Title
Routing the Scenic: technologies of occupation and environmental culture in the Columbia River Gorge

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Routing the Scenic: technologies of occupation and environmental culture in the Columbia River Gorge

By

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For any names that do not appear here, it is my oversight. Though this is a work made possible by many, all errors or omissions herein are my own.

To the waters and women who love one another fiercely. And especially, for my Mom and for Toni.

INTRODUCTION

Seeing the Scene

The Oregon side of the Columbia River Gorge National Scenic Area is bounded on the west by the Sandy River. There, the Sandy River Delta Park offers an accessible multi-use recreation area. This park is an exemplar of the socionatural conditions that characterize the National Scenic Area. Like so many places throughout the Gorge, it boasts scenic views, hiking and riding trails, a dog run area, and restricted hunting; it is jointly managed by the U.S. Forest Service and U.S. Army Corps of Engineers; it has been (re)shaped by dams and ecological restoration initiatives; it teems with blackberries and birds; it is Chinook and Cowlitz territory; it is currently enjoyed by recreating settlers and under U.S. occupation. Like so many places throughout the Gorge the park also features interpretive signage and landscape work that aims to educate visitors about the human and environmental history of the Sandy River Delta and the National Scenic Area.

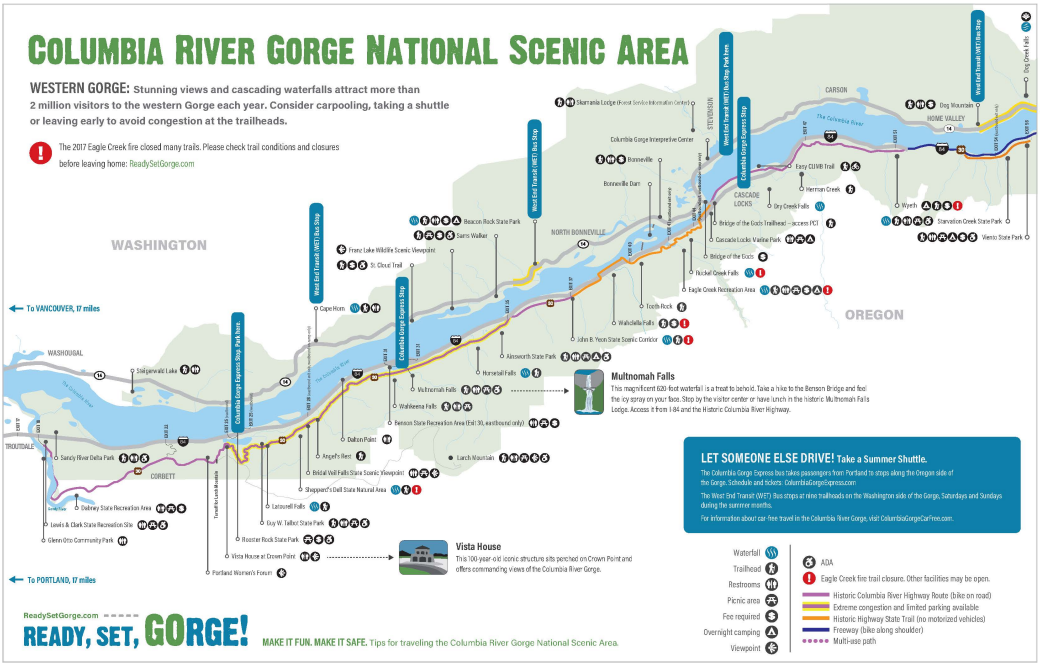

Figure 1 "Ready, Set, Gorge!" map of the western half of the Columbia River Gorge National Scenic Area.[1]

More than 2 million visitors come through the green, forested cliffs and canyons of the western

[1] "Ready, Set, GOrge!" is a collaboration between the U.S. Forest Service, Friends of the Columbia Gorge, Travel Oregon and Oregon Department of Transportation. This map is from Friends of the Columbia River Gorge, https://gorgefriends.org/home/ready-set-gorge.html.

National Scenic Area. When arriving from Portland, the Sandy River Delta is perhaps the first stop that many make on their way to more "stunning views" and "cascading waterfalls" off the scenic highways and hiking trails to the east. A stop at the Delta also offers insight into the narrative discourses and cultural practices that have come to constitute the Scenic Area. Here, in 2008, renowned architect and designer Maya Lin worked with local non-profit Confluence Project to install one of six landscape artworks that incorporated "fragments of text (Native American myths, Lewis and Clark's journal entries) and functional sculptures (a bird blind, a land bridge, a fish-cleaning table) to evoke a landscape and a way of life submerged in time and memory."[2] The Bird Blind introduces us to the interrelated practices of restoration, redemption, and rendering visible at work in the National Scenic Area. Here, we glimpse the persistence of imperialist narratives in the midst of settler environmental initiatives to recuperate "a peaceful landscape":

> "Serving as the gateway to the Columbia River Gorge, the delta stretches across 1,500 acres of upland deciduous forest. The terrain is flat, cut through with channels of the Sandy River. There's a huge, well-used dog park here, but if you know where to go, you can find a spectacularly quiet corner.
>
> The peaceful landscape of the Sandy River Delta hides a rich and marred history. It was a place where native people visited for thousands of years to gather things like stinging nettles for fishnets and camas roots for sustenance. A hundred years ago, cattle grazed here. But then in the 1940s, an aluminum plant was built directly west, with devastating environmental consequences.
>
> In the 1990s, the land came to the U.S. Forest Service and since then enormous sweat equity has gone into bringing the delta back.
>
> "This is a redemption story," Fogarty said. "It's a multi-year, multimillion-dollar restoration project to bring this 1,500 acres back to what it once was."
>
> This project joined the efforts of the U.S. Army Corps of Engineers, the Oregon Guard, and Friends of Trees, among others.
>
> The dam blocking part of the river was removed, making way for salmon and smelt. A new parking lot was laid at the trailhead. Volunteers removed invasive plant species and native trees were replanted.
>
> In 2004, The Confluence Project kicked off with the goal of connecting people with places in the Columbia Basin. When Confluence's renowned artist and designer Maya Lin was thinking about a way to immerse people in the Sandy Delta, Fogarty said she went back to what Lewis and Clark noticed as they camped just across the Columbia."[3]

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[2] Camela Raymond, "The Shape of Memory," *Portland Monthly,* Nov issue, 2007. https://www.pdxmonthly.com/articles/2009/5/19/1107-features-memory

[3] April Baer, "A Hike In The Sky: The Path To Maya Lin's Sandy River Bird Blind," *Oregon Public Broadcasting,* April 28, 2017. https://www.opb.org/radio/programs/state-of-wonder/article/hike-maya-lin-bird-blind-sandy-river-delta-oregon/.

To get from downtown Portland to the Bird Blind at the delta one drives merely twenty minutes east on I-84. Just off the highway, there is a gravelly parking lot about a fifteen-minute walk from the river. Barely over a mile hike from the lot's Meadow Trailhead, on a gentle curve through an array of alders and cottonwoods, a path hits "a sharp 90-degree right-hand turn that breaks that nice harmony of the curve. It makes you stop, turn, and it kind of invites you to walk out into the blind."[4] The Bird Blind is an ellipse of locust-wood slats, constructed to seemingly "float" above the delta amidst acres of restored riparian habitat. A scientific name of 134 birds encountered by Lewis and Clark as documented in their journals is engraved on each slat, as well as the "Status" of each species according to the endangered species list as of the date of construction in 2008. On the Confluence website, it is written that the Bird Blind "serves as a lasting reminder of the impact *humans* have had on the environment and a model for a new way to envision the connection between people and the natural world."

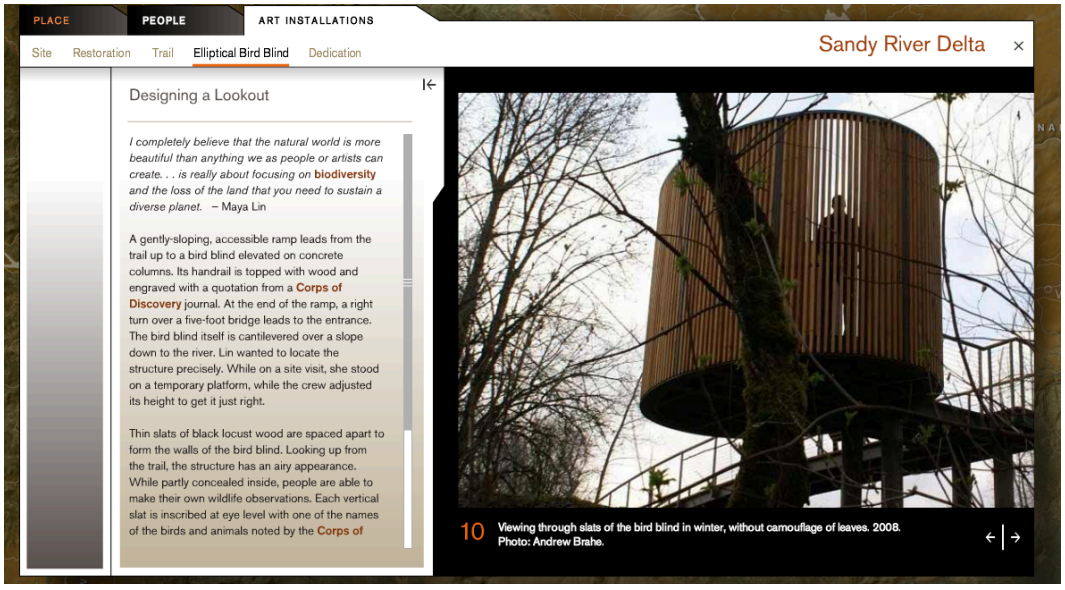

Figure 2 "Designing a Lookout" at the Sandy River Delta.[5]

It is worth reading Confluence's summary of the Sandy River site:

> Two hundred years ago, William Clark reported that he couldn't sleep because of the "horrid" racket made by so many birds in the delta area. Lin's design for the site recalls that experience…As the restored landscape matures, a new forest will surround Lin's work–and perhaps attract more birds back to the site.

[4] Ibid.
[5] "Sandy River Delta," *Confluence Project*. http://www.confluenceproject.org/.

> Access to the site was difficult before Maya Lin's installation went in, with a dangerous highway exit and no parking. The Confluence Project worked with the Oregon Dept. of Transportation to get a new exit, and then with the National Guard to build a parking lot. About forty soldiers slept on site during construction, and a few even camped there over the weekend to guard the equipment.

I read this passage to make note of the key role of Lewis and Clark's presence, figuring the Bird Blind as re-creation of their experience at the delta, without critically engaging with the power relations and politics that produced this experience and its discursive documentation. The vision of a "restored" and "returned" landscape is directly connected to colonial naturalist documents, the transportation and tourist industry, and the militarization of the space.

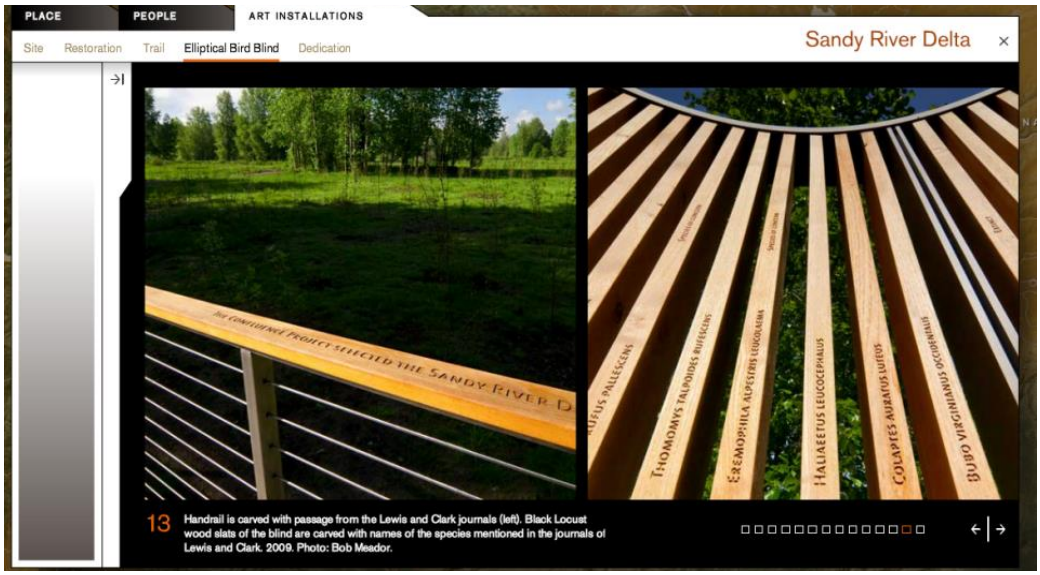

Figure 3 "Elliptical Bird Blind" at the Sandy River Delta.[6]

The Bird Blind works in multiple ways. It is a shelter that separates humans from non-human animals in the park so that they can be observed in their natural habitat. It is a physical structure built into the landscape that materializes Lewis and Clark's scientific valuations and symbolizes the event of their encampment. The blind is also an intentionally permanent manipulation of the landscape that attempts to memorialize the loss of endangered species as derived from Lewis and Clark and the Endangered Species Act's data. And, it is also fashioned as an environmentalist space where contemplative individuals, bound collectively by national belonging, are interpellated to reconcile Lewis and Clark's narrative with what they see today and imagine for the future through observation of habitat. As such, the logics of colonial expedition are recuperated for use in "redemption," rather than critiqued.

[6] Ibid.

The rhetoric of shared history and future of an imagined national community erases longstanding and present-day differential power relations and positionalities of Corps' explorers as well as visitors to the Bird Blind. The focus on "loss" and "change" appeal to an imperial nostalgia, marking them not as historical and ongoing injustices, but as inevitable and always-already past-tense disappearances. As Cook-Lynn has shown in her essay "*Assigning Meaning to the Lewis and Clark Adventure and the Western Story,*" imperial nostalgia and redemptive strategies of historiography produce a rationalization of simply "mourning" death, rather than calling for examination and analysis through exposing genocide and violence.

The Bird Blind is a node in the larger network of tourist infrastructure development along the River that largely depends on the notion of intact wilderness and the marketability of settler history, such as Lewis and Clark, The Oregon Trail, and big Hydropower. The commodification of nature and history through Gorge tourism continues to circulate subjects and capital through the region in ways that revise and repackage a colonial history for pleasurable and edifying consumption. This consumption relies on constant elisions of the necessary and long fought for redistributions of wealth and land claims in the region.

Although Confluence aims to (re)present the Corps in a new and inclusive way, my reading here demonstrates that at certain moments it repeats and repackages dominant paradigms that produced the Corps for a liberal, environmentally-minded, mainstream audience. It is not new for Lewis and Clark's documents to be treated as objective text. Notably, the documents are refashioned for environmental stewardship and ecological restoration; a process that affirms the settler-nation state's future and its values of discovery and individualism, instead of shaking them. Rather than critically examine the colonial perspectives and consequences connected to the documentation and collection of specimens, surveillance of Indigenous nations, and charting of territories for corporate and settler expansion, push-back on the celebration of Lewis and Clark is recuperated as a commemoration of values and practices symbolized by the Corps of Discovery – namely, discovery, knowledge, and nationalism. In moments such as these, settler science and U.S. occupation are naturalized as an inevitable process. This contemporary environmental ethics does not suggest the delta be returned to the Chinook and Cowlitz, nor does it name colonial violence and capitalist modes of production as drivers of ecological change in this place. In this way, the Bird Blind offers a material and theoretical "gateway to the Gorge": Ushering us in to an investigation of the relationship between scenery, settler colonialism, sovereignty, and practices of "seeing" in the National Scenic Area.

Routing the Scenic

The Columbia River Gorge National Scenic Area is a spectacle of sweeping, dramatic vistas filled with basalt cliffs and wide, windy waters. Through the centuries, its spectacles have been claimed and transformed by settlers and their governments: The vast numbers of delicious salmon, immense timber forests, and Indigenous trade markets "discovered" by Lewis and Clark in the 1800s; the hundreds of thundering waterfalls and nation's largest system of hydropower dams that reshaped its terrain in the 1900s; the cutting-edge drone innovation and world-renowned wind-surfing that came to characterize its high-tech and outdoor economies in the 2000s. This dissertation, "Routing the Scenic: technologies of occupation and environmentalist

culture in the Columbia River Gorge," contends that these spectacular scenes are more layered with violence than we think. The dynamics of imperial expansion have cast scenery as a technology of occupation. I challenge the traditional understanding of scenery as an apolitical and fixed quality of "Nature," revealing the shifting and power-laden processes of enclosure and accumulation that have constructed the Gorge's scenery. The Columbia River Gorge is Indigenous land. The routings[7] of settlers and technologies in and through this place have constituted practices of occupation, albeit in ways always contested and never complete. The fetishization of scenery hides the fact that Columbia River Indians, members of the sovereign nations of the Confederated Tribes of Warm Springs, Confederated Tribes of Umatilla, Nez Perce, and Yakama maintain claims to this land. The making of a National Scenic Area is inextricable from the political, economic, and cultural machinations of the United States' nineteenth and twentieth century imperial expansion into the Pacific Northwest. These machinations persist in the ongoing occupation of Indigenous lands today.

Figure 4 Vista House, built in 1916, on Crown Point in the Columbia River Gorge National Scenic Area. (Photo credit: Larry Geddis)[8]

Just as the Doctrine of Manifest Destiny drove and justified the Lewis and Clark expedition with the effect of conquest and settler occupation, the entanglement of scenery with U.S. nationalism is articulated in the passage of the Columbia River Gorge National Scenic Area Act (NSAA) in

[7] I am indebted to conversations with Nick Mitchell for the development of routedness and routing as a conceptual tool here.

[8] Photo by Larry Geddis in Eileen Garver, "Mt Hood and Columbia River Gorge Electric Byway," *Travel Oregon*. April 4, 2003. https://traveloregon.com/things-to-do/trip-ideas/electric-vehicle-trips/mt-hood-columbia-river-gorge-loop/

1986. The passage of this federal legislation demarcated the largest national scenic area in the United States. It contributed to the legal-political definition of scenery and codification of land-use planning and protections aimed at preserving and enhancing the scenic quality of a landscape. President Reagan signed the NSAA into federal law after years of political negotiations and local and regional conflict over the extent to which federal powers should govern local land use in the Gorge.[9] Through the NSAA, Oregon and Washington formed a Gorge Commission charged with land use planning and economic development along the Mid-Columbia River region: Over 292,000 acres of rural, urban, State and National Forest lands in the throes of recovery from extractive industries. The NSAA also mandated that the Gorge Commission develop and implement a "Management Plan" for the new national scenic area.[10] The Management Plan established resource inventories, policies, and guidelines "to protect and provide for the enhancement of the scenic, cultural, recreational, and natural resources of the Columbia River Gorge."[11] The Management Plan drew spatial and regulatory boundaries around three different land use categories throughout the Gorge: Urban Areas, Special Management Areas, and General Management Areas. Additionally, the Plan—and its corresponding inventories, guidelines, and evaluation rubrics—set precedent for how to map, categorize, quantify, and measure "scenic resources" in the Gorge. The material, legal, and cultural construction of "scenic value" is thus carried out through legally codified practices of bounding, evaluating, and surveilling "key viewing areas," "landscape settings," and "scenic travel corridors" across space and time.

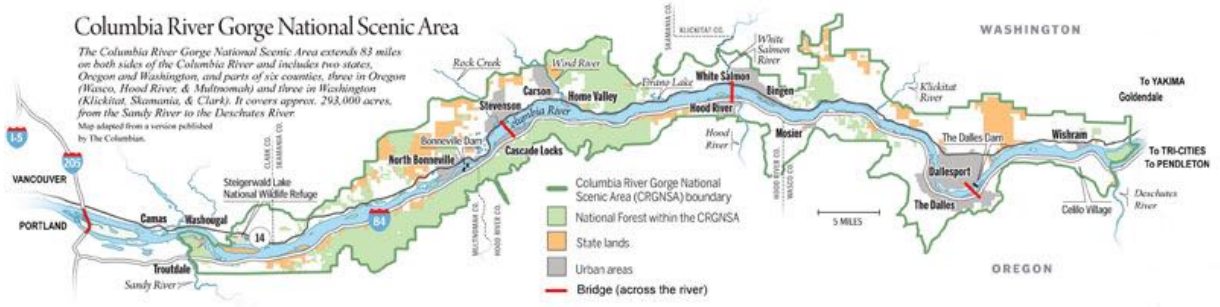

Figure 5 Map of Columbia River Gorge National Scenic Area showing its boundaries, the distribution of National Forest and State Lands, Urban areas, and town and highway names. [12]

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[9] See the work of Kathie Durbin and Carl Abbott, Sy Adler, and Margery Post Abbott: Kathie Durbin. *Bridging a Great Divide: The Battle for the Columbia River Gorge*. (Corvallis: Oregon State University Press, 2013).; Carl Abbott, Sy Adler, and Margery Post Abbott. *Planning a New West: The Columbia Rive Gorge National Scenic Area*. (Corvallis: Oregon State University Press, 1997).

[10] The "Management Plan" was finalized by the Gorge Commission in Oct 1991. It was sent to U.S. Secretary of Agriculture for concurrence in Nov 1991, and concurred by the USSA in February 1992. Congress directs the Gorge Commission to review the Plan no sooner than 5 years, but at least every 10 years, to determine amendments and revisions. "Management Plan for the Columbia River Gorge National Scenic Area," Columbia River Gorge Commission and USDA Forest Service, as amended through Aug 2016, 10. http://www.gorgecommission.org/management-plan/plan.

[11] This language comes directly from the National Scenic Area Act, which is included as supplementary material to this dissertation.

[12] "Towns in the Columbia River Gorge," Historic The Dalles, http://historicthedalles.org/area/towns-in-the-columbia-gorge/.

Today, the Gorge is renowned for its vistas, windsurfing, and environmental liberalism. The NSAA has been leveraged by grass-roots groups, environmental NGOs, planning commissions, and politicians to thwart the development of, e.g., a Nestlé water-bottling plant, to demand transparency in plans for crude-oil-by-rail transportation, to mobilize for stricter air pollution regulations, and to lobby for the inclusion of "Ecosystem Value" in the re-negotiation of the wording of the Columbia River Treaty. The NSAA includes the recognition of Indian Treaty Rights and consultation with tribal governments. Legal scholars have argued that, "in recognizing the tribal governments as true partners in this effort, the Commission honored the concept of government-to government relationships to which so many other agencies pay only lip service."[13] These examples demonstrate that "the preservation of Scenery" does not have a singular or fixed definition; nor does it have a homogenous constituency.

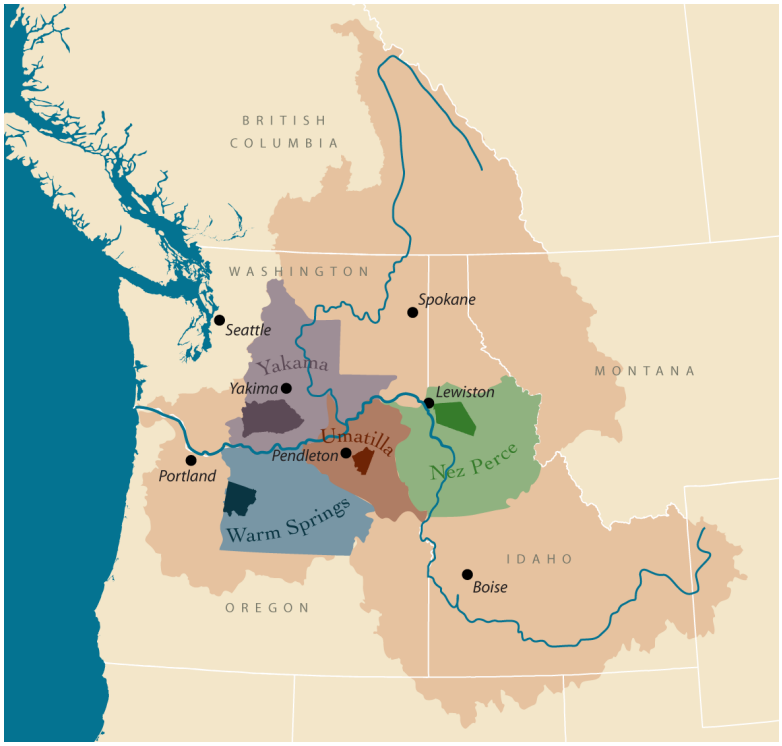

Figure 6 This map shows the re-territorialization of Indigenous territories and polities on the Columbia River. The dark portions of each tribal territory represent current reservation landholdings, and the lighter portions each nation's ceded territory. Codified in federal law by the Treaties of 1855, the peoples of the Confederated Tribes of Warm Springs, Yakama Nation, Confederated Tribes of Umatilla, Nez Pearce, and Celilo-Wyam peoples were removed from lands the U.S. deemed essential for regional development. Along the Columbia and Snake Rivers, where Indigenous peoples have always fished, practiced ceremony, and sustained commercial economies, the state sought to settle its populace, construct canals, and build dams.[14]

Yet the Scenic Area is a product of 20th century dam construction, highway extension, and commercial fishing. These projects of capital expansion relied on methods of measurement,

[13] Kristin Olson Rodgers, "Native American Collaboration in Cultural Resource Protection in the Columbia River Gorge National Scenic Area," *Vermont Law Review*, 17, no. 741 (1993): 800.
[14] Map from "Member Tribes Overview," Columbia River Inter-Tribal Fish Commission, https://www.critfc.org/member_tribes_overview/.

valuation, and boundary making that dispossessed and (re)spatialized the ceded homelands where Columbia River Treaty Tribes and Columbia River Indians have lived, traded, and fished since time immemorial.[15] Racialized, anti-Indigenous dispossession in the Gorge manifested in overt forms of displacement by inundation, fishery collapse, and incarceration of nations of peoples on reservations. Settler colonialism, however, continues to structure relations between people and resources, and between U.S. empire and Indigenous nations.[16] As such, the NSAA itself is not the focus of my inquiry: Rather, it is a prominent starting point that demands an investigation of the historical legacies that scenery and "scenic value" carry with them. How can we understand the historical construction, political valences, and hidden violences of "Scenic Value" in the longer social and cultural history of settler colonialism in the Columbia River Gorge? To what extent does protecting national scenery as a political and ideological project enable or obscure the ongoing struggles and successes of the Confederated Tribes of Warm Springs, Yakama Nation, Confederated Tribes of the Umatilla Reservation, Nez Perce, and Columbia River Indians to maintain salmon runs, river access, and housing, among other Treaty rights?

