water, gasoline, agricultural products, and the sustenance of a human community seem to appear and reward urban inhabitants without revealing a trace of their origins. For a person living in an industrialized city: there is no visual marker that links their daily dose of coffee to the crucial pollination of honey bees, there is no way to fathom the careful chemical mixture in soil that a farmer has fertilized, and there is no direct need to consider the homes of indigenous peoples that dissipate with the melting and flooding of every ice cap.

Experience has shown me that students are introduced to digitized education from the time they are in elementary school. The years go by and as we progressively learn about photosynthesis, cellular structure, and food chains through digital aids, it is thought that if the student can regurgitate the information, they must indeed have a comprehensive and manual understanding of natural phenomena. In this form of educational technique, there is no incentive to apply knowledge practically other than to score proficiently on a plethora of tests. While the natural world may be studied, nature and the world of the study-



Figure 47. Ken Tape, “Climate Breakdown?”

ing may as well exist as juxtaposed worlds. Furthermore if the “internal ecology” of a visually dependent person appears stable, and this view is then affirmed by the media, how is one easily able to realize that their comfort and social homeostasis relies on a worldwide system of destructive and unsustainable industrial practices?

In order to reach the digitally, visually, and technologically obsessed, it is utterly logical that this would be achieved through highly impactful forms requiring short spans of attention. The ability to interpret visual signals is a nearly automatic sensation that poses no instantaneous discussion to grapple with. A lone book, magazine, or even a lecture do not possess the immediate gratification that Western masses are predisposed to. It is the combination of these mediums with visual representation that enables specific issues to be widely communicated to general populaces. At University of New Mexico’s recent event designed to inform the public about environmental issues affecting the Arctic National Wildlife Refuge and its peoples (“the last oil” Symposium), a diverse range of speakers implemented imagery that visually engaged the audience, but also provided context on environmental issues facing Alaska.

Ken Tape, an ecologist at the University of Alaska Fairbanks orchestrated a presentation concerning melting glaciers, the evidence of thawing permafrost on Arctic habitat, and the various responses wildlife are making in reaction to environmental changes. Tape’s eloquent scientific explanations were complimented by Nature photographs he and other scientists had taken while in the midst of field research. For most of the planet, hearing about a glacier that has greatly diminished in size over several decades is an un-relatable notion. On the other hand, to visibly see a glacier that has diminished by ten times its original size in 40 years is to unarguably acknowledge vast changes that have occurred in the ecosystem. In order to demonstrate undeniable evidence of climate change, Tape referenced landscape photos from various periods of the 20th century, and then compared them with photographs of the 21st century that had been recorded in the exact same location. In this instance, the photos were able to reference previous states of nature and force the viewer to observe ecological changes propelled by a present day, fossil fuel driven lifestyle. The timelessness of the visual form allowed Ken Tape to successfully capture the environmental transition from a hundred years ago to the present, a task that would have been difficult if not impossible through verbal explanation alone.

Brian Adams who also works in the photographic medium, fused and connected the tie between climate change and the direct impacts that coastal people endure as a result of warming temperatures. Adams is an Iñupiaq Alaskan who from a young age has photographed the mothers, fathers, elders, and children from various Alaskan communities.



After developing his skills, Adams devised an intention to capture climate change through the intimate perspective of the villager, rather than through the distant lens of the environmental scientist. He elaborates that one of the most important values in his practice is to present the human element in whatever work he may present. Beginning by showcasing photos from his childhood, the audience can easily sense the warmth and nostalgia from how Adams ruminates on his upbringing, his culture, and his home. Images of his cousin’s bedroom, his grandmother’s funeral, and of traditional food all merge to create a cohesive window into Iñupiaq culture from the daily practice to the sacred ceremony.

Adams exposes Iñupiaq life through a personal photographic style and thereafter educates the public on the threats that climate change pose to his people’s way of life as a whole. By means of beautiful photographs, a member of the uninformed public can now understand that a depletion of ice connotes not only environmental instability, but an erosion of family life, tradition, and community. Via, art guided by lecture and emotional sincerity, Adams breaks the illusion that global warming affects only a remote, distant, and uninhabitable land; his work functions to affirm that the Arctic is a land brimming with human life that is paying witness to an environmental devastation capable of uprooting the most basic foundations of social necessity.

The speech given by Julie Decker sheds light on the romanticized views of Alaska that have personified Alaska as a permanent and im-

Figure 48. Brian Adams, “Next North.”



pervious ecosystem. Decker reveals a historical tracing of rampant commercialism that has idealized Alaska as a permanent domain of untouched wilderness. Decker supports her account of Alaskan commercialism by showing the audience dreamy postcards, fanciful artist's renderings of the Arctic, and schematics of fully domed-cities designed to inhabit Alaska. The first half of Decker's presentation exposes the media-driven perspective of Alaska that has been propagated throughout mainstream culture. In the second half of Decker's lecture, she unites the views of Ken Tape and Brian Adams by strongly enforcing the idea that science, indigenous voices, and art will all integrate in the aims of a sustainable future. Eloquently, Decker manages to describe the Alaskan issue as a precursor to an international test facing all humanity, a test which will demand the humans of the future to learn how to adapt and live responsibly within our environment. Decker ultimately inspires a mentality of resilience by expressing that the Arctic will not be remembered as an artifact, pastime, or piece of nostalgia, but will be preserved through the collective voice of integrated efforts. Strikingly she states "We are a place more than a map, more than black and white notions, and more than the West of reality TV."

In response to the symposium I created a piece that addresses technological distraction and hypothetical climate disruption facing my

region, New Mexico. The hyper saturation of the television works to immediately draw the viewer in, and thereafter to slowly guide the eye around a devastated, deforested, and acidic landscape. The emphasis on the television in contrast with the dullness of the environment comments on the separation between media designed fantasies projected on individuals, and the realities that are determined to be too stark and indigestible by the "informational powers that be". I consciously utilized an impactful and vibrant aesthetic that can compete with the gaudy advertisements, news stories, and political messages that bombard me on a daily basis.

Figure 49. Julie Decker, "Next North."



Figure 50. *I told the school teacher, We are not faces of naivety, But of children...Who choose to see.* Acrylic painting by Wyatt Pottorff, 24x36, 2018.

Response

JEROME LOUIS

“The last oil” symposium was held in February of 2018, on the campus of University of New Mexico. The symposium is a response to the Trump administration for opening 1 billion acres of on/offshore drilling in the United States. The main reason is to become the leader in energy dominance; it also launched a war on nature and on people. But “the last oil” symposium was different, as it seems to have reached into other academic fields than just the environmentalist community.

What was different about “the last oil” symposium from other conferences were the speakers and what they have each presented. As each speaker was unique and all from different academic fields, it gave the audience different points of view. There were twenty-nine speakers who are all leading activists, biologists, scientists, writers, and conservationists. Each speaker contributed their own views and thoughts of what oil is doing to the natural world.

And it’s a sad thought of what we humans are really doing to this Earth and when is it going to stop? The use of oil is destroying everything that is natural and which is also the leading cause of climate change. “the last oil” symposium addressed all these issues and problems in a professional manner, as the symposium is a stand for multi-species justice.

*Note: Diné artist Jerome Louis’s original artwork *We Are One* is featured on page 12 and, the back cover is his drawing, *As United We Stand*.



Figure 51. Nick Estes, “Rise of the Red Nation.”



Figure 52. Allison Akootchook Warden, "Multispecies Solidarity."



Figure 53. Inupiat Beluga Whale Hunt, Chukchi Sea. Photo by Subhankar Banerjee, 2007.



Figure 54. Iñupiat prayer after whale hunt, Kaktovik. Elder Isaac Akootchook and whaling captain James Lampe offer a prayer to thank the creator and the whale for offering food for the community. Photo by Subhankar Banerjee, 2001.

Response

JULIE MASON

For my project, I chose to do a graphic novel style of project. I considered creating campaign posters, but felt that without a future event or specific call to action/solution, the posters might be ineffective in conveying the message I wanted. Unfortunately, I was not able to attend “Rise of the Red Nation” as I was hoping to, and I received the final captioned video just today—so my project is more based on Rosemary’s story that she told during “Protecting Our Seas & Coastal Communities.” Her story resonated with me, especially since I had been doing quite a bit of pondering on my own over the last few years on why the government and private corporations are allowed to control so much of our land and why we as citizens are penalized for attempting to live off the land and what it has to provide for us. For example, I grew up in Oregon, so we get quite a bit of rain. However, I read several articles over the years about people who were being fined for trying to collect rainwater for private use in their own backyards or on their own lands.

Additionally, there were further stories about people in Washington, or California, who were being fined heavily and threatened with jail time for non-compliance, simply because they were growing fruit and vegetable gardens in their front yards and inviting people in need to help themselves to the free food. Considering we currently live in New Mexico, I find it a bit strange that we have not yet fully taken advantage of solar power, which surely would be much more cost efficient and advantageous to all of us. I believe if Germany, Britain, and other similar countries lacking even a fraction of the sun we receive, are able to power their entire countries using solar power—then imagine the possibilities if we applied those same principles to our state (or even the entire country)!

Going back to Rosemary’s story—it is quite obvious that gas and oil corporations control our country out of capitalistic greed, and do not care who they hurt in the process—not even if it ends up hurting themselves as humans. Therefore, it is our responsibility to ensure people are aware of the entire cycle and chain of events, rather than as isolated incidents or stories that happen to “them, but not us”. For we are all in this together. As an educator myself, I am always saddened and



Figure 55. Nicole Whittington-Evans, “Rights of Nature.”

somewhat shocked when I read newsletters penned by our superiors such as district superintendent or college dean, etc., and they are bemoaning the low prices of gas because it has a direct effect on our school's budgets. That, to me, is a red flag—how entrenched are we in the oil business that we have to hope for higher gas prices so that our schools will do better? That feels like an extraordinary conflict of interest—and so I encourage alternative sources of energy and better education of all in regards to exactly what kind of deal is being made with the devil when we allow schools to be governed by oil and therefore perpetuate the willful ignorance of how capitalism is harming our very fabric of existence.

I would like to flesh out a graphic novel and add more detail, as well as perhaps incorporate several different stories—all are important to tell. I chose this format because words have more impact when accompanied by visual emphasis, and I feel readers would be able to connect to the characters more, and that empathy is extremely important to have when trying to convince people to engage in finding solutions.



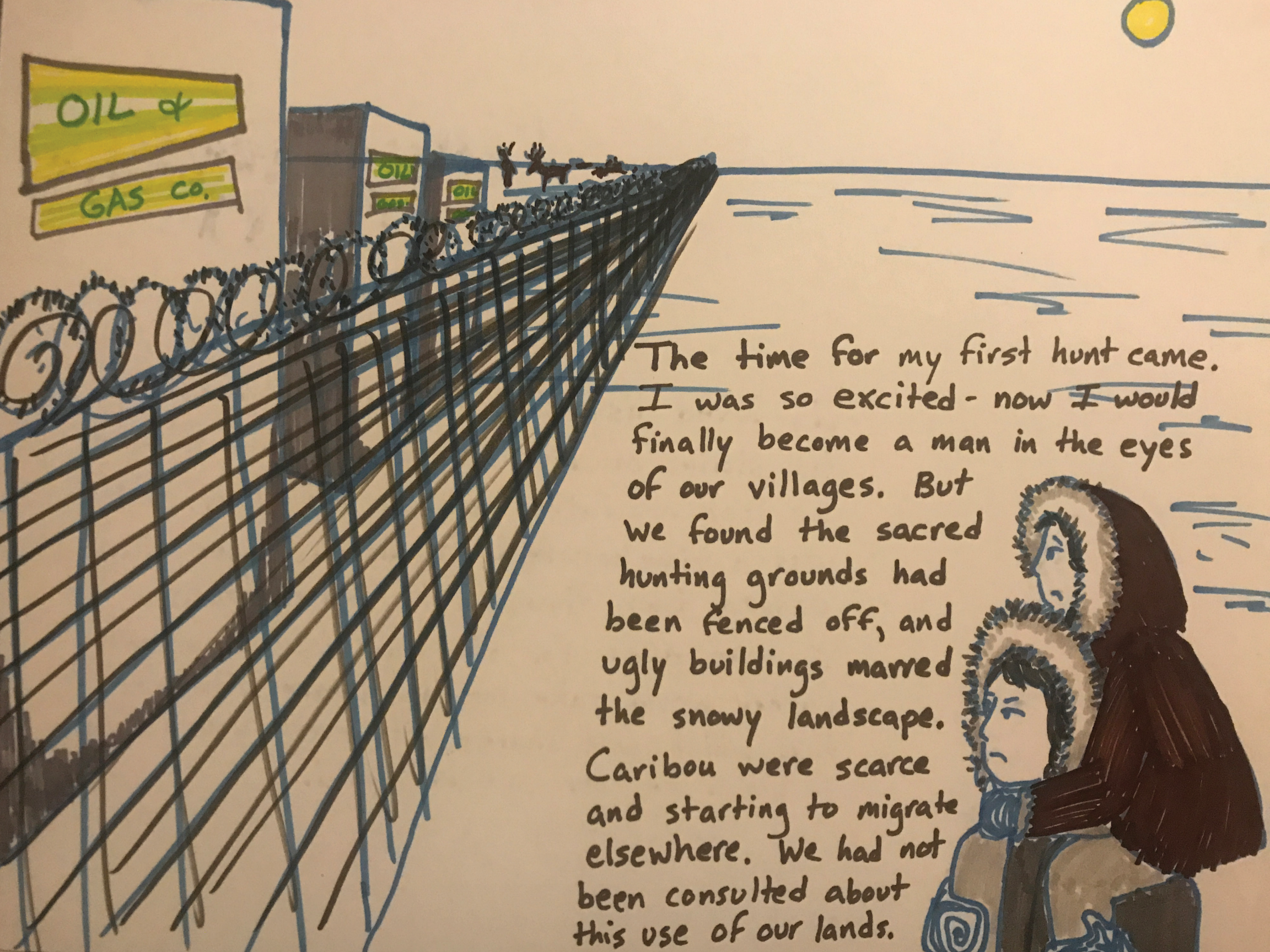
Figure 56. Workshop Participants, "Act Now!"
Figure 57-63 (following spreads). *Response*, drawings by Julie Mason.



I loved listening to my grandfather tell stories of his first hunt, and of when he took my father out for his first. It was a time honored tradition in our clan, passed down through the generations.

I was eager for the day when my own father would take me and share with me that which was shared with every young man - it would be our special bond.



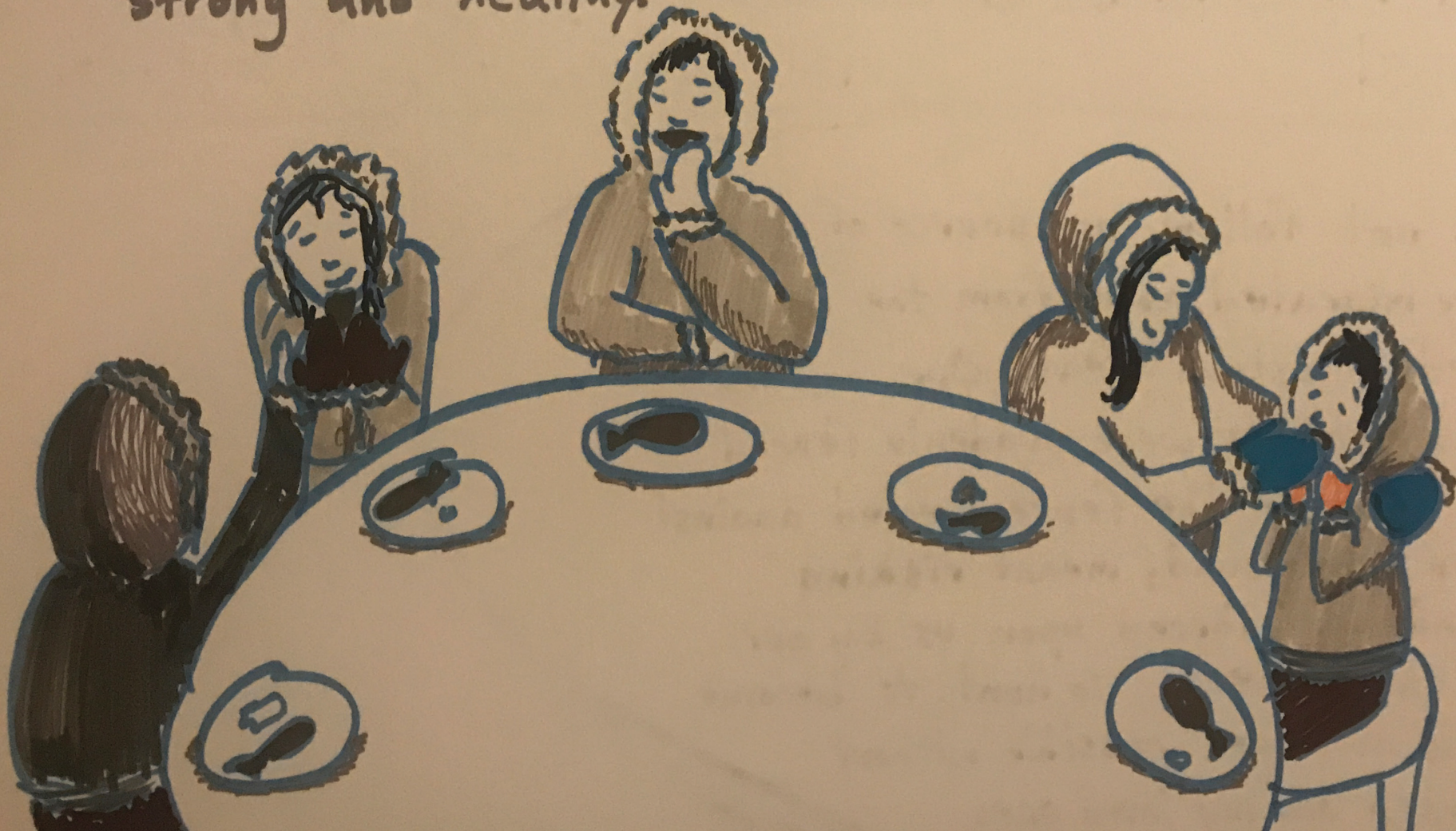


The time for my first hunt came. I was so excited - now I would finally become a man in the eyes of our villages. But we found the sacred hunting grounds had been fenced off, and ugly buildings marred the snowy landscape. Caribou were scarce and starting to migrate elsewhere. We had not been consulted about this use of our lands.