This dissertation shows how settler sciences and technologies have enabled and obscured ongoing U.S. settler colonial structures of land control throughout the 20th century and into the present. I analyze an imperial archive of settler cartographic practices, scientific and commercial reports, visual cultural texts, and natural resource management plans in and through which the Gorge has been constructed as a national scenic site. I read this archive critically—against the grain—to denaturalize U.S. sovereign claims to land and political power. I further excavate imperial incoherence and foreground Indigenous persistence by analyzing published oral histories, legal testimonies, letters, and cultural texts produced by Columbia River Treaty Tribe members and Columbia River Indians. I show how mutually constitutive processes of aestheticization, scientization, and recreation have figured prominently in making the Gorge "scene." I argue that scenery has emerged as an historical category that is both cultural and material, with implications beyond land-use planning and preservation. I illuminate the co-constitutive relationship between the cultural productions of settler science as common sense and the physical technologies of occupation in the Columbia River Gorge.[17] Ultimately, "Routing the Scenic" offers a critical, anti-colonial history of the present wherein the politics of "seeing" and "scene" are treated as mobile cultural and material practices of settler territorialization.

[15] Here, I use "time immemorial" not as a claim of my own, but in order to mirror the language that the public-facing discourse of many Columbia River Treaty Tribal members and Columbia River Indians themselves use to describe their relationship to these lands.

[16] Patrick Wolfe. "Settler Colonialism and the Elimination of the Native," *Journal of Genocide Research,* 8, no. 4 (2006).

[17] Here I am referring to Mark Rifkin's theorization of "settler common sense" which I will explain in more detail in the next section of this introduction. See Mark Rifkin. *Settler Common Sense: Queerness and Everyday Colonialism in the American Renaissance*. (Minneapolis: University of Minnesota Press, 2014).

I hate that it is raining, again, on some gray day in early November, 2015. I am sitting at lunch with a few lawyers and policy-makers from the Columbia River Inter-Tribal Fish Commission. We have walked from their Portland Office, on the east side of the city overlooking the Willamette River, a main tributary to the Lower Columbia River that intertwines here at the border of Oregon and Washington State before joining confluence to the Pacific. Our conversation meanders along interwoven topics—One of the lawyers has recently reviewed legal documents from the 1940s in which the salmon fishery decimated by The Dalles Dam construction was monetarily quantified and "priced" for payout to Tribal governments. She explains her fury over the overt algorithmic manipulation, even though she has been doing this work for decades. We circle back to our conversation about developing a syllabus on the Lower-Mid Columbia River history that foregrounds innovation in environmental management, particularly in fishery health, made by Tribal hatcheries and scientists in spite of this same hydropower infrastructure. There is a lot of work to be done, they explain, even across the diverse groups of people who really do hold the ecological wellbeing of the River as personally and collectively important. "For example,"an Intergovernmental Affairs specialist begins to explain, there is a striking story illustrates what he means. He tells me about a Columbia River Gorge Commission meeting, in which debates and comments were open to the public; not just for general complaint and suggestions, but also for key topics or debates of the time. In the late 90s, one such meeting held significant space for a conversation between "River Users" and Gorge Commissioners with the hopes of chipping away at a conflict that frequently occurred between Indigenous fishers and their nets, and windsurfers and their sails. In a voice a bit wry, he explained that during this particular meeting, a windsurfer spoke to the Gorge Commission. This windsurfer had previously generated a complaint regarding use of a specific river-entry point along the Columbia River shore. The windsurfer defended his right to undeterred use of this space with a moral claim: "This place is like my temple. It's like my church." But earlier that fishing season, the windsurfer's board had run into a placed fishing net. When the fisherman returned by boat to find the windsurfer cutting through the fishing net to disentangle his board and sail, the fisherman confronted him. According to the CRITFC employee telling me this story, the conversation on the water consisted of a debate regarding who should "really get to use" this spot on the river: who really has an embodied and moralistic relationship to the Gorge more broadly? This debate, however momentarily quotidian or fleeting, is historical, structural, and violent. The same river entry used by the windsurfer that day is a legally designated "in-lieu fishing site," a site constructed and maintained by the U.S. Army Corps of Engineers, to which the federally recognized Tribes (Yakama, Umatilla, Warm Springs, and Nez Perce—the members of the Columbia River Inter-Tribal Fish Commission) always have first right and access. The "in-lieu" sites (there are over 40 along both shores of the

Columbia) were designed by the federal government as compensation for the loss of river-adjacent territory and fishery stocks resulting from the spatial displacement and reorganization of Indigenous peoples during the 1855 Treaties and subsequent decimation of salmon runs during the ensuing Hydropower era (1930s-50s). An in-lieu fishing site represents a 20th century interpretation and implementation of protections for "usual and accustomed fishing places," a protection guaranteed by federal law and government-to-government relations between the U.S. and Columbia River Treaty Tribes.

> As counter-sovereignty, US sovereignty is in perpetual reaction to the prior and primary claims of Native peoples on the territories that the United States claims as its own. Seen in this light, US sovereignty will always be an unfinished project in perpetual crisis of unraveling.
>
> – Manu Karuka (writing as Manu Vimalassery), "Counter-sovereignty."[18]

While living in Portland during the most intensive period of my research and data-collection, the time I spent in Gorge Commission meetings, at environmental non-profit events, and driving to and from The Dalles (the easternmost border of the Scenic Area) determine which collections I chose to pull at the Oregon Historical Society, how I read them, and the ways I understood their content to matter in our contemporary moment. Those day-long Commission meetings, held at various community centers or lodges in towns throughout the Scenic Area in both Oregon and Washington, did not an excited minutes-reader make. However, it was through interactions beyond the bounds of the Commission and Scenic Area itself that often cast the usefulness of tracing scenery, its various cultural and political enrollments, and technologies of preservation under brighter—and more urgent—light.

At that lunch with Columbia River Inter-Tribal Fish Commission staff, I interpreted the story of the windsurfer and the fisherman as a commentary on the irony, the almost palpable and violent irony, of this recreationist's remaking of how the Gorge must be held sacred and by whom. It was "tone deaf" and at the same time registered at an important, symbolic level: The configuration about what is sacred in this landscape, taken up by incoming fluxes of outdoor enthusiasts, not only appears to be heaped on top of but actually made possible by the dispossession and reorganization of riverine landscapes and the waters themselves. This river was not windsurf-able prior to the construction of the locks, the dams, and the canals. The windsurfer in the story was only able to practice his sport off the banks off Hood River, Oregon because the 1930 construction of the Bonneville Dam to the west and the 1957 construction of the Dalles Dam to the east flooded winding channels, basalt cliffs, island burial grounds, and the Indigenous fishery at Celilo Falls. In so doing, these dams produced a chain of reservoirs that hold their slack-waters. The narrow rapids and currents that once made transportation and navigation by vessels much larger than a big canoe, prior to channelization projects and hydropower infrastructure that began before and then well into the 1990s, are now relatively slow moving, wide sections of river. Often, the Mid-Columbia River is referred to as a "series of lakes."

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[18] Manu Vimalassery, "Counter-sovereignty," *J19: The Journal of Nineteenth-Century Americanists*, Vol. 2, No. 1, (2014): 142.

Debate on future control turns gorge into war zone

Story on Page One also

By JEANIE SENIOR
Correspondent, The Oregonian

For 85 miles, from the sheer cliffs along the Sandy River to the stark grasslands of the Deschutes, the Columbia River flows through a gorge that is indisputably one of the most beautiful places on Earth.

Describing the view from Crown Point, the place where people take out-of-town visitors to see the gorge, as panoramic may be using a cliche, but cliches are born of appreciative repetition. The tourists who flock to admire the waterfalls probably do not enjoy the grace of Multnomah, the sparkle of Horsetail, the cascades of Wahkeena, any more than do local residents out for a Sunday drive to see the wildflowers or the autumn leaves.

The gorge has been called a world-class landscape, and certainly endless comparisons can be made — to Italy, to Switzerland, to Bergen on the Rhine, even to the Hudson River Valley. But the gorge is special, whether draped with mist, iced with a howling blizzard, or basking in a late-afternoon summer sun. The Columbia River has carved a landscape that is magnificent in scale, sweeping in scope, delicate in detail.

It also is a war zone.

Disputes over how best to use the gorge while preserving its natural beauty have pitted neighbor against neighbor, Oregon against Washington, and local officials against the federal government.

The long-running arguments are often the result of profound philosophical differences that will never be resolved easily and may never be resolved at all.

"Quite often, one of the hardest things to do is get an area of national importance recognized in its own neighborhood," said David Brower, the founder of Friends of the Earth and the former head of the Sierra Club. "We had that problem starting out in Yosemite. When beautiful country's coming out of your ears, you just don't look at it, if you will excuse the

local control advocates this year.

Background papers released by Columbia Gorge United said that passage of the Packwood bill would mean a large-scale federal buy-out of gorge properties, following massive condemnation proceedings.

"It's ironic that the county most strongly in favor of local control has practically an absence of local control," said Bowen Blair Jr., the executive director of the Friends.

"In fact, the Skamania County planning director has stated that priority staff time could not be expended on developing a zoning ordinance because of the pressure from developers," Blair said. "In Skamania County, local control truly means no control."

Skamania County has no zoning ordinance, a fact that preservationists cite often to support their views. This may be more of surprise to Oregonians, who have lived with more than 10 years of state-mandated land-use planning, than to residents of Washington, where a number of counties lack zoning ordinances.

Skamania officials have been working on a zoning ordinance since 1979. But when a draft ordinance was under review about a year ago, county officials said they would not direct zoning maps to be prepared unless the maps were requested by community councils. Without maps to implement zoning, any ordinance approved would be a weak document indeed. "Meaningless," is how the Breckel described it.

Development proposed

Skamania County was the center of a storm of controversy in 1981 and again in 1983, centering on Camas land developer George Rizor's proposal to develop 24 homesites on his land across the Columbia from Multnomah Falls.

Rizor's 1981 development plans were squashed by a lawsuit brought by six other county landowners. His second development plan in 1983 already had been approved by the county when he announced the land had been sold to the Trust for Public

Here are the major provisions of the two bills in Congress intended to deal with preservation of the Columbia River Gorge.

The Packwood bill, as it is generally known, was first proposed by the Friends of the Columbia Gorge, a conservation group, and was introduced by Oregon Republican Sens. Bob Packwood and Mark O. Hatfield. Officially, it is known as Senate Bill 827.

The so-called governors' bill is based on a proposal by Oregon Gov. Vic Atiyeh and Washington Gov. John Spellman.

The Packwood bill would:

- Establish a 310,000-acre national scenic area administered by the U.S. secretary of agriculture through the U.S. Forest Service.
- Set up a 14-member regional commission that would have power to advise the secretary of agriculture and the Forest Service. In addition to the secretary or a designate, six members would come from each of the six counties in the gorge and be appointed by county commissioners; two each would be appointed by the governors of Oregon and Washington; three would be appointed by the secretary of agriculture.
- Require the Forest Service to set up interim gorge management guidelines within six months of the bill's enactment. The plan would go to the regional commission within two years for its approval. The secretary of agriculture would have six months from that date to approve the plan. Total time from passage to final approval would be three years.
- Exempt incorporated cities from the plan.
- Require the Forest Service to identify "critical" lands in the gorge. Those lands would be limited to a maximum of 10 percent of the scenic area's total acreage. Homes, farms and grazing lands established before July 1, 1981, would be exempt from "critical" designation, as long as land uses did not change.
- Allow condemnation to preserve land in critical areas. The regional commission would review land-acquisition proposals involving condemnation.

The governors' bill would:

- Establish a 14-member bistate commission charged with writing a management plan for the area. Administration of the plan would be up to the 50 state, local and federal governments that have jurisdiction in the gorge. Each of the six gorge counties would appoint one commissioner. Four at-large commissioners would be selected by the Oregon governor and four by the Washington governor. At least four at-large members would come from gorge counties.
- Include towns and unincorporated communities in the management area. Agricultural lands and commercial forest lands would be excluded. Also excluded would be continuing development at Bonneville Dam.
- Require that the commission review land development activities in local, state or federal jurisdictions until a management plan was adopted.
- Require that the gorge commission adopt a management plan within 18 months of its establishment. Set a three-year limit from the time of the bill's passage for adoption of the management plan.
- Set up a preservation program for critical areas using land-use laws, incentives and subsidies. It would allow condemnation as a last resort to preserve specific parcels of land. A majority vote of the commission would allow condemnation.
- Allow, under a 1984 amendment by Rep. Ron Wyden, D-Ore., the secretary of agriculture to review and comment on the management plan. The secretary would have no say in its development, however.

Figure 7 "Debate on future control turns gorge into war zone," *The Oregonian*.[19]

Politicians, practitioners, and academics have lauded the NSAA as a turning point in "how the West is planned,"[20] having been remade as an eco-playground for tourists and techies—many of whom are drawn by the world-class wind-surfing there—despite decades of reconfiguration to accommodate hydropower and industry. Journalistic accounts, regional histories, and urban-rural planning scholarship, offer many frameworks for understanding the processes by which the Columbia River National Scenic Area Act came into being, how it is a unique case in bi-state land-use governance, and what it has contributed to natural resource law and preservation.[21] Many of these analyses focus on the longstanding conflict between local rural populations and urban elites. They document decades of public contestation over who would benefit, and how, from the NSAA. The story of "the battle for the Gorge,"[22] or "bridging the great divide,"[23] has been told in ways that often reinforce a dichotomous distinction between two groups, with little acknowledgement that both constitute settler populations "battling" over Indigenous territories: Washington land use law against Oregon land use law, rural conservatives against urban environmentalists, and upper-class recreationists against working-class loggers. While I have relied on these recorded histories to learn about the details of policy formation, affiliations and relationships between governing institutions, local politics and regional governance practices, I recognize their common, exclusionary, assumptions. For example, a 1997 monograph "*Planning a New West: The Columbia River Gorge National Scenic Area*" set the following stage:[24]

> "With the recent decline of natural resource industries in the American West, a new economic future has dawned for the region, one focused on tourism, service industries,

[19] Courtesy of the Oregon Historical Society, Columbia River Gorge Vertical File.
[20] Abbott, et. al., *Planning a New West*.
[21] This is referencing, again, the work of Kathie Durbin, Sy Adler, Carl Abbott, AND Margery Post Abbott.
[22] Kathie Durbin, *Bridging a Great Divide*.
[23] Ibid.
[24] Abbot, et. al., *Planning a New West*.

> and high technology. From New Mexico to Alaska, affluent and articulate interests are shaping a New West on the foundations of the Old West. As former timber, farming, and mining landscapes are re-allocated for recreation, environmental reserves, and new residential development, the debate over who gets to shape and speak for the West intensifies. In the Columbia River Gorge, the creation of a National Scenic Area in 1986 focused on differences between the goals and values of the Old and New Wests….As a regional planning experiment mandated by the federal government in partnership with state and local governments, the Columbia River Gorge National Scenic Area is a revealing case study that explores what may be the future for protection of historical landscapes in the American West."[25]

Looming large in this statement are much more fundamental questions about territorialization, dispossession, and repeated instantiations of nationalist legacies—both ideological and material—that are ignored when the conversation about scenery is reduced to limiting categories such as "Old" and "New" West. This analysis occludes the ways in which practices of environmental preservation and planning are structured by settler colonialism.

Settler colonialism is an ongoing structure and set of social orders.[26] Modernist settler colonial projects—such as the U.S. occupation of Turtle Island—often rely on forms of liberal inclusion that adhere to concepts of progress, individuality, property, and environmental stewardship, and multiculturalism that reproduce the inequalities colonialism has created.[27] Settler colonial projects reproduce themselves. As Mark Rifkin and many other scholars of settler colonialism have demonstrated, the "givenness" or "commonsense" of settler jurisdiction is produced in and through laws, writings, institutions, and visual culture that at times appear as having nothing to do with representing Indigenous peoples or directly expropriating Indigenous lands. Everyday modes of colonial occupation, Rifkin argues, get "'renewed' and 'recreated' in ordinary phenomena by nonnative, non state actors, in ways that do not necessarily affirm settlement as an explicit, conscious set of imperatives/initiatives or coordinate with each other as a self-identical program."[28] And, as Aileen Moreton-Robinson has likewise asserted, processes of renewal and recreation are fraught and anxiety-ridden: It takes "a great deal of work to maintain" the United States as a "white possession."[29] So too, then, does it take a great deal of work to maintain the Columbia River Gorge and its attending landscapes as a U.S. possession and a settler playground at that.

U.S. sovereign claims to Indigenous territories are always counter-sovereign claims, perpetually in reaction to the primary and ongoing claims of Indigenous peoples on their ancestral territories.

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[25] Ibid. Book Jacket.

[26] Patrick Wolfe, *Eliminating the Native*.

[27] Here I am thinking of the work of Walter D. Mignolo, "Coloniality of power and de-colonial thinking," *Cultural Studies* 21, no. 2-3 (2007): 155-167; Nelson Maldonado-Torres, "Thinking Through the Decolonial Turn: Post-continental Interventions in Theory, Philosophy, and Critique—An Introduction," *TRANSMODERNITY: Journal of Peripheral Cultural Production of the Luso-Hispanic World*, 1, no. 2 (2011): 1-15.; Evelyn Nakano Glenn. "Settler Colonialism as Structure: A Framework for Comparative Studies of U.S. Race and Gender Formation," *Sociology of Race and Ethnicity*, 1, no.1 (2015): 52–72.

[29] Aileen Moreton-Robinson. *The White Possessive: Property, Power, and Indigenous Sovereignty*. (Minneapolis: University of Minnesota, 2015).

Scholars in Native American and Indigenous Studies and American Studies have theorized settler colonial occupation of Indigenous homelands across Turtle Island (*North America)*[30] as a material and ideological project of U.S. continental imperialism. Manu Karuka's theorization of counter-sovereignty—especially as it is mediated by the war-finance nexus of U.S. militarism and capitalism across the continent—is central to my analysis of scenic value and occupation in the Gorge:

> "United States sovereignty claims are actually claims of counter-sovereignty. That is, US claims to territorial authority are generated, in the first instance, in claims of discovery and preemption of other non-Native claimants to Native lands and waters. In political terms, the dominion of the various states, and their Union, has its basis in the ongoing recognition of Native rights to occupancy and use. Following this logic, recognition of Native presence, however constrained, is logically necessary for the functioning of US rule of law. As counter-sovereignty, US sovereignty is in perpetual reaction to the prior and primary claims of Native peoples on the territories that the United States claims as its own. Seen in this light, US sovereignty will always be an unfinished project in perpetual crisis of unraveling."[31]

The processes of capitalist expansion and counter-sovereign claims to Indigenous lands and relations described in the following chapters do focus on the machinations of U.S. occupation. Yet my analysis of settler colonialism and U.S. imperialism agrees with the assertion that oppressive powers are never totalizing: The practices of maintaining such occupation are always contested, incohesive, and unraveling.

I develop three terms to explain the forms of work enrolled in (re)producing U.S. counter-sovereign claims to Indigenous lands. In the following chapters, these terms emerge directly from the analysis of my primary materials. I use the concept of "Technologies of Occupation" to name the role of infrastructure, engineering, and scientific innovation in maintaining and extending the environmental apparatuses of U.S. settler colonialism. As railroads and river passages enabled the proliferation of large-scale agriculture and industry in Oregon Territory, private and political entities began to advertise the pleasures of these newly established inroads. Boats and trains offered an ease of transport into a wealth of business opportunities. Second, I use "Settler Ocularcentrism" to examine the dominance of visual technologies and representations as strategies of naturalizing, and disavowing, the pernicious violence of settler colonialism. I demonstrate how settler occupation is spatialized through regimes of visuality, using ocular techniques of charting, controlling, and consuming human and non-human relations, or ecologies. Additionally, I highlight the prominent role of visual culture and visual technologies in the ideological naturalization and physical materialization of settler occupation.

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[30] I do not use Turtle Island as the name for the North American continent frequently throughout the text, but I introduce it here as a Indigenous-centric, decolonial name for this body of territories; one that is used across tribal members from many nations. For reference of use, see Zoe Todd, "An Indigenous Feminist's Take On The Ontological Turn: 'Ontology' Is Just Another Word For Colonialism," *Journal of Historical Sociology,* 29, no 1 (2016): 4-22.

[31] Manu Karuka, *Empires Tracks: Indigenous Nations, Chinese Workers, and the Transcontinental Railroad*. (Berkeley: University of California Press, 2014): 12.

Finally, my concept of "Scenic Accounting" refers to the rubrics for making and measuring scenery, the assemblage of practices that enable the legal enforcements of the National Scenic Area Act and far pre-date it. This concept facilitates the examination of the specific practices of categorizing, counting, assigning value to, and accumulating Scenic Value throughout the Gorge landscape. All of these concepts assist fine-grained analysis of the quotidian workings of occupation, and highlight its infrastructural and visual components.

My theoretical contributions to the field emerge from analyses of a diverse set of materials with a focus on the everyday. Stories like Chuck's reveal the ways that mundane, quotidian cultural practices and perspectives uphold long-standing "settler common sense";[32] the affects, constructions, and perspectives that make U.S. social and political claims and orderings of space appear normal, expected, deeply personal, and even religious and spiritual. Importantly, the physical and spiritual right to a particular River place—one that is in fact legally cordoned off as a compensatory scrap for wide-scale economic and territorial dispossession of multiple Native nations—is configured by the windsurfer in this story as one of environmental reverence, as expressed by and embodied in his enthusiasm for outdoor recreation. What kinds of "common sense" are shared between the decision-makers who constructed dams and the windsurfer who cuts nets?

As my above conversation with Chuck illustrates, themes of preserving scenery intersect with small-scale, daily continuities on the part of Native fishers to continue using the river and white people's entitlement to profit and play. I am not suggesting that Native peoples don't wind-surf, or that only settlers do: What I am pointing to is that Chuck told me that story for a reason. In my experience, the moment he relayed to me connected many themes that we had previously been discussing at lunch, one of which being settler entitlement and dispossession of Native peoples. Then, more complexly, how the quotidian instances in which the violence and irony of holding scenery "sacred," "beautiful," "pristine," and ultimately, as a "play-ground," stand as fruitful material to consider when we try to make sense of how territorializing projects and liberal modernist modes of consumption—even as ecotourists, outdoor adventurers, and environmentalists—maintain their hegemony.

In line with much recent decolonial and post-colonial scholarship that lays bare the power relations of ongoing colonialisms and their "aftermaths" while also refusing that colonial conquest ever fully cohered or was "successful" on its own terms,[33] my analysis dwells in the inconsistencies and contestations that can be found within and across the reports, laws and legal decisions policies, and settler stories that were intended to stand as factual and final from the late 1800s to present. This dissertation demonstrates the articulations of scientific, legal, and cultural production of Scenery in the Columbia River Gorge. I do not treat scenery as a discursive or material category that coheres completely throughout history. An analysis of how Scenic viewsheds are protected and consumed does not demonstrate a singular, unidirectional "view from above." Instead, I treat the social life of scenery as malleable, transmutable, and producing a set of conditions that allows for divergent political possibilities.[34] It is in the continuities and

[32] Mark Rifkin, *Settler Common Sense*.
[33] Evelyn Nakano Glenn, "Settler Colonialism as Structure."
[34] To think with the "social life of things" I use Arjun Appadurai, ed. *The Social Life of Things: Commodities in Cultural Perspective*. (Cambridge: Cambridge University Press, 1986).

slippages across texts whose genres are not easily classified that this mode of inquiry becomes most productive: Travel writing that circulated as exploratory, historical, and scientific documentation; Studies that catalogued Scenic Vistas and scientifically quantified their visual beauty; Museum proposals to the Federal Government intended to preserve local scientific and archaeological material for the national interest and cultural consumption; Land-Use politics aimed at ecological conservation as well as management of individual and collective acts of resistance to settler-colonial resource use regimes.

Following methods in cultural studies (particularly the study of visual culture) and historical political ecology,[35] this dissertation situates grounded ethnographic examination of environmental non-profit and activist groups, and natural resource management agencies and institutions, within an archival analysis of 19th-20th century river development and land use planning in the Mid-Columbia River. My research for this manuscript was conducted over a period of five years, from 2014-2019. I collected most of my data from 2015-16 in Portland, OR; Vancouver, WA; and towns, landmarks, tourist destinations, and trails throughout the National Scenic Area. I attended the Gorge Commission's monthly meetings, as well as meetings with Greenpeace, Portland Rising Tide, and Friends of the Columbia River Gorge. I interviewed representatives from those organizations, as well as other activists organizing around mainstream as well as social justice environmental issues in the Gorge and Pacific Northwest more broadly. I also interviewed representatives of the Columbia River Inter-Tribal Fish Commission, local city planners, and railroad engineers. I attended and participated in events advocating against crude oil trains in the Gorge, as well as drone piloting and federal aviation association regulations. I conducted a significant portion of my archival research at the Oregon Historical Society Davies Research Library, from which I relied significantly on their collections on the National Scenic Area, history of Portland and regional development planning, and landscape photographs. I also used the archives at the Columbia River Gorge Discovery Center and the Bancroft Library, as well as digitized archives of the University of Washington maps collections, the U.S. Army Corps of Engineers, Bonneville Power Administration, and Gorge Commission meeting minutes. Finally, I analyzed contemporary newspaper articles—predominantly from *The Oregonian, Portland Monthly,* and *The Columbian*—as well as brochures, magazines, artworks, films, museum exhibits, interpretive signage, and the geophysical landscape itself.

Summary of Chapters

The first two chapters provide a loose genealogical analysis of the construction of scenery in the Gorge from the mid-1800s to the present. The next three chapters use this historiography as a fundamental starting point. To it, they each add emplaced and historicized case studies of technologies of occupation and their attendant visual representations of landscape. While I used archival material, I drew most heavily from news and media sources, interviews, and participant observation.

Chapter One, "Countersovereign Routes in the Gorge," examines historical practices of scenic accounting, and circulation of capital and settlers, that have conditioned the contemporary

[35] Nancy Lee Peluso, "What's Nature Got To Do With It? A Situated Historical Perspective on Socio-Cultural Commodities," *Development and Change,* No. 43, (2012): 79-104.

contestation of a Gorge-based Casino proposal from the Confederated Tribes of Warm Springs. I tease out contiguous traces of transportation infrastructure, capital investment, and pleasure. The sections of this chapter proceed historically, beginning in the early 1800s visual imag(in)ings of the Gorge as a gateway. I briefly explain how seeing the Gorge articulated with early dispossession of Indigenous peoples at what is presently known as Cascade Locks. I then examine the extension of transcontinental railroads, and analyze the landscape photography of Carleton Watkins as an aestheticized financial technology. Then, I follow changing conceptions of scenic value through traffic and tourist booms of the early 1900s. I analyze railway company and chamber of commerce propaganda to look closely at how configurations of pleasure and play configured the expansion of capital and settlement of stolen land.

This chapter makes three interrelated historical points. First, I briefly review the way multiple global empires have materially and ideologically constructed the Gorge as a passage for exploration, trade, and settlement at the expense of Indigenous peoples. Rendered a strategic corridor of transcontinental and Pacific-bound trade, the U.S. imperialist imaginary fantasized control of the Gorge as a crucial step toward global military and economic supremacy. I then consider the coproduction of transcontinental railroads and landscape photography through the Gorge as transmutations of this history. I conduct a close reading of Carleton Watkins's images of the Gorge, framing landscape photography as technology of capital investment in the Gorge's scenery. This reading demonstrates how scenic aesthetics shaped, and were shaped by, the U.S. war-finance nexus in the Pacific Northwest. I argue that visual representations of the U.S.'s newly acquired territory were techniques of imaging and imagining the expansion of railroads, circulation of capital, and pleasures of possession. Then, I continue to trace the commercial and corporate production of scenery into the twentieth century. I follow changing conceptions of scenic value through traffic and tourist booms of the early 1900s. I analyze railway company and chamber of commerce propaganda to look closely at how configurations of pleasure and play structured the expansion of capital and settlement of stolen land. I argue that the construction of the Gorge as both property and playground relied on the circulation of capital and production of "Indian-free" scenery.

Chapter Two, "Scenic Salvage and the Consumption of Erasure," traces the historical conditions in Chapter One through a scientific turn in the construction of scenic value during the later 20th century. I look at the salvage archeology of Lewis Cressman and a proposal for a regional Natural History Museum in the Gorge. Preemptive imperialist nostalgia for the innumerable "artifacts" that would by inevitably submerged by the rising backwaters of major dam projects manifested in federal legislation like the Historic Sites Act of 1935 and The River Basin Survey Program (1945-1964). With such vast and extensive federally mandated inundations, scenery in the Gorge became an exceptional site of discovery and development in geology, natural history, and archeology. At the same time, such scientific discourse authorized both the material and cultural enclosure of historical Indigenous relations for consumption by an increasingly mobile and leisurely settler population. The same transit routes that unearthed sites later identified for digs by salvage archeologists also carried the tourist traffic that scientists and commissioners sought to entertain and edify with carefully curated scenes of the Gorge's special significance for the progress of mankind and the lands he had now harnessed.

Chapter Two shows how viewpoints and scenic value were becoming scientifically codified in ways inseparable from the drive to increase traffic and tourism in the Gorge. I argue that science and pleasure cohered in and through practices of dispossession and erasure. Finally, I follow the extension of scientized formations of scenic value into the present: I turn to the legal codification of "Scenery" through the passage of the Columbia River Gorge National Scenic Area Act, and hone in on the defining language, practices of measurement, and rubrics of compliance that emerge from scenic resource management plans and handbooks at the turn of the 20th century. These layered sections build a loosely genealogical history of the present, to which I return in the conclusion to make final arguments about the practice of scenic accounting as a countersovereign strategy in the settler public's backlash against the Warm Springs casino proposals in the Gorge.

Chapter Three, "Contested Sonic Space at Celilo Falls," continues to examine the persistence of visual technologies in the (re)production of settler commonsense, as well as ongoing Indigenous assertions of political sovereignty and futurity at the eastern end of the Columbia River Gorge National Scenic Area. In this chapter, I argue that "seeing with sound" is a fraught political process with the potential to both obfuscate and assist Indigenous claims to land. I do so by analyzing the Portland District U.S. Army Corps of Engineers' 2007 sonar images of Celilo Falls on the Columbia River. I take up feminist materialist analytics developed by Native American and Indigenous Studies scholarship on cartography and refusal, and place them in conversation with the sonic geographies of Columbia River Indigenous writers. Namely, I use Elizabeth Woody's poem Waterways Endeavor to Translate Silence from Currents (1994) to investigate how overlapping and conflicting deployments of sonic imaging play a major cultural, political, and material role in the (re)mapping of Celilo Falls. First, I present a theoretical framework that considers the role of what I call sonic knowledges in unsettling colonial visual cartographies. I use archival Army Corps' maps and critical sonar studies literature to show how the Army Crops' 2007 riverbed sonograms emerge from a longer context of US settler practices of enclosing land with maps and surveying water with sound. I then turn to a close reading of newspaper articles and state legislation to analyze how the sonograms take on a present political life in ways that repackage ocularcentrism and assuage settler guilt, thus authorizing ongoing US enclosure of Indigenous lands. Yet, I also bring to bear Indigenous sonic knowledges that position imaging processes as potentially antithetical to addressing questions of access to land and self-determination. Through examining newspaper interviews, public testimonies, and Elizabeth Woody's poem, I elucidate deployments of sonic knowledge that can help us think about what anti-colonial (re)mapping practices demand of contemporary cartographic imaging processes. Attending to sonic knowledges under conditions of settler-ocularcentrism, I suggest, might assist anti-colonial feminist science studies engagements with processes of imag(in)ing Indigenous space.

In **Chapter Four**, "Fish Matters," I continue to analyze curated encounters with inundated scenes in the Gorge. I turn to the Bonneville Fish Hatchery—as a hybrid place that is simultaneously working landscape, amusement park, and living laboratory—in order to show how the maintenance of settler common-sense is also meted out through the biological and cultural (re)production of the nonhuman. In the first part of this chapter, I situate the Hatchery in the historical context of capitalist expansion and corresponding imperial infrastructure in the lower Columbia River. First, I briefly discuss how construction of the Bonneville Dam

respatialized the lower Columbia River in the 1930s. The Dam dramatically altered the material and social realities of Indigenous claims to, and uses of, land and fisheries. A constitutive part of this alteration was not only the severe inundation of fishing places, and village and commercial sites, but the near complete decimation of anadromous fish runs: Salmon, lamprey, sturgeon, and many other species can no longer migrate to and from the ocean without having to navigate the often unsurvivable wall of turbines, ladders, and spillways that span the entire width of the River. Within this assemblage of technologies of occupation—the hydropower system—I then consider the Bonneville Fish Hatchery grounds as a complex reproductive technology. Through a close reading of Hatchery exhibitions, and a close focus the visual curation of a charismatic nonhuman character (Herman the Sturgeon), I explore how the scientific industry of reproducing nonhuman bodies under conditions of colonial occupation is also a deeply cultural project. From this interrogation of visual encounters with underwater scenes, I conclude by making connections to the ongoing surveillance of Indigenous fishers. I analyze the late-1990s Oregon State Police sting "Operation Broodstock," in which predominantly Tribal fishermen were indicted for sturgeon poaching, and call attention to how settler concern for the nonhuman is also enrolled in a broader regime of biological regulation as countersovereign strategy.

I argue that Herman's exhibit occludes the ecological devastation that conditions, and emerges from, the inseparable complex of hatcheries and hydroelectric infrastructure on the Columbia. I show how seeing-underwater is a simultaneously scientific and cultural practice that is enrolled in "rendering-technical" the deeply social and political questions surrounding how to manage river relations in a time of ongoing occupation. Herman the Sturgeon offers a socionatural entry point into further analysis of curated encounters with inundated scenes in the Gorge. As in previous chapters, rubrics of play and edification converge in the Hatchery: a hybrid space of industrial commerce, living laboratory, and amusement park. Likewise, I find another assemblage of the recreating settler subject, a space of collection and exhibition, and practices of accounting (or taking-stock), visualizing, and preserving imperial possessions. Chapter Four thus builds on the analyses of all preceding chapters through further examination of the makings of settler common-sense vis-à-vis underwater viewsheds.

Chapter Five, "Scenic Hellscapes," examines entanglements of nonhuman relations, visual technology, and surveillance. I expand my scale of analysis here as a way to demonstrate the iterative, coconstitution of imperialist logics at local and global scales. I argue that the design and use of the ScanEagle's thermal imaging capacities traffics a militarized practice of aerial surveillance across a multitude of diverse entities. From firefighters, environmental NGOs, and U.S. military operations, unmanned automated systems that "fly the gaps" and "seek heat targets" engender new ways of tracking bodies and spatializing landscapes as thermal terrain. The ScanEagle offers an entry point into further analysis of how discourses and practices of military strategy, tactical operation, and security-making are coproduced by practices of controlling intractable territories. As in previous chapters, the visual rubrics of settler ocularcentrism are reinforced, reconfigured, and ruptured through the workings of the ScanEagle. I find that representations of the Gorge, produced by the ScanEagle and regional tech industry more broadly, continue to construct a spectacular scene whose unique materialities demand innovative technologies of visualization, wherein pleasure and profit converge. This Chapter builds on the analysis of the proceeding chapters by further investigating the role of thermal imagining in expanding the environmental "battlefields" of U.S. continental and global

empire. Here, I pay close attention to the discourse and practices that make landscapes into "intractable terrain" and "render tactical" aerial views. Additionally, I add a focus on the political economic production of such discourse and practices in the Gorge and insist on an analysis of transnational reaches of U.S. surveillance rooted in the local and emplaced sites of its material and cultural production.

In the first part of this chapter I discuss the 2017 Eagle Creek Fire and the diverse narratives surrounding its visual representations across popular media and government documents. I explore how the advent of the wildfire in the Gorge sparked new practices of "seeing the scene" using drone technology from local industries directly affected by the fire. I examine the turn toward conceptualizing the National Scenic Area as exceptionally dangerous "terrain" and the role of the ScanEagle's thermal imaging in supplying firefighters with tactical logistics. From this contemporary context, the second section of this chapter focuses on the longer-standing relationships between the Gorge landscape, cultural configurations of scenery and settler subjectivities, and the "tech boom" respatializing the National Scenic Area today. Through newspaper and in-person interviews, I once again excavate the themes of "work and play," natural vitality, and technologies of occupation as they converge through the increase of tech workers, defense dollars, and real estate value in the Gorge. From this political ecology analysis of surveillance technology, I conclude by following the reach of one particular unmanned automated vehicle—the ScanEagle—through its deployment for military, police, and conservation surveillance. I analyze how the same thermal imaging provided by the ScanEagle to combat the Eagle Creek Fire is also used in border policing, counter-terrorist operatives, and anti-poaching missions. Ultimately, this chapter presents a case in which visual images of landscape become "tactical," and ecologically complex scenes become "terrain," through projections of U.S. control of environmental and military battlefields alike.

Scientific understandings and representations of landscapes and ecosystems are cultural and political. Yet, many existing studies of the NSAA do not address longer histories of how "scenery" emerged as an object that could be scientifically known, a quantity that could be measured, and a terrain that could be visually bounded and managed.[36] Given the long-term implications of land use planning in the Gorge for Tribal sovereignty and environmental health, it is necessary to chart the histories of capital and natural resource distribution and dispossession that constitute the geopolitically bounded Scenic Area. The Columbia River Gorge has been a corridor of commerce, navigation, sustenance, and political life since time immemorial. It has also been a route through which the scientific charting of wildlife and geology, legal and physical enclosure of land, and channelization and damming of river rapids were instrumental projects of U.S. colonial settlement and capitalist expansion from the early 1800s to present.

This research is timed in the precise moment of renegotiation and "modernization" of the international 1964 Columbia River Treaty between Canada, the U.S., Tribal Nations, and First Nations, and as protected public lands and Tribal resources are undergoing rapid downsizing and encroachment of extractive industry across the U.S. How can we understand the material and ideological consequences of environmental land use planning that emerges from, and is made possible by, the conditions of colonial settlement that continue to produce housing shortages,

[36] Abbott, et. al., *Planning a New West*; Bowen Blair, "The Columbia River Gorge National Scenic Area: The Act, its Genesis, and Legislative History," *Environmental Law,* 17, no. 4 (1987): 863-969.

barriers to economic self-determination, and violate federal Treaty agreements?[37] Scholars have theorized the historical co-constitution of power and labor through hydroelectric and fishery development in the Columbia River,[38] and the role of Pacific Northwestern landscapes and scenery in shaping contemporary U.S. environmentalisms.[39] However, what remains unexamined is how scenic preservation—and the corresponding natural sciences and narratives that chart, measure, and demarcate scenery—is imbricated in the political and spatial ordering of Indigenous lands. By uncovering the connections between environmental politics, land use planning, and shifting cartographic technologies, my research will shed light on the expansion of settler colonial environmentalisms in river basins around the world.

[37] For more scholarship that attends to these questions, and pieces that foreground the oral histories and testimonies of Indigenous peoples from the Columbia River Basin, see the collected articles in *Oregon Historical Quarterly* special issue "Remembering Celilo Falls," volume 108, no. 40 (2007).
[38] Richard White, *The Organic Machine: The Remaking of the Columbia River,* (New York, NY: Hill and Wang, 1995).
[39] William Robbins, *Landscapes of Promise: The Oregon Story, 1800-1940,* (Seattle: University of Washington Press, 2004).

CHAPTER 1

Countersovereign Routes through the Gorge

Introduction: Scenery Against Sovereignty

> Cascade Locks No Casino (CLNC) is urging federal legislators to block tribes from building off-reservation gambling centers.
>
> In addition, the group has decided to take its battle beyond the hometown borders. CLNC now vows to fight any casino proposed by Native Americans on land within the Columbia River Gorge."
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> – "No Casino broadens scope of debate," *Hood River News,* 2005.[1]

In the late 1990s, government officials of The Confederated Tribes of Warm Springs sought to improve the dire economic conditions they faced as a nation. The decline of the timber industry, the unending decimation of salmon runs in Nch'I-Wàna (*Columbia River*), had contributed to a near 40% unemployment rate among Warm Springs members. Such instability has economically impacted the nation for decades as a direct and calculated result of ongoing U.S. enclosure and occupation of Warm Springs' homelands. Though the peoples who now comprise The Confederated Tribes of Warm Springs once inhabited vast territories run-through by Nch'I-Wàna (*Columbia River*) and extending east of the Cascade Mountains, the "reservation era" of U.S. imperialist Indian Policy coerced multiplicities of peoples into confederations and incarcerated them on small, "undesirable" lands. The U.S.'s historical strategy of removing Indigenous peoples far from their ancestral territories, and fixing them as geopolitically bounded nations away from their traditional places and relations, has constricted Warm Springs' economic, political, and cultural prosperity. The 1855 Treaty with the Tribes of Middle Oregon marked the federal codification of forced removal of Wasco, Warm Springs, Northern Paiute, and other Columbia River Indigenous peoples onto a 1,000 square mile reservation seventy miles from Nch'I-Wàna and 100 miles from the Portland Metropolitan Area.

The "reservation era" enabled the expropriation and occupation of Indigenous lands and resources during a period of U.S. imperialist expansion. Yet present-day Indigenous nations continue to experience the violent consequences of this historical primitive accumulation: The occupation of their homelands is not a past, completed event, but an ongoing process maintained by structures that continue to benefit settlers today.[2] At the end of the twentieth century, high-stakes gaming was one growing strategy that Indigenous nations used to enact economic self-

[1] "No Casino broadens scope of debate," *Hood River News,* Dec 10, 2005. https://www.hoodrivernews.com/archive/no-casino-broadens-scope-of-debate/article_897a56dc-0a63-59d4-9b2e-8ee707ad5440.html.

[2] See my discussion of settler colonialism as an ongoing structure in the Introduction.

determination and generate revenue for their communities. In 1988, Ronal Reagan signed into law the Indian Gaming Regulatory Act (IGRA). This was the first act to instate any form of federal gaming structure, and was aimed at establishing a jurisdictional framework to govern Indian gaming. The Act delegated new authority to the U.S. Department of the interior as well as new rubrics of federal offenses with corresponding power in the U.S. Department of Justice to prosecute them.[3]

Since the 1960s, Warm Springs had owned and operated the Kah-Nee-Tah High Desert Resort and Casino on their contiguous reservation lands. The resort's Indian Head Casino was the nation's one permitted casino. The Warm Spring's reservation, however, is distant from well-trafficked highway routes and cosmopolitan centers: geographical conditions that prevented Kah-Nee-Tah from attaining more lucrative returns. When my family would visit Kah-Nee-Tah during the summer, to play in the water park, we would drive two hours east from Portland, 70 miles east on Highway 26, and exit a winding road in the high desert before reaching the resort. In an effort to bolster their economic self-determination in the 1990s, Warm Springs began to examine the possibility of expanding their gaming operations to strategic locations beyond their reservation land. To find a place closer and better accessible to future patrons, Warm Springs looked to their ancestral homelands along Nch'I-Wàna. The Columbia River Gorge was identified as a particularly suitable place. This was ancestral territory and Warm Springs already owned trust lands in Hood River, a city being reshaped by popularity among recreationists and tourists from Portland. [4]

By 1998, Warm Springs was gauging public response to the possibility of constructing a casino on this land. Mainstream media and many Hood River residents leveled immediate, anxious critiques. Some locals began to organize themselves in ad-hoc coalitions, such as "No Gorge Casino," pen oppositional opinion pieces, and place "NO GORGE" signs around town.[5] By 2001, Warm Springs also sought an alternative location in response to the opposition within Hood River and sought to acquire trust land in the city that was also seeking opportunities for economic recuperation, Cascade Locks. After successfully purchasing 120acres to adjoin their existing trust lands in Hood River, Warm Springs likewise pursued the acquisition of trust land in Cascade Locks. The nation approached the city and publicly pursued a proposal to purchase 60acres of industry-zoned land in order to build the Bridge of the Gods Casino.

Brook Colley (Wasco/Eastern Cherokee, Enrolled Eastern Band of Cherokee Indians), scholar of Native American studies, writes extensively and with sharp acuity about the Warm Springs' casino proposal, and the nation's intertribal relations with Grand Ronde in Oregon, during the

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[3] The IGRA has prompted tremendous conflict and contestation. For more detail on the way Indigenous governments have both leveraged as well as opposed the IGRA see work by Brook Colley and Jessica Cattelino: Brook Colley, *Power in the Telling: Grand Ronde, Warm Springs, and Intertribal Relations in the Casino Era,* (Seattle: University of Washington Press, 2018); Jessica Cattelino, *High Stakes: Florida Seminole Gaming and Sovereignty,* (Durham: Duke University Press, 2008).

[4] Brook Colley's research evidences that Warm Springs acquired the 40-acres of trust land in Hood River in 1974. The land was originally allotted to Thomas Jim (Wasco), and more information can be found in Dave McMechan, "The Interesting Case of Thomas Jim," *Spilyay Tymoo,* August 22, 2002 (as cited by Brooke Colley in Chapter 3 of *Power in the Telling,* 68.).

[5] Brooke Colley, *Power in the Telling*.

Casino Era.[6] Of the proposal at Cascade Locks, Colley explains, "though this land was neither part of the tribe's historic reservation nor held in trust for the tribe, the location is cultural and historically significant to the Warm Springs people, and it is part of their recognized ceded lands where they have reserved treaty rights."[7] Yet, for over a decade (1998-2013), Colley shows that the settler public's response to the Hood River and Cascade Locks proposals significantly undermined the self-determination and sovereign land claims of the Warm Springs nation, and Native nations across the U.S. more broadly.

In her monograph, *Power in the Telling,* Colley briefly attends to the mainstream discourse of opposition to a "Gorge Casino." She examines newspaper articles from the time to highlight how many locals, Portlanders, and regional environmentalists opposed Warm Springs' proposals because their sites were located "within the boundaries of the Columbia River Gorge National Scenic Area Act. They argued that the site was far too environmentally sensitive for such development and that building a casino would negatively affect the beauty of the area, which would not be in line with community values, and they said it would bring social ills to the region."[8] Residents in local cities and across the state placed the environmental sensitivity and visual beauty of the Gorge front and center in their arguments against the Warm Spring's casino plans. Prominent environmental groups appealed to public perception of the Gorge as a national treasure, as well as federal protections for its scenic value as codified in the National Scenic Area Act, in their activism against the casino and off-reservation gaming more broadly. The case of anti-casino activism that turned prominently on the protection of visual beauty, I argue, provides an historical example of how accounting, accumulating, and enclosing scenic value has long been an imperialist strategy of countersovereignty.[9]

On December 18th, 2002, local paper *Hood River News* published an opinion piece authored by Kevin Gorman, the executive director of environmental non-profit organization Friends of the Columbia River Gorge (FOG) at the time.[10] A concise and assertive piece, Gorman's article was organized around three points, each of which detailed distinct yet interrelated reasons why the Confederated Tribes of Warm Springs did not have the unequivocal right to build a casino on their Hood River trust land. Herein, the executive director of "the only non-profit organization dedicated entirely to protecting the Columbia Gorge"—one that was instrumental in organizing public support, and advocating at state and federal levels, for passage of the Columbia River Gorge National Scenic Area Act (NSAA)—positions himself squarely within a public debate regarding Tribal land use and Federal Indian Law.[11] I argue that this article is exemplary of how the enrollment of "scenery," and the codification of its protection through the NSAA, authorized countersovereign environmental politics in public discourse and federal legislation that aimed to constrict the territorial and economic self-determination of the Confederated Tribes of Warm Springs.

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[6] Ibid.
[7] Ibid, 4-5.
[8] Ibid, 68.
[9] For a concise explanation of "countersovereignty," see the Introduction to this dissertation.
[10] Kevin Gorman. "CL casino idea based on a 'threat' that's not real." *Hood River News*. Dec 18, 2002. https://www.hoodrivernews.com/archive/cl-casino-idea-based-on-a-threat-that-s-not/article_53f47eac-9452-5f4e-9fcf-24c1a7bb2e07.html
[11] For more on the role of FOG in passing the NSAA see Kathie Durbin's *Bridging a Great Divide,* as well as the FOG webpage, https://gorgefriends.org/.

Gorman's article is brief and direct. His language is pointed and uncomplicated: "Here are the obstacles facing a Hood River casino." First, he explains, moving a casino to an "off-reservation site requires renegotiation of the [Governor's Compact] and the approval of the Governor." This renegotiation, he claims, would likely be precedent setting—forcing renegotiations of "all the Tribes in Oregon and would change the face of gambling in Oregon dramatically and immediately." He bolsters his anxiety about "off-reservation" Tribal gaming inundating the state with an excerpt from a statement made but a month earlier by then Secretary of Interior Gail Norton: " '…I am extremely concerned that the principles underlying the enactment of IGRA are being stretched in ways Congress never imagined when enacting IGRA.' (Letter to New York Governor George Pataki, Nov. 12, 2002)."[12] In this way, the article yokes local contestation of casino construction to a broader, national concern about the cohesion of U.S. sovereignty. The inclusion of Norton's quote signals that the issue at hand is more than mere conflict over small-scale plans. Rather, the case of the Gorge Casino comes directly to bear on the integrity of U.S. federal Indian policy and whether a nation-wide Act regulating Indigenous economic activity will maintain uncompromised status as law of the land.

The Warm Spring's casino, the article implies, would set a precedent that enables such proliferation of Tribal economic activity as to compromise the congressional intent of the IGRA. The author focuses specifically on the history of land-use and demarcations of Indigenous territories as evidence for why this particular case is in breach of the IGRA. The IGRA, he explains, "allows gambling only on 'Indian Land'" and the proposed trust site has never been developed, tribal members have never resided there, and neither governmental services nor law enforcement have ever been provided there by the Tribes. Therefore, "a casino on the Hood River land is not permitted [under the act]" because "at no time since its 1976 acquisition has [sic] the Tribes exercised governmental power over the Hood River trust land."[13] Far from a used and governed space, Gorman claims, "the 40-acre Hood River parcel is an isolated, undeveloped and uninhabited piece of land more than 50 miles from the 640,000-acre Warm Springs reservation." Here, longstanding settler colonialist logics of property as mediated by proper use, prolonged occupancy, and securitization are brought to bear on a public debate regarding whether a Tribal nation can develop the land they own—and further still, the modes of economic production through which they are permitted to do so. Applying the IGRA to the Warm Spring's parcel of trust land in Hood River is a reactive claim of colonial sovereignty that directly opposes the history of Warm Spring's occupation of their ancestral territories and imposes capitalist modes of land-use in its place.

The IGRA is not the only federal legislation the author cites in opposition to the casino. The article's third and concluding point turns to the federal regulations established by the passage of the 1986 Columbia River Gorge National Scenic Area Act (NSAA). Such a move suggests that the NSAA, like the IGRA, pertains directly to questions of precedent within the broader scope of Federal Indian policy. In the passage below the NSAA is cited in further legal argumentation against Warm Springs' proposed use of trust land:

[12] Kevin Gorman, "CL casino," para5.
[13] Kevin Gorman, "CL casino," para11.

> "3. Operating a casino on the Hood River trust land would require transferring additional National Scenic Area land into trust, thus violating the Columbia River Gorge National Scenic Area Act.
>
> The Warm Springs Tribes have purchased approximately 200 acres surrounding their trust land and are attempting to move the newly acquired land to "trust" status through the Department of Interior. If these lands become "trust lands," they will be exempt from the National Scenic Area regulations.
>
> The U.S. Forest Service, the lead federal agency in the National Scenic Area, has the mandate to review the Department of Interior's actions to determine if they are consistent with the National Scenic Area Act. The Forest Service has determined that the proposal to take the newly acquired lands into trust is inconsistent with the Act. This determination does not affect the existing trust land, but it does prohibit the development of the newly-acquired lands that would be necessary for access roads, parking lots, a hotel, an other amenities incidental to a large casino operation. This Forest Service decision effectively prohibits a casino on the 40-acre parcel."[14]

Simply put, Gordon argues that proper implementation and adherence to the NSAA forecloses Warm Springs' sovereign right to construct access roads, parking lots, and other buildings on any newly acquired property. Here, scenery functions as a legal-political category with the authority to interfere with, and ultimately govern, the territorial and economic rights of an Indigenous nation for whom the very scene in question is their ancestral homelands from which they were forcibly removed by U.S. imperialist projects of settlement and development vis-a-vis capitalist expansion and its attendant infrastructures.