We could not follow our source of food when they migrated away from the newly constructed industrial areas. Our hunting and fishing grounds were suddenly fenced off, and to ignore the fence erected against our will, on our ground, meant risking violence and debt forced upon us by our so-called government. To hunt, to become a man, was no longer possible without putting myself and my loved ones in jeopardy. Yet we were...

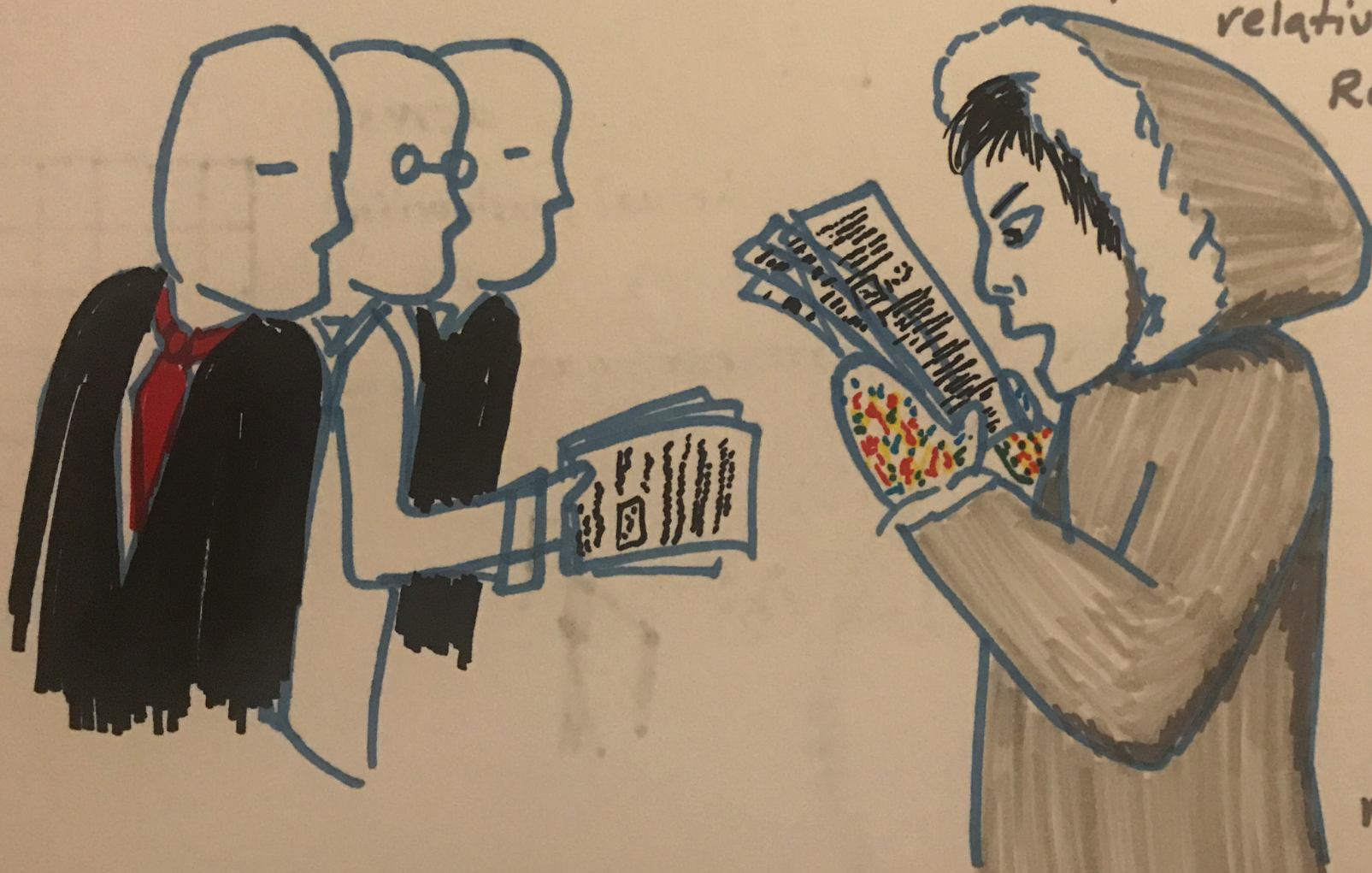
Since food was scarce and it was becoming nearly impossible to live off the land as we had done for thousands of years, certain fish species became even more of a delicacy. We took special care to offer these rare treats to our children and respected elders. The best part of these fish were the livers, which would help us grow strong and healthy.



Imagine our surprise when over a YEAR later, scientists and officials showed up at our doorstep to tell us the food we had been eating to survive, now had dangerously high levels of toxicity and was harmful to our health. Not only were we not allowed to hunt our usual food in the usual places, but we could not even eat what was left. Yet, hazardous waste apparently was so high, that our fish livers with their radioactivity and carcinogens were relatively safer to eat.

Relatively.

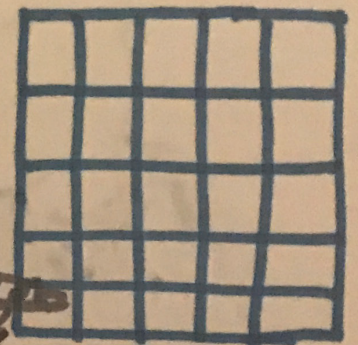
We were living in a nightmare, one that we did not choose - it was forced upon us because of capitalistic greed. What would it take to make them go away and stop making us sick?



Hunting Grounds

Fishing Grounds

400 acres
(Actual construction)

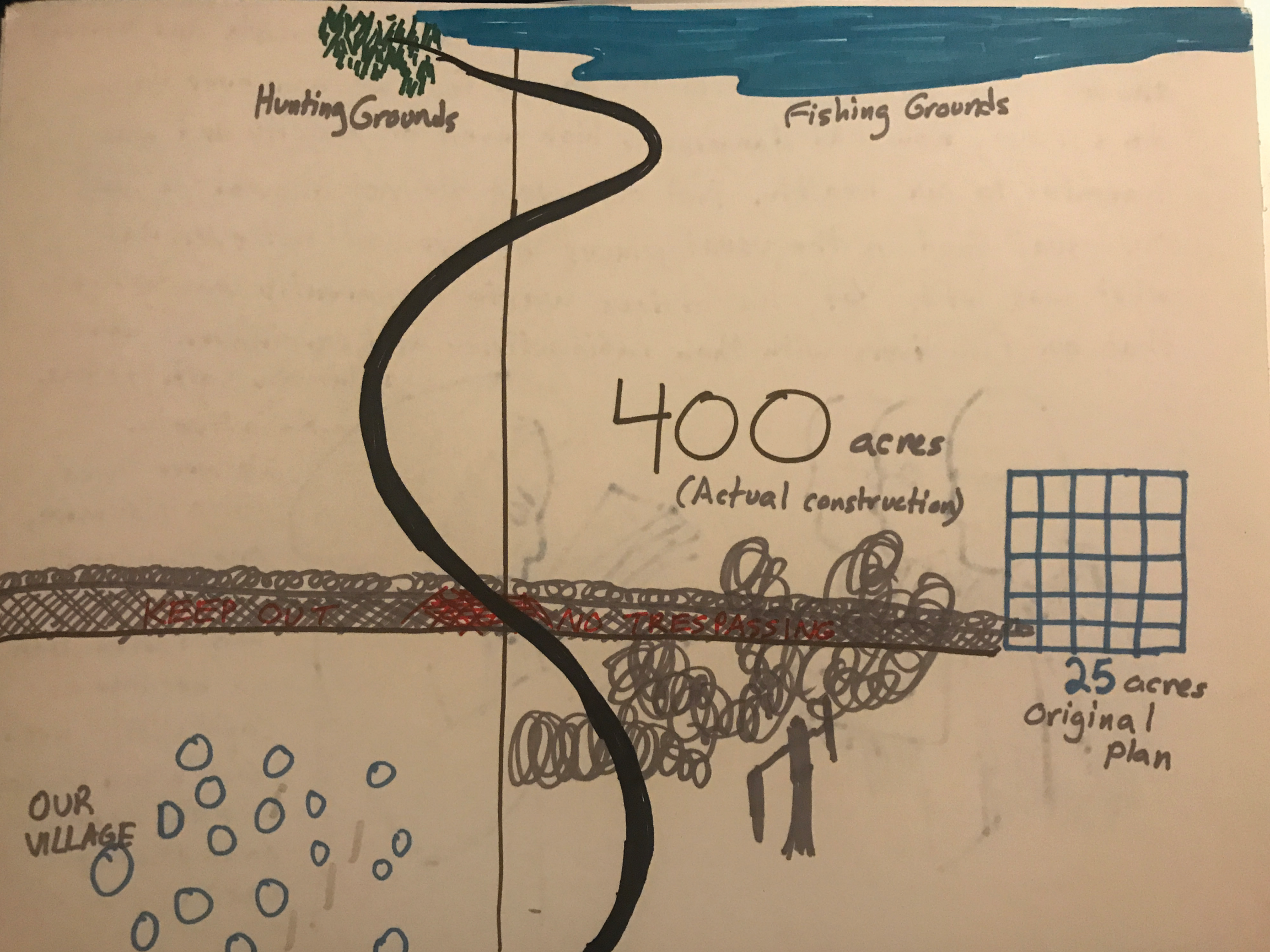


25 acres
Original plan

KEEP OUT

NO TRESPASSING

OUR
VILLAGE



The captains of industry, the oil and gas giants, had met with our elders and promised a small footprint - just 25 acres of land for their oil drilling. Somehow, they disregarded us and our wishes, and claimed hundreds of acres of land that did not belong to them. We were essentially locked out of our own home. We began to notice more of our people becoming sick, due to lack of quality food, exposure to toxic levels of waste affecting the food we did eat, and the burning fires from the oil drills causing air pollution and asthma to skyrocket. What could we do? How could we fight back, when our livelihood, our traditions, our food, and even our culture and language were being slowly poisoned, even targeted? Our health and identities were in danger.



The Nature of Language in Presentations on Environmental Change:

Reframing Environmental Language for Larger Audiences

RYAN EDGINGTON

We are all indigenous to Mother Earth—Petuuche Gilbert

Freedom is a Place—The Red Nation

It was with great enthusiasm that I was able to attend the symposium the last oil: a multispecies justice symposium on Arctic Alaska and beyond, which happened at the University of New Mexico in early Spring 2018. As the flyer/postcard for the symposium explains, the purpose of the gathering was to “address the catastrophic US Arctic energy policy, which violates indigenous human rights and threatens to derail efforts to mitigate climate change and the Sixth Extinction.” The program also included a cross-cultural discussion about how energy extraction unevenly affects indigenous communities whether it be oil, gas, coal, uranium, or some other element. I attended several sessions, including the welcome and introduction as well as panels led by several experts on both the Arctic and indigenous rights. Those panels focused upon several issues: Sacred Space, The Rights of Nature, Alaska as a Global Place, Indigenous Rights in the Four Corners Region.

The purpose of this paper is not to recount the conference. Instead, it is to speak to meaning and language of academic talks that focus on environmental issues. Having served as an environmental historian at many different academic institutions, and given talks to both public and academic audiences, those of us that have worked to teach the themes of environmental change often use language that only resonates with academics. But this symposium made it clear that when academics and community educators and activists come together, there is an opportunity to undo the dissonance that may appear between the two groups.

Figure 64. Finis Dunaway, “Alaska and Beyond.”



This paper is not a critique of environmental academic speak, but it does seek to push a “what we mean” agenda by picking up on some of the crucial language I believed was most powerful during the symposium. By that, I mean, ideas such as “ecocide,” “national sacrifice zones,” and “deep ecology” are not easy to grasp, but they are crucial. The average person may need more context for what they mean and why they are such important ideas.

This is not meant to be a total reflection on the panels I attended. But, the titles of the panels I attended were “Rights of Nature,” “Alaska and Beyond,” and “Rise of the Red Nation.” Rather than recount the titles or the accolades of the scholars who were a part of these panels, here, I will address their backgrounds throughout the paper.

Again, the purpose here is not to revisit the panels ad nauseum or to give a birds-eye view of what I experienced. Instead, it is to look at the language that academics and activists use to promote their work and/or cause. I will not only talk about the ideas that I heard from panelists, but will also lean on other scholars and activists to, hopefully, flesh out important themes useful for the environmentalist community. My goal is not to provide answers, but to instead stoke conversation about how to transfer knowledge (whether academic or activist) to the public. The goal is to not criticize how the presenters gave their talks, but instead better understand how the ideas in “the last oil” symposium may translate to broad populations.

Before I get to the panels I attended, I wanted to address some of the themes that emerged in the Welcome and Introduction to the symposium. First, one of the basic frameworks was the notion of a holistic approach to dealing with environmental change. This is a critical component of understanding the relationships between humans and nature. As the historian Arthur McEvoy noted, non-human nature, as an actor in history, alters cultures and their economies through the dynamics of environmental change. Economies shape how cultures operate, whether through religion or everyday social customs. Completing the circle, human cultures alter nature based upon human economic needs and cultural desires (McEvoy, 2011). This is critical at global, regional, and local levels. The question here is how do academics get that notion across to lay audiences that perhaps have divisive views on where humans sit in environmental places? Are humans simply another species that relies on other species (both sentient and non-sentient) to survive? Are humans above other species because of our intelligence? How do we convey notions of environmental holism to the public?

A second important theme from the symposium welcome is *place*. As the philosopher Edward Casey explains, “places not only are, they happen” (Casey, 1996). A community or individual that sits in place and thinks about their ties to the land may better understand their relationship to the things around them than an environmental agent



in a far-off office. Again, places don’t simply exist they are experienced by myriad animals, plants, and humans. Going back to McEvoy, nature is not just “there,” it is an active agent of change in human societies and those same societies can recognize the wisdom of nature.

Finally, a third idea that emerged was the notion of ecocide. One of the people to popularize this term is the writer Mike Davis. In his essay “The Dead West; Ecocide in Marlboro Country” he unpacks the hidden history of environmental decay due to nuclear weapons production in the American West. Stating the obvious about one community he suggests that “As a direct result, this downwind population (exposed to the fallout equivalent of perhaps fifty Hiroshimas) is being eaten away by cumulative cancers, neurological disorders and genetic defects” (Davis, 1993). From Washington to Utah to New Mexico there are many downwind populations. The abuse of the land to produce nuclear power has created sacrifice zones that not only impact the non-human natural world, but the bodies of entire human communities, which can lead to a rightful sense of exploitation. An example in New Mexico is Española, located just down the mountain from Los Alamos National Laboratories, where poorer Hispanic and Native communities have faced the specter of disease from radioactive dumping at the labs. By polluting nature, industry pollutes bodies both human and non-human. This is a toxic-holism that is not sustainable in the long-term.

The notions of holism, place, and ecocide are crucial to what we do

Figure 65. Marek Ranis, “Next North.”



as environmental activists and scholars. But how we translate those themes into a greater active agenda to inform the public is a question that will take more than academic discourse. In each section below, I will begin by briefly introducing each scholar and then examining the major themes I saw as useful in promoting environmental change.