This chapter begins with excerpts from Gorman's Op-Ed as a means of demonstrating the contemporary relevance of historicizing the entanglements of scenic value, capitalist expansion, and the makings of countersovereign modes of authority in the Gorge. Scenery is a narrative, logic, and spatial ordering in a region long constructed as an exceptionally wild, naturally fruitful landscape—and as such, manifestly primed for possession—in the U.S. imperialist imaginary.[15] "Scenic value" has both authorized and mediated public and legal opposition not only to Indigenous economic enterprises in the Gorge—such as the Casino—but the self-determination of Indigenous nations in relation to U.S. State and federal law more broadly. Routing the scenic through the Gorge has long scaffolded the expansion and circulation of settler subjects, infrastructure, and capital—militia, explorers, trains, tourists, cars, and hikers. Part of scenery's power lies in its ability to aestheticize the invisibilization of genocidal violence. In our present moment, "scenic value" and its attendant cultures and legal codifications continue to be a means of routing imperialist power. The story of anti-casino environmentalism begun here will bookend

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[14] Kevin Gorman, "CL casino," paras12-14.

[15] My conception of imperialist imaginary is based on the scholarship of Mary Louise Pratt, Anne Laura Stoler, Amy Kaplan, and Anne McClintock. I have drawn from their texts: Anne Laura Stoler, *Haunted by Empire Geographies of Intimacy in North American History*, (Durham: Duke University Press, 2006); Amy Kaplan, *The Anarchy of Empire in the Making of U.S. Culture,* (Cambridge, MA: Harvard University Press, 2005); Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation*, (London: Routledge, 1992); Anne McClintock, *Imperial Leather: Race, Gender, and Sexuality in the Colonial Conquest,* (1995).

Part One of this manuscript. At the end of Chapter Two, I will return to more in-depth analysis of "anti-casino" discourse generated by environmentalists, in concert with settler NIMBY groups such as No Gorge Casino! and other unexpected contingencies like the Oregon Family Council and Oregon Restaurant Association. The construction, categorization, and conservation of "scenery" in the Columbia River Gorge is a material and ideological process in and through which settler anxieties about Indigenous futurities, land claims, and economic self-determination are meted out. In keeping with a major organizing framework of this manuscript—an engagement with the historical conditions that continue to structure ongoing U.S. imperialist projects of enclosing, settling, disciplining, and (re)producing colonized territory and human-nonhuman relations—this chapter asks: What have the political stakes of Scenic Value as an ideology been throughout the 21st century? How do we see continuities and intimacies, not just new turns, breaks, or innovations?

This chapter hones in on the contemporary and historic stakes of scenic preservation in the Gorge. In order to contend with the historical resonances and political ramifications of securing certain forms of land use vis-à-vis protecting scenery in the present, we must dig deeper into the archive of "Scenic Value." Part One of this manuscript offers a history of the present formulated as a loose genealogy of "Scenery": A history of the present that serves to politicize a seemingly aestheticized, if even progressive, project of preserving vistas and natural beauty through U.S. economic and territorial expansion. In this chapter I focus my analysis on the inseparable commercial and aesthetic values generated by three key bodies of visual cultural texts: maps, photographs, and advertisements depicting the Columbia River Gorge. Taken together, these visual representations and the historical conditions under which they were produced and circulated, demonstrated how scenic aesthetics shaped, and were shaped by, the U.S. war-finance nexus in the Pacific Northwest.

Visual representations of the U.S.'s newly acquired territory were techniques of imaging and imagining the expansion of railroads, circulation of capital, and pleasures of possession. I show this in three interrelated ways. First, I examine maps made by early expeditions and surveys of the Columbia River and the Gorge. I discuss how multiple global empires have materially and ideologically constructed the Gorge as a passage for exploration, trade, and settlement, at the expense of Indigenous peoples. My close readings of cartographic visuals demonstrates how particular spectacular scenes in the Gorge were depicted as crucial corridors for control in the process of building global military and economic supremacy. I continue this analysis through a second major body of visual cultural texts by reading the landscape photography of Carleton Watkins as a transmutation of this history. Watkins's images of the Gorge were traded as both high-end artistic masterpieces as well as political tools of the Columbia River Railway and Navigation Company. His photographs of transcontinental railroads and spectacular scenery provide historical evidence of the inextricable relationship between the imperialist extraction of cultural and commercial value in the Gorge. Finally, I continue to follow the construction of scenic value through traffic and tourist booms of the early 1900s. I analyze the print materials of railway companies and chambers of commerce, in the form of propaganda brochures and advertisements. Here, I examine how configurations of pleasure and play increasingly structured the expansion of capital and settlement of stolen land. I argue that the emergence of the Gorge as a playground in which a particular kind of white, male subjectivity could enjoy the pleasures recreation and edification in "Indian-free" scenery.

Imperial Anxieties and "Bad Rapids"

Multiple global empires have held anxious obsessions with sights and scenes of the Columbia River. Throughout the 17-19th century, Spanish, British, and later U.S. expeditions were sent to chart the coast and inlands of (what is for now) the pacific northwestern United States in order to locate a navigable passage to and from the inner continent and the sea. Government and corporate agents alike conducted surveys of the hydrology, topography, and ethnology of the mouth and lower reaches of the River. Visual cartographies served to catalogue geophysical opportunities and obstacles for military occupation, commercial trade, and settlement. For example, Jonathan Carver's map entitled "A New Map of North America from the Latest Discoveries" (Figure 3), a hypothetical transcontinental connection through an abstracted and comparatively blank northwestern region. First published in 1778, this map depicted Carver's 1760's travels through the continent's interior—purportedly, the first colonial american explorer to reach west of the upper Mississippi. Carver aspired to complete the highly incentivized discovery of western water route to the Pacific yet, the indication of such a "River of the West" was a visual inscription of colonial futurity: Carver never crossed the Continental Divide, yet his map anticipates the discovery of a transcontinental river where the Columbia would be charted by later colonial surveyors. Maps like these imag(in)ed countersovereign claims to routes of commerce already constituted by the political, territorial, and trade relations of Indigenous peoples.

Figure 3 Jonathan Carver's "A New Map of North America from the Latest Discoveries," engraved in the late 1760s, depicts the hypothetical "River of the West," promoting the myth that the Mississippi River confluence with a channel that ran to the Pacific.[16]

[16] Jonathan Carver, "A New Map of North America, from the Latest Discoveries . . ." from Travels through the Interior Parts of North America, in the Years 1766, 1767, 1768. London: C. Dilly, 1781. Engraved map. Geography

The imperial mythology of a cross-continental gateway to the west, a riverine channel that would facilitate the settlement of "New World" territory, enable efficient extraction of corresponding natural resources, and establish routes for global commodity circulation, is a long-standing one that persisted through various transmutations throughout the 1800s (see Figure 4). Though not the first agents of the empire to chart the Columbia River, the 1804-1806 Lewis and Clark Corps of Discovery remains perhaps the most prominent and persistent in the U.S. popular imaginary.[17] Commissioned by then president Thomas Jefferson on the heels of the Louisiana Purchase in 1803, militarized-scientific expedition was charged with scientific, economic, and military objectives. Jefferson commanded the cadre to proclaim U.S. control throughout the newly ceded territory. The Corps was charged with producing accounts of the human and nonhuman life and geographies, so as to best calculate their potential exploitation, and establish claim to the Pacific Northwest through the Doctrine of Discovery.

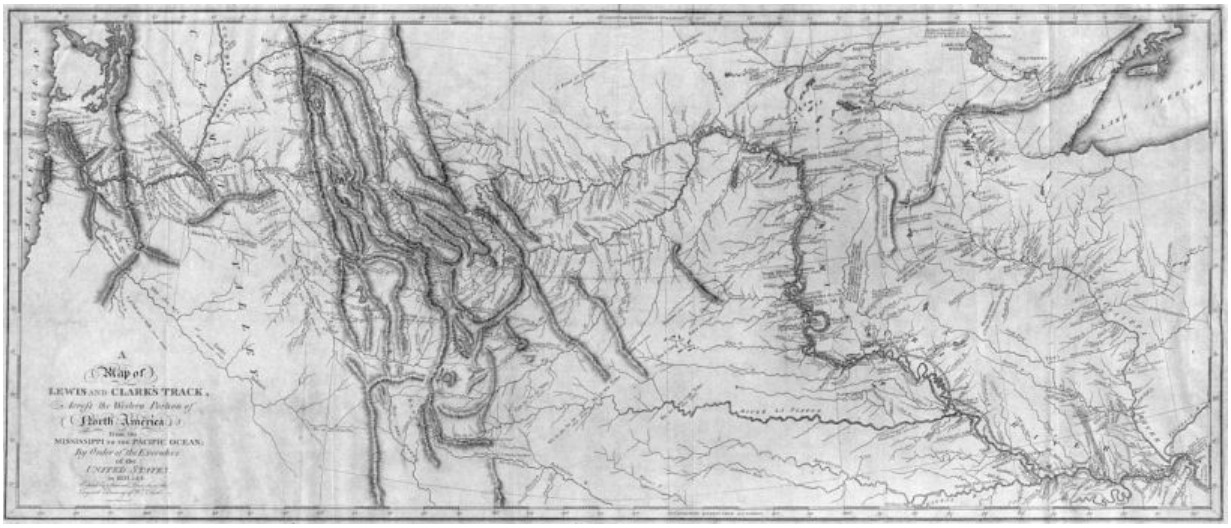

Figure 4 A Map of Lewis and Clark's Track, Across the Western Portion of North America From the Mississippi to the Pacific Ocean.[18]

The topographical and hydrological maps produced as a result of the Corps's surveys provided depictions of the relationship between the Columbia River, Missouri River, and the Rocky Mountains. "Unclaimed" lands in the pacific northwest, and the mid-lower reaches of the Columbia River specifically, were heralded as a fertile passage—an expeditious connection to

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and Map Division, Courtesy of the Library of Congress (28A) accessed https://www.loc.gov/exhibits/lewisandclark/lewis-before.html.

[17] Today, the Corps' path persists as an overwrought and tedious presence along the trails and museums within the Gorge today, marked by Park Service signage, tourist brochures, museum exhibits, and campsites. For more on the Corps in U.S. popular imaginary today see, Craig Howe and Kimberly TallBear, Steven Saransohn.

[18] "A Map of Lewis and Clark's Track Across the Western Portion of North America, From the Mississippi to the Pacific Ocean, By Order of the Executive of the United States in 1804, 5 & 6. (1814)" Identifier: wsu559; F592.4 1814. Courtesy of Washington State University Libraries Digital Collections. https://content.libraries.wsu.edu/digital/collection/maps/id/704/rec/1.

Asian markets across the ocean, itself laden with a wealth of resources ready for extraction. Visual representations of the Columbia River compelled and assisted the U.S. empire's acquisition of the lands and waters in Oregon Territory from the British empire through the Oregon Treaty of 1846: Acquisitions that, when technologically harnessed for full use, would enable the U.S. to outrun the financial and territorial dominance of the Spanish and British empires. The "river of the west" was depicted as the young U.S. empire's new commercial route to the east—through resource-rich lands ready for exploitation—and the Gorge was a preordained "gate." The precepts of Manifest Destiny enabled a configuration of the Gorge as a predestined path, carved by natural forces in order for civilized and industrious men to likewise penetrate. And yet, the particular geological and hydrological features of the Gorge, the Columbia's many cascades and rapids; its basaltic islands, cliffs, and outcrops proved unnavigable by the very vessels needed for capitalist industry to prosper, such as large sail ships and steamers. Through the towering Cascade Mountains, the River carved a channel through staggering basalt cliffs. Constricted through a steep and narrow drop toward the sea, the current was tumultuous and riddled with outcrops, islands, cascades, and whorls.

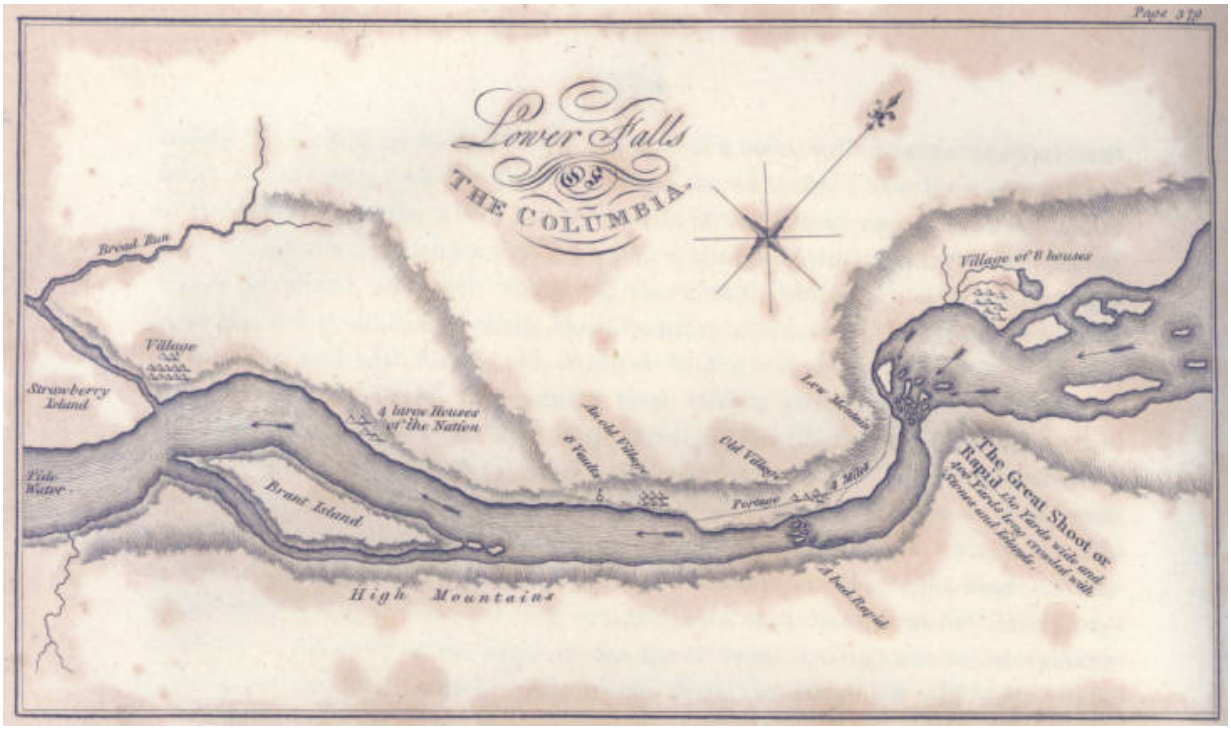

Figure 5 This map "Lower Falls of the Columbia," is from *History of an Expedition Under the Command of Captains Lewis and Clark* by Nicholas Biddle in 1814. It is one of several focused details on the rapids of the Columbia River. Note the numerous Indigenous villages and the small label on the southeast shore, just below the river, reads: "A bad Rapid." [19]

[19] This map is title "Lower Falls of the Columbia," by Merriwether Lewis, printed in London, 1814. Identifier: wsu557; F592.4. Courtesy of the Washington State University Libraries' Digital Collection. https://content.libraries.wsu.edu/digital/collection/maps/id/698/rec/2.

Imperial agents assessed the cascades of the Columbia as a "problematic place, a potential obstacle to economic use."[20] In addition, they depended on the Indigenous people they met to navigate the river. Lewis and Clark, for example, would never have passed the "Great Falls of the Columbia" without skilled and practical assistance from the peoples who lived, traded, and controlled migration in these places. They had neither the expertise nor the technology to manage the Cascades by boat themselves. Their journals include detailed documentation of their paltry knowledge of the currents and geography of the Cascades. What they were able to learn, mapped in Figure 4 for example, was derived entirely from the explanations and advice of local Indigenous communities. Even with such offerings, the Corps' anxiety about their own autonomy and capacities at the Cascades are reflected in their cartographies. Oftentimes absent actual place-names, the soldiers' maps are marked with cautionary descriptors: "A Bad Rapid," for example, conveys incompetence (Figure 5).

Through geological surveys, topographical maps, travel writing, and transit logistics, the futurity of militarized occupation and commercial circulation was routed through the Gorge. Criminalization of the Indigenous peoples who labored to manage settler transit down and around the Gorge rapids was a constitutive part of corporate and political efforts to control commercial pathways there. Popular travelers' accounts at the time, such as those by Washington Irving (*Astoria,* 1839), John K. Townsend (*Narratives of a Journey Across the Rocky Mountains, to the Columbia River,* 1810-13), and Alexander Ross (*Adventures of the First Settlers on the Oregon or Columbia River,* 1849) constructed an "Indian problem" at the cascades—wherein "dangerous" Indigenous guides were "anxious" to exploit traders and travelers, thus appealing to public's anti-Indigenous racism in a call for U.S. assumption of control over transit and traffic at these "choke-points."[21]

Imperial expeditions targeted these geographical "choke-points," and the "slippery people" that lived and worked there, as places requiring further surveillance and control.[22] Juridical and commercial anxiety about the cascades of the Columbia is evidenced by the detail with which geological and railroad surveyors depicted and discussed these river rapids. Most notably, "The Cascades of the Columbia" (Figure 6) appear in the War Department's published reports from the Pacific Railroad Surveys of 1853-5. The Pacific Railroad Surveys were authorized by the Secretary of War and funded by Congress with the goal of finding possible routes for a transcontinental railroad across the U.S. newly acquired western territories. The surveyors, scientists, and artists who executed the expeditions collected geophysical and political information aimed at facilitating U.S. navigation of both natural terrain and Indigenous territories.

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[20] William Lang. "The Meaning of Falling Water," *Oregon Historical Quarterly*. 108, no.4 (2007): 569.

[21] Ibid, 570-71. See also the narratives of Washington Irving (*Astoria,* 1839), John K. Townsend (*Narratives of a Journey Across the Rocky Mountains, to the Columbia River,* 1810-13), and Alexander Ross (*Adventures of the First Settlers on the Oregon or Columbia River*).

[22] In C. F. Coan, "The Adoption of Reservation Policy in Pacific Northwest, 1853-1855," *Oregon Historical Quarterly,* 23, no.1 (1922): 1-38, Coan analyzes Irving's writings, and uses an excerpt from *Astoria*: "…the Indians at the portages of the Columbia River were at first very bothersome but they were taught to accept the presents given them for their services, and not to commit robberies; the Wallawalla, Nez Percés, and the Cayuse appear to have been neither so thievish as the "portage" Indians nor so fierce as the Blackfeet and the mountain Snake…"

Figure 6 "The Cascades of the Columbia." Chromolithograph made by John Mix Stanley for Isaac I. Stevens. From "Narrative and final report of explorations for a route for a Pacific railroad, near the forty-seventh and forty-ninth parallels of north latitude, from St. Paul to Puget Sound," by Isaac I. Stevens, Governor or Washington Territory.[23]

Isaac I. Stevens—recently appointed governor and secretary of Indian Affairs of Washington Territory—lead the exploration of the Pacific Northwest region, which included the rapids and waterfalls of the Gorge. Prior to his political appointment, Stevens had acquired training at West Point and worked for years as a surveyor and engineer on large public works projects with the U.S. army corps. In his capacity as governor and secretary of Indian Affairs, Stevens also sought to manage the settlement and economic development of Washington Territory. In Stevens's report for the Pacific Railroad Survey, entitled "Narrative and final report of explorations for a route for a Pacific railroad, near the forty-seventh and forty-ninth parallels of north latitude, from St. Paul to Puget Sound," he included detailed descriptions of the topography, hydrology, and ecology of the Cascades.[24] Stevens also contracted chromolithographic illustrations of these complex and tricky locations (Figure 6). Figure 6, "The Cascades of the Columbia," would have been seen by congressional members alongside scientific discussion of where the future

[23] John Mix Stanley Chromolithograph from Isaac I. Stevens, *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* (1855-1862), Vol. 12, Book 1, Plate 44. https://dc.ewu.edu/rrsurvey/47/. Courtesy of Eastern Washington University archives and special collections.

[24] The report that includes this print is from Volume 12, Book 1 of the set: *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* Made under the direction of the Secretary of War, in 1853-5, according to Acts of Congress of March 3, 1853, May 31, 1854, and August 5, 1854. Washington, D.C.: Thomas H. Ford, Printer.

transcontinental rail-line should run—a futurity imagined in and through the "elimination of the Native."[25]

Figure 7 "Rocky Mountains to Puget Sound from the explorations and surveys made under the direction of the Hon. Jefferson Davis, Secretary of War," 1854.[26]

Systematic visual representation of the material and social qualities of Columbia River, as depicted in the Pacific Railroad Surveys, represent a convergence interrelated projects: To subdue and concentrate Indigenous nations in the region thereby facilitating frictionless railroad extension toward connection with Asian markets on his territory's coast. As governor and superintendent of Indian affairs in Washington Territory, Stevens enacted brutal commitment to pacification throughout the region, including the extinguishment of Indigenous title along the Cascades and removal of Indigenous peoples onto reservations away from the Columbia's shore. In collaboration with Joel Palmer, Oregon's superintendant of Indian affairs, Stevens conducted Treaty negotiations as a strategy to mitigate the "Indian problem" during a period of rapid growth in settler population and commercial industry.[27]

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[25] "The elimination of the native" is a framework for describing U.S. settler colonial conquest and Federal Indian Policy as laid out by scholars like Patrick Wolfe, in "Settler Colonialism," and J. Kehaulani Kauanui, "A structure, not an event": Settler colonialism and enduring indigeneity," *Lateral: Journal of the Cultural Studies Association*, 5, no.1 (2016).

[26] Map no. 3 Rocky Mountains to Puget Sound from the explorations and surveys made under the direction of the Ho n. Jefferson Davis, Secretary of War (1854). Rocky Mountains to Puget Sound (1854) Identifier: uwm58; Y 1.1/2: S erial 801 map 1. Courtesy of Washington State University Libraries' Digital Collection. https://content.libraries.wsu. edu/digital/collection/maps/id/221/rec/1.

[27] For more on narratives of the "Indian problem" in the Pacific Northwest, see Francis Haines, "Problems of Indian Policy," *The Pacific Northwest Quarterly*, 41, no.3 (1950): 203-212.

The Stevens-Palmer Treaties of 1855 exemplify the transmutation of Federal Indian policy, from the Removal Period (1825-1850) to the Treaty and Reservation Period (1850-1887).[28] With the acquisition of Oregon (including Washington territory) and California Territory in the 1840s, the U.S. removal policy—the violent push of eastern and midwestern Indigenous peoples off of their lands and toward the Pacific—had failed to expunge Indigenous claims and conflict in the west. Settlement following the Donation Land Claim Act,[29] Oregon Trail,[30] and subsequent expansion of agriculture, mining, timber, roads, and rail, prompted local and federal agents alike to devise policy that they argued would pacify Indigenous peoples of the Pacific Northwest and ease a process of supplantation by settlers:

A special report was submitted to Congress, February 9, 1854, by the Commissioner of Indian Affairs in which he advised that treaties be speedily made with the Indians of Oregon and Washington, both east and west of the Cascade Mountains. It was this report, based on Palmer's report of October 8, 1853, that determined the policy of treaties and reservations for the Indians of Oregon and Washington. The report recommended that Congress appropriate $68,000 to pay the expenses of negotiating the treaties and to pay the first installment of the annuities. This action was stated to be necessary; because the lands of the Indians were being taken by the whites; because the government had encouraged the settlement of the region; because the prosperity of the country was delayed by the uncertainty of peace; because an extensive outbreak was probable unless the Indians were pacified; because hostilities were caused by the absence of treaties; and because it was desirable that there be peace with the Indians along the routes of the railroad projects.[15] This recommendation led to the decision on the part of the government to make treaties with the Indians of Oregon and Washington. Later recommendations only tended to strengthen

Figure 8 This passage elucidates the relationship between rail and removal. [31]

Mapping, defining, and assigning land to various Indigenous polities was intended to secure and consolidate populations on small, governable, and surveillable plots.[32] The logic of this ideology

[28] The 1851 Indian Appropriations Act allocated funds to move Western tribes onto reservations—parcels of land that were "protected and enclosed" by the U.S. government. Period of federal "Indian policy" in the "Far West" under the Franklin Pierce administration and commissioner of Indian Affairs, George W. Manypenny, 1853-1857; see Kent Richards, "Stevens Treaties of 1854-1855," *Oregon Historical Quarterly,* 106, no.3 (2005): 343. Scholars of federal Indian Policy have identified the other subsequent eras: Removal period (1825-1850); Treaty and Reservation Period (1850-1887); Allotment and Assimilation (1887-1934); Termination (1940-1961). For more, see Michael Hibbard, "Tribal Sovereignty, the White Problem, and Reservation Planning," *Journal of Planning History,* 5, no. 2 (206): 87-105.

[29] The Donation Land Claim Act granted 320 acres of designated area free of charge to every unmarried white male citizen eighteen or older and 640 acres to every married couple arriving in the Oregon Territory before 1 Dec. 1850. See Francis Haines.

[30] The U.S. sought to achieve "secure passage" for settlers on the Oregon Trail with the signing of the Treaty of Laramie between U.S. and Plains Indians and the Indians of the northern Rocky Mountains. This treaty enabled westward migration, the building of roads, and stationing of U.S. troops along the Oregon Trail. See Francis Haines.

[31] C. F. Coan, "The Adoption of Reservation Policy," 6.

hinged on a paternalistic form of dispossession, in which the Nez Perce, Yakama, Cayuse, WallaWalla, Umatilla, Warm Springs, Wasco, and other Indigenous peoples with ancestral territories in the Columbia River Basin would be provided for under U.S. occupation, while also subdued on undesirable lands away from colonial projects:

> "…Stevens [negotiated] treaties in the Pacific Northwest with the often-stated goal of concentrating the Indian tribes in order to allow white settlement and development. In part, Stevens hastened to complete these treaties because he recognized conflicts between the Donation Land Act (giving early settlers land anywhere in the Northwest) and laws governing Indian affairs. To reduce such conflict, he urged speed in defining Indian lands. Although he advocated concentrations of the tribes onto a single reservation, he did not achieve the goal. Even so, Steven's work opened the way for settlement and eventual construction of the Northern Pacific Railroad through the region."[33]

By the time surveyor-cum-governor Stevens had left office in August 1857 to represent the territory in Congress, Stevens had "negotiated ten treaties providing for the quieting of Indian title to some hundred thousand square miles of land."[34]

Agents of colonial occupation targeted the shorelines of Gorge cascades and rapids as sites of strategic occupation. These places were not natural nodes of settlement, but politicized by their implications for riverine navigation and the flows of industry and finance that could be controlled there. U.S. projects of westward expansion into Oregon Territory included respatializing areas of waterfall on the Columbia River—such as The Cascades, Five Mile Rapids, and Celilo Falls—and exterminating them as they been since time immemorial: powerful centers of Indigenous economies, social relations, and sovereign right. U.S. militia, corporate industry, and property-seekers sought to enclose the clusters of whorls, eddies, and rapids within the Gorge through the removal of villages, enclosure of non-human populations, physical alteration of riverbanks and channels, and removal and criminalization of Indigenous fishers. Technologies of occupation— such as railroads, timber mills, fishing wheels, canneries, canals and locks—extracted and exploited natural resource and enabled the fixed, industrial and agricultural lifeways of settlers. Technologies of occupation also envisaged settler futurity onto the landscape, displacing entire Indigenous communities, decimating first foods, and monopolizing commercial and navigational power. Constructing and controlling routes through the Gorge were never merely set on the efficient management of civic traffic, but always a countersovereign project of U.S. empire.

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[32] For more on this see the work of Ned Blackhawk, John Dougherty, Andrew Fisher, and Manu Karuka.
[33] Candy Mouton in James A. Crutchfield, Candy Moulton, Terry Del Bene, eds., *The Settlement of America: An Encyclopedia of Westward Expansion from Jamestown to the Closing of the Frontier*. (New York, NY: Routeledge, 2011), 449.
[34] "III. A History of Treaty Making and Reservations on the Olympic Peninsula," Center for the Study of the Pacific Northwest.

Scenic Commerce and Landscape Photography

The maps and surveys analyzed in the previous section directly contributed to the construction of railways in the west.[35] American Studies scholar Manu Karuka, in his monograph *Empires Tracks,* analyzes frames the history of railroad construction within the violent global histories of U.S. colonialism and capitalism, thereby explaining the imperial foundations of U.S. political economy. He shows how claims of possession over Indigenous lands acted as a "proprietary anchor" for railroad investments in the United States, and that much of the lands claimed as domestic territory by the continental U.S. was incorporated during 19th century railroad building.[36] Even prior to the Railroad Surveys I analyzed in the previous section, Karuka argues, imperial agents from government officials to railroad promoters "anticipated the exchange value of Indigenous lands, even before the onset of colonial jurisdiction."[37] Early hypothetical drawings of railway networks sketched an anticipated occupation, "blending military and real estate logics."[38] The construction of railroads spurred a large-scale usurpation of Indigenous lands that became a regular part of state policy, policy enacted through forms of violent colonial warfare that cannot be separated from the history of the corporation: "While military officials looked to railroads for control over territory, U.S. railroad corporations drew upon military resources in the pursuit of financial profit."[39] It is this interrelated and coproductive relationship between capital and colonial occupation that Karuka theorizes as the war-finance nexus. In the case of the congressional land grants that would fund railroad construction throughout the west during the Reservation Era (post-1850s), capital claims on territory and resources would directly abrogate federal treaties with Indian nations. The federally sanctioned property claims of railroad corporations did not reflect reality but articulated U.S. countersovereignty: "It was U.S. sovereignty as a provisional declaration, sovereignty on credit, a colonialist bond to be honored on future maturation. This is the war-finance nexus."[40]

The previous section in this chapter linked railroad projects to processes of colonization. I analyzed cartographic scenes as speculative enterprises to remake Indigenous lands, and highlighted the role of visual representations—maps and surveys—as technologies that imag(in)ed and facilitated occupation. In this section, I turn to examine how "the capital relationship is inextricable from processes of invasion and occupation" in the pacific northwest and even "preceded any functional colonial occupation of the region."[41] In order to hone in on the war-finance nexus I focus on a specific colonial corporation that maintained a monopoly on river and rail traffic through the Gorge corridor, the Oregon Steam and Navigation Company (OSNC). Specifically, turn my attention to the images of scenery that OSNC used to secure capital: I analyze selected mammoth plate and stereoview photographs made by prominent

[35] Today, the Union Pacific transcontinental railroad runs through the city of Cascade Locks. On the opposite shore, in Washington State to the north, the Burlington Northern & Santa Fe line runs through the city of North Bonneville. Both lay atop the historic paths of the region's first railroads and countless ancestral villages and fishing grounds, and both through the entire Columbia River Gorge National Scenic Area and the ceded homelands of The Confederated Tribes of Warm Springs, the Confederate Tribes of Umatilla, the Nez Perce, and the Yakama Nation.
[36] Manu Karuka, *Empires Tracks,* 42.
[37] Ibid, 42.
[38] Ibid, 42.
[39] Ibid, 42.
[40] Ibid, 67.
[41] Ibid, 67.

landscape photographer Carleton Watkins. I argue that Watkin's photographs of Gorge vistas, forts, and railroads--commissioned by the OSNC—demonstrate how modes of visual production continued to construct value and secure investment in the Gorge, all the while aestheticizing the removal of Indigenous peoples and erasing evidence of their territorial claims. The coconstitution of capital accumulation and countersovereignty must also be understood through the visual cultural production of scenic value.

In the mid-1800s, the Oregon Portage Railroad(s) first traversed the Oregon and Washington shores lining "The Cascades of the Columbia."[42] First built as wooden tracks with a horse-powered car, the roads facilitated four miles of land-based transport past the River's first series of "unnavigable" rocks and rapids for U.S. steamships carrying soldiers and settlers. These portage railroads, historians of U.S. empire have argued, "were the most critical parts of the Columbia River transportation infrastructure."[43] Accordingly, politicians and financiers sought monopolistic consolidation of transportation company shares, properties, and right-of-ways. Traffic routes around the cascades and through the Gorge were strategic nodes in the war-finance nexus. The Oregon Steam and Navigation Company (OSNC) was one such entity that aimed to monopolize river traffic on the Columbia River.[44] The principal shareholders who established the OSNC included railway owners, steamboat captains, and prominent financial speculators of the 1860s, such as J.S. Buckle, Simeon Reed, William Lad, R.R. Thompson, Henry Olmsted, J.O. Van Bergen, D. F. Bradford, Billy Ralston and John C. Ainsworth. These founding financiers' envisioned Pacific Northwest wherein control of transportation meant an accumulation of wealth via "rendering valuable her wastes and wilds…to open up and develop its resources."[45] Their conglomerated system of steamers, ports, and portages enabled the regional circulation of capital to and from polities and markets in San Francisco, South America, and Asia.[46] Their vessels moved fruit, timber, grain, iron, cattle, salmon, soldiers, settlers, politicians, and tourists through the Gorge. The OSNC's monopoly included control the Oregon Portage Railroad.

At a time when preeminent capitalists were extending their operations and investments into the U.S. empire's frontier territories, Columbia River navigation was both a material and financial gamble. OSNC's boat captain shareholders, such as John C. Ainsworth, were instrumental in shaping the company's physical and financial development—both on the water and land, locally at The Cascade Rapids and back east in U.S. congressional chambers. Regional historian Tyler Green argues that "Ainsworth was an old riverboat gambler, and his plan was accordingly audacious: he wanted to make Portland, a town one-twentieth the size of San Francisco, a

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[42] Companies were established separately in Washington and Oregon, but later conglomerated. See Frank B. Gill, "Oregon's First Railway: he Oregon Portage Railroad at the Cascades of the Columbia River" *The Quarterly of the Oregon Historical Society,* 25, no. 3 (1924): 171-235. For more detail on rail on the region see F.G. Young, "The History of Railway Transportation in the Pacific Northwest," *The Quarterly of the Oregon Historical Society,* 12, no. 2 (1911): 171-189.; L.C. Gilman,"The Spokane, Portland and Seattle Railroad Company," *The Washington Historical Quarterly,* 14, no. 1 (1923): 14-20; Frank B. Gill, "Oregon's First Railway: the Oregon Portage Rilroad at the Cascades of the Columbia River," *The Quarterly of the Oregon Historical Society,* 25, no.3 (1924): 171-235.
[43] Tyler Green, *Carleton Watkins: Making the West American,* (Berkeley: University of California Press, 2018): 212.
[44] The OSNC of Oregon was incorporated in 1862, and acquired nearly all of the steamboats on both the Columbia, Willamette, and Snake Rivers, as well as the network portage rails that connected the flow of people and commodities between their lower, middle, and upper-river vessels. See the work of authors cited above.
[45] Portland Daily Oregonian, April 17, 1865.
[46] Tyler Green, 211.

western co-terminus of the strongest transcontinental railroad line the city and the OSNC could attract."[47] The company's regionally specific experience navigating this particular riverine landscape meant, "the OSNC understood its geography and topography. While back east, iron rails were increasingly replacing rivers as the primary carriers of people and goods, the Columbia River Gorge's topography made railroad construction difficult or impossible. In much of the Pacific Northwest, the only cost-effective way to get through much of the terrain was along the routes cut by rivers. This was especially true of the OSNC's region, as the Columbia ran between volcanoes Hood and Adams and cut steep passage through the massive basalt flows that stretched between them."[48]

> "Upon reaching the rapids, ships would unload their cargoes onto portage railroads; the trains would run the cargo past the watery impasse and then load cargo onto another steamer on the other side. Because of the steep topography, these two portage roads were the only cost-effective way to get freight through the region. As a result, control of those portage roads was imperative to any transcontinental that wanted to run roads through the Columbia River Gorge. To control them was to control right-of-way along the entire Columbia River system, 268k square miles of future wealth. The OSNC controlled them."[49]

The rapids described in the passage above are "The Cascades of The Columbia"; the same as those depicted in the chromolithograph featured in *Reports of Explorations and Surveys, To Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean* (1855-1862) (Figure 6). Through narrative description, topographical data, and cartographic depictions published in the Pacific Railroad Surveys (analyzed in the previous section of this chapter), the War Department had assembled strategic information for material and financial speculation.

The submission of the Pacific Railroad Survey reports to Congress enabled the passaged of the federal Pacific Railroad Acts in the 1860s. The original Act of the series, signed into law by Abraham Lincoln in 1862, authorized direct land grants and government bonds to railroad companies. The War Department's surveys had already projected numerous exploitable paths for the extension of imperial tracks all across territories of numerous Indigenous nations. Under the Pacific Railroad Acts, these Indigenous lands were renamed as "public lands," and companies with land grants thereby authorized to "use dirt, stone, and timber for construction, granting 200 feet on each side of the line for stations, buildings, and other physical plant." As Manu Karuka has argued, and I likewise do in this manuscript, "[t]he law was itself a speculative enterprise to remake Indigenous lands, and Indigenous modes of relationships in and with those lands. The capital relationship is inextricable from processes of invasion and occupation, but the capital claim actually preceded any functional colonial occupation of the region."[50]

With the passage of the Acts, transnational railroad corporations and investors made material and financial moves to implement their previously speculative transcontinental rail connections. With

[47] Ibid.
[48] Ibid, 212.
[49] Ibid.
[50] Manu Karuka, *Empire's Tracks,* 67-8.

the advent of land grant finance, and the increasing demand for transit and trade by a growing settler population, the OSNC built a broad-gauge railroad out of the old portage's horse-drawn road, and acquired small steam locomotives for the retrofitted line.[51] OSNC shareholders aimed to sell their lines in the Columbia and Portland terminus as the ideal transcontinental connection. Yet, as the Central Pacific, Union Pacific, and Northern Pacific expanded westward toward end-destinations in San Francisco and the Puget Sound, they threatened to largely bypass Oregon and the growing city of Portland altogether.[52] Though OSNC had upgraded its existing portage railroads along the Columbia River, the evidence and advertisements of such needed to travel. In order to secure political and financial investment in their infrastructure, OSNC turned to commercial landscape photography as a mode of accounting for the value of their lands and lines in the Gorge.

OSNC shareholders and lobbyists aimed to sell their infrastructure to congress and powerful investors as the best option for a throughway to the Pacific coast, and they relied on visual representations to evidence their claims. While lobbying in congress, and persuading company executives and powerful investors, OSNC agents used landscape photographs as evidence of their lines as the best option for a throughway to the Pacific coast. In their appeal to eastern railroad officials, congressional officers, and financiers, Green describes, "the game was on. But—and for the OSNC, this was the key to its whole future—would easterners whose railroads, capital, and political support the OSNC needed to attract, understand how different eastern geography and topography were from western topography? Would investors, bankers, railroad executives, and politicians understand the OSNC's geographic and topographic hammerlock on the region? […] Geography gave OSNC its biggest business advantage, but for now, easterners failed to understand the geography."[53]

In 1867, the OSNC commissioned Carleton Watkins to produce mammoth-plate photographs and stereographs of their infrastructure running through the Columbia River Gorge landscape. Watkins's photographs of waterfalls and railroads were the first photographic series of the Gorge every produced, and are perhaps still the most iconic landscape images of the Gorge in the present-day settler imaginary. They are popularly taken-up in ahistorical and whitewashed environmentalisms that uphold investment in the sublime grandeur of sweeping wilderness. I read Watkins images of the Gorge against this narrative to demonstrate how scenic views—and viewing scenery—was produced by, and in turn produced, technologies of traffic (here, the railroad) that mediate the metabolism of U.S. imperialist war-finance nexus. The production and circulation of scenic value in the Gorge projected future-oriented claims onto Indigenous lands, assisted the material expansion of extractive industry, and routed both cultural and financial investment through newly viewable territory.[54]

Today, Watkins is renowned as an historical master and cutting-edge photographer of land and wilderness. His images of Yosemite were instrumental in securing federally protected wilderness status for the valley during the 1864 passage of the Northern Pacific Railroad grant. Yet, art

[51] Frank B. Gill, "Oregon's First Railway," 197.
[52] Tyler Green, *Carleton Watkins*.
[53] Ibid, 213-14.
[54] This claim is informed by the Manu Karuka's engagement with "future-oriented claims" and railroads, *Empire's Tracks,* 66-69.

historians and biographers increasingly assert that Watkins's work must be examined as that of a commercial photographer.[55] His images of mining sites and laborers, railways and mills, warehouses and homes—series beyond those at Yosemite—and the Columbia River series in particular must be investigated more thoroughly for their entangled aesthetic and financial imperatives. The following analysis builds on this argument, and further specifies that Watkins's landscape photographs of the Columbia River produce, and are in turn produced by, the coconstitution of imperial traffic, finance, and scenic value in the Gorge. The visual conventions of Watkins's landscape photography, I argue, cannot be understood separately from the circulation of traffic and capital routed through his scenes.

Watkin's was a preeminent survey photographer of his time. Increasingly, state and corporate sponsored survey photography assisted in making "real," knowable, consumable, and *valuable* the "unknown" and "unseen" territories onto which westward moving politicians, investors, and settlers projected their future interests.[56] Throughout his career, he was financially sustained by contracts filed with wealthy investors in California, who hired him to photograph their industrial enterprises and estates. Watkins's production on the OSNC route along the south shore of the Columbia River must be understood in the context. Historian Tyler Green explains, "He was there to make pictures of the Oregon Steam Navigation Co. (OSNC), the most important private concern in the economically promising Pacific Northwest, and to make scenic views. Just as Watkin's pictures of Yosemite would define it, so too would his picture of the steep basalt cliffs and plunging waterfalls of the Columbia River Gorge."[57] The images Watkins made of the Gorge in 1867-68 were designed to communicate that railroad access to national and international trade via Portland, and to the Pacific Northwest as a region, would necessarily be routed by the OSNC—the only company that controlled the fundamental infrastructure to transit the tremendous, intractable Gorge.[58]

The aesthetic conventions of sublime vistas in his sweeping panoramas and 3-D stereographs were not merely apolitical tricks of artistry, but techniques of intertwined profit and pleasure making. Regional and art historians have argued that Watkins's photography visually chronicle "the rapidly changing history of Euro-American settlement in that formidable landscape, capturing the river as it lay in the balance between the pioneer era and more modern ways of life"[59] wherein viewers see "the Gorge at a crossroads in terms of the ways people lived in and moved along the waters."[60] However, I assert that rather than reflecting or capturing the changing nature of travel through the Gorge, these photographs in turn assisted change, and in fact worked as technologies of imperial expansion. To name "change" in the way "people lived and moved" is insufficient. These images were designed to inform politicians and financiers as to how they would deploy capital, where they might choose to settle, and which vistas they would collect on

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[55] For more on this see Megan K. Friedel and Terry Toedtemeier, "Picturing Progress: Carleton Watkins's 1867 Stereoviews of the Columbia River Gorge," *Oregon Historical Quarterly,* 109, no. 3 (2008): 388-411.; Peter E. Palmquist and Martha A. Sandweiss, *Carleton E. Watkins, photographer of the American West,* (Albuquerque: University of New Mexico Press, 1983).

[56] Kevin Michael DeLuca and Anne Teresa Demo, "Imaging Nature: Watkins, Yosemite, and the Birth of Environmentalism," *Critical Studies in Media Communications,* 15, no. 3 (2000): 245.

[58] Tyler Green, 220.

[59] Megan K. Friedel and Terry Toedtemeier, 389.

[60] Ibid, 406.

their walls.[61] I read Watkin's landscape photography within the repertoire of settler ocularcentric strategies to construct the Gorge as an imperial possession: One whose attainment was naturalized by visual suggestions of completed conquest and readiness for the traffic of commerce and leisure.

Constructing scenery in the Gorge has long been a visual project of Indigenous dispossession, routing finance, and selling to settlers. The conventions of depicting scenery in this way were inseparable from the commercial projects of advertising to powerful politicians and railroad financiers, as well as pandering to the public's burgeoning nationalism and curiosity to "see the West." Watkins's produced around 50 sweeping mammoth-plate photographs for the OSNC and wealthy collectors, as well as over 100 three-dimensional stereoviews for an emerging middle-class that sought to "visually teach themselves about the world."[62] Rather than consider components of Watkin's Gorge series as juxtaposed, categorically distinct binaries—aesthetic landscapes alongside industrial landscapes; and high-profile mammoth plates in addition to common mass-produced stereo views—I assert that it is more informative to examine them as a cohesive body of work. In so doing, we see how material technologies of occupation were always already deeply commercial and cultural as well.

The images I have selected to examine here are all taken at the Cascades (both lower, middle, and upper and on what is presently the Washington and Oregon shores). In the previous section I examined how this series of rapids was a site of much imperial expedition and cartographic anxiety about military and commercial navigation and Indigenous geopolitical control (see Figure 5; Figure 6). First, I examine the mammoth-plate images that would have been sold to collectors in cities as distant as San Francisco and New York, and used by the Oregon Steam and Navigation Company as evidences of investment-worthy infrastructure in negotiations with federal representatives and wealthy investors. After presenting a close reading of mammoth-plate images of the Cascades and Block Houses, I then turn to three stereoviews of the Middle Block House also made by Watkins. These stereoviews are near-identical photographs that, when paired and printed on heavy cardstock, could be viewed through a hand-held or tabletop stereoscope for parlor pleasure whereby a viewer is transported to a realistic, three-dimensional vision as though they too, were looking out onto the landscape.[63]

[61] Tyler Green, 203.
[62] Megan K. Friedel and Terry Toedtemeier, 392.
[63] Ibid.

Figure 9 "Cascades with Indian Block House." [64]

Figure 10 "Ruins of the High Bridge, Middle Block House, Columbia River, Washington Territory." [65]

[64] OHS Digital Collection, bb000016 "Cascades, with Indian Block House" (O6). Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; b4.; OrHi 21616.
[65] OHS Digital Collection, bb000798 "Ruins of the High Bridge Middle Block House Cascades" (Mammoth 434), Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; b4.; OrHi 21108

Watkins's photograph "Cascades with Indian Block House" (as shown in Figure 9, from "Sun Sketches of Columbia River Scenery" album) is reminiscent of Steven's etching of "The Cascades" (Figure 5). The scene of unnavigable rapids that Watkin's photographed here was already well known to surveyors, politicians, officials, and industry investors. What this image features here that Steven's etching did not is the recently constructed OSNC rail-line on the north shore, the bright wooden pillars of which can be seen threaded behind basaltic outcroppings along the forested hills. This is a route around the rushing water. However, the line is not named in the title of the photograph. Rather, it is the "Indian Block House"—otherwise known as Fort Rains—which Watkins's chose as discursive object of this landscape. Though a viewer may wonder that the Block House is the small structure with bright white roofing in the near dead center of the image, it is the much more difficult-to-see building at the top of the bluff. A gray, vertical two-story house—nearly mirroring the twiggy upward stature of the rail-line pillars or surrounding pines—the "Indian Block House" nearly blends into its natural surroundings.

The "Indian Block Houses" of Watkins's photographs were forts along the Cascades that housed detachments of soldiers and armaments that were used to physically assert settler and federal claims to property through surveillance, threat, and murder of Indigenous peoples.[66] "The Block House" in Figure 9, nearly disappearing itself into the tree line, is Fort Rains. The U.S. Military built Fort Rains in 1855, along with Fort Cascades to the west and Fort Lungenbeel to the east. These Forts were built in order to bolster militarized claim and policing of the portages at the cascade rapids as a key corridor for the transport of settlers, food, and arms. Following the Donation Land Claims Act of 1850, the Franklin Piece administration of the mid-1850s marked a turn to "reservation" policy on the heels of Jacksonian "removal": The Stevens-Palmer Treaties of 1855 in Walla Walla and The Dalles manifested this approach to expunging and expropriating Indigenous title to land.[67] For the Confederated Tribes of Warm Springs, among many other Plateau and mid-Columbia River peoples, the 1855 Treaties codified in federal law the already ongoing violent removal and incarceration of Indigenous nations along the Columbia River onto confined parcels of land miles and miles away from ancestral riverine territories. These are the Treaties still held as settler colonial law of the land today, and regulate the enforcement of reservation borders as seen in the map of Warm Spring's land at the beginning of this chapter (Figure 1). And yet, the Treaties were never successful in their aims nor uncontested in their implementation.

Scholars of Watkins's photographs have described his "Block House" images as evidence that by the 1860s the Gorge was "not a military enclave but a hub of commercial activity centered around the OSNC."[68] These images "conveyed to both armchair tourists and potential OSNC travelers that, while the Columbia river Gorge may have been an adventurous place to travel, it was only the terrain that offered danger."[69] However, I engage these photographs as ones that did not "reflect" an absence of "threat of Indian attack" but worked to construct that absence—

[66] Give a bit of information about this? I have specifics if that is important for understanding. I do not want to re-narrate genocidal violence when it is unnecessary.
[67] Kent Richards writes: "To Stevens, his task appeared straightforward—he would extinguish aboriginal title to the land, establish the best lines of roads and railroads, and inaugurate a government that would provide the political stability necessary for the population to grow and the economic to flourish in the Northwest sector of the nation," 345.
[68] Megan K. Friedel and Terry Toedtemeier, 404.
[69] Ibid.

however falsely—and served as tools to naturalize the occupation of Indigenous lands. Watkins photos offer a way not understanding the inextricable development of militarized occupation, commercial and tourist traffic, and the cultural production of scenic value. As commercial accountings and consumer commodities, "Block House" photos bolstered settler amnesia of the violence of dispossession, and further strengthen financial investment in the incarceration of Indigenous peoples away from routes that U.S. empire sought to exploit for river navigation, railways, and roads.

In Watkins's "Ruins of the High Bridge, Middle Block House, Columbia River, Washington Territory," the image is captured from a point upon the bluff (Figure 10). The viewer is interpolated to occupy a lookout position *from* the Middle Block House itself. Looking down at the river, and across to the Oregon shore, we see a steaming locomotive heading west on the Oregon Steam and Navigation Company's standard-gauge railroad line. The train appears to be in motion, a bright puff of steam blowing back from the engine as it chugs eastward toward The Dalles. Behind the sturdy cargo boxes, making their way down solid earthen foundation of the embedded steel rail, is the comparative evidence of technological progress at work: The dilapidated ruins of the High Bridge. Watkins juxtaposition portrays OSNC in rapid spatial and technological advances (the High Bridge was constructed merely two years before the land-laid standard-gauge line in the foreground). Further still, these visual conventions of advancement in the west—in over articulation with contemporaneous precepts of Manifest Destiny—are constructed from the vantage point of a military fort. The circulation of this view, in my reading, operates at two coconstitutive registers: Evidence of "successful" Indigenous removal and dispossession, and invitation for financiers, settlers, and tourists to pass through and possess the sight laid out before them.

In order to take a photograph from the Middle Block House, Watkins had to lug dozens of glass plates, colloidal chemicals, and a "dark-room" tent, up to the bluff upon which the structure was erected. The photographic process was time consuming, required scouting, and on-the-spot processing of negatives.[70] This image, as proof of photographic material production, evidences a shift in colonial order in Oregon and Washington Territory. No longer an active military outpost, occupied by soldiers and armed with a howitzer at the ready, Fort Rains is a place from which renowned photographers can capture scenic landscapes and commercial traffic can be envisioned.

The Middle Block House was also Watkins's subject and vantage point for stereographs he made on his pass through the Gorge (Figures 11 and 12). These images were sold by the thousands to households across the westward-expanding empire as the public sought to participate in the national consumption of "the farthest and most promising regions of its new continental empire."[71] For those who could not afford—financially and physically—the steam-ship journey to the Columbia River and subsequent travel along the river shores, Watkin's stereoscope decks sought to approximate a tourist's site-seeing passage through the Gorge. An ocularcentric forecast, perhaps, of the educative pleasure that would be sought by future passengers on train, automobile, and hiking trail.

[70] Tyler Green, 203
[71] Ibid.