The Rights of Nature

The “Rights of Nature” panel included three scholars. The first was Nicole Whittington-Evans, who works as the Alaska Regional Director of The Wilderness Society. She works with several agencies and communities to promote conservation. She has worked in the state for about twenty-years. She suggests there are several threats to Alaska wilderness: logging, recreational-off road vehicle use, a lack of wilderness reviews, and, of course, oil and gas drilling (Whittington-Evans, 2004). A second panelist was Jeff Fair, has studied birds in Alaska, namely the Yellow-Billed Loon. One of his celebrated articles on wildlife preservation appeared in Audubon Magazine. There he encouraged conservationists to not only show concern for the Arctic National Wildlife Refuge, but also National Petroleum Reserve-Alaska in the western region of the state (Fair, 2011).

Figure 66. Joel Clement, “Truth to Power.”



The third panelist, Debbie Miller, has worked in Alaska for nearly half a century where she has taught in villages, explored the history of oil production, and co-founded the Alaska Wilderness League. As she explains in the introduction to her book *Midnight Wilderness*, “The Arctic National Wildlife Refuge is the essence of America’s wilderness heritage. It is a rare sanctuary that I have had the privilege to experience and have grown to love deeply” (Miller, 2011). Most people will never have the chance to explore ANWR, but it resonates as a symbolic place in the wilderness struggle and a beacon for protecting America’s outdoor spaces. In their panel Whittington-Evans, Fair, and Miller brought to the forefront several themes:

The importance of a “Land Ethic”

Whittington-Evans brought up this notion in particular. This, of course, harkens back to Aldo Leopold’s “Land Ethic” as set out in his seminal book *A Sand County Almanac*. This fundamental idea suggests that knowing nature as community will lead to practices that fall in line with the environmental holism mentioned above. As J. Baird Callicott notes of the land ethic, “Since ecology focuses upon the relationship between and among things, it inclines its students toward a more holistic vision of the world” (Callicott, 1989).

In Wild We Trust” and the “Celebration of Little Things.”

These ideas were explicitly brought up by Fair but were also hinted at by Miller. Both have spent significant time in Alaska learning about and exploring the state’s wilderness. Birds seem to play a crucial role in how both know Alaska. The first theme that seemed to come to mind is that places like ANWR and the National Petroleum Reserve-Alaska, are, for wildlife, borderless places; places that may be demarcated on maps via the field of cartography, but have little initial relevance to the wildlife that populate the region. However, how those places are used by humans will inevitably change the lives of wildlife. As Ray-

Figure 67. Traci Quinn, “Truth to Power.” Still image from video by Kevin McDonald.



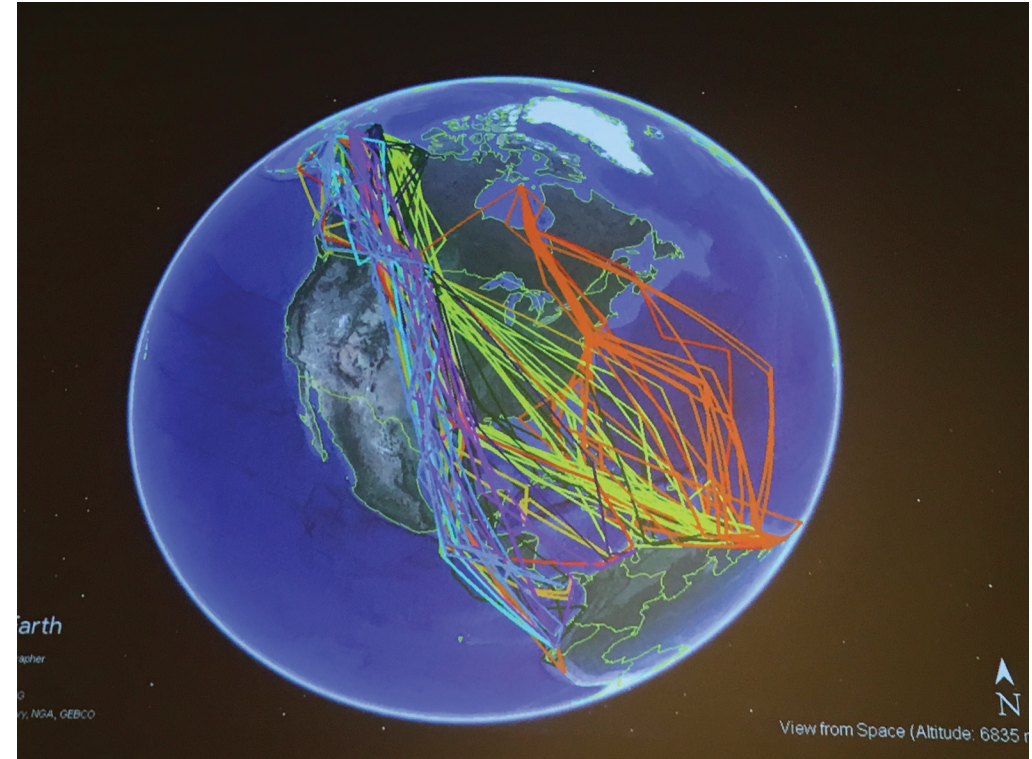
mond Craib explains in *Cartographic Mexico*, lines drawn by the State can reveal the power a State has over human communities. But, here, in particular, those lines affect both wildlife and local communities (Craib, 2004). How are we to explain the relative fact that wildlife does not hew to the rationales of drawing borders? Or, that some local Arctic communities deny the legality of those borders as drawn around wilderness?

Alaska and Beyond

The “Alaska and Beyond” panel included two scholars. The first was Finis Dunaway, who is a historian at Trent University. His work focuses a great deal on the use (and abuse) of environmental imagery. His book *Seeing Green: The Use and Abuse of American Environmental Images* offers an opportunity to explore the manipulation of environmental imagery for various ideologies across the political spectrum. A critical aspect of this is what Dunaway calls “universal vulnerability” (say, using children in advertisements) (Dunaway, 2015). One of the best chapters in his book is his focus on the 1970s “Keep America Beautiful” campaign where the supposed Native American Iron Eyes Cody rows his canoe down a river surrounded by massive industrial pollution and surrounded by trash (the actor was actually Italian) (Dunaway, 2015). It is relatively well known that this advertisement campaign was backed by companies such as the American Can Company, Owens-Illinois Glass Company and, later on, Coca-Cola and the Dixie Cup Company. The campaign sought to place the onus of pollution upon the consumer not industry.

The other panelist was Stephen Brown who works at Manomet and, like Jeff Fair, is interested in birds. While his work is more biological in nature than Dunaway’s, Brown and his colleagues, who put together the United States Shorebird Conservation Plan, have encouraged

Figure 68. Stephen Brown “Alaska and Beyond.” Still image from video by Kevin McDonald.



several governmental and environmental policymaking steps towards Shorebird protection. Namely, that preserving Shorebird populations is not merely about science, but also about inter-organizational cooperation from government agencies such as the Bureau of Land Management and non-profits including the National Audubon Society (Brown et al, 2001). Brown also focuses on the transnational or trans-regional nature of bird populations.

ANWR as “Transnational Space.”

Both Brown and Dunaway approached the idea of ANWR as a transnational space; as a borderless place. The rationale for this is relatively clear. ANWR has meaning for the United States as a nation-state as a potential economic boon and cultural symbol (often touted by environmentalists). But it also has meaning for local communities that may see themselves as autonomous. As Subhankar Banerjee explains, “In the campaign to protect the Arctic National Wildlife Refuge, the environmental organizations speak about science, while the Gwich’in

Figure 69. Stephen Brown, Bird migrations in “Alaska and Beyond.”



people speak about their creation story” (Banerjee, 2016). The Gwich’in hold deep spiritual ties to the place and the animals that inhabit it.

While these ways of seeing ANWR have “co-existed” in contesting the fossil fuel industry, they also reflect that the meaning of ANWR depends on the perspective of the stakeholders and their investment in the place environmentally, economically, and culturally. For birds or caribou, these constructions mean nothing. What matters is survival. But, nature holds consciousness, and non-human sentient beings experience environmental change. They certainly must adapt for better or worse. Animals must face the depletion of environments at the behest of industries seeking to make a profit from their habitat. It is crucial that everyday citizens know that adaptation is not just something that occurs as climate change takes hold, but has happened for non-human species for hundreds of years under the specter of industrialization.

Viewing or Seeing Nature

This was mostly a theme brought up by Dunaway and focused specifically on the aforementioned ideas of how imagery (whether it be the “Crying Indian” or the work of Subhankar Banerjee) is not only a statement on a place or an environmental moment, but is also a tool that can be read and re-read by the viewer with very different meaning from the person that produced it. Imagery can be both a tool for

activists to enact political change and as a counter-tool to undermine perceptions about the impact of industry on the environment.

Rise of the Red Nation

The “Rise of the Red Nation” panel included four scholars and activists. Diné scholar Melanie K. Yazzie’s research focuses on her ancestral homelands. While her book, *Life in The Age of Extraction: Diné History in A Biopolitical Register*, is yet to be published, it focuses upon the affect and the aftermath of the massive industry presence in Navajo Country and the reaction of the Navajo to that presence. She is also an activist and cofounder of the organization Red Nation.

The second presenter, Nick Estes, is the cofounder of Red Nation and holds a doctorate from the American Studies program at the University of New Mexico. In two forthcoming books, he focuses upon the Dakota Access Pipeline and resistance to its implementation by the Sioux and other activists. Two community activists joined the panel. Cheyenne Antonio, who is Diné, seeks to build stronger community ties when it comes to combating fracking within or near the Navajo Nation. Jennifer Marley is a member of San Ildefonso Pueblo and is an organizer for The Red Nation.

Rather than take on each individual’s comments about resource extraction in Native Country, I will summarize the essence of this panel. This was the most compelling group of conversations between the panelists and the audience that I attended. The critical themes that came from the panel had to do with Native marginalization to and resistance of extractive industries (whether it be oil, uranium, or anything that affects the environment and health of Native communities in New Mexico). As Yazzie noted, there has been generational calls for “multi-species justice.” In other words, all beings and the Earth are family in the Diné community. Moreover, this battle is historical, or in better words, multi-generational.

Resistance

Native communities have a rich history of resistance from struggling against chattel slavery to dispossession from primary sites of subsistence (often sites designated as wilderness by Anglos in the late nineteenth and early twentieth centuries) (Spence, 1999). The American Indian Movement became a flashpoint from the occupation of Alcatraz in 1964 to the incidents at Wounded Knee in 1973. The movement also included significant youth activism (Smith, 1996).

“Resistance” is a particularly important, but also difficult term to wrestle with. What does resistance look like? Need it be the occupation of Alcatraz? Or the stand-off at Wounded Knee? Or is there softer

Figure 70. Bernadette Demintieff & Monica Scherer, “Act Now!”

resistance, such as destroying equipment used in fracking to slow the process down. Should everyday forms of marching and rallies be considered resistance? In other words, is there a spectrum of resistance? These are issues activists and scholars should revisit.

National Sacrifice Zones

This was a particularly important theme during this panel. As Danielle Endres explains, sites of natural resource extraction are often sites where marginalized communities live (Endres, 2012). From my perspective, it is not surprising that places such as Española, New Mexico, the Navajo Nation, and the Gwich'in homelands are facing greater exploitation when it comes to extraction of natural resources. Endres's work focuses upon the plan to store waste at Yucca Mountain in Nevada. One of the critical components of her work is to argue that "local participation in environmental decision making is an essential tenet of environmental justice." In particular Yucca Mountain is sacred space for the Shoshone and Paiute peoples. The plants and animals there are critical to the lives and spirituality of both communities, not unlike those indigenous peoples in Alaska near ANWR.

Settler States

This idea is relatively obvious. It reflects Edward Said's idea of Orientalism, which speaks to how the colonial gaze is a two-dimensional process. As Patrick Wolfe says, "settler colonialism has both negative and positive dimensions. Negatively, it strives for the dissolution of native societies. Positively, it erects a new colonial society on the expropriated land base—as I put it, settler colonizers come to stay: invasion is a structure not an event" (Wolfe, 2006). In both cases, native societies are most likely the losers. Moreover, settler colonialism is not just a state-based ideal, it can include industry, investors, and even those in power within a particular community. It also has environmental consequences for communities with deep ties to place. Following Said's notions, Orientalism reflects both the colonial perception of the other and also reflects back upon the hubris of western culture. In the process, power shapes the machinations of cultural and environmental exploitation.

Initial Thoughts

All of the panels, and the welcome and introduction, were compelling in their own ways. The "Rights of Nature" panel spoke to the importance of Leopold's land ethic, which has become a seminal ideal within



the environmental community. The ethic is about seeing nature not as a thing, but something to understand as both living and as critical to human survival. This gets us back to the notion of holism. Leopold's ideal has resonated for years as a result of how powerful his critique of human abuse of nature was when he first came up with the land ethic. Leopold was well known for his role in extirpating wolves from the American Southwest in the name of conserving huntable game in the early twentieth century. In an essay titled "Thinking Like a Mountain," he noticed that overpopulated deer species were decimating the environment. This all came with the human notion that wolves were bad for both nature and the outdoors hunting experience (Flader, 1994). Thus he saw a crucial relationship to wolves, deer, and environmental health.

The second panel brought up the notion of seeing nature. How do we see nature? That depends. For a young African-American girl in an impoverished community in North Philadelphia, she may see nature from what is around her. An actual visit to ANWR or the Grand Canyon is, sadly, improbable. Nature becomes the local park, the occasional trip to the botanic garden, or a visit to a museum. For the young boy from Barelas in Albuquerque, Alaska may be something framed and understood through words and images, whether they be media or art. The Tongass National Forest is most likely not in their lexicon and out-of-reach in person. For those with deep ties to areas of oil drilling and exploration, there is a much deeper connection to the place both spiritually and culturally. The point is that seeing nature is about connection to place. Therefore, we all experience and understand places

Figure 71. Samuel Truett, "Protecting Our Seas and Coastal Communities."

like Alaska differently.

Finally, the last panel talked to the notion of National (or Natural) Sacrifice Zones. It is clear that this is an enduring pattern of exploitation. New Mexico, in particular, has faced massive environmental decay due to gas and oil extraction and other forms of mining natural resources. Perhaps the most heinous has been uranium mining and the dumping of radioactive materials into waterways that have poisoned thousands. To call New Mexico a National Sacrifice Zone is an understatement. Those in the Four Corners region have borne the brunt of nuclear waste pollution (Kosek, 2014).

What is Missing?

From my perspective, Ramachandra Guha is right in suggesting that the anthropocentric vs. biocentric “dichotomy” is relatively useless. While Guha applauds environmentalists’ (and here deep ecology proponents) pressure to move away from an anthropocentric world view of the environment, he also checks them on their arrogance by saying, “What is unacceptable are the radical conclusions drawn by deep ecology, in particular, that intervention in nature should be guided primarily by the need to preserve biotic integrity rather than by the needs of humans” (Guha, 1989).

Large NGO environmentalists often act with hubris, not thinking about the human communities they are meant to serve. Whether it be the Gwich’in or Diné, local communities set in place with cultural and environmental values tied to the land are seemingly left out of, or marginalized from, the making of the “land ethic” around a place. Because extractive industries are as powerful as they are, environmentalists, as was shown in the symposium, need to collaborate with local communities to find long term conclusions. As important, environmentalists must learn from them. Despite the rich content of *“the last oil,”* and despite programs to integrate local communities into dialogues about saving nature from decay there seems to be a continued notion of wilderness for some, but not for others. This leads to a final thought. I recognize that the purpose of the symposium was to bring greater focus upon the ways that namely indigenous communities face environmental, cultural, and economic strife. The symposium also showed the unfortunate impact of industry on wildlife. What seemed to be missing from the conversation was anything that had explicitly to do with class. While one could read between the lines in the panels that I attended, there seemed to be a tacit exclusion of the term class.

A long-forgotten essay by the historian Richard White was titled “Are you an Environmentalist or Do You Work for a Living?” (White, 1996). White’s premise was relatively simple, people that work in ex-



tractive industries are chided by environmentalists for their labor. But the reality is that everyone labors and consumes natural resources whether we are sitting at our desk on a college campus or working in the timber industry (Loomis, 2015). The voices of workers in any extractive industry, no matter their background, offer an opportunity to hear how they understand what they do and how they can be potential partners in solving environmental problems. Odds are good that most are exploited and may be a part of local communities with ties to the land. Environmental justice is as much about labor as it is about activism.

So, how do we craft a holistic approach to educating one-another, inside and outside of academia, on environmental issues? There are clearly structural issues. If capitalism, and global economies generally, remain as they do today, we will continue on an unsustainable path to ruin. Holism is crucial: knowing that humans are embedded in nature. Finding a proper land ethic that is universal seems near impossible. So, where do we start?