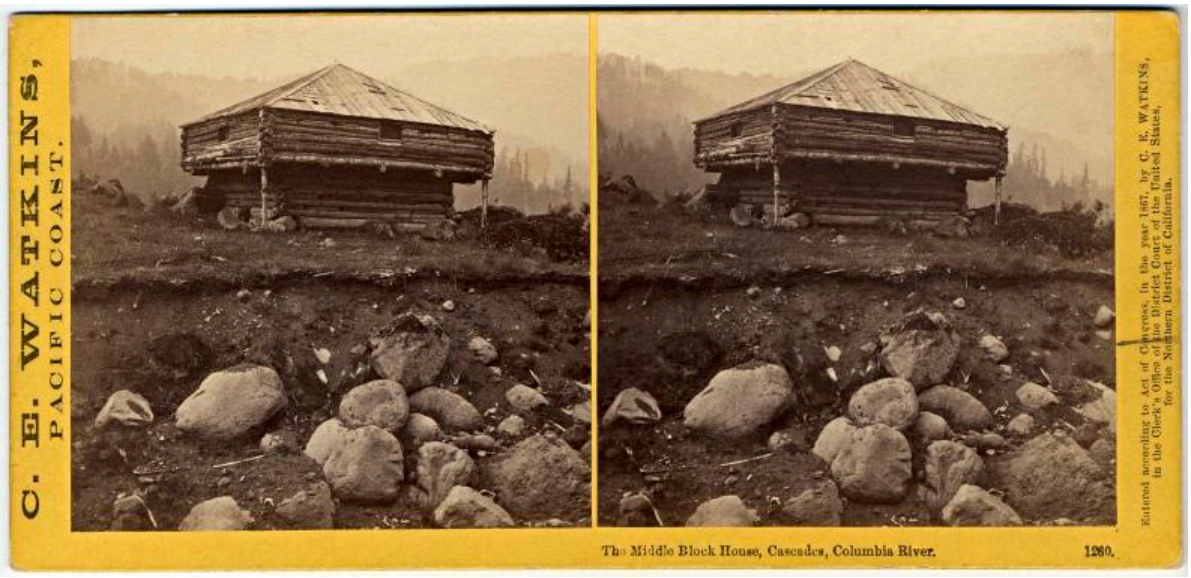

Figure 11 The Middle Block House, Cascades, Columbia River[72]

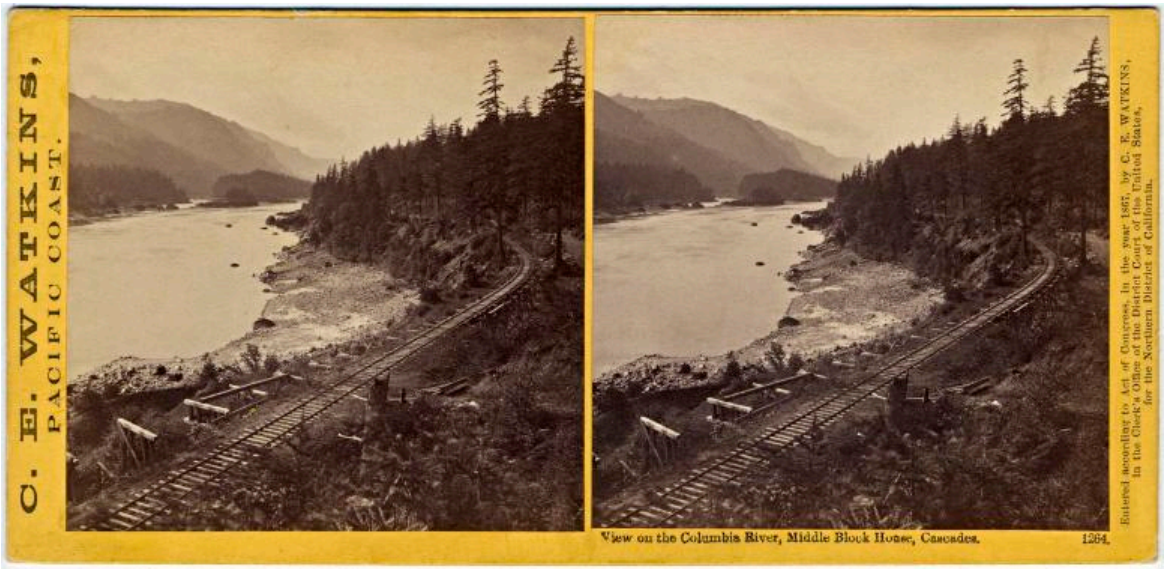

Figure 12 View on the Columbia River, Middle Block House, Cascades[73]

The stereoview "The Middle Block House" presents, in closer view, an historical ruin (Figure 11). Despite the occupation of the Middle Block House by U.S. militia merely eight years before the making of this image, the fort here appears to be weathered and crumbling. Broken beams

[72] OHS Digital Collection, bA020993, "The Middle Block House, Cascades, Columbia River" (Stereograph 1260), Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; b1.f118

[73] OHS Digital Collection, bA020994, "View on the Columbia River, Middle Block House, Cascades" (Stereograph 1264), Carleton E. Watkins photographs, 1861-1885; Org. Lot 93; b1.f126

and missing pillar, foregrounded by an actively eroding bank and boulders whose strength appears to endure beyond that of the precariously arranged building, suggest an age-old, obsolete vestige of militarized occupation. Perhaps an artifact—or in the practice of its parlor consumption, an amusing curiosity—Fort Rains appears as a catalogued object. The scene here presented is one absent of Indigenous peoples,[74] wherein the material infrastructures of colonization are rendered vestiges nearly returned-to-nature. Mass printed on card-stock and sold to the masses, the scene circulates as a national commodity for consumption in the comfort of settler homes.

Yet another stereoview from this series, "View on the Columbia River, Middle Block House, Cascades" (Figure 12), invites the viewer to look out at the river from Fort Rains itself. Over the river and down the OSNC tracks, out to the forested cliffs of the Oregon shore, the stereographic vision of the Gorge intends to transport the viewer to the geophysical location of the photographer. There to gaze upon the scene, not to haul grain or move guns, the viewer stands at Fort Rains and takes comfortable pleasure in the scene. So easy to access as a stereoview, such a practice assists the settler public in imagining their right to see—their right to occupy—this place. As the railroad brings the eye from the nearest point in the fore, to gentry curve through the width of the frame and between two tall pines through a wooded horizon, the eye follows and works to carve a path through the trees. Can the tracks be followed all the way to the horizon? Can one see there? Must one go there to see? The image demands the viewer look west, suggests an imagining of stretches beyond the line of sight, and offers a new yet obviously navigable route down the River toward the Pacific.

Financial gambling has long been part of development in the Gorge. Landscape photography was enrolled in lobbying strategies to secure sales and speculation in the Pacific Northwest "frontier." Scenic images of the Gorge produced in the 1860s assisted the ideological and material extension of the U.S. empire's tracks to the Pacific. Decades after Watkins's work circulated in political and public spheres, preeminent financier and trader of U.S. railroad securities—Henry Villard—sought to obtain control of OSNC infrastructure in a move to further monopolize transportation in and through the region. Villard aimed to turn profit from the natural resources and routes of the region in global markets, and thus sought to control OSNC infrastructure. Backed by a clientele of European bond-holders—many of whom were also large creditors of the Oregon Steamship Company—Villard formed an American syndicate, the Oregon Railroad and Navigation Company, through which he amalgamated both the OSNC and the Oregon and San Francisco Steamship Line. With the subsequent formation of the Oregon Transcontinental Company, and completion of railroad lines to the Pacific Ocean via projects of the Northern Pacific Railway and Union Pacific Railway, the old portage rails through the Gorge constituted a network of tracks that crossed the U.S.[75]

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[74] Megan K. Friedel and Terry Toedtemeier explain: "Watkins's documentation of Euro-American progress along the Columbia but not Native communities leaves a negative space in his 1867 photographs—an omission perhaps explained by the removal, beginning in 1855, of many Native Americans from their traditional settlements to reservations…It is also possible that Watkins's employers and coworkers dissuaded him from taking any photographs of Native peoples that would indicate they still have a presence along a river the company was so rapidly developing," 408.

[75] See Gill and Young.

Empire's Traffic

The imperialist projects of the 1800s structured the contemporary conditions of occupation in the region today and turn on booms of traffic and the pleasures of possession. The extension of transcontinental lines through the Gorge incorporated adjacent lands into the federally authorized corporate Land Grant system. Railroad companies and state chambers of commerce published thousands of promotional brochures and pamphlets to advertise lands for sale, and scenes for leisure, in the Pacific Northwest. Such print materials contained narratives, maps, and illustrations designed not for key politicians or financiers, but for the settler public at large. Figure 13 shows a map produced by the Northern Pacific Railway. This map details the Pacific Northwest as a region, displaying the thin black line of transcontinental track that lines the south shore of the Columbia and into Portland. The hashed lines on either side of the road indicate the outer limits of the railroad's lands for sale. Alternating plots of land, within 50 miles on each side of the track, were granted to the Northern Pacific through Oregon Territory.[76] The company, granted nearly forty million acres by the Railroad Acts, sold land to settler colonists and used plots as security to borrow money—all of which financed the construction of their transcontinental system.

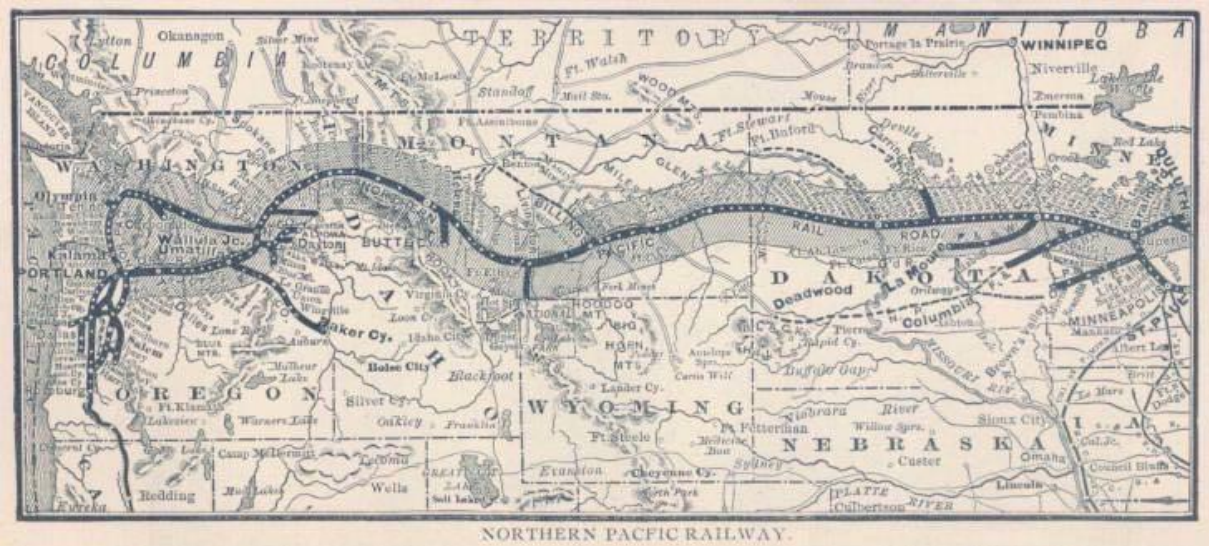


Figure 13 Map of route and reaches of land-grants from Northern Pacific Railway brochure (1883). [77]

[76] The plots alternated; every other parcel was kept by the federal government and given away, or sold at extremely low cost, to homesteaders. For more detail on railroad land grants and homesteading, see Ross Cotroneo, "Western Land Marketing by the Northern Pacific Railway," *Pacific Historical Review*, 37, no 3 (1968): 299-320.

[77] "The brochure from which this map comes is a self-promotional pamphlet published by the city of St. Paul, and concerned almost uniformly with that city's assets, excepting a small section focusing on tourism in the Yellowstone. This brochure commemorates the September, 1883 opening of the Northern Pacific's transcontinental route." Northern Pacific Railway, (1883). Identifier: wsu178; HE1009 .S3. Courtesy of the WSU Digital Collection. https://content.libraries.wsu.edu/digital/collection/maps/id/346/rec/68.

Maps, advertisements, and booster discourse in papers and pamphlets, constructed a scene of fertile, newly accessible and amply subsidized plots for settlers. The map in Figure 14, published by the Oregon Railroad and Navigation Company and Southern Pacific Company in 1906, serves as an example. Designed for tourists, speculators, and potential property-owners, this map boasts a title of nationalist exceptionalism: "The Northwest presents the greatest opportunities for settlers of any portion of 'Uncle Sam's' domain." The map depicts Washington and Oregon States, and is centered squarely on the Gorge. Here, the landscape is "unequaled" for "grains, grasses, fruit, lives stock, and minerals."

Figure 14 Map of the Oregon Railroad and Navigation Company and the Southern Pacific Company, 1906. The top text reads "The Northwest presents the greatest opportunities for settlers of any portion of 'Uncle Sam's' domain," and the bottom, "For grains, grasses, fruit, live stock and minerals the territory embraces in this map is unequaled."[78]

[78] Map of the Oregon Railroad and Navigation Company and the Southern Pacific Company. (1906). Identifier: wsu 303; sc001 2.1. Courtesy of the WSU Digital Collection. https://content.libraries.wsu.edu/digital/collection/maps/id/726/.

Possession and investment in the Pacific Northwest was configured as simultaneously profitable and pleasurable. Commercial enterprises enrolled imag(in)ings of sweeping scenic vistas as ideological and material techniques for accruing capital. The $5000 Gold Bond and Land Grant certificate in Figure 11 offers a powerful example of how finance was aestheticized in and through the landscape of the Gorge. Perhaps a manifestation of scenic accounting in the most literal sense, the Bond's text and numerics frame a prominently centered vision of pines, river, and mountains. This is not an image of industry or tracks, but a panoramic view from an elevated hill—in one's hand an entire vista is held. In looking at the Bond, the owner looks out across the land. The proprietor's evidence of financial stake in the U.S.'s newly opened territories simultaneously serves to visually enclose the scenic investment. Property is rendered a pleasure to hold, particularly in and through the leisure of looking.

Figure 15 Northern Pacific Railroad and land grant bond for $5000. Note the print of the Cascade mountain range on the horizon, with the Columbia River running before as seen from the height of a forested vista (1921).[79]

As railroads and river passages enabled the proliferation of large-scale agriculture and industry in Oregon Territory, private and political entities alike began to advertise the pleasures of these newly established inroads. A proliferation of new rail lines, river routes, and highways enabled an ease of transcontinental movement of settlers and capital. The imperial projects of claiming land and extending rail were forms of material violence that made possible, and were reinforced, by these subsequent imperial routes of traffic. Scenic value, as an organizing rubric for routing imperial tracks and traffic through the Gorge, was not obsolete with the completion of the transcontinental railroad: Rather, it was transmuted. Following Watkins's imagin(in)ings of Indigenous erasure and completed conquest, representations of Gorge scenes (re)populated the landscape with a propertied settler public. Visions of vital, white masculinity at play in the Gorge sold train tickets, tourist packages, and affects of domesticated imperial futurity. Such visions

[79] Northern Pacific Railroad and Land Grant, 1881 Specimen Bond. www.archivesinternational.com, https://www.icollector.com/Northern-Pacific-Railroad-and-Land-Grant-1881-Specimen-Bond_i26828094

worked to naturalize the occupation of Indigenous lands, and presented the ongoing project of supplanting Indigenous place as both inevitable and pleasurable.

The discourse and images circulated by boosters, railroad companies, and state chambers of commerce reinforced and transmuted the value of scenery in the Gorge. Echoing the rhetoric and vistas of Watkins's photography, brochures and pamphlets in the first quarter of 1900s increasingly projected an entrepreneurial subject seeking both profit and pleasure from a fertile feminized landscape. Most of these print materials featured maps of transcontinental rail-lines, often with hourly schedules from major cities like Chicago and St. Paul, with destinations in Spokane, Seattle, and Portland. Many of them also advertised the sale of plots from federal land grants, and provided prices according to landscape type and soil quality. The narrative text that accompanied such logistical and financial information romanticized both the activities of settlement as well as the geophysical qualities of the region

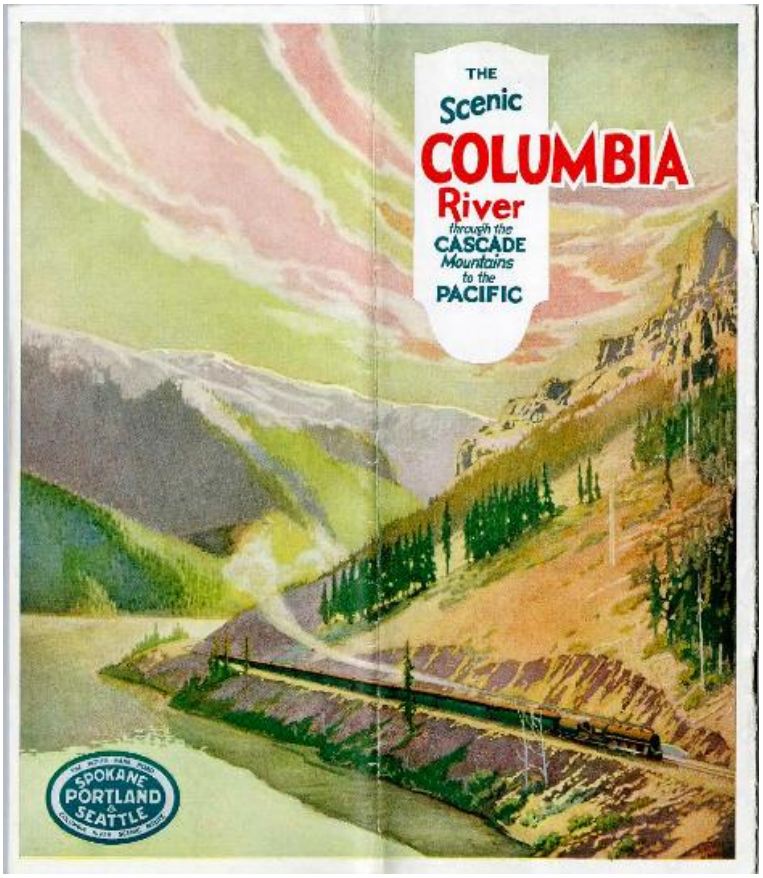


Figure 16 Transcontinental and local railroad companies published brochures, like this one, featuring the Gorge's scenic beauty and comfort of modernized passenger cars to tourists and settlers alike (many of whom were both at once).[80]

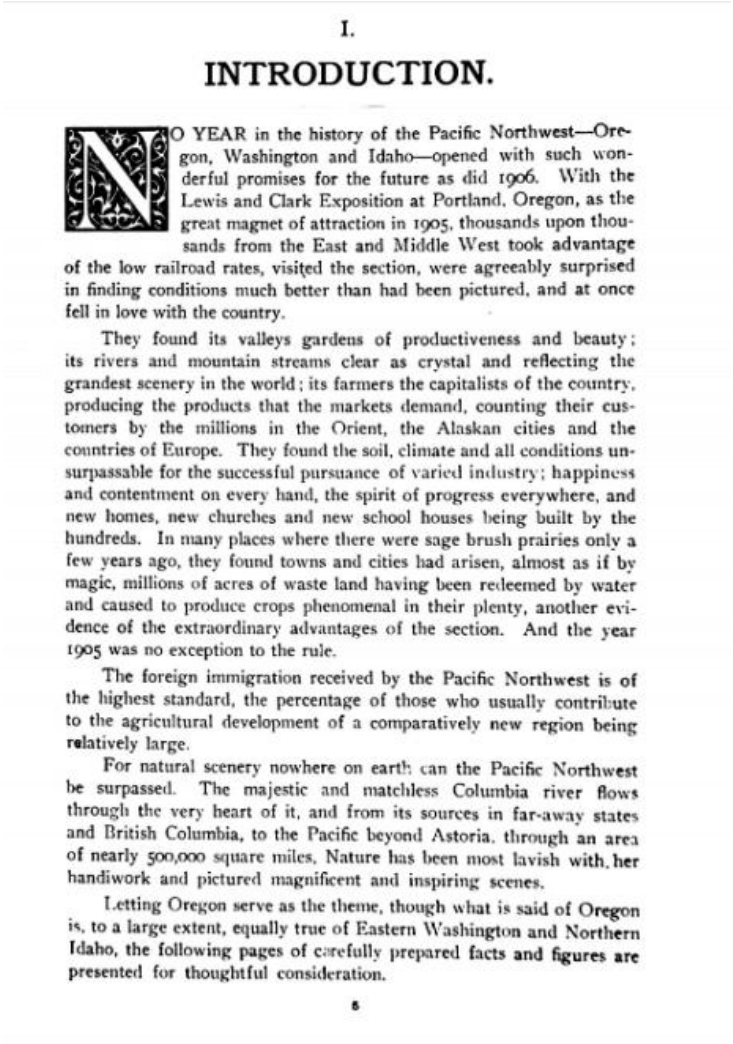
[80] Pacific Northwest Promotional Brochures. Mss 6000. Boxes 2-6. Oregon Historical Society Archives.

Figure 17 Cover and inset of promotional brochure by ORNC and SPC lines. "Oregon, Washington, Idaho and Their Resources" (1905).[81]

The ORNC and Southern Pacific Company, for example, published this one (of *many*) booster pamphlets in 1905, claiming that farmers and capitalists count their customers by the millions in "the Orient, the Alaskan cities and the countries of Europe[…]For natural scenery nowhere on earth can the Pacific Northwest be surpassed. The majestic and matchless Columbia river flows through the very heart of it, and from its sources in far-away states and British Columbia, to the Pacific beyond Astoria, through an area of nearly 500,000 square miles, Nature has been most lavish with her handiwork and picture magnificent and inspiring scenes."[82]

As state and corporate entities crafted a narrative of technoscientific promise for the settler-nation's willing workers, so too, did they link this boosterism with the promise of health through leisure and outdoorsmanship. Specifically, a form of vitality that was guaranteed by the embodied consumption of "magnificent scenery." Interrelated with an emerging politic of extracting wealth from territory through technological innovation, the settler subject was increasingly configured as one who needs not conquer new land, but seek pleasure in the healthful clime, "scenic grandeur," and visual beauty that his nation is engineering as available to him.

[81] Ibid.
[82] Ibid.



I.

INTRODUCTION.

NO YEAR in the history of the Pacific Northwest—Oregon, Washington and Idaho—opened with such wonderful promises for the future as did 1906. With the Lewis and Clark Exposition at Portland, Oregon, as the great magnet of attraction in 1905, thousands upon thousands from the East and Middle West took advantage of the low railroad rates, visited the section, were agreeably surprised in finding conditions much better than had been pictured, and at once fell in love with the country.

They found its valleys gardens of productiveness and beauty; its rivers and mountain streams clear as crystal and reflecting the grandest scenery in the world; its farmers the capitalists of the country, producing the products that the markets demand, counting their customers by the millions in the Orient, the Alaskan cities and the countries of Europe. They found the soil, climate and all conditions unsurpassable for the successful pursuance of varied industry; happiness and contentment on every hand, the spirit of progress everywhere, and new homes, new churches and new school houses being built by the hundreds. In many places where there were sage brush prairies only a few years ago, they found towns and cities had arisen, almost as if by magic, millions of acres of waste land having been redeemed by water and caused to produce crops phenomenal in their plenty, another evidence of the extraordinary advantages of the section. And the year 1905 was no exception to the rule.

The foreign immigration received by the Pacific Northwest is of the highest standard, the percentage of those who usually contribute to the agricultural development of a comparatively new region being relatively large.

For natural scenery nowhere on earth can the Pacific Northwest be surpassed. The majestic and matchless Columbia river flows through the very heart of it, and from its sources in far-away states and British Columbia, to the Pacific beyond Astoria, through an area of nearly 500,000 square miles, Nature has been most lavish with her handiwork and pictured magnificent and inspiring scenes.

Letting Oregon serve as the theme, though what is said of Oregon is, to a large extent, equally true of Eastern Washington and Northern Idaho, the following pages of carefully prepared facts and figures are presented for thoughtful consideration.

6

Figure 18 Text within promotional brochure by ORNC and SPC lines (1905-6).[83]

For example, a promotional brochure published by the Chicago, Burlington, and Quincy Railroad; Northern Pacific; Great Northern Railway, the authors (signed as the passenger directors for each line)—entitled "The Land of Opportunity"—reassured young men of the 1920s that the dirty-work of settlement is done (Figure 18). Now, the story went, was the moment to take advantage of the wealth ready to spring from the technological achievements reshaping the region:

> "Huge dams and irrigation works, each an engineering feat in itself...The pioneer work is done, a raw country has been conquered and subdued...To the farmer, industrial worker, manufacturer, the retail business man, the man with capital to invest, and to every man who yearns to get a start at the start of things, the Pacific Northwest calls."[84]

This discourse was accompanied by cartographic visions of the myriad potential routes a reader's future travels might take (Figure 19).

[83] Ibid.
[84] Ibid.

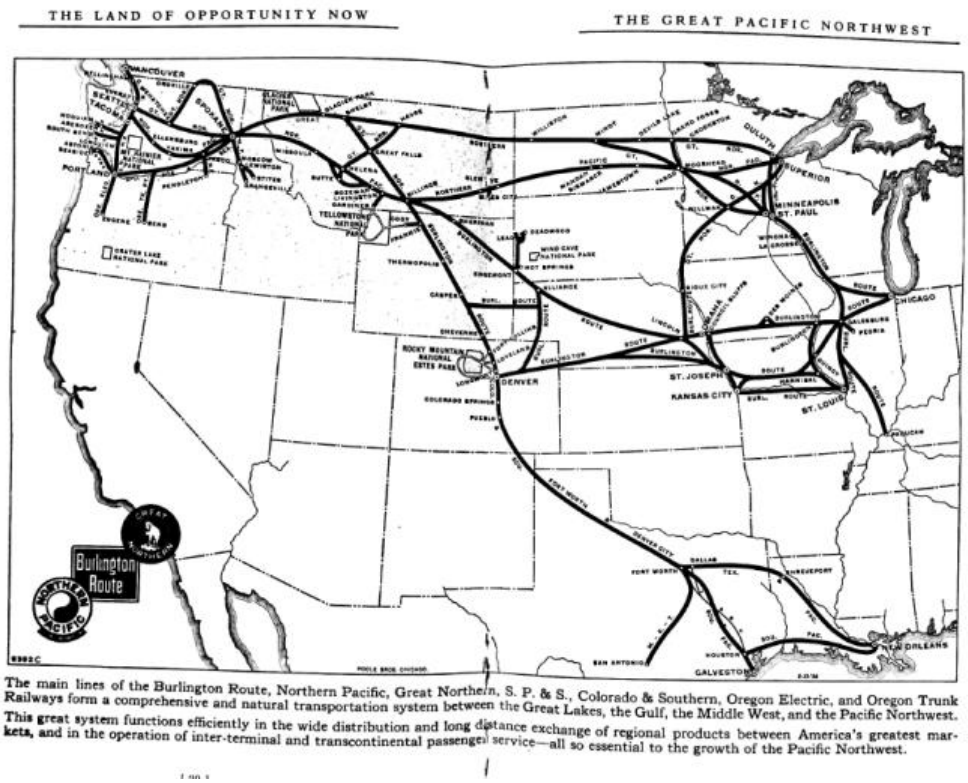
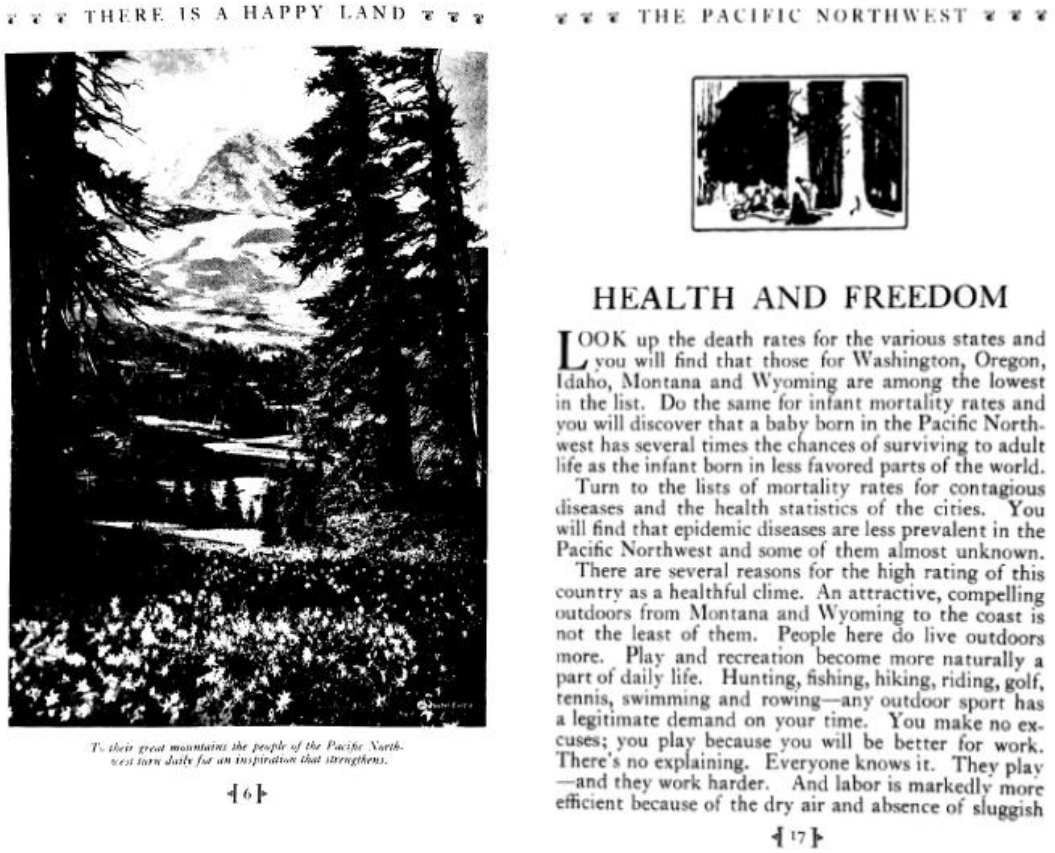


Figure 19 Map showing transcontinental routes including in the pages of a booster brochure, "The Land of Opportunity Now," published by Chicago, Burlington, and Quincy Railroad; Northern Pacific; Great Northern Railway.[85]

The same companies published another similar brochure in 1923, "There is a Happy Land" (Figure 20). The pages within featured photographs of distinctive landscape features (such as the Cascade mountains and Douglass Firs) to illustrate text that described a disease free and healthful clime in the region. Here, the interpellated subject is one who aims to improve the land *and* himself. An invigorating place to play, the texts suggest, the pacific northwest landscape makes a man a happier, healthier, and better worker:

> "You will find that epidemic diseases are less prevalent in the Pacific Northwest...
>
> There are several reasons for the high rating of this country as healthful clime....
>
> You make no excuses; you play because you will be better for work. There's no explaining. Everyone knows it. They play—and they work harder."