REFERENCES

- Banerjee, Subhankar, “Long Environmentalism: After the Listening Session,” In *Ecocriticism and Indigenous Studies: Conversations from Earth to Cosmos*, Eds. Salma Monani and Joni Adamson, *Ecocriticism and Indigenous Studies: Conversations from Earth to Cosmos*. Routledge, 2016. (New York: Routledge,

Figure 72. Rick Steiner, “Protecting Our Seas and Coastal Communities.”

- 2017), 7.
- Stephen Brown, Catherine Hickey, Brian Harrington, "United States Shorebird Conservation Plan," Manomet Center for Conservation Sciences (Manomet, Massachusetts, 2001), 34-35.
- Callicott, J. Baird. In *Defense of the Land Ethic: Essays in Environmental Philosophy*. (Albany: SUNY Press, 1989), 22.
- Casey, Edward, "How to Get from Space to Place in a Fairly Short Stretch of Time: Phenomenological Prolegomena." In *Senses of Place*, eds. Keith Basso and Steven Feld (Santa Fe: School of Advanced Research Press, 1996), 13-52.
- Davis, Mike, "The Dead West; Ecocide in Marlboro Country." *New Left Review* 200 (1993): 49-73. Davis, 64.
- Craib, Raymond B., *Cartographic Mexico: A History of State Fixations and Fugitive Landscapes* (Durham: Duke University Press, 2004).
- Dunaway, Finis, *Seeing Green: The Use and Abuse of American Environmental Images* (University of Chicago Press, 2015), 3.
- Dunaway, Finis, "The 'Crying Indian' Ad that Fooled the Environmental Movement," *Chicago Tribune*, <http://www.chicagotribune.com/news/opinion/commentary/ct-perspec-indian-crying-environment-ads-pollution-1123-20171113-story.html> (accessed 25 March 2018).
- Edgington, Ryan, *Range Wars: The Environmental Contest for White Sands Missile Range* (Lincoln: The University of Nebraska Press, 2014), chapter 2;
- Judy Pasternak, *Yellow Dirt: An American Story of a Poisoned Land and a People Betrayed* (New York: Simon and Schuster, 2010).
- Endres, Danielle, "Sacred Land or National Sacrifice Zone: The Role of Values in the Yucca Mountain Participation Process." *Environmental Communication: A Journal of Nature and Culture* 6 (2012): 328-345.
- Fair, Jeff, "The Other Arctic," *Audubon Magazine* (November-December 2011) <http://www.audubon.org/magazine/november-december-2011/the-other-arctic> (accessed 23 March 2018).
- Flader, Susan L., *Thinking like a Mountain: Aldo Leopold and the Evolution of an Ecological Attitude Toward Deer, Wolves, and Forests* (Madison: University of Wisconsin Press, 1994).
- Guha, Ramachandra, "Radical American Environmentalism and Wilderness Preservation: A Third World Critique." *Environmental Ethics* 11 (1989): 72.
- Kosek, Jake, *Understories: The Political Life of Forests in Northern New Mexico* (Durham: Duke University Press, 2006), chapter 6.
- Loomis, Erik, *Empire of Timber: Labor Unions and the Pacific Northwest Forests* (New York: Cambridge University Press, 2015).
- McEvoy, Arthur, "Towards an Interactive Theory of Nature and Culture," in *The Ends of the Earth: Perspectives on Modern Environmental History*, ed. Donald Worster (Cambridge: Cambridge University Press, 2011), 211-229.
- Miller, Debbie *Midnight Wilderness: Journeys in Alaska's Arctic National Wildlife Refuge* (Braided River, 2011), XX.
- Shreve, Bradley G., *Red Power Rising: The National Indian Youth Council and the Origins of Native Activism* (Norman: The University of Oklahoma Press, 2012).
- Smith, Paul Chaat, Warrior, Robert Allen, *Like a Hurricane: The Indian Movement from Alcatraz to Wounded Knee* (New York: The New Press, 1996).
- Spence, Mark David, *Dispossessing the Wilderness: Indian Removal and The Making of the National Parks* (New York: Oxford University Press, 1999).
- White, Richard, "Are You an Environmentalist or Do You Work for a Living?: Work and Nature." In *Uncommon Ground: Rethinking the Human Place in Nature* (New York: W.W. Norton, 1996).
- Whittington-Evans, Laura "Wilderness in a Changing Alaska," *International Journal of Wilderness* 2 (2004): 14-17.
- Wolfe, Patrick, "Settler Colonialism and the Elimination of the Native," *Journal of Genocide Research* 8 (2006), 388.



Figure 73. Rev. Lennox Yearwood, Jr. speaking at the Arctic Refuge rally in Washington, DC. Photo by Subhankar Banerjee, June 15, 2018.



Figure 74. David Solomon, "Multispecies Justice."

Figure 75 (following spread). Kasegaluk Lagoon, barrier island, Chukchi Sea. Photo by Subhankar Banerjee, 2007.



Home

BROOKE MARTINEZ

As we discuss topics like integrative ecology and social transformation we can see the importance of collective decisions throughout the political sphere, and taking action within our communities in order to make a difference. Our decisions to extract resources from the earth has led to the extinction and threat to millions of animal species, plants and ecosystems. Throughout “the last oil” symposium the speakers were able to eloquently use images and emotion as a means of communicating large-scale problems.

In the session, “Protecting our Seas and Local Communities,” Melanie Smith presented three major points that have contributed to her data analyses: sea ice, ocean currents and primary productivity (Smith, “the last oil”). By studying these points Melanie was able to conduct an analysis of ecological habitats throughout Alaska with “... more than 50 million seabirds” (Smith, “the last oil”). As ecologists continue to analyze and create data it becomes more evident that weather conditions are pushed to extremes by climate change and ecosystems are paying the consequences. Melanie Smith shared astounding facts and data while also using images to help the audience understand her message. She used images of the specific type of birds being studied, graphs, and maps. These were helpful because they were used as guidelines to clarify the complexity behind the scientific research that Melanie presented.

In the same session Rick Steiner created a powerful presentation by using images to convey a message to the audience. Not only were the images beautiful, but they also targeted the emotions of the audience to show the problems that the Arctic is facing. He commented on the combination of art and science used to shift the way that we view the Arctic and its expansiveness. The images create a connection with the audience as a means of communication. It is important to note that Steiner highlights the state of the Arctic as it is naturally. Through images he was able to communicate that science and technology are imperfect based on evidence from ecosystems that are still trying to recover from oil spills (Steiner, “the last oil”). He shared images of the Arctic ocean with the audience to reveal the beauty and diversity of many of different types of oceanic and terrestrial species (Steiner,

Figure 76. Melanie Smith, “Protecting Our Seas and Coastal Communities.”





“the last oil”). We are constantly discovering new types of animals while simultaneously recording the extinction of other species in the process.

Steiner presented of a photo of a man drowning in oil, this image was one of the most powerful and tragic images of the entire slide-show. Living in a first world country we fail to notice that people living in other countries are dying from the side effects of offshore drilling and exploitation of the environment. Marginalized groups have become targets because they have less access to resources and are put in dangerous positions when facing corporations. We are encountering this same problem within New Mexico where people’s voices have been suppressed due to issues of land rights and human safety.

In the session, “We’ll Fight to Protect the Caribou Calving Ground and Gwich’in Way of Life,” Sarah James highlights the connection that the Gwich’in people have with the environment unlike many people living in modern day society. The Gwich’in rely on the existence of many of the caribou: “Caribou are not just what we eat; they are who we are” (James, 262). The Arctic is being exploited for profit and corporations are destroying the land along with the indigenous people living on it. Sarah exemplifies an individual with a passion to maintain generational traditions and to protect the land that she was raised on. It was beautiful to listen to Sarah describe the interconnectedness between indigenous people. She communicated effectively as she shared her personal experience of living in the Arctic. This was special because she spoke from a place of sincerity. We can apply this to the interconnections within our communities to build toward living a life of moderation.

The symposium focused on specific geographical locations which



made it easy to comprehend and identify important locations such as where the Gwich’in and Inuit people live. It was so powerful to hear the voices of indigenous people from the Arctic as they connected with people in a bold and courageous manner. Aside from Sarah James, Rosemary Ahtuanguaruk also spoke of her personal experience that prompted her to become an environmental activist. She taught me that any form of action matters no matter how useless it may feel when we are fighting against corporations. When people share their stories and who they are they have the profound capability to spread their influence amongst an audience. Rosemary evoked emotion from the public in a truly breathtaking manner. As Rosemary shared the story of her mother and the human rights violations she has witnessed she evoked emotion in the audience. These injustices have continually taken place against the indigenous people of the Arctic. As people wiped their tears and stood to their feet we took a moment to honor the Native people.

Resources are readily available to us and we often fail to question where these products are coming from. People living a modern life have a more difficult time trying to experience the same spiritual connection with nature that people living a traditional life cherish. It is important to try and step out of our privileged worlds and into the lives of people who live off of the land and its resources in order to survive.

During the symposium many of the speakers expressed their frus-

Figure 77. David Gutzler, Ken Tape, and William Pockman, “Climate Breakdown?” Still image from video by Kevin McDonald.

Figure 78. Symposium Tableting with Partner Organizations: Albuquerque Center for Peace and Justice, and Nuclear Issues Study Group.



tration with the Trump administration because they have perpetrated an “attack” on the Arctic. They plan to repeal policies that have been set in place to protect our environment. This was an important topic to tune into throughout the symposium because it was used to identify a major source of the problem. The speakers communicated the power of taking action and creating a voice for ourselves as the first step to changing policy. As we follow current events the problems in the Arctic should be making the front pages of the news. We have to communicate and come together to promote environmental justice. It has become evident that indigenous people have become targets. These people live with the purpose to preserve and protect the Arctic. The health and safety of the indigenous people of the Arctic has become a high risk for the survival of the people and their culture.

In the symposium there was a variety of disciplines; from scientists and photographers to Elders and activists. The symposium brought together a brilliant group of both men and women that are networking

with one another toward a common goal. Sarah James and Rosemary Ahtuanguaruak provided stories of life experience that provoked feelings of comfort and inspiration inside of me. It was so powerful to watch two women take leadership in a white-male dominated world. They represented marginalized groups and connected emotionally with the audience with their vulnerability. As a whole, the speakers were extremely diverse and represented the population at large.

In analyzing the symposium as a whole it is easy to identify the connections between each of the topics discussed. Some of the most effective ways to address a problem is to present the analysis of data, provide images and share stories. When people tell stories it allows us to resonate with one another which draws upon our emotions. Emotion brings people together to make us feel connected. When we become connected we are able to communicate our hopes and dreams to make the world a better place. The speakers presented images that affected me profoundly and helped me understand what the Arctic is currently experiencing. Images can tell a story in a matter of seconds, they are so effective because they share stories that have the power to change our emotions and the way that we view the world.

Within the scope of the symposium’s themes, it would have been helpful for a speaker to explain the mechanical process behind offshore drilling. It would have helped clarify for the audience why oil drilling is so harmful to the environment. This could have been included in Rick Steiner’s presentation, but may have been difficult due to the time restraint. Aside from this, the symposium addressed the major points of long environmentalism and slow violence with a variety of speakers from diverse backgrounds and disciplines.

It was an honor to be able to attend the symposium and listen to speakers share their knowledge and stories with the common goal to protect cultural rights of the indigenous people and to restore the environment. Due to the carelessness of corporations we are creating toxic environments for humans and entire ecosystems. We have to take action against global elites in order to transform the world we live in today.

Over spring break, I went to Lake Tahoe in the Sierra Nevada Mountains. As I walked passed snow-capped mountains and frosted trees I captured photos and silently admired the natural beauty. Most days, the lake was protected by a thick layer of fog that heavily weighed over

Figure 79. Gas flaring at Gathering Center 1 production facility at Prudhoe Bay. Photo by Pamela A. Miller, 1988.

the city. I was eager to see the glistening blue lake that hugs the border of both California and Nevada. I took photos because I was inspired by the images used in the symposium. I wanted to capture the beauty of nature untouched by people. This is more difficult than it may seem. Once unknown places are discovered by people; we tend to never just leave them alone. This reminded me of the global elites that continue to exploit the Arctic. Images have their own voices but it is up to us if we want to listen.

As my family and I drove past avalanche warning signs and the city became quieter it was because nature was resting her eyes. The snow never stopped. Over the course of one week, more than four-feet of snow coated the ground. It was the most snow I had ever seen in my entire life. I was dressed in winter gear but still couldn't feel my hands or my toes. I love to take pictures because they help me visualize how everything is connected. I imagined how my actions affect the people around me and how my inaction is only more detrimental to them.

As I followed the path on the mountain I watched squirrels run up trees and birds fly above me. I had a new appreciation for the world around me. I imagine that Rosemary admired the beauty but took the extra step to do everything in her power to advocate for it. She has helped me recognize the importance of preserving culture and our home, mother earth. By capturing images of places dear to our hearts and sharing them, we can learn to appreciate the natural world even more. I want to be an activist.

As the snow crunched beneath my feet and snowflakes kissed my face I closed my eyes and wished that I could be in the Arctic.

REFERENCES

- Ahtuanguauak, Rosemary. "Protecting our Seas and Coastal Communities." *the last oil* Symposium, 23 Feb 2018, SUB Ballroom C, University of New Mexico, Albuquerque, NM.
- James, Sarah. "Protecting the Sacred Place Where Life Begins" *the last oil* Symposium, 23 Feb 2018, SUB Ballroom C, University of New Mexico, Albuquerque, NM.
- James, Sarah. "We Are the Ones Who Have Everything to Lose (2001, 2009)" *Arctic Voices*, edited by Subhankar Banerjee, Seven Stories Press, 2012, pp. 262.
- Smith, Melanie. "Protecting our Seas and Coastal Communities." *the last oil* Symposium, 23 Feb 2018, SUB Ballroom C, University of New Mexico, Albuquerque, NM.
- Steiner, Rick. "Protecting our Seas and Coastal Communities." *the last oil* Symposium, 23 Feb 2018, SUB Ballroom C, University of New Mexico, Albuquerque, NM.



Figure 80. Pacific loon on nest, Coastal Plain, Arctic National Wildlife Refuge. Photo by Subhankar Banerjee, 2002.



Figure 81. left to right: Rosemary Ahtuanguaruak, Rick Steiner, and Melanie Smith, "Protecting Our Seas and Coastal Communities."

For the kids, kids, kids, kids...

ANISSA DUWAIK

Raw. Untouched by man. The last great wilderness. “The Sacred Place Where Life Begins”. This and many other descriptive words can only scratch the surface to describe what the Alaska is like, what it feels like, and what it means. Yet, for many of us who live in the lower parts of the United States, we have virtually no idea what it means, nor what the survival of the people, caribou, and health of the land mean to the rest of us. When I heard a tribal member talk about his life as a hunter/gatherer society, I was struck with his sentence describing the reasoning to fight for their way of life: it’s for the kid’s, kid’s, kid’s, kid’s... The depth of awareness that comes from such a simple statement is almost incredulous. Living in a society of instant gratification, instant food, instant news, instant... life, most of us cannot comprehend the price we are paying- a deep lack of understanding of the long-term effects of any chosen path, whether personal or global. Perhaps that is why most Americans are deficient in their ability to connect events to slow violence, or its counterpart, long environmentalism.

I felt the need to start this report from a personal perspective, considering that this is where most Americans are in relation to the current events in Alaska. Since my own awareness of the current events was meager at best, perhaps this level of understanding may be important as we search for ways to reach more people. Recently I heard the term ‘compassion fatigue’ and felt a sense of relief knowing that not only was I not alone, but also that it didn’t mean I was a ‘bad person’. Lack of interest is far from the problem, more so it’s a sense of most times hopelessness, bleakness, and an overwhelming sense of uselessness as I struggle to understand “what can I do”. Wikipedia has this to say about compassion fatigue:

Sufferers can exhibit several symptoms including hopelessness, a decrease in experiences of pleasure, constant stress and anxiety, sleeplessness or nightmares, and a pervasive negative attitude. This can have detrimental effects on individuals, both professionally and personally, including a decrease in productivity, the inability to focus, and the development of new feelings of incompetency and self-doubt. Journalism analysts argue that the media has caused widespread compassion fatigue



Figure 82. David Solomon, “Multispecies Solidarity.”

in society by saturating newspapers and news shows with often decontextualized images and stories of tragedy and suffering. This has caused the public to become desensitized and/or resistant to helping people who are suffering.

And I agree.