[85] Ibid.



THERE IS A HAPPY LAND

To their great mountains the people of the Pacific Northwest turn daily for an inspiration that strengthens.

16

THE PACIFIC NORTHWEST

HEALTH AND FREEDOM

LOOK up the death rates for the various states and you will find that those for Washington, Oregon, Idaho, Montana and Wyoming are among the lowest in the list. Do the same for infant mortality rates and you will discover that a baby born in the Pacific Northwest has several times the chances of surviving to adult life as the infant born in less favored parts of the world.

Turn to the lists of mortality rates for contagious diseases and the health statistics of the cities. You will find that epidemic diseases are less prevalent in the Pacific Northwest and some of them almost unknown.

There are several reasons for the high rating of this country as a healthful clime. An attractive, compelling outdoors from Montana and Wyoming to the coast is not the least of them. People here do live outdoors more. Play and recreation become more naturally a part of daily life. Hunting, fishing, hiking, riding, golf, tennis, swimming and rowing—any outdoor sport has a legitimate demand on your time. You make no excuses; you play because you will be better for work. There's no explaining. Everyone knows it. They play—and they work harder. And labor is markedly more efficient because of the dry air and absence of sluggish

17

Figure 20 "There is a Happy Land" was a promotional brochure published by the Chicago, Burlington, and Quincy Railroad; Northern Pacific; Great Northern Railway (1924).[86]

Railway companies and chambers of commerce enrolled the Pacific Northwest landscape in authorizng a promise of health and leisure. With the "pioneering done," boosters claimed, the nation's willing workers could move west in comfort. Yoked to the notion of an "attractive, compelling outdoors" was an emerging conception of health and freedom as an inherent quality of scenery itself.

As evident by the cover images of these brochures, the futurity of imperial property and profit in the Pacific Northwest was projected through a gendered and racialized rubric of scenery (Figure 14; Figure 18; Figure 19). Feminist scholars of environmental history and U.S. empire have thoroughly demonstrated how white-washed feminization of landscape and natural resources articulated with masculinist pleasures in conquest and control.[87] In the case of state and corporate booster materials, often publishing together, sweeping views of the Columbia River and Cascade Mountain peaks were offered up to readers through the bodies of white women projected into the fore. Internal pages detailed acres of unsold state land by county and type of agricultural endeavor.

[86] Ibid.

[87] The theoretical underpinnings of this assertion comes from an engagement with work on gender, race, and empire by Anne McClintock, Laura Anne Stoler, and Mary Pratt Brady.

Figure 21 Covers of brochures published by the state chamber of commerce. Left, "Oregon the Land of Opportunity. Right, "Oregon Primer" (1924).[88]

These are covers of brochures printed by the Oregon Chamber of Commerce, also aiming to entice an eastern public to move west (Figure 21). Evocative of Demeter the Greek Goddess of the Harvest, these women bear fruit. On the left, a sprouting seed in her hand, and on the right a platter of apples, pears, and grapes, each figure lifts a symbol of fertility to the reader. Intended for men moving west, these gestures offer up material and social reproduction; gifts awaiting in Oregon. The women appear as embodiments of the scenery itself. The flowing dress of each blends with agricultural fruits around her. On the left, green and red folds meld into verdant leaves and rosy apples—her hand itself is a nurturing parcel of earth, from which a sapling springs to join the firs that frame her On the right, a pouring purple gown shares ground with plump clumps of purple grapes—her long braid itself, a vine. Like the snow-capped mountain on the horizon, these figures whitewash the otherwise unpopulated landscape. Absent are the Indigenous peoples of the Gorge, as well as the East Asian immigrants who would have been the predominant labor force in vineyards and orchards at the time.

Contemporaneously, other brochures produced by state of Oregon feature cover images depicting white male subjects striding through the landscape. Male bodies were represented acting in and on the landscape. Often in motion—throwing a fishing line, driving a plow, or flexing muscles. The scene was one of work and play: Industry in Oregon was pleasurable, and as such, proprietors reaped their benefits in leisure time on the land.

[88] Pacific Northwest Promotional Brochures. Mss 6000. Boxes 2-6. Oregon Historical Society Archives.

Figure 22 Covers of brochures published by the Oregon State chamber of commerce. Left, "Recreate in Oregon." Right, "An Oregon Dairy Farm."[89]

Figure 22 shows two such images. On the left, a man forges his way through a river current in the woods. He strides forward, fishing fly extended skyward, like the fir trees from which he emerges. He is active and in motion: An able white body—fisherman and farmer—with the scene all to himself. The text within narrates the scene and explicitly links profit and pleasure:

> "The charm of country life in Oregon is unsurpassed in any part of the world. Profitable occupation in the midst of magnificent scenery with enjoyment of all outdoor sports and recreation and excellent educational facilities."

The coincidence of appeals to recreational tourists-cum-potential settlers or investors demonstrates the flexibility of scenic value as an imperialist construction. It is not only the land-shopping dairy farmer from the east, but the fly fishermen who can also be "lured" to Oregon via automobile or luxurious train-car for play and profiteering. Highway and steel rail routes through "scenic grandeur" attract tourists seeking health and pleasure, while already configured as future proprietors in a long-line of rugged entrepreneurs before they even arrived.

Conclusion

The Cascades of The Columbia River (Figure 6; Figure 9) can no longer be seen today, from either Washington or Oregon shore. They were inundated by the Bonneville Reservoir with the construction of the Bonneville Dam in 1937. The port and city of Cascade Locks sits on the Oregon shore overlooking what would have been "the Cascades of the Columbia." The city of Cascade Locks is one of the sites proposed by Warm Springs for the construction of a casino. Developing the Gorge for industry and transit was a military-financial endeavor, one constituted

[89] Ibid.

in large part by the transcontinental traffic of commodities, capital, and land claims. The extension of railroads throughout the North American continent routed U.S. imperial power—in the entangled forms of war and finance—across vast territories in ways that also produced racialized and gendered disciplinary social orders.[90]

In this chapter, I examined maps, photographs, and print materials from the 1760s-1920s to historicize the entanglements of scenic value, capitalist expansion, and the makings of countersovereign modes of authority in the Gorge. Scenery is a narrative, logic, and spatial ordering in a region long constructed as an exceptionally wild, naturally fruitful landscape—and as such, manifestly primed for possession—in the U.S. imperialist imaginary. "Scenic value" has both authorized and mediated public and legal opposition not only to Indigenous economic enterprises in the Gorge—such as the Casino—but the self-determination of Indigenous nations in relation to U.S. State and federal law more broadly. Routing the scenic through the Gorge has long scaffolded the expansion and circulation of settler subjects, infrastructure, and capital—militia, explorers, trains, tourists, cars, and hikers. The rubric of scenic value persisted in routing ever-increasing modalities and quantities of financial speculation and traffic throughout the Gorge.[91]

In the next chapter I hone in on a scientific turn in the construction of scenic value—I look at the salvage archeology of Lewis Cressman and a proposal for a regional Natural History Museum in the Gorge, to explore how science and pleasure cohered in and through practices of dispossession and erasure. Then, I follow the extension of scientized formations of scenic value into the present: I turn to the legal codification of "Scenery" through the passage of the Columbia River Gorge National Scenic Area Act, and hone in on the defining language, practices of measurement, and rubrics of compliance that emerge from scenic resource management plans and handbooks at the turn of the 20th century. Together, the chapters offer a loosely genealogical history of the present. At the end of Chapter Two I synthesize this analysis in order to make final arguments about the practice of scenic accounting as a countersovereign strategy in the settler public's backlash against the Warm Springs casino proposals in the Gorge.

[90] Manu Karuka, *Empire's Tracks*.
[91] John Arthur Elliott, a highway engineering, is quoted as saying this in "HISTORIC COLUMBIA RIVER HIGHWAY, CROWN POINT VIADUCT," Department of the Interior (1996), 5. http://lcweb2.loc.gov/master/pnp/habshaer/or/or0300/or0364/data/or0364data.pdf

CHAPTER 2

Scenic Salvage and the Consumption of Erasure

Introduction

Industrial aestheticization of rail and highway vistas—analyzed in the previous chapter—structured the ensuing scientific aestheticization of the Gorge in the mid-twentieth century and beyond. The physical cuts made to lay steel rail, level ground for concrete, and carve river canals also exposed underground scenes that would be catalogued, collected, and curated by plunderous relic hunters and archaeologists alike (and often very much in collaboration with one another).[92] All along the construction sites of transit routes through the Gorge, the possessions and bodies of Columbia River Indigenous peoples' ancestors were violently unearthed, stolen, sold, traded, hoarded, and circulated amongst settler laypersons as well as some of the most authoritative figures in archaeology at the time. Traffic routes cut through Indigenous fishing sites, villages, marketplaces, burial grounds, and sacred relations. They were—and continue to be—infrastructures of immediate and future dispossession: Technologies of occupation, both material and cultural.

Contemporaneous to the rapid growth in the settler population and tourist numbers, the ever increasing magnitude of federal water reclamation and hydropower dam projects in the Columbia River Basin further dispossessed Indigenous nations of their foods, homes, lands, economic stability. Across the U.S., beginning in 1917, federal Flood Control Acts were transforming river basins. Much like the Pacific Railroad Acts, albeit by different mechanisms, the Flood Control Acts expropriated Indigenous nations' Treaty protected territory for construction. With each dam built, territories, fishing places, homes, and burial grounds were flooded by reservoirs for the purposes of producing hydroelectric, navigation, and recreation values. Throughout the Columbia River Basin there are now over 270 hydroelectric dams.[93] Inundation was, and still is, an immediate practice of enclosure and removal.

In the Gorge, the construction of the Bonneville Dam in 1935 and The Dalles Dam in 1957 inundated the waterfalls and cascades in the river channel, as well as miles of shore line, fishing scaffolds, salmon smoking sheds. The Celilo Reservoir, behind The Dalles Dam, flooded the villages of Sk'in, Wapaykt, Wayám, fishing places sapawilalatatpama, layxaytpama, swaycas, qiyakawas, and awxanaycas, and covered Grave Island, Wasco Island, amáwi, Melamoose Island, and so many more places and relations.[94]

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[92] Virgina L. Butler. "Relic Hunting, Archaeology, and Loss of Native American Heritage at the Dalles. *Oregon Historical Quarterly,* 108, No. 4 (2007): 624-643.

[93] "Dams: history and purpose." Northwest Power and Conservation Council. https://www.nwcouncil.org/reports/columbia-river-history/damshistory

[94] It is impossible to list here all the names of food places, homes, drying sheds, paths, sacred relations, and landmarks that are (for now) beneath water in the Columbia River Gorge. For a place to start, see tribal histories and accountings of these currently flooded resources and relations, see: George W. Aguilar Sr. (Kiksht Chinookan, member of the Confederated Tribes of Warm Springs), *When the river Ran Wild! Indian Traditions on the Mid-Columbia and Warm Springs Reservation,* (Seattle, WA and Portland, OR: University of Washington Press and

Ten federal Flood Control Acts were passed between 1936 and 1965, thus generating a continental wave of federally mandated inundations. From the 1930s through the 1950s, the Columbia River Basin—including the Gorge—was dramatically reshaped by the creation of new reservoirs, as the river slowed, expanded, and inundated shorelines behind each new main-stem dam. Building dams thus required demarcating sacrifice zones:[95] Areas of the river and land that engineers and politicians deemed submergible in order to produce electricity, facilitate navigation, and prevent flooding elsewhere. During this same time period, popular and scientific interest in extracting, collecting, and preserving the innumerable "artifacts" that were to be inevitably submerged by the rising backwaters of major dam projects manifested in federal legislation like the Historic Sites Act of 1935 and The River Basin Survey Program (1945-1964). State sanctioned moves to recover and remove the threatened objects, especially those of living Indigenous polities whose homes and lands were bounded within dam sacrifice zones, was saturated with imperialist nostalgia.[96] The Columbia River Gorge, wherein the possessions and ancestors of Columbia River Treaty Tribes and Columbia River Indians lay in the landscape soon to be flooded, became a salvage site that would shape the sciences of archaeology and natural history. Archeologists and relic hunters constructed the Gorge as an exceptional site of discovery and development in geology, natural history, and human evolution.

Construction of the Gorge as a place in need of protection and curation for its scientific and edifying value emerged from conditions of its respatialization and inundation. In particular the protection and production of scientific and scenic value were direct results of a new wave of Indigenous displacement and dispossession, this time, by hydropower infrastructure. Yet, the sites of hydropower infrastructure and scientific extraction can be mapped onto the routes of railroads, photographers, and settlers I analyzed in Chapter One. As railroad lines, highways, canals, and canneries reshaped the land and population of the Gorge, they also unearthed sacred sites, villages, and burials. In many cases, the transit routes that pre-dated dam construction were the first projects to make cuts and digs in places that would later be prized by salvage archeologists and grave looters alike. As professional and public interest grew in the scientific value and natural history of the Gorge—made salvageable and collectible by the construction of massive dam projects—so too, did the circulation of tourists and population of settlers. Further, I show, as the Gorge cohered as a federally regulated National Scenic Area at the end of the twentieth century and into the twenty-first, these historical narratives of national interest, exceptional natural qualities, and systematically curated scenes persisted. Settler practices of "salvaging" the scene, can still be traced through the survey practices and development Handbooks presently used by the Gorge Commission and homeowners to calculate and curate scenic value in the Gorge today.

Oregon Historical Society Press, 2005); Jennifer Karson. ed., 2006,*Wiyaxayxt/Wiyaakaa'awn/As Days Go By: Our History, Our Land, Our People; The Cayuse, Umatilla, and Walla Walla,* (Pendleton and Portland, Oregon and Seattle, Washginton, Tamástslikt Cultural Institute, Oregon Historical Society Press, and University of Washington Press, 2006). Eugene S. Hunn and James Selam, *Nch'i-Wàna "The Big River": Mid-Columbia River Indians and Their Land,* (Seattle, Washington and London: University of Washington Press, 1991).

[95] for more on the concept of a "sacrifice zone" see Steve Lerner, *Sacrifice Zones: The Front Lines of Toxic Chemical Exposure in the United States*, (Cambridge: MIT Press, 2012).; Macarena Gómez-Barris, *The Extractive Zone: Social Ecologies and Decolonial Perspectives*, (Durham: Duke University Press, 2017).

[96] For more on salvage archaeology as run-through with what critical scholars of transnational empire have theorized as "imperialist nostalgia," see Ann Laura Stoler's *Imperial Debris*.

In this chapter I analyze the discourse and practices of archeologists and commissioners working to account for, and curate, the scientific and scenic values of the Gorge. I show how routes of traffic through the Gorge persisted and shifted: Paying particular attention to how techniques of visually curating value across projects of collection, edification, and aestheticization. This Chapter follows the historical conditions of Chapter One through a scientific turn in the construction of scenic value. I use the salvage archeology of Lewis Cressman and a proposal for a regional Natural History Museum in the Gorge examine the different ways of constructing and consuming scenery in the Gorge as the landscape was reshaped by inundations—from waters, and archaeologists, to tourists and homeowners. I show how viewpoints and scenic value were scientifically codified in ways inseparable from the drive to increase traffic and tourism in the Gorge: In both the report and proposal, I elucidate how the discourse of scientists and commissioners made connections between the entertainment and edification of tourists, and the construction of scenes that showcased the history of mankind and the lands he had now harnessed. I argue that science and pleasure cohered in and through practices of dispossession and exhibition. Then, I follow the extension of scientized formations of scenic value into the present: I turn to the legal codification of "Scenery" through the passage of the Columbia River Gorge National Scenic Area Act, and hone in on the defining language, practices of measurement, and rubrics of compliance that emerge from scenic resource management plans and handbooks at the turn of the 20th century. I conclude this chapter by returning to the ways that scenic accounting was used as a countersovereign strategy in the settler public's backlash against the Confederated Tribes of Warm Springs's casino proposals in the Gorge.

Imag(in)ing the Museum: Science and Nationalism

> The Columbia River Basin is one of the finest natural scenic areas in the United States. The Basin embraces an unusual variety of recreational attractions. Generous patronage in the region has made recreation a major activity which causes it to receive increasing consideration in plans for water-use development by the Corps of Engineers, United States Army.
>
> --Proposal for Natural History Museum at The Dalles.[97]

The Flood Control Acts and the expansion of hydroelectric infrastructure across the U.S. were technological and material projects that articulated with explicitly scientific and cultural projects as well. Decades of federal investment and regulation of major public works projects also witnessed an expansion of state resources allocated to purportedly collect and curate the "national heritage" endangered by progress. The Inter-Agency Archeological Salvage Program (IASP) (administered by the National Park Service and Smithsonian Institute) was funded by Congress from 1946-1967, after intensive lobbying of congress and federal agencies by the Committee for the Recovery of Archaeological Remains (CRAR) to "address the impact of dam

[97] L.S. Cressman, David L. Cole, Samuel C. Sargent, Paul J. F. Schumacher were all contributing writers to the archival document, "Brief in SUPPORT OF PROPOSAL for a MUSEUM OF NATURAL HISTORY of the COLUMBIA RIVER REGION at The Dalles, OREGON," (1958): 29. This report was obtained in the Oregon Historical Society Archives: Marshall Dana Papers, Box 2, Folder 4.

and reservoir construction on archaeological sites."[98] "The IASP inexorably linked federal construction projects and cultural resource preservation; funding of these programs led the federal government to recognize that it had a responsibility to preserve and protect our national heritage and that the expenditure of funds on historic preservation is a legitimate cost."[99] The River Basin Survey Program was the IASP's major component, and "ushered in the era of cultural resource management (CRM)—then called "salvage archaeology"—that dominates American archaeology today.[100]

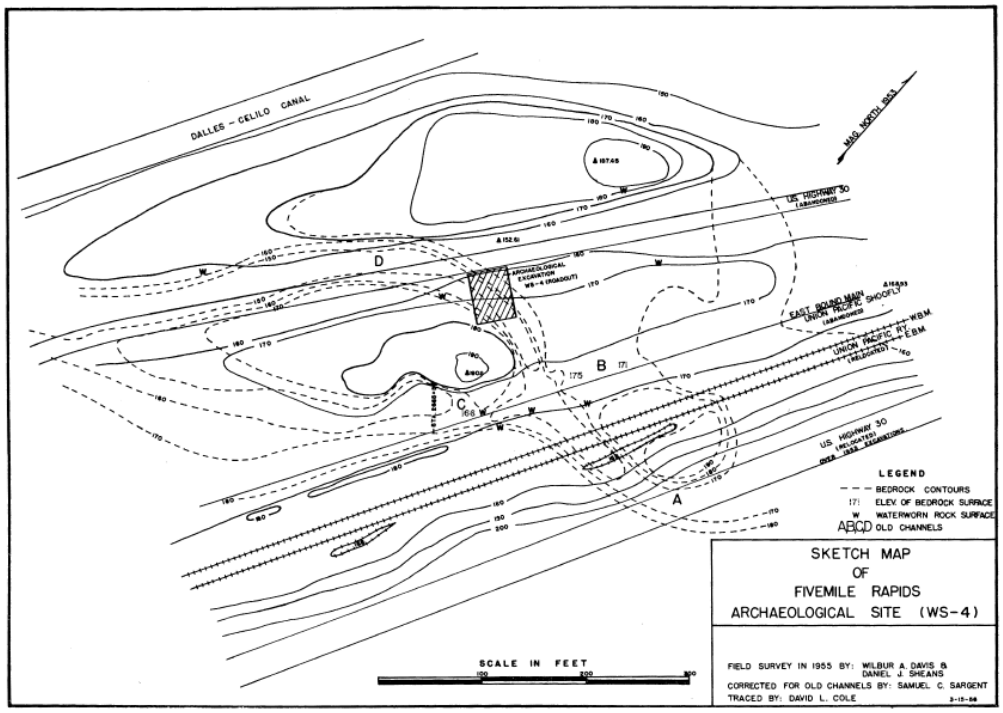
The immediate and future flooding of the Columbia River Basin by federal dam projects rendered soon to be inundated underground scenes of the Gorge key sites of salvage (for sellers and scientists alike—though theft and research are here inseparable).[101] Before The Dalles Dam was constructed in 1957, most of the Gorge had been severely plundered for "artifacts" by relic hunters, who followed the pathways of road, river, and rail construction as they recklessly unearthed buried materials.[102] One archeologist of the time wrote, "When the highway, the Celilo Canal, and the O.W.R. & N. Ry. Were put through here in the limited space between the rim rock and the river many artifacts and burials were disclosed….The artifacts have been much distributed. Some are in public and private collections in Portland…"[103] Through the River Basin Survey program, archeologists and looters worked together at sites along the rapids and cascades in the Gorge that were first most predominantly disturbed by the construction of transit routes. At The Dalles, localities like "Pit Area," "Wakemap Mound," and "Roadcut" were places used by leading archeologists like Luther Cressman and their students to conduct analyses that would be received as major advances in archeological research methods. The "findings" at sites disturbed by rail, road, and canal were constructed as foundational to anthropological theories of early Holocene occupation and the establishment of a "detailed cultural chronology" of the area.[104] One such site, "Roadcut," is described below and depicted in Figure 1:

> "The site lies about five miles east of The Dalles on the south bank of the Columbia River. The deposit originally extended from the rimrock at the base of the massive cliffs to within a few meters of where the bank drops off in sheer cliff to the river, a distance of about 200 meters. The east and west boundaries are not known with any certainty, but there must have been an included extent of more than 300 meters. The site is at the west end of the rapids known as the Fivemile Rapids (the Long Narrows of Lewis and Clark) at the point called Big Eddy. On the river side of the site, the Celilo Canal cuts through, and the locks and administration buildings for the Corps of Engineers were built probably

[98] R. Lee Lyman, "Chapter 5: The River Basin Surveys in the Columbia Plateau," in Kimball M. Banks and Jon Czaplicki eds. *Dam Projects and the Growth of American Archeaology: The River Basin Surveys and the Interagency Archeological Salvage Program*. (Left Coast Press, Inc., 2016): 66-84.
[99] Ibid, 17.
[100] Ibid.
[101] For more on looting, trade, and Indigenous reclamation of ancestral objects and relations see Virginia Butler, "Relic Hunting, Archaeology, and Loss of Native American Heritage at the Dalles," *Oregon Historical Society Quarterly,* 108, no.4 (2007): 624-643.
[102] See again Butler, and Lyman.
[103] Butler, 629.
[104] L. S. Cressman, David L. Cole, Wilbur A. Davis, Thomas M. Newman and Daniel J. Scheans. "Cultural Sequences at the Dalles, Oregon: A Contribution to Pacific Northwest Prehistory, *Transactions of the American Philosophical Society,* New Series, 50, no. 10. (1960): 1-108.; Lyman, 68.

on the part of it which was leveled for that purpose. Various service buildings also were built on what was probably a part of the original site. Seven dwellings and auxiliary buildings for the personnel of the staff were built on another part of the site. The original Columbia River highway traversed the site adjacent to the south side of the Celilo Canal. In 1938 this highway was relocated and widened, further destroying an undisturbed area. However, during this construction with the assistance of the Oregon State Highway Commission, the University of Oregon salvaged a considerable amount of valuable material. On the south side of the site close to the cliffs, the Union Pacific Railroad double-track right-of-way cuts straight through the site from east to west. The portion of this site which was excavated in 1952 was a small section on the northern periphery between the canal and the cliffs. It thus was but a small part of what was once an extremely large site, both in depth and in area, and is supposed to have been the main Wasco village. In 1956 the houses of the personnel were removed from the site and an undisturbed area at the east end was excavated. Some excavation was also carried out in undisturbed fill under the original Columbia River highway on the north side of the area."[105]

16 CRESSMAN: CULTURAL SEQUENCES AT THE DALLES, OREGON [TRANS. AMER. PHIL. SOC.



MAP 7. Sketch map of Fivemile Rapids and sites excavated. Archaeological area showing land surface (1955) and "old channels" of the Columbia River.