So, what can be done? Since taking this class, I have realized the importance of my involvement in this particular subject. I realized that I had to figure out how I can help. Recognizing that Alaska is “The Sacred Place Where Life Begins”, the dawn of realization for me occurred on many levels:

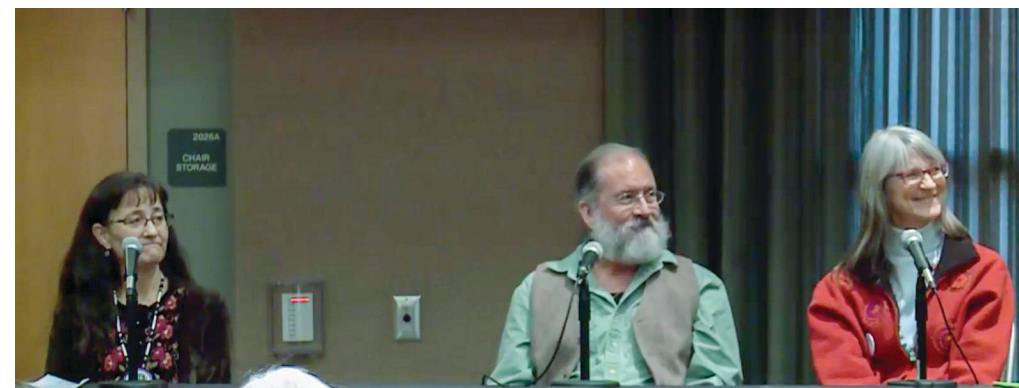
- 1) That this may possibly be the most important issue facing the world.
- 2) Without a planet, all other issues are mute.
- 3) What happens in Alaska will happen to me... eventually.
- 4) As a lifetime advocate of human rights, planetary rights, animal rights, and Indigenous rights, this one issue relates to all that I have stood for in my life.
- 5) Acknowledging that taking on this huge issue, will probably prevent further involvement in many other issues.

However, as I get older, I am better able to understand that all I can do is my best. I understand that it doesn't make me a bad person because I'm not standing up for the souls in Syria who are dying by the minute, taking on the local water issues, fighting for equal rights for women, transgender people or any other of the multitude of atrocities and issues facing the world. It just means that I'm one person, doing what I can for my kids, kids, kids, kids.

From this vantage point, I feel it necessary to discuss the basics of Alaska: the history, the people, the animals. From there, I examine what issues are facing Alaskans finishing up what can be done. I am writing this for me. The symposium opened my eyes to the atrocities that were occurring, but also helped me to understand that by standing together, we can change the projectile of this mass destruction.

History:

According to the government site, Alaska Centers, Public Lands Information, the first people came to Alaska about 15,000 years ago, as they followed the herd animals across the Bering Land Bridge. Another migration across this bridge, occurred about 12,000 years ago, bringing in the Na-Dene and Eskimo-Aleut people. This last group moved up north to populate Alaska and Canada. When the ice age ended, sea levels rose to cover the Bering Land Bridge, thereby isolating the American populations.



In the early 1700's the Bering Strait between Asia and North America was discovered by Vitus Bering. Bering and fellow explorer, “discovered” Alaska during a Russian expedition, landing near what today is called Kayak Island. By 1784, the first Russian settlement in Alaska was established on Kodiak Island at Three Saints Bay. By the 19th century, Russian Alaska became known as a center of international trade. Alexander Baranov, a talented merchant, became one of the main rulers. Building schools and factories, he also taught the natives how to plant rutabaga and potatoes. Baranov felt a strong affinity for Alaska, eventually marrying the daughter of an Aleut chief. Eventually Baranov retired and was replaced by naval officers that eventually brought financial ruin to the trade. Due to obscenely high salaries and paying natives half of what was rightfully owed, furs from sea otters almost obliterated the species and the trade industry was declining.

Then the Crimean War broke out. Due to Russia's inability to neither supply nor defend Alaska, as well as a growing fear that the British would block Alaska, the Russians grew increasingly fearful that they would be left with nothing. As a result, on March 30, 1867, the Russians ‘sold’ Alaska to the United States for a whopping 2 cents per acres, purchasing 1.5 million hectares for 7.2 million dollars. Just five years later, gold was discovered. During the course of the next thirty years, over 100,000 prospectors would attempt to travel north to seek their fortunes, and share diseases with the Natives. In 1925 a diphtheria epidemic crippled the Native inhabitants of Alaska.

After reading the synopsis of the history of Alaska from the government site, I decided to dig deeper, knowing that history is told by the successor and the true story is much more deplorable. I found the site, akhistorycourse.org, that discusses the history and culture of governing Alaska. Disturbingly, the first sentence on Native Citizenship states:

“The 1867 Treaty of Cession with the Russians spelled out that the inhabitants of Alaska “with the exception of uncivilized native tribes,

Figure 83. Nicole Whittington-Evans, Debbie Miller, and Jeff Fair, “Rise of the Red Nation.” Still image from video by Kevin McDonald.

shall be admitted to the enjoyment of all the rights, advantages, and immunities of citizens of the United States. . .”

The Native people of Alaska were not even considered second-class citizens, rather they were not even recognized as citizens at all. Not until 1915 was there any legislature for the Natives to even be considered citizens, and that, as the Alaska lawmakers stated that every Native “who has severed all tribal relationship and adopted the habits of civilized life” could even become a citizen. Once a Native decided on this course of action, they were scrutinized by a group of teachers to ensure that a total abandonment of any tribal customs or relationships had taken place. If that wasn’t enough, the Native person had to have at least five white citizens who had been in Alaska at least one year to testify on their behalf. Then the certificate had to be presented to the district court to ensure that the person had indeed removed themselves from their tribe and “adopted the habits of civilized life.” (akhistory.org) Worse yet, the legislature adopted a requirement that all voters pass a literacy test, yet another means of keeping Natives from voting.

As time passed, legislature changed to continue to accommodate the way of life for the dominant culture. In 1905, Congress said there would be one school for “white children and children of mixed blood who lead a civilized life”. Native children would then be put into another school to teach them how to live a “civilized life”. In essence, the predominantly white culture effectively destroyed the Native way of life. Children no longer could speak their languages, hair was cut short, traditional dress was removed. Parents did not know how to communicate with their children.

In order to counter the domination, The Alaska Native Claims Settlement Act of 1971 ended native land ownership claims while simultaneously creating regional corporations that administer approximately one-ninth of Alaskan territory; the native people are the shareholders. However, with the discovery of oil in 1967 at Prudhoe Bay on the Arctic Coast, the state of Alaska changed drastically, as did the dealings of the U.S. government concerning sovereignty. As late as 1998, a decision by the Supreme Court limited the powers of tribal government, in essence refusing tribal jurisdiction over the state, arguing that a declaration of “Indian Country” in Alaska would have led to 226 separate and sovereign tribal governments. The legal battles for rights to their ancestral land continue to this day.



A Land of Oil

Throughout the years since the invasion of white settlers into Alaska, numerous explorations into oil production resulted in less than remarkable offerings. However, claims were still filed under the Hardrock Mining Act of 1872. Around the 1900's large mining and oil companies began to file “blanket claims” on large areas of land that had oil potential. Then in 1906, concerned about the nation’s need for fuel, President Theodore Roosevelt withdrew all coal and most oil land from development until Congress could come up with a way to control claims. Roosevelt used the authority given to him by Congress in the 1906 Antiquities Act to make this withdrawal. In 1920, congress adopted the Mineral Leasing Act, thereby providing a resolution to the national concern. Congress also provided for the creation of oil reserves strategically placed oil reserves. The largest, established on Alaska’s Arctic coast, a 23-million-acre reserve, renamed the National

Figure 84. Sarah James, “Protecting the Sacred Place Where Life Begins.”



Petroleum Reserve-Alaska (NPR-A).

Throughout the years, many explorers and Natives reported oil seepages in Alaska. During World War II, the demand for petroleum became a huge concern. In response the U.S. and Canadian Army engineers completed the construction of an oil pipeline from Norman Wells on the Mackenzie River in Canada's Northwest Territories to Whitehorse, Yukon Territory and Skagway. By 1944, the Army abandoned the project, but the construction showed the level of interest in the North was very high. Over the years, exploration continued. But it wasn't until July 15, 1957, that a large amount of oil was discovered. At 900 barrels a day, the first major commercial discovery in Alaska began the demise of a pristine wilderness. Alaska was changed dramatically and permanently with the discovery of North America's largest oil field on the Arctic Coast in 1968 at Prudhoe Bay. Huge amounts of money began flowing into the state with the construction of the trans-Alaska oil pipeline in 1974, with production following close behind in 1977. Since then, about 10 billion barrels of oil have been pumped from the North Slope.

Oil businessmen knew that in order to gain wealth from this oil, an oil pipeline across Alaska to the lower United States would be necessary. Two obstacles stood in their way: The Alaska Native claims to their land and environmental protests. The passage of the Native Claims Settlement Act of 1971 removed the first obstacle, and in 1973,

the approval of the Alaska Pipeline Authorization Act removed the second obstacle. Construction was underway by 1973 and completed by 1977, resulting in a boomtown atmosphere that scared many local residents.

The Native People of Alaska

Excerpted from *The Native People of Alaska* by Steve J. Langdon, published by Greatland Graphics, Anchorage, 1978. Used with permission:

Alaska's indigenous people, who are jointly called Alaska Natives, can be divided into five major groupings: Aleuts, Iñupiat, Yuit, Athabascans, Tlingit, and Haida. These groupings are based on broad cultural and linguistic similarities of peoples living contiguously in different regions of Alaska. They do not represent political or tribal units nor are they the units Native people have traditionally used to define themselves.

The Gwich'in People are part of the Interior Native group, the Athabascans-speaking First Nations people of Canada and an Alaskan Native people. Known for their crafting and beadwork, they also continue to live a traditional life of the hunter/gatherer way. Historically, the Gwich'in people had a religious tradition that could be described as animism, meaning that communication with animals was a natural part of the being. Having no concept of a "Christian God", the Gwich'in saw everything as part of That: air, stone, water, or animal. Understanding this aspect is key to realizing their connection with the Caribou, such that they are considered one in the same—a single entity.

Understanding the connection between the Caribou and the Gwich'in, it is no wonder that a Steering committee has been formed to fight against the oil companies, as well as our government that refuses to protect this sacred space. The Gwich'in Steering Committee was formed in 1988 in response to the proposals to drill for oil in the Arctic National Wildlife Refuge. Recognizing that oil development threatens the very heart of the people and wildlife, the chiefs of all Gwich'in villages from Canada to Alaska have joined voices to unanimously speak against the oil and gas development.

At "the last oil" Symposium, I was honored to hear from Sarah Agnes James and Rosemary Ahtuanguaruk, both elders in the Gwich'in and Iñupiaq tribes. Hearing first-hand from a variety of speakers on the detrimental effects from the gas and oil industries I could no longer turn away. Throughout the symposium, there were many opportunities to connect with the wildlife, the birds, the caribou... and the peo-

Figure 85. Raven Dance during Gwich'in Gathering in Arctic Village. Photo by Subhankar Banerjee, 2001.

ple. When Rosemary spoke, my tears refused to stop falling.

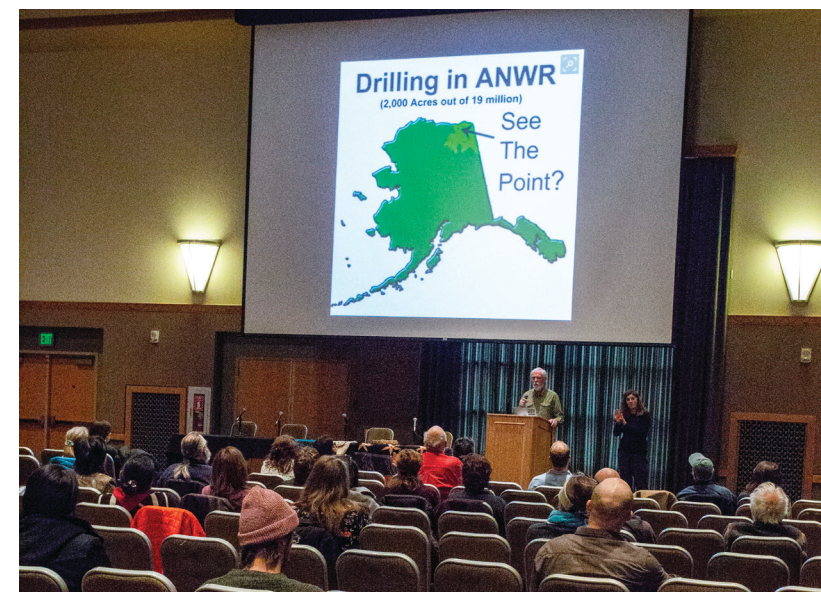
According to one video from “the last oil” symposium: AJ+: Fighting for the Land, 2017, Alaska’s indigenous people have fought against colonization, assimilation and exploitation — this is their story, also drove home the injurious effects that oil drilling is having on the people. I was surprised to learn the price of gas is \$10/gallon, a container of Folgers runs almost \$20, and dog food, a whopping \$75/bag. The impacts of forcing the Natives to buy food, rather than continue their subsistence way of life is astronomical. It’s difficult to conceive this financial impact is not playing a bigger part in this discussion. It seems that many Alaskans are supporting opening up the Reserve to more drilling. The financial benefit of increased money, schools, roads, etc. seems a tantalizing endeavor, but at the cost of colonization, assimilation, and exploitation?

Current Events

The Arctic National Wildlife Refuge is located on the coast of Alaska, covering 19.5-million acres. 8.9 million acres are protected as wilderness, but the 1.5-million-acre coastal plain, remains vulnerable to development. The refuge is home to over forty-five species of land and marine mammal life. Oil companies, members of Congress, and the president want to open up the coastal plain for drilling, putting the Porcupine Caribou Herd at risk. The migration patterns of the Caribou cover a vast area, up to 3,000 miles over the course of a year, however they almost exclusively rely on the thin band of land along the coast of the Refuge to give birth and nurse their young. As the Sacred Place Where Life Begins, drilling in this area could devastate the area and damage to the herd to a point of no return. This will in turn affect the people who rely on the caribou for sustenance.

According to the Gwich’in Steering Committee, “The roads, pipelines, traffic, drill rigs and other disruption that comes with oil drilling could drive the caribou away from their calving grounds. Studies of female caribou have shown that they reduced their use of the heavily developed Prudhoe Bay oil fields, to the west of the Refuge, by 78 percent.” This is unacceptable. Knowing that we have already entered into the Sixth Mass Extinction, it is mind boggling that we are not doing everything we can to minimize our ecological footprint. I have done quite a bit of reading from various sources on both sides of this issue. What follows is a recap of my understanding, as well as the information that is being presented through the media.

Alaska is rich in biodiversity, from the wildlife to the Native inhabitants. It is truly the last frontier that has only been slightly altered from its most natural state. The traditional tribal people live a simple



life as a hunter/gatherer society. Living in harmony with their surroundings, a visit to any village will most assuredly create a window into another time zone, a time when people lived for today... and for tomorrow. Here is a picture of a people who know how to live a sustainable life, one that creates abundance indefinitely. Without running water, this life is unfathomable for most to digest. The result of living in this harsh environment is one that is rich, soul strengthening, and living with very little waste. Every chore, every hunt, is made with awareness. The connection to the land is one that most of us can only dream of. This way of life creates people who are very present in the day to day of life. It also creates an intimate understanding that how a person lives their life, has both positive and negative effects on others—whether today, or fifty years from now. Most of us have lost this connection.

On the flip side, in the very same place, there are many people who are living in the cities that were created by the money that came from the discovery of oil. As with most humans, the ‘bright, shiny lights’ created from electricity, running water, new schools, and roads that result from large amounts of money is just too enticing to walk away from. The discovery of oil completely changed the trajectory of much of Alaska. I was surprised at how many Alaskans support the drilling in the refuge. However, I don’t believe that most people will ever choose to live in harsh conditions, as such, it is easy to understand the tantalization of dollar signs and running water. If most of us were honest with ourselves, we would choose the same. What struck me most, was the extreme viewpoints. One is either for or against. There is no

Figure 86. Ken Whitten, “Protecting the Sacred Place Where Life Begins.” Photo by Jess Peri.

middle ground. I couldn't find one website that was willing to negotiate, or even offer a space in the middle. Understandably.

One school study even showed that it isn't even about the oil, but about the pipeline. The pipelines are meant to haul a large amount of oil. The pipelines are at risk of breaking down, crud building up, due to the design of transportation of large amounts. Since production has diminished so drastically, rather than disassemble, proposals for more drilling are being offered as the only option. Again, no middle ground. In my own naïve understanding, I see that there are two opposing sides. Many of the large cities of Alaska are on the verge of bankruptcy due to the boom/bust cycle. Scarcity breeds fear. Without offering an economically viable solution, or a forced decision of protection, it's hard to conceive of a round table where all can work together. In my simplistic opinion, a few things need to be done:

- 1) An alternative and sustainable energy source needs to be at the forefront
- 2) therefore, we must fight big oil and the one percent.
- 3) An economic option that brings in money, jobs, and education.
- 4) Pushing an agenda that treats the Alaskan coast as a 'museum', a refuge, a space that must be protected at all costs, a space that is completely off limits to any and all human activity that is not sustainable.

I was deeply moved by the symposium, learning and connecting with a land that I have known very little about. The voices of the birds and caribou, the understanding of the migratory patterns of mammals and birds, the effects of climate change, the personal experiences of the Alaskans that are suffering from health problems because of the oil fields, the fight that almost feels insurmountable, these and more are of utmost importance to the average person who does not understand how significant this is and vital to all of life to preserve. I realize that most of what I wrote about is common knowledge, but for me it was a necessary step to a profound understanding of the circumstances surrounding The Sacred Place Where Life Begins.



Figure 87. Debbie Miller, "Rights of Nature."



Figure 88. Gwich'in Caribou Harvest—Danny Gimmel, Photo by Subhankar Banerjee, 2007.



Figure 89. Joe Tetlich, Chairperson of the Porcupine Caribou Management Board, his son Jamie and nephew Shane—are bringing caribou meat back to Old Crow. Photo by Subhankar Banerjee, 2006.



Greetings from Alaska

BEN PFEIFER

Figure 90. Rick Steiner, "Protecting Our Seas and Coastal Communities."



Hey Grandpa,

POSTCARD

PLACE
STAMP
HERE

Finally made it to Alaska just like you always dreamt. Many parts are still beautiful, but the people here are struggling. The air around most parts is hard to breathe. I was hoping to see some caribou while I was here but we couldn't find any around. The people here tell me there's less than a thousand left. At least it wasn't too cold though. Wish you were here.

FROM: Philip 2052

Figure 91. Greetings From Alaska. Digital collage by Ben Pfeifer, 2018.



Dear Grandpa,

POSTCARD

PLACE
STAMP
HERE

I got to observe a traditional event today from the Quich'in. Celebrations help them forget the struggles of life while reminiscing on the good old days, before the oil companies moved in. I was lucky enough to see your old teacher Subhankar in a lecture he gave for visitors. Both of you guys have been a big inspiration for me! Thanks for inspiring me to go!

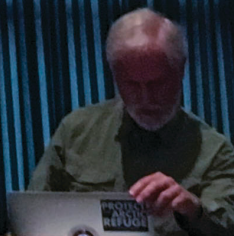
FROM: Juliana 2045

Figure 92. Greetings From Barrow, AK. Digital collage by Ben Pfeifer, 2018.

Figure 93 (following spread). Ken Whitten, "Protecting the Sacred Place Where Life Begins." Photo by Laura C. Carlson.

The Last place we should ever look for Oil

by Ken Whitten



Response

JAY CAMARILLO



The symposium “the last oil” was very insightful into the life of others, namely the country lives of the indigenous people who live in the North. I was fascinated that though people from several different backgrounds were making several different points, the message of urgency and relationships was clear. I appreciated the various ways that people demonstrated these issues, through prayer, dance and song, and scientific representations of the changes in the Arctic. Though the conference was mainly objective, I could feel the energy of the presenters and the hope of reclaiming the lives they do not want to lose; some of those who had presented had the knowledge of Arctic life, the knowledge that I and many continental Americans lack. I appreciated the insight that I was given and though there seemed to be an emphasis on the importance of “healthy food” in Northern communities, they were living a tremendous dilemma of eating safer food from the South that happens to be extremely expensive and ironically less healthy.

We know that there are high levels of contaminants in their food, we are trying to stop the pollutants at the source, and though policy action can potentially be immediate, the effects of the dormant chemicals in the North will continue to have influence over people in the future.

Caribou with Mother and Son: The mom and her son facing the caribou is more of a cultural piece, implying that while the caribou and

Figure 94. Mary Tsiongas, “Rights of Nature.”

Figure 95. *Caribou with Mother and Son*. Digital collage by Jay Camarillo, 2018.



Gwich'in are separate, they rely on one another through tradition and culture. I wanted the mother and child to appear innocent and the caribou to seem wise yet distant; the most common perception that people have is that humans control everything and have power over everything, a detachment that the Gwich'in people don't experience.

Polar Bear Stepping onto Oil: The image of the polar bear stepping onto the oil symbolizes the contradiction of having minimum-level contact with humans despite being the most directly affected areas around the globe. The oil overtaking the water is representing the passive existence that the bears, and other animals, live being overthrown by humanity's actions. It is an image that invokes the audience to question the responsibility of erecting large factories and oil rigs when we know that those who will be affected the most don't have an active voice. The animals in the Arctic are part of an extremely fragile ecosystem, and humans have used their land for profit regardless of the consequences.

Figure 96. *Polar Bear Stepping onto Oil*. Digital collage by Jay Camarillo, 2018.



Figure 97. Jonathan Solomon at the Gwich'in Drum-Sing-Dance to Protect the Arctic Refuge rally, Washington, DC. Photo by Subhankar Banerjee, 2005.



Figure 98. Bernadette Demientieff, Monica Scherer, ASL Interpreter, and the workshop participants, "Act Now!"



Figure 99. Brian Adams & ASL Interpreter, "Next North."

Saving the Arctic National Wildlife Refuge

KRISTIANA CARR

I recently attended *the last oil* symposium on saving the Arctic Wildlife Refuge in Alaska. I was interested to learn about this and hear first-hand accounts of what has been taking place and appreciated having this opportunity. In this paper, I will talk about what I learned through facts that were presented, as well as add my thoughts and ideas. The climate in the Arctic has been changing according to scientific data. As a result, the sea ice has been melting at an alarming speed. There has been a 60% decline and what remains has less density. One Alaskan native said that “it has yet to reach 30 degrees below zero this year,” which is normal during the winter months. He also mentioned that the usual frozen Arctic Ocean now has over 700 miles of open water. All of which are direct results of climate changes in the Arctic.

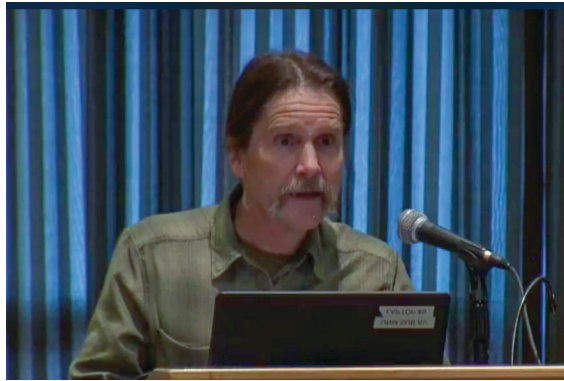
There are several other very serious concerns as to why the Arctic National Wildlife Refuge must be preserved without leaving behind a devastating man-made footprint that is destroying this region. A speaker at the symposium, Sarah James, spoke of her Indigenous ancestry in this region. Her people are the Caribou People.

Another speaker, Rosemary, her parents and grandparents are gone, and her son struggles socially and with alcoholism. Although she seemed exhausted, she continues to press onward for the proper treatment of her people and to raise a voice to protect them and their way of life. She went to school in Seattle, Washington to become a community health aide as there were no doctors in her village, and a doctor would only come to visit three or four times per year. Clearly, that's not enough so Rosemary became a healthcare provider for her people. Truly a very special woman, she chose to dedicate her life to her people in this manner.

There are 323 people in Rosemary's village. Health issues are increasing. Pregnant women, elders, and children are even more at risk as well as their food is becoming contaminated. Many of them have developed asthma or cancer as a result of the poor air quality in the Alaskan region. They have been lied to over and over by the government. What is causing this health decline and the poor air quality? The



Figure 100. Sarah James "Protecting the Sacred Place Where Life Begins." Photo by Jess Peri.



oil drilling in that region is what's to blame. They are drilling within four miles of their village. The bright lights and loud noise scare animal herds, when it has always been an uninterrupted peaceful way of life for centuries.

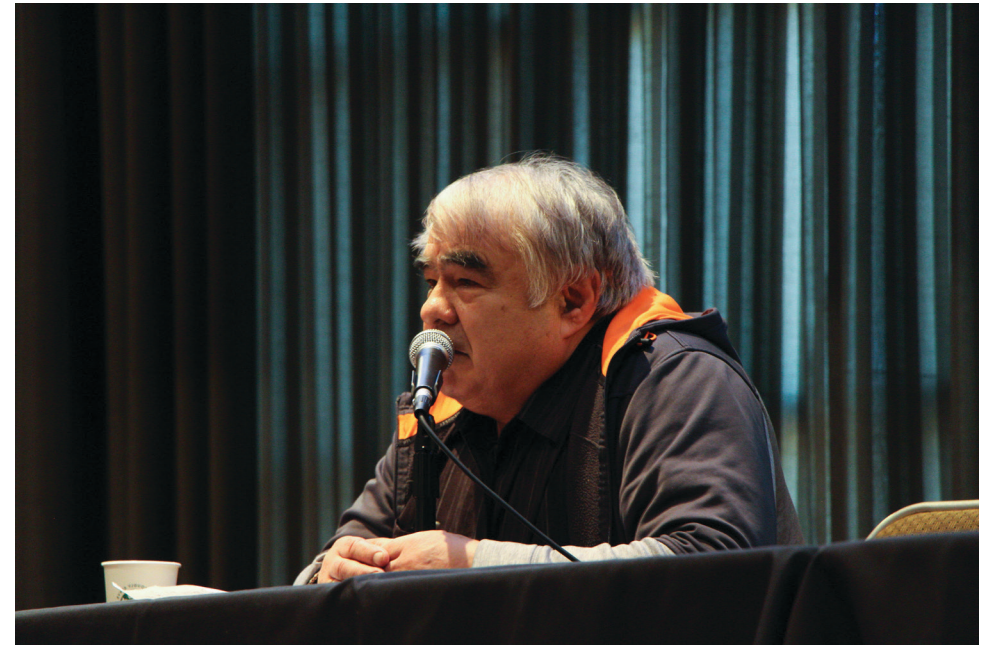
Another speaker was the former Director of Policy for the Office of Interior for the U.S. government. He became a whistle blower after becoming aware of what was happening in the Arctic and when he spoke out against it, he resigned. He explained the rise in air temperature and the decline in the air quality, and there are several villages along the Arctic coastline that are threatened to be wiped off the map or forced to relocate. Can you even begin to imagine having to pack and move an entire village who have very limited resources to begin with? They live off the land. It's not like they have access to large moving equipment and crews at their disposal. This is utterly devastating for them and I can empathize with them.

The sea ice is melting, and the sea level is rising. You can actually sail into the Bering Sea without encountering ice, which years ago would be unheard of. As a result, there has been increased vessel traffic. Remember what happened with the Valdez? That was 30 years ago, and the oil has contaminated everything there. It was not cleaned up without leaving behind a catastrophic aftermath in its wake of destruction. We are human, and accidents happen. Increased vessel traffic only increases the odds of this happening again.

Many of the speakers told of how they have been strongly encouraged to stop speaking out against what is happening. These sound like threats to me. I asked one person if they were on social media because I wanted to know how to keep in touch. She told me she has had to stay away from social media due to the manner in which she has stood up and been instrumental in raising awareness as to what has been happening in Arctic Alaska.

I walked away with my eyes opened, although I was not surprised. It saddens me that as advanced as we are as a nation, there would not be a way to work together in a way that would benefit everyone. For

Figure 101. Joseph Cook, "Alaska and Beyond." Still image from video by Kevin McDonald.



example, why would it not be possible for big oil to branch out in a new ecological manner that would leave little carbon footprint? What if Exxon embraced clean energy which would actually benefit them as they would stand to profit from clean energy such as wind power, which they could still stand to profit from, and therefore would require less time and expense in oil drilling? They would profit and it would be much more ecologically friendly, and they could give consumers the choice to use either. Most want to save our planet, and this would be a possible alternative to do so.

But how would one go about convincing the large oil companies to embrace clean, renewable energy instead of fighting against it? If I were going to be asked that question, my immediate response would be to write a letter and suggest that given the current times that we live in, I would like to see Exxon explore the possibility of working together for the good of our planet. I would explain how they could potentially stand to corner the market if they were able to offer a variety of options to their consumers. While a vast majority of the population consumes fossil fuels, as the ozone layer depletes, perhaps it would be a good time to consider broadening the services that they have to offer. Furthermore, I would present a diagram for them to see of a wind farm, which was owned by Exxon. They could call it 'Exxon Renewable Energy.' They would have a monopoly. If presented in that manner, perhaps it may plant a seed that would grow over time, where they may decide that it was time to embrace it and jump on board. If they

Figure 102. Robert Thompson, "Truth to Power."

considered the costs of their drilling operation verses profits, I wonder what the profit comparison would be.

Although raising awareness is key, and laws protecting such places are crucial, I can't help but think that given the current circumstance there must be a way that negotiations can be made, and perhaps new laws be implemented which would mandate that only a certain percentage of fossil fuels could be consumed due to the harm to our environment. Additionally, for each gallon of fossil fuel that was extracted by oil companies, equal amount must be spent on renewable energy. I believe that it is possible to implement such a plan if it could be approached to congress that it's truly about the greater good of our planet. I could understand how drilling may be a necessary evil, if there was nowhere else to drill, a shortage of oil, or there was no such thing as renewable energy. This is certainly not the case. There is an overabundance of fossil fuel already in barrels, and as long as supply and demand were met, it would make sense to allow drilling in specified areas providing it met ecologically friendly guidelines, such as risk to environment, to animals, or to people. For example, in the logging industry, for each tree cut another tree is planted to replace it. Paper companies do this, which I think is more ecologically friendly and leaves more to our children and their children down the line, than nothing but wasteland whose resources have been consumed so that there is nothing left. As well as a very large hold in the ozone which affects earth's climate, the rising temperatures, air quality, etc. What if it was passed into law and mandated that for every so many barrels of oil extracted, that x amount must be invested in renewable energy.

These are just my thoughts based on finding a possible solution to protecting the earth and all its inhabitants. We only get one planet, why wouldn't we work together to find a compromise? The executives at giant oil companies have children and grandchildren too. Why not hit them not in their wallets but in their hearts. Perhaps it may be possible as awareness is raised that hearts and minds of people can change. I would like to thank my professor for giving us this opportunity to open our minds and think for ourselves based on facts, not just what we are being presented as the facts. Saving the Arctic National Wildlife Refuge is crucial to our entire planet.



Figure 103. Native Energy Policy: Solar Power~Wind Power~Man Power. Sarah James at the Gwich'in Drum-Sing-Dance to Protect the Arctic Refuge rally, Washington, DC. Photo by Subhankar Banerjee, 2005.



Figure 104. Arctic Refuge rally in Washington, DC. Photo by Subhankar Banerjee, June 15, 2018.

Ghost Rivers, Warnings, and Opportunities

[The Proposal: From February 17 through February 25 (while “the last oil” symposium will be taking place at the University of New Mexico), I will be traveling as a fellow of the Institute of Journalism and Natural Resources along the Lower Colorado River. The institute is an intensive reporting trip undertaken with 19 other reporters. Over the course of eight days, we will travel more than 1,600 miles in three states and two countries, visiting with water managers, community members, tribal governments, and engineers. Days are spent traveling, touring facilities, hiking, and meeting with people; evenings are spent in seminar-style discussions. As part of my work duties at *NM Political Report* and NMPBS, I will be using the trip to compare and contrast water management practices on the Colorado River versus on the Rio Grande and Gila River in New Mexico. For my Masters work in the Department of Geography and Environmental Studies, I will be considering how the Colorado River fits into my research concerning “ghost rivers.” In your class, I propose completing two different assignments for my midterm: a 15-page paper and accompanying presentation to the class about the colonization of the Colorado River.

This colonization has occurred in a number of different ways: the damming and piping of the river for cities and agricultural uses, the removal of people like the Hualapai from their traditional lands within the Grand Canyon and across the Colorado Plateau, the federalization of lands within Grand Canyon National Park, the continued refusal of the federal government to make good on its settlement of water rights claims by the Gila River Indian Community, and also how, by drying the river for long stretches in Mexico and before it reaches the delta, governments and large-scale industries deprive people of the river upon which their communities grew up and once flourished. Along the way on this trip, I will also be seeking stories of hope and social transformation – and will conclude the paper/presentation with those.]

LAURA PASKUS

Before it even reaches the sea, one of the mightiest rivers of the western United States trickles to an end in the Sonoran Desert just south of the United States-Mexico border. The Colorado River delivers water to more than 36 million people in seven states and two countries. Its waters carved the Grand Canyon and, far more recently, allowed the growth of Sunbelt cities like Phoenix and Tucson, both of which receive the Colorado’s waters via pipes, tunnels and canals. The cities of Los Angeles and San Diego battle farmers and other states for its waters and the Colorado is the engine behind the city of Las Vegas. Farmers in the Imperial Valley of California use the river’s water to grow over a billion tons of hay each year, about two-thirds of the vegetables eaten in the U.S. during the winter and most of the nation’s winter lettuce (Paskus, 2018a).*

To the east, the Rio Grande begins as a trickle in Colorado’s San Juan Mountains and flows through the San Luis Valley and then on into New Mexico. For centuries it has brought sustenance to pueblos, farmers and villages, and downstream of El Paso, it forms the border

Figure 105. David Gutzler, “Climate Breakdown?”



between Texas and Mexico, and then empties—or used to empty—into the Gulf of Mexico. Along its journey, the Rio Grande provides drinking water to more than one million people and irrigates two million acres of farmlands, lawns and orchards in Colorado, New Mexico, Texas and Mexico. It's also dry for long stretches along its journey. In the “forgotten” stretch of the river in Texas, it's dry for about 200 miles. In El Paso, the rio is confined within a concrete channel. Above Mesilla, New Mexico and upstream to the base of Elephant Butte Dam, its channel is dry, save for when water managers use it to move irrigation water. And even in the Middle Rio Grande just south of Albuquerque, the river has regularly dried most summers since 1996, sometimes for stretches as long as 30, 60, and 90 miles.

Even flows in the northern stretch of the Rio Grande—which carved out the dramatic Taos Gorge—and has for decades supported a rafting and recreation industry, are causing some people to worry. Especially this year, with historic low snowpack in the mountains of the watershed. WildEarth Guardians attorney Jen Pelz said she's been looking at flows in northern New Mexico in anticipation of the 50th anniversary of the Wild and Scenic Rivers Act, which Congress passed in 1968 to protect “outstanding” river stretches (Paskus, 2018c). “Colorado's attitude is that they only have to deliver what the [Rio Grande Compact] said, and if that means no boating in New Mexico, that's not their problem,” she said, noting that about 150 cubic feet per second of water typically comes into the Rio Grande below Colorado and feeds the Wild and Scenic stretch. “But I'm skeptical and a little scared of what those gages are going to look like, and whether the recreation community in Taos can survive off really low flows.”

Yet both the Colorado River and the Rio Grande fare better than the “ghost rivers” that once thrived and drew people to live along their banks in Los Angeles, Tucson, Phoenix, and Santa Fe. The Los Angeles, Santa Cruz, Salt, and Santa Fe rivers today only run when heavy rains flush storm or flood waters through their channels, or when water managers release “extra” water from reservoirs to allow them to flow for brief periods of time. Contemporary westerners built up their cities along these rivers and all but sucked them dry, safe in the belief that their abilities to snatch or buy water away from rural areas—as Los Angeles did with Owens Valley—or pump groundwater would allow those cities to flourish and keep growing, no matter how arid the climate.

This year, as forecasts for both the Colorado River Basin and Rio Grande Basin are historically low, water managers, farmers, cities—even activists—talk about “hope” for a strong summer monsoon system or a better snowpack next winter. At the same time that water in the west has been politicized, technologized and de-culturized, people still consider “hope” a reasonable water management scheme. Belief in



technology and faith in the weather to provide—if not this year, then surely next year—stand in stark contrast to the inability of contemporary westerners to imagine—or perhaps, remember—that water in the desert is sacred, special, and of intangible value. In the preface to an annotated bibliography about holy wells and sacred water sources in Britain and Ireland, Barre Toelken writes of how water in the American West has become a “deeply emotional symbolic substance for identifying the triumph of humans over nature” (Gribbens, 1992). He continues:

Here in the driest part of the United States one might have expected to find the rare wells, springs and fragile rivers classified as sacred, as indeed many of them had been to the previous inhabitants, the Native Americans. But the conspicuous consumption and display of water in this region today tends heavily toward another symbolism: proof of the conquest of the land and its natural systems and the conversion of its sacred fluid into a practical (i.e., exploitable) resource. Even though water has become more

Figure 106. Looking upstream of Morelos Dam in Mexico at the Colorado River. Photo by Laura Paskus, 2018.



and more scarce (who could have expected otherwise?), contemporary Westerners (other than Mormons, for whom water still carries a considerable religious connotation) have portrayed it as a substance with primary technical meaning.

By contrast, Toelken writes, “it is the green, rain soaked British Isles—where water is abundant—that many water sources have maintained their magical and holy dimensions since earliest times.”

Rivers and waters aren’t considered sacred in the contemporary American West. Except for in certain parts of the states Washington and Colorado, they aren’t even allowed to keep their own waters. Rivers and lakes are meant to provide for humans, and not exist for any other reason. Today, as some environmental groups, funded by various entities, including the Walton Family Foundation, raise alarms about the state of the American West’s arid-lands rivers, they’re urging water managers to “give back” water to the rivers that never earned rights to their own waters, the same way cities and farmers did under western water laws. Even under the most progressive of political circumstances, however, it’s not clear that policies to protect rivers can keep up with the changing climate.

Figure 107. Looking downstream of the Morelos Dam in Mexico at the Colorado River. The portion of the river allowed to flow south in its historic channel is the section of water between the two lighter green bunches of vegetation. Photo by Laura Paskus, 2018.



The West’s changing climate

According to the 2017 Climate Change Special Report, global annual temperatures have increased by 1.8 degrees Fahrenheit over the past 115 years, and the current period is “now the warmest in the history of modern civilization” (Wuebbels et al, 2017). In the southwestern United States, warming is occurring at about double the global rate, and by the end of the century, New Mexico is projected to be four to six degrees warmer than it is today (Gutzler and Robbins, 2011).

Continued warming will have continued impacts on the Southwest’s already-tight water resources. For example, between 2000 and 2014, Colorado River flows were 19 percent below the 1906-1999 average—conditions driven by temperature-induced drought rather than a lack of precipitation that drove previous droughts (Udall and Overpeck, 2017). Warming under current emissions scenarios will drive an estimated 20 to 30 percent decrease in Colorado River flows by midcentury and a 35 to 55 percent decrease by the end of the 21st century (Udall and Overpeck, 2017).

This year, a new study showed that more than 90 percent of snow monitoring sites in the Western United States showed declines in

Figure 108. Half a century ago, the Delta of the Colorado River supported wildlife, vegetation, fishing communities, and villages. Today, it is dry, with not even vegetation growing across hundreds and hundreds of acres. Half a century ago, the Delta of the Colorado River supported wildlife, vegetation, fishing communities, and villages. Today, it is dry, with not even vegetation growing across hundreds and hundreds of acres. Photo by Laura Paskus, 2018.



snowpack—and 33 percent showed significant declines (Mote et al, 2018). The trend is visible during all months, states and climates, according to the authors, but are largest in the spring and in the Pacific states and locations with mild winter climates. The decrease in spring-time snow water equivalent—the amount of water in snow—when averaged across the entire western U.S. is 25 to 50 cubic kilometers, or about the volume of water Hoover Dam was built to hold in Lake Mead.

Streamflow projections for the Upper Gila River, a tributary of the Colorado River that originates in southwestern New Mexico, show that warming will decrease flows by about five to ten percent, due to decreasing snowmelt runoff (Gutzler, 2013). Another comprehensive analysis of the climatic causes of flow variability in the Gila River between 1928 and 2012 shows that the Gila River will “no doubt” be influenced by human-induced climate change (Pascolini-Campbell et al, 2015).

Continued warming-induced dryness, growing demands for water, and climate change-induced decreases in streamflows may force even large dryland river systems into “permanent hydrological drought” (Dettinger et al, 2015). A study of the Colorado River, the Rio Grande, the Klamath River and California’s Bay-Delta system found that of the four, the Rio Grande Basin faces the greatest challenges due to climate change. The Rio Grande, in fact, offers the best example of how continued declines in water flow due to climate change might sink a major river system into “permanent drought” (Dettinger et al, 2015).

Figure 109. La Ciénega de Santa Clara, the “accidental wetland” that today supports more than 200 species of birds. Photo by Laura Paskus, 2018.



Similarly, a study of 421 river basins in the Northern Hemisphere found that 97 river basins—supplying water to almost 2 billion people—have at least a 67 percent chance of decreased snow supply (Mankin et al, 2015). Of the 32 basins most sensitive to changes in snowmelt are the Rio Grande and the Colorado River. Under the two climate models authors used to simulate historical and future snowfall and rainfall, the risk of decline in spring and summer water availability in the Rio Grande Basin is between 95 and 100 percent (Mankin et al, 2015).

As population increases continue placing demands on water resources, natural ecosystems, and agriculture, future droughts will occur in a warmer world with higher temperatures than in the past. In addition, due to 20th and 21st century reliance on groundwater, humans of the future will have less groundwater to rely upon (Cook et al, 2015). The loss of groundwater, plus the higher temperatures, will “likely exacerbate” the impacts of future droughts—leading to a “remarkably drier future that falls far outside the contemporary experience of natural and human systems in Western North America” (Cook et al, 2015). These conditions, they note, “may present a substantial challenge to adaptation” (Cook et al, 2015).

A study of 24 subbasins of the Upper Rio Grande found peak flow on the Upper Rio Grande is 14-24 days earlier, and among the 24 subbasins, daily hydrographs show higher streamflow in March and April, but less from mid-May through the end of irrigation season (Elias et al, 2015). The authors write that the “large decrease in volume in May, June and July will compound water management challenges in the region.” Given the large percentage of streamflow that comes from

Figure 110. Laguna Grande restoration site in the Colorado River’s Upper Delta. Photo by Laura Paskus, 2018.



snowmelt, simulation of snowmelt and streamflow response to higher temperatures is “vital for development adaptive management strategies” (Elias et al, 2015). They add that the region’s water resources are especially vulnerable in the future because they are already limited. And new reconstructions of runoff ratio for the Upper Rio Grande Basin, to 1571 C.E., show that the declining trend in runoff that has been observed in the basin since the 1980s through the present is “unprecedented” in the last 445 years (Lehner, 2017). Having strengthened over the past few decades, temperature sensitivity implies that “future management vulnerability” will persist (Lehner, 2017).

As these few studies among many show, we know what the future holds for the western United States, its rivers and its communities. These projections are no longer hypothetical scenarios showing what *might* happen if greenhouse gas emissions increase. Rather they explain what will continue happening to rivers and water supplies as greenhouse gas emissions continue, and as the atmosphere continues reacting to those already released. At the same time, history and current events show what happens when water scarcity becomes dire. Whether civil war in Syria, or Cape Town drilling wells into previously protected conservation areas as “Day Zero” approaches, we know what can happen when crises over water occur.

Figure 111. Colorado River waters feed crops in California’s Palo Verde Valley. Fallow fields and the dry desert contribute to dangerous and unhealthy dust storms. Photo by Laura Paskus, 2018.



Proxies and accidental wetlands

The Rio Grande Silvery Minnow was listed for protection under the Endangered Species Act in 1994. Historically one of the most abundant fish in the river, the fish had occupied 2,400 miles of the Rio Grande and its tributary the Pecos River. But by the late 1990s, the fish was nearly extinct, found only in a 174-mile stretch of the Middle Rio Grande in New Mexico. Then, in 1996 about 90 miles of the Rio Grande south of Albuquerque dried. Biologists scrambled to figure out how to protect the fish, environmental groups sued, political wars waged, and water managers and users tried to figure out how to serve cities and farmers, while keeping the fish from going extinct.

Under the auspices of the Endangered Species Act, beginning in 2003, the U.S. Fish and Wildlife Service (FWS) required water managers to keep at least 100 cubic feet per second of water in the Albuquerque stretch of the river, even if it dried to the south, as it did many years, usually between San Antonio and the southern boundary of the Bosque del Apache National Wildlife Refuge. The program for the minnow’s recovery was extensive, stretching out across local, state and federal agencies.

Over about a decade, the program spent more than \$150 million. For environmental groups, biologists and some residents of the state, saving the minnow became a proxy for saving the river: If water managers were required to keep water in the river to comply with the federal law, many assumed that the river would inevitably benefit, too.

Figure 112. The Rio Grande south of Albuquerque in June 2016. Photo by Laura Paskus, 2018.



Surely, the river and other wildlife invariably benefited from the water, and the springtime pulses water managers would send downstream, timed to help the minnows spawn. But the silvery minnow program ultimately devolved into a program focused on technology, rather than the restoration and maintenance of a healthy river channel with regular enough flows to support a three-inch long fish. In the spring, biologists collect eggs from the river and then send them to hatchery facilities. When the river dries in the summer, biologists go back to the river, scooping out minnows from drying puddles (leaving the other fish behind to die and rot) and transporting them to flowing stretches of the river. Then in the fall, they return again, this time with hatchery-reared minnows to pour into the river.

Then in 2016, FWS agreed with water managers (the U.S. Bureau of Reclamation and also the Middle Rio Grande Conservancy District) that operations in the Middle Rio Grande are not jeopardizing the survival of the minnow. Under its new biological opinion for the silvery minnow, FWS does not require flow minimums and instead expects Reclamation to manage the river to improve fish densities. The fish stopped being a proxy for the river, and instead became a technological problem to solve. Farmers still flood irrigate fields to grow alfalfa. Cities still allow urban sprawl. And people take their water for granted. And everyone keeps hoping that next year will be wetter, and better.

Figure 113. The Colorado River in California's Palo Verde Irrigation District. Photo by Laura Paskus, 2018.



On the Colorado River, there are efforts to protect endangered fish, as well. But there are also unique efforts to bring water back to dry stretches of the river, and protect “accidental” wetlands, such as the Salton Sea in California and La Ciénega de Santa Clara in Mexico. The Salton Sea resulted from a misdirected effort to redirect the Colorado River. Over time, its waters were sustained due to saline agricultural runoff. But it also began to sustain huge bird populations and provided a stopover for migrating birds. Today, however, its waters are shrinking. And as the sea contracts, the playa it exposes sends dust into the air, affecting air quality, causing respiratory problems, and coating fields with fine particulates. Today, even as environmentalists try to figure out how to protect the Salton Sea, water users in California are reluctant or unwilling to share promised water with the ecosystem.

Meanwhile, American environmentalists have been working with partners in Mexico to restore certain sections of the river that have been dry since the 1960s. In 2014, the two countries worked together to send an experimental pulse of water downstream, allowing the river to attempt to reach its delta. Within the delta, there's also another “accidental” wetland. About 30 miles south of San Luis Río Colorado lies La Ciénega de Santa Clara, where 40,000 acres of salty lagoons and marshy wetlands support tall, green cattails and more than 200 spe-

Figure 114. The Colorado River irrigates the “paradise” of the Coachella Valley in California. Brussels sprouts are in the foreground, with a dust storm near sunset. The source of the dust is the drying Salton Sea. Photo by Laura Paskus, 2018.



cies of birds (Paskus, 2018b). Shorebirds like sandpipers and plovers and migratory birds, like ducks and geese, show up here by the tens of thousands. It's the largest saltwater marsh in the Sonoran Desert—and it's here by accident.

La Ciénega de Santa Clara, the largest saltwater marsh in the Sonoran Desert, isn't here because the ocean crept this far inland. Nor is it some remnant from when the Colorado River still reached the sea. Since the 1970s, a canal has dumped water too salty for farms here in the delta. For decades, the United States delivered water across the international border that included saline runoff from American farms. After a treaty amendment requiring the U.S. to reduce the salinity of its deliveries, that runoff was diverted to the Colorado River's dry floodplain. And there grew La Ciénega de Santa Clara.

During certain times of the year, biologist Alejandra Calvo crosses a barren stretch of desert in Sonora, Mexico on an almost daily basis. Until the 1960s, the Colorado River spread across this delta on its path to the Sea of Cortez. Today, a vast swath of that landscape supports no vegetation, no birds, no wildlife.

As cities and farmers in the United States, as well as a warming climate, continue putting more pressure on the Colorado River, the Yuma Desalting Plant is starting to look like a more attractive option for gleaning more water from the river. Built in 1992, the plant has

Figure 115. Biologist Alejandra Calvo at La Ciénega de Santa Clara. Photo by Laura Paskus, 2018.



only been operational for two stretches of time. Were it to open again, however, the ciénega would lose its water supply. Instead of supplying the ciénega, that water would be treated for use in Arizona. That has activists like Calvo, and the National Audubon Society's Jennifer Pitt, worried. But there are also reasons for hope—here and upstream where Mexican and American activists have worked together on a restoration project in the Colorado River's historic channel for about a decade.

About 40 miles from the ocean, Laguna Grande is the largest restoration site in the delta. The binational Sonoran Institute began work here on patches of existing habitat established when the river flowed through its channel in the late 1990s or early 2000s. Soon, the project should cover about 800 acres, and it already employs more than 20 people, many of whom live in nearby villages. Families can visit the restoration project, and students come out to tour the newly re-established cottonwood forests. Beavers have returned here, as well as bobcats and coyotes. There are also rodents, raptors and rattlesnakes. The Sonoran Institute leases or buys water from farmers in the Mexicali Valley to support the wetlands, and the more than 250,000 trees they've planted here.

Walking through the cottonwood forest, Pitt says this landscape was destroyed before anyone figured out what to do about it. When the

Figure 116. Water from the Colorado River moves to California fields through the All-American Canal. Photo by Laura Paskus, 2018.

Colorado River started running dry in the mid-20th century, there weren't yet environmental laws to temper or stop destructive operations or policies. "We didn't have a regulatory framework, we didn't have courts, and we didn't have any leverage," Pitt says. "We figured that out at some point in the mid-2000s and figured out that as a conservation advocacy community that our path forward had to be collaboration and cooperation. We had no choice."

But whether talking about Laguna Grande or the pulse flow, Pitt is careful to note the delta is by no means fully restored. "When we say 'restoration'...we mean there's going to be a tiny, little ribbon of green that connects the Upper Gulf to the Colorado River," she says. "That's important. But that's not the delta."

In the intermountain West, 70 percent of all wildlife depend on river corridors for some part of their life cycle, she says. And communities need rivers, too. "The perspective on rivers that has allowed us, as a society, to manage them unsustainably—where our demands exceed supply, which has devastated the health of rivers—is also set up to devastate communities," Pitt says. Fixing rivers means stabilizing water supplies for communities, both urban and rural. As water managers and stakeholders wrangle with policy, infrastructure and water uses and rights, they can also be deliberate about healthy rivers—or, she says, "remnants" of healthy rivers.

Unlike in the past, environmentalists and community advocates aren't always on the outside, unable to apply the brakes to destructive projects or unsustainable policies, she says. And addressing climate change offers the chance to look at things differently, too.

"All those water management systems that seemed in the past so fossilized and unable to adapt to changing social values are now having to change because of climate change and the declining supply," Pitt says. "As they're revisiting the policy, which will change the infrastructure, which will change how water is distributed across economies and societies—now is the time for us to be at the table, helping to find the ways to at least not lose more, and in some cases, to try and rebuild."

Not only are "water resources" in the contemporary American West managed in ways that are "fossilized," the ways in which we perceive water itself lack usefulness. It's useful, then, to look beyond the American West.

The geographer Kuntala Lahiri-Dutt, for example, argues for a reconsideration of the binary of land and water, within the rubric of hybrid environments. She suggests that thinking through the historical production of water/lands will help geographers move beyond what



has become an "indissoluble dichotomy" and she urges geographers to think beyond the nature-culture binary and beyond the "deeply entrenched water-land dichotomy" (Lahiri-Dutt, 2014). Geographers have not fully dealt with this sort of hybrid environment she writes, in which land and water are inseparable and give rise to a "nebulous and fluid environment" (Lahiri-Dutt, 2014).

Thinking of this hybridity as fluid and transient, challenges the notion of permanence in landscapes and encourages "negotiations" between land and waters—the seas, rivers, and lakes that geographers have long constituted as lying outside the terra firma" (Lahiri-Dutt, 2014). In the Bengal floodplain, she shows how the "aqueous land" is more than just the product of fluvial action. Colonial interactions, including changes in land tenure and revenue collection, along with post-colonial dam-building coproduced the hybrid environment, and did so at different geological scales (Lahiri-Dutt, 2014).

Although the American West's arid-lands rivers are vastly different from the "spongy" environments of Bengal, Lahiri-Dutt's work pro-

Figure 117. The largest reservoir in the western United States, Lake Mead, is approaching such low level that the federal government may soon step in to impose restrictions, unless water users in Nevada, Arizona and California can agree to a drought contingency plan that mandates shortage-sharing. The white "bathtub ring" visible on the cliffs is about 150 feet tall. Photo by Laura Paskus, 2018.



vides a useful framework for thinking about the impermanence of rivers, due to geological, climatic, historical, and political factors. However exciting, and heartening, river restoration efforts are, it's important to heed Guha and Martinez-Alier (2013), who pointed out the ways in which the overconsumption of the industrialized world and by urban global elites spurred the same wilderness or biocentric perspectives that often continue the process of transferring resources from the poor to the wealthy. Neither the mistakes of the American wilderness movement, nor of American-led efforts to conserve big cats, large game animals, and other species in the developing world, should be repeated in an effort to bring waters back to dry riverbeds.

After all, the rivers of the arid western United States aren't drying due to drought. Rather, they're drying because of overconsumption, conspicuous consumption, and the inability of contemporary Americans to live within their hydrological means.

As long as fountains spray tens of thousands of gallons of water per day into the parched air of Las Vegas—which receives four to six inches of rain per year on average—or people continue growing lawns, filling swimming pools, flood-irrigating winter lettuce and alfalfa for livestock (all the while wasting food at gluttonous speed), “water scarcity” in the American West cannot be taken entirely seriously.

Meanwhile, the tools with which contemporary westerners have

Figure 118. Red Hill Bay Marina at the Salton Sea. Today, the waters are about a mile from the marina. Photo by Laura Paskus, 2018.



claimed to adapt to drought conditions—building gargantuan dams and reservoirs—are already beginning to fail, just decades into the new planetary era associated with climate change.

The Colorado River's largest reservoir, Lake Mead, is less than 40 percent full, and its cliffs show a “bathtub ring” about 130 feet tall. As of early March, the lake's water level was 1,088 feet above sea level. When it reaches 1,075 feet, that triggers federal rules that cut the amount of water users in Nevada, Arizona and California can take. The spring forecast for the Colorado River Basin remain “well below average.”

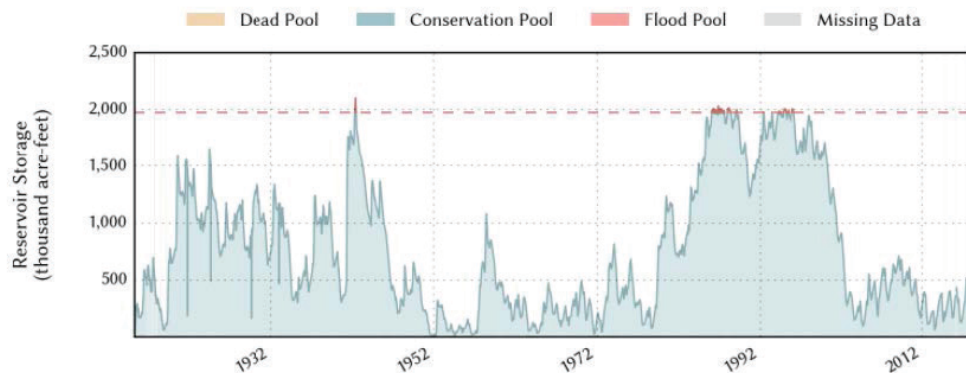
Water users in the three states, including cities like Las Vegas and Los Angeles, the Central Arizona Project, irrigation districts in Southern California and tribes are all keeping a close eye on the reservoir—and still need to work out a drought contingency plan to avoid those federally-mandated cuts if the reservoir keeps dropping.

On the Rio Grande, Elephant Butte Reservoir is 23 percent full, and the Rio Grande Basin is experiencing the worst water year since records begin, in the 1890s. Water managers have some storage in upstream reservoirs, but they admit this will be a “grim” year (Paskus, 2018c). In this sense, the work of critical physical geographers, including Rebeca Lave may be useful.

Given the impact of humans on widespread scales, human and phys-

Figure 119. Before the waters of the Colorado River are sucked into Hoover Dam, their movements are hypnotic. Photo by Laura Paskus, 2018.

Elephant Butte Lake: 23.2% full as of 2018-03-21



ical considerations cannot be examined in isolation nor reduced to simple variables; instead explanatory frameworks need to change and classifications of species or biomes may even need to be reevaluated for their relevancy (Lave et al, 2014). Broadening their epistemology and training, and spanning physical and critical human geography, is necessary work, Lave argues, especially as the connections between social and biophysical systems become increasingly clear.

Climate justice cannot be achieved without understanding that Earth's physical changes are rooted in global political economy, history, and colonialism (Lave, 2014). And by engaging across the divide and combining social theory with a deep knowledge of a particular field of environmental science, Lave believes "we may just be able to move from critiquing natural resource policy to making it more just" (Lave, 2014).

At this precise moment in history, contemporary westerners are facing a choice, an opportunity: We can cling to outdated water laws, wasteful water practices and failing infrastructure. We can fight with one another, depriving rivers of their water in order to pour it onto lands never meant to support crops like alfalfa, cotton, or even most fruit and vegetable crops. We can allow our cities to dry out rural communities and outbid farmers for their water. Or we can forge a new way of connecting with our landscapes and waters. We can remember how to respect our landscapes and waters, rather than trying to dominate or subvert them. We can support sustainable agricultural practices, improve and nurture our cities and urban communities, and remember to treat water in the desert as the rare gift that it is.



**Note: I cite my own reporting not because it carries the authority of academic work, but to be transparent that some of the sections of this paper come from my reporting and are not necessarily original to this paper.*

REFERENCES

- Cook, B. I., Ault, T. R., & Smerdon, J. E. (2015). Unprecedented 21st century drought risk in the American Southwest and Central Plains. *Science Advances*, 1(1), e1400082.
- Dettinger, M., Udall, B., & Georgakakos, A. (2015). Western water and climate change. *Ecological Applications*, 25(8), 2069-2093.
- Elias, E., Rango, A., Steele, C., Mejia, J., & Smith, R. (2015). Assessing climate change impacts on water availability of snowmelt-dominated basins of the Upper Rio Grande basin. *Journal of Hydrology: Regional Studies*, 3, 525-546.
- Guha, R., & Martinez-Alier, J. (2013). *Varieties of environmentalism: essays North and South*. Routledge.
- Gutzler, D. S. (2013). *Streamflow Projections for the Upper Gila River*. New Mexico Interstate Stream Commission.
- Gutzler, D. S., & Robbins, T. O. (2011). Climate variability and projected change in the western United States: regional downscaling and drought statistics. *Climate Dynamics*, 37(5-6), 835-849. (First published online June 8, 2010.)
- Gribben, A. (1992). *Holy Wells and Sacred Water Sources in Britain and Ireland: An Annotated Bibliography*. Garland Pub.

Figure 120. Data and graph from Texas Water Development Board. Photo by Laura Paskus, 2018.

Figure 121. The city of Las Vegas is built on Colorado River water, not just casinos. Photo by Laura Paskus, 2018.

- Dynamics, 37(5-6), 835-849. (First published online June 8, 2010.)
- Gribben, A. (1992). *Holy Wells and Sacred Water Sources in Britain and Ireland: An Annotated Bibliography*. Garland Pub.
- Lahiri-Dutt, K. (2003). People, power and rivers: experiences from the Damodar River, India. *Water Nepal, Journal of Water Resources Development*, 9(10), 251-267.
- Lahiri-Dutt, K. (2014). Beyond the water-land binary in geography: Water/lands of Bengal re-visioning hybridity. *ACME: An International E-Journal for Critical Geographies*, 13(3).
- Lave, R. (2014). Engaging within the academy: a call for critical physical geography. *ACME: An International Journal for Critical Geographies*, 13(4), 508-515.
- Lave, R., Wilson, M. W., Barron, E. S., Biermann, C., Carey, M. A., Duvall, C. S., Munroe, D. (2014). Intervention: Critical physical geography. *The Canadian Geographer/Le Géographe Canadien*, 58(1), 1-10.
- Lehner, F., Wahl, E. R., Wood, A. W., Blatchford, D. B., & Llewellyn, D. (2017). Assessing recent declines in Upper Rio Grande runoff efficiency from a paleoclimate perspective. *Geophysical Research Letters*, 44(9), 4124-4133.
- Mankin, J. S., Viviroli, D., Singh, D., Hoekstra, A. Y., & Diffenbaugh, N. S. (2015). The potential for snow to supply human water demand in the present and future. *Environmental Research Letters*, 10(11), 114016.
- Mote, P. W., Li, S., Lettenmaier, D. P., Xiao, M., & Engel, R. (2018). Dramatic declines in snowpack in the western US. *npj Climate and Atmospheric Science*, 1(1), 2.
- Pascolini-Campbell, M., Seager, R., Gutzler, D. S., Cook, B. I., & Griffin, D. (2015). Causes of interannual to decadal variability of Gila River stream flow over the past century. *Journal of Hydrology: Regional Studies*, 3, 494-508.
- Paskus, Laura (2018, February 19). Looking for lessons along the Colorado River. New Mexico Political Report. Albuquerque.
- Paskus, Laura (2018, March 2). When rivers, or at least their remnants, return. New Mexico Political Report. Albuquerque.
- Paskus, Laura (Producer). (2012, October 28). KUNM News [Radio broadcast]. Albuquerque: KUNM-FM.
- Udall, B., & Overpeck, J. (2017). The twenty-first century Colorado River hot drought and implications for the future. *Water Resources Research*, 53(3), 2404-2418.
- Wuebbles, D. J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (Eds.) (2017). *Climate Science Special Report: Fourth National Climate Assessment*. Washington, D.C., U.S. Global Change Research Program

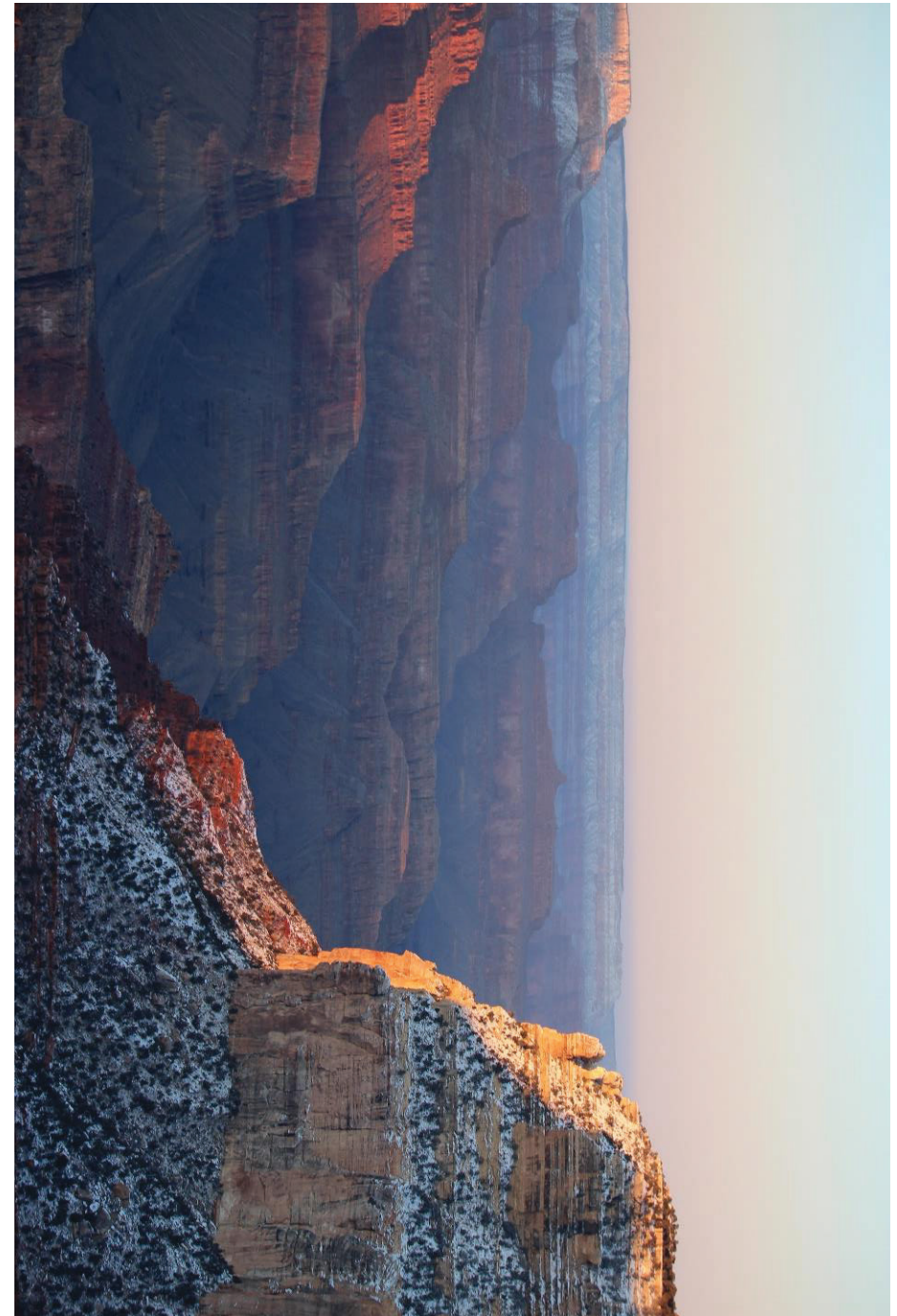


Figure 122. Millions of years ago, as early humans were still developing and migrating, the Colorado River chiseled out the Grand Canyon. Photo by Laura Paskus, 2018.
Figure 123 (following spread). The Rio Grande in Albuquerque in March 2018., Photo by Laura Paskus, 2018.





AS UNITED WE STAND