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Figure 1 Sketch map of Fivemile Rapids and sites excavated. Note the map includes multiple, palimpsestic routes of empire: the Dalles-Celilo Canal, the U.S. Highway 30, the Union Pacific transcontinental railway. All of which intersect and overlay ancestral Indigenous lands.

[105] Cressman et. al., "Cultural Sequences," 15-16.
[106] Ibid, 16.

Amateurs and leading archeologists, together, stole materials and forged scientific claims that were sold, stored, and traded in museums, universities, and antiquity markets (and still are today). At The Dalles sites, the claims of collectors and researchers alike about the scientific importance of the Gorge's "pre-historic" geology and cultures further authorized imaginaries of the Pacific Northwest as an exceptionally significant U.S. acquisition in the march of natural and human history.[107] The state-sanctioned salvage of stolen indigenous relations—for science and for sale—prior to yet another phased of dramatic and violent reorganization of the Columbia River Gorge resulted in an accumulation of artifacts that researchers and local officials sought to further exploit. A few years after Cressman and his teams completed their surveys, a Museum of National History of the Columbia River Region was proposed at The Dalles. Archeologists, geologists, and city commissioners argued for the scenes that would soon be inundated by reservoirs to be preserved as museum exhibits for the edification of tourists and collective interest of the nation and mankind.

Briefs filed in support of this proposal demonstrate how scenic value also came to be constructed in and through scientific discourse and practice. In this section I focus on one such document that relied heavily on archeological findings to make the case for why national funds should be allocated to develop a museum, and draw tourists, to The Dalles. The "Brief in Support of Proposal for a Museum of National History of the Columbia River Region at The Dalles, Oregon," was submitted to the Federal Government as part of a request for the construction and maintenance of a museum in the city of The Dalles, at the eastern most border of what is now the Columbia River Gorge National Scenic Area. Within, authors make several interrelated arguments. One, that the scientific record of human existence in the Gorge—as represented by unearthed items—was a possession of the public: A resource of national interest that, under the Historic Sites Act, must be accessible and properly interpreted. Two, that the best way to communicate the significance of the region was through visual display and the curation of objects in (re)creations of their natural scenery. Three, traffic and recreation in the Gorge were growing and The Dalles was emerging as part of a tourist corridor, described by planners and scientists alike as rich in educational and scientific value.[108] As such, the Brief ultimately claimed, the ideal location of exhibition was directly on top of a "common grave," where the disinterred ancestors of Columbia River Indigenous peoples from what engineers and surveyors called "Grave Island" had been reburied. According to the Brief, this location, named "Site 3," was already well-leveled for the construction of a parking lot and had natural rock faces could be used to mimic the scenes of removed petroglyphs. Further, it was an ideal viewpoint overlooking The Dalles Dam reservoir, where settler tourists could visually consume the sweeping scene of submerged Indigenous territories. Underlying these explicit arguments were imperialist logics of possession and cultural genocide, routed through a rubric of scenic value.

> "The establishment of a Museum of Natural History of the Columbia River Region at The Dalles would be in the national interest. The following brief is submitted in support of the truth of this statement. American democratic society, as is the case with any organism, depends for the well-being of the whole on the well-being of its constituent parts. What benefits a community in New York, Alabama, Iowa or Oregon by that very quality adds to the well-being of the Nation. This was well demonstrated during World War II by the

[107] See again Lyman; Butler; Cressman et. al.; "Brief in SUPPORT OF PROPOSAL for a MUSEUM."
[108] "Brief in SUPPORT OF PROPOSAL for a MUSEUM."

> essential contributions made to the national well-being by the great power developments in Tennessee Valley and the Columbia River Region. Therefore, a regional program in the Columbia River Region which is devoted to the exploitation of the unique educational, recreational, and scientific values of general significance to be found in this area is of NATIONAL (sic). Tourist traffic in this area moves over a complex of national highways. One of these, U.S. 30 is designated as an interstate highway in the new national highway program. It passes immediately through the locality concerned. Economic and technological changes with the resultant increase in the amount of leisure time available to the population can be expected to produce a marked increase in tourist traffic, and the proposed Museum will be used by great numbers of citizens from all over our nation."[109]

The museum proposal called for a total of $211,400 for the basic necessities of constructing a museum, and states that the funds should be solicited through public subscription as well as through legislative appropriations. The museum, according to the authors, offers "the final step in implementing the law for the Columbia River Region."[110] Under the provisions of the Historic Sites Act of 1935, the authors claim, the federal government and National Park Service should be responsible for the protection and interpretation of materials extracted during the River Basin Surveys. The "unique" value of these materials are explained in terms of the Nation's collective interest in the Columbia River's exceptional natural environment:

> "This brief outline of the human story on the Columbia east of The Dalles shows that the area simply as a record of man's development in the New World is unique; but for this story to be fully appreciated and its uniqueness understood, it must be read in its relation to the striking and unusual natural environmental of which it is part; an environment the central core of which and the motif giving meaning to it, is the RIVER. Here, clearly is a situation of national importance and its full exploitation to interpret to our citizens the educational, scientific, and historical values so uniquely illustrated would most certainly be in the NATIONAL INTEREST."[111]

A prominent section of the brief was written by Dr. L.S. Cressman—head of the Anthropology Department at the University of Oregon at the time. In the "Archeological Value" section, Cressman begins by stating the Columbia River stands apart even from the Nile and Tigris-Euphrates system for its significance to "not only human history…but earth history."[112] The way that it outranks them is "in its contribution to modern technology and industry through its use by man for water throughout the whole wide range of modern industry and science."[113] He continues:

> "The aboriginal occupation and the long continuous history of the area is made more dramatic by the location of the most important site with reference to modern use. As one excavated at the deepest and oldest part of the site, where the bones are fossilized, on one

[109] Ibid, 1.
[110] Ibid, 2.
[111] Ibid, 4.
[112] Ibid, 6.
[113] Ibid.

> side was the Union Pacific Railroad and on the other the Columbia River highway, and the movement of heavy motorized traffic on both routes provided a dramatic contrast with the way of life represented by the stone tools of the aboriginal inhabitants. Alongside the highway ran the Celilo canal along which waterborne traffic moved. As one looked down river he saw the dam in process of construction and now completed, it provides electric power and improved navigation…The dam at The Dalles is a national resource exploiting the potentials produced through the long ages. The scientific story of man and nature, as revealed here as at no other place, should be a part of the richness of MAN'S knowledge, upon which to reflect and from that reflection to draw understanding. To provide the interpretative means for an appreciation of the opportunities a museum is needed to exploit the scientific and aesthetic values of this unique situation."[114]

Scientific and scenic value are inextricably linked in the Brief's imperialist narrative of "man's" progress. The Dalles is configured as an exceptional national possession: One that circulates in the popular imaginary as a place where "aboriginal inhabitants" come to be seen as both primitive and past, as well as intellectual and cultural property of a national settler public. The collapse of Indigenous presence into a universalizing and linear narrative of "man and nature" grants settler tourists a possessive gaze—both ideological and material—that simultaneously naturalizes and aestheticizes Indigenous disappearance.

The enrollment of scenic value in this project deserves further attention. The discourse of national interest, and a universalized human history, I analyzed above also produced particular ideas about how U.S. heritage should be viewed in place:

> "The Federal government acquired land and constructed a viewpoint to provide the public with a place from which to view this great structure and the surrounding country. This land is available for a Museum and its construction would carry out effectively the interpretation of the educational values of the region and at the same time provide an opportunity to see the dam and how it has changed the way of life of an area…The completion of the John Day dam will change the whole character of the river from Bonneville Dam to Priest Rapids in Washington; a great turbulent river will have been tamed to work for man with navigation moving on quiet reservoirs for the national benefit. The dams built by the federal government change the way of life of a community; they are a national asset, and a sound policy would include, at least with those of scientific importance, the accompanying educational program to enable the citizens to whom the dams belong to understand something of the significance of the area in terms of its past and the future outlined for it by the dams."[115]

Continuing from the description of how the "whole character of the river" has changed because of hydropower development, the next section, written by David L. Cole on "The Dalles Dam Reservoir and its Historical and Archaeological Importance", describes what has been flooded and "disappeared to be remembered only as history." Here, the narrative of a vanishing amorphous, Indigenous peoples ("Indian fishing sites, which have been used for many thousands

[114] Ibid, 7-8.
[115] Ibid, 10-11.

of years have been flooded") and the "scientific records of human occupation have been submerged." Yet, the investment in salvage science is presented as imperative only insofar as it collects and preserves "objects of antiquity," but certainly did not extend to fishing sites, homes, burial grounds, and Indigenous sovereign territories.

Critical scholars of empire, science, and exhibition have theorized the U.S. move to mourn the disappearance, and rescue the vestiges, of the human and nonhuman life destroyed by U.S. conquest and settlement as a form of imperial nostalgia.[116] As Boyd Cothran has further argued, such practices can also be enrolled in the production of "settler innocence"—configure collection and curation as a benevolent act that generates value where there would otherwise be disappearance. This configuration simultaneously serves to absolve the U.S. of responsibility for violent destruction, and as collections and curations circulate they also construct revisionist narratives of history that erase legacies of violence altogether.[117] In an overt example of (re)inscribing the landscape—(re)placing histories of violence, and covering evidence of such—the Brief proposes a potential location for the Natural History Museum directly atop a reinterment site where the U.S. Army Corps of Engineers had reburied Indigenous ancestors flooded out from Grave Island by The Dalles Dam.

It is only much later in the report that the reader encounters what is more obvious, layered violence of the material displacement written into the Brief: The parcel of land proposed for construction, Area 3, is described to "already [have]several facilities available" and be therefore primed for museum construction because it has very recently been a worked and re-arranged site.

[116] See again Boyd Cothran, *Remembering the Modoc War,* and Anne Laura Stoler, ; Ann Laura Stoler, *Imperial Debris*.
[117] Cothran, *Remembering the Modoc War*.

D. The Construction Program and Development of the Museum

If Area 3 should be chosen as the site for the proposed Museum of Natural History, the site already has several facilities available. The approach road and parking area for the museum have been constructed and the area is completely bounded by a solid woven mesh fence. It is a natural viewpoint and would take very little landscaping in its preliminary phases. Thus, phase one--choice and preparation of the site--would have been accomplished.*

The second, and most immediate phase of development of this area for use by the visiting public as an orientation center, would be the placement of the salvaged petroglyphs from the Dalles Reservoir against the natural rock face of the hill to the northeast of the present parking area. This phase should also include a temporary frame structure with toilets for the visitors, and offices for a custodian to watch over the petroglyphs and provide information to the visitors. The petroglyph display area should be closed at night. This second phase of development

*This is also the area of the mass reburial of the Indians from Grave Island, inundated by the Dalles Dam. L.S.C.

Figure 2 Page 56 of the "Brief in SUPPORT OF PROPOSAL for a MUSEUM" discursively demarcates reburials from Grave Island as parenthetical subtext.

The authors of the Museum Brief describe "View Point Site Area No. 3" as "an excellent site for the museum and for displaying the petroglyphs." They emphasize the panoramic vista, what can be seen out to far horizons as well as looked-down upon from the measured elevation, and the travel routes to be observed below:

> "[Mr Schumacher and Mr Cole] agreed that View Point Site Area No. 3 was an excellent site for the museum and for displaying the petroglyphs. Here the Corps of Engineers has constructed a viewpoint for the Dalles Dam adjacent to the former Seufert property. This viewpoint is on a hilltop at ca. Elevation 230-240 feet, overlooking the highway and Columbia River valley flowing 100 to 150 feet below. A 1500-foot approach road has been constructed by the Corps of Engineers, which leads up to a fine parking area sufficient for 100 cars. The viewpoint entrance from U.S. Highway 30 is approximately one-half mile east of the Juncture of U.S. 30 and U.S. 197."[118]

[118] "Brief in SUPPORT OF PROPOSAL for a MUSEUM," 50-51.

The passage continues in a way that once again elucidates how constructions of Scenery, scientific salvage, and Indigenous displacement and erasure come together in this cultural project. While it is important to the authors that the petroglyphs be (re)placed in a site that appears "natural," they also find it advantageous that such a (re)placement will occur on top of an already removed and reinterred burial ground:

> "Besides its excellent advantage as a scenic viewpoint, there is also a natural rock face against which the salvaged petroglyphs can be displayed. At the present time, this viewpoint site has an outdoor exhibit by the corps of Engineers showing details of the dam construction. A mass grave covered by a memorial plaque has been placed at one side of the parking lot. Here, the bodies of Indians, formerly located on Grave Island in the river, have been reinterred by the Corps of Engineers.
>
> Area 3
>
> "This site, it is felt, is an ideal location for the museum from the standpoint of accessibility for the touring public, pleasantness of terrain, and the least expensive from the viewpoint of site preparation and construction costs."[119]

Here, phase one of the museum—described as the "choice and preparation of the site"—has already "been accomplished." The site is described as a "natural viewpoint and would take very little landscaping in its preliminary phases." Here I highlight again the proximity of the vista and settlement. Importantly, I urge us to think about how this viewpoint is one explicitly couched in language of leisure, education, and interpretation of scientific materials. Scenic value is routed through a scientific discourse that is ideologically and materially founded on the removal, categorization, and (re)visualization of Indigenous relations.

Figure 3 This photograph, of the marker for a mass grave, is printed on the outside of the final page of the report. There is no caption or explanation provided as subtext for the image.

[119] Ibid, 51.

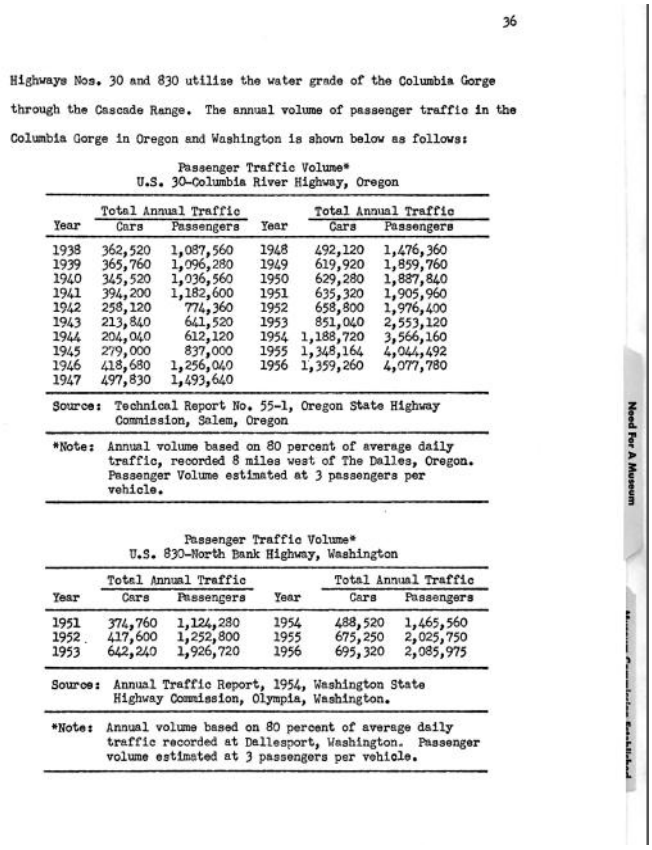
The scenic value of the Gorge was not only folded into endeavors to salvage Indigenous histories for the benefit of National inheritance and scientific knowledge production. The scene was also systematically measured for its capacity to enable the circulation tourists and capital. As Chapter One and Chapter Two demonstrate, development, scenery, and traffic co-produced one another. Viewsheds and vistas throughout the Gorge were made accessible to companies, tourists, and scientists through processes of genocide, dispossession, and enclosure. In turn, the circulation of maps, photographs, and brochures sold scenic value as a resource for profit and pleasure.

Tourist traffic figured centrally in the Museum Proposal's rationale. Inextricable from the entangled scenic and scientific value of the visual display of stolen artifacts, was the potential for such a project to harness and increase the flow of traffic (and capital) in the Gorge. The Brief boosts the Gorge's reputation as a place of pleasure and play. Recreation, it claims, can be edifying and is a natural and economically beneficial byproduct of industry and hydropower projects in particular. This context is important for considering present-day "conflicts" surrounding which forms of economic development and "play" are state-sanctioned and which are regulated or foreclosed.

> "The basin area radiating around The Dalles is a potentially excellent tourist center. Not only is it on one of the major transcontinental routes, but it is continuous to a vast national forest recreation area. Bonneville Dam had over half a million visitors in 1955 and the new dam at The Dalles is expected to have equally as many, if not more. The new reservoir created by this dam will be a recreation center as soon as the Corps of Engineers completes its proposed docking, parking, and picnicking facilities. The Columbia waterway has become one of the great pleasure boating spots of the region, enhanced by its superb scenery. These recreational facilities will not only draw nearby people from Oregon and Washington, but will create an attraction for our vast population of traveling Americans."[120]

The Brief includes figures reporting the total annual traffic, and total number of tourists, along through-highways and major visitor centers (such as the Bonneville Dam). Figure 4 below indicates that, save for the years of WW-II, annual passenger traffic had been on a steady rise since 1938—nearly tripling by the year the Brief was written (1956).

[120] Ibid, 49.



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Highways Nos. 30 and 830 utilize the water grade of the Columbia Gorge through the Cascade Range. The annual volume of passenger traffic in the Columbia Gorge in Oregon and Washington is shown below as follows:

Passenger Traffic Volume*
U.S. 30-Columbia River Highway, Oregon

Year	Total Annual Traffic Cars	Passengers	Year	Total Annual Traffic Cars	Passengers
1938	362,520	1,087,560	1948	492,120	1,476,360
1939	365,760	1,096,280	1949	619,920	1,859,760
1940	345,520	1,036,560	1950	629,280	1,887,840
1941	394,200	1,182,600	1951	635,320	1,905,960
1942	258,120	774,360	1952	658,800	1,976,400
1943	213,840	641,520	1953	851,040	2,553,120
1944	204,040	612,120	1954	1,188,720	3,566,160
1945	279,000	837,000	1955	1,348,164	4,044,492
1946	418,680	1,256,040	1956	1,359,260	4,077,780
1947	497,830	1,493,640			

Source: Technical Report No. 55-1, Oregon State Highway Commission, Salem, Oregon

*Note: Annual volume based on 80 percent of average daily traffic, recorded 8 miles west of The Dalles, Oregon. Passenger Volume estimated at 3 passengers per vehicle.

Passenger Traffic Volume*
U.S. 830-North Bank Highway, Washington

Year	Total Annual Traffic Cars	Passengers	Year	Total Annual Traffic Cars	Passengers
1951	374,760	1,124,280	1954	488,520	1,465,560
1952	417,600	1,252,800	1955	675,250	2,025,750
1953	642,240	1,926,720	1956	695,320	2,085,975

Source: Annual Traffic Report, 1954, Washington State Highway Commission, Olympia, Washington.

*Note: Annual volume based on 80 percent of average daily traffic recorded at Dallesport, Washington. Passenger volume estimated at 3 passengers per vehicle.

Need For A Museum

Figure 4 A chart of the annual volume of passenger traffic in the Columbia Gorge in Oregon and Washington, Brief in Support of Proposal for a Museum of Natural History of the Columbia River Region at The Dalles, Oregon.[121]

In accounting for traffic the Brief also published illustrated graphs to demonstrate the almost exponential growth in car count traveling through the Gorge on the US-30 (the Historic Columbia River Scenic Highway). The figures in the graph below appear to be following a linear, forward path: First, marching with bayonet pointed skyward, a lone male-coded solider marks a gap, or break, in the upward passenger trajectory (Figure 5). Yet, as his foot crosses the gap, it marks the beginning of a much more dramatic incline. The soldiers move to the other side of the war, and his forward gaze, seem to start-off the exponential curvature of an ever-widening line of traffic. Next, a car with two visible passengers and bundled belongings on top, signal the presence of family units—ambiguous as to whether the people in the car are carrying camping equipment for vacation, or their possession for a move, perhaps intentionally so. Finally at the top right corner of the graph is what appears to be a large ship or barge. The figure is drawn halfway out of the frame, a suggested speed into the future, carrying far more passengers than a single car: Perhaps a transoceanic public, peering through the many tiny white windows of an upper deck.

[121] Ibid, 27.

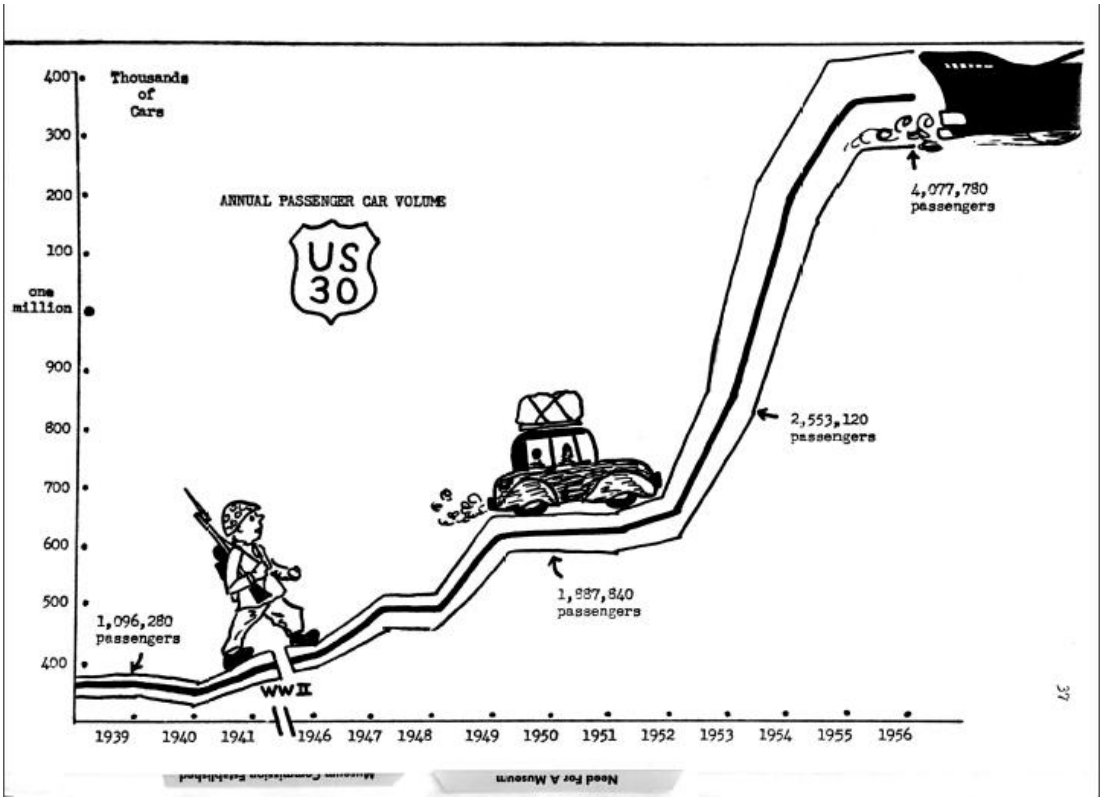

Figure 5 A chart of the annual volume of passenger traffic in the Columbia Gorge in Oregon and Washington, Brief in Support of Proposal for a Museum of Natural History of the Columbia River Region at The Dalles, Oregon.[122]

As evidenced by the representational distribution of authors on this brief, the viewing areas in the Gorge were of interest to city officials, regional planners, and scientists beyond the immediate geopolitical boundaries of what would become the Columbia River Gorge National Scenic Area. In fact, the civic and political interest in constructing and enclosing viewing areas for the pleasure of tourists and recreations were initiatives driven largely by well-to-do Portland residents, many of whom with influential stature as regional planners, developers, and park and landscape architects.[123] The combined efforts of groups like the Portland Garden Club, and prominent individuals like Marshall Dana and Jon Yeon, succeeded in securing federally protected regulations for future development in the Gorge. The passage of the Columbia River Gorge National Scenic Area Act (CRGNSAA), signed into law by then-president Ronald Regan in 1986, instated a bi-state commission of representatives from each Gorge county as well as the National Park Service charged with enforcing the new land-use and development regulations. Their responsibilities involved both envisioning a future landscape that was both scenic and working, and devising and implementing regulatory scaffolding for the "protection and enhancement of scenic, cultural, natural and recreation resources" while also supporting "the economy of the gorge by encouraging growth in existing urban areas and by allowing future

[122] Ibid, 28.

[123] This narrative is derived from interviews and observation with the Columbia River Gorge Commission, and researching materials in the Marshall Newport Dana Papers and the Columbia River Gorge Vertical Files at the Oregon Historical Society Archives. As well as Kathie Durbin's book *Bridging a Great Divide*.

economic development in a manner that is consistent with protection and enhancement of resources." The strategic management plans, and evaluation procedures, henceforth devised by the Commission are in use today.

Codification, Categorization, and Counting

Through practices of categorization, quantification, permitting and penalization, Scenic value is routed through scientifically methodological practices of accounting and policing. The protection of Key Viewing Areas and Scenic Corridors, like the viewpoint mentioned above in Area 3 (Figure 2), were codified in federal law. In order to carry out the purpose of the CRGNSAA, the Columbia River Gorge Management Plan was created. The first version of the Management Plan was drafted in 1991, and has since been revised and amended, most recently (at the time of this writing) in 2016, to account for changing economic conditions, development demands, civic engagement, and evaluation procedures. The CRGNSAA itself does not provide specific criteria for assessing whether the Management Plan is failing or succeeding: As such, the Gorge Commission has sought the assistance of third party analyses—through partnerships with The Friends of the Columbia Gorge (FOG), for example—to develop plans for evaluation that can provide "an objective check and balance mechanism, to the Gorge Commission's self-evaluation process mandated by the NSA" regarding the extent to which Gorge resources are being sufficiently preserved and enhanced under the implementation of the Management Plan.

This section focuses on the systematic methodologies that take Scenic preservation and enhancement as their object of evaluation, as well as the interrelated legal mechanisms that discipline land-owning subjects into producers of Scenic value. First, I briefly explain how the text of Management Plan lays out categorical definitions for three distinct levels of management, descriptions of twelve types of landscape settings, and a list of twenty-six Key Viewing Areas (KVAs). The Plan sets forth rubrics for permissible as well as noncompliant development for parcels of land according to their categorical designations and levels of visibility from KVAs and viewing corridors. Then I examine the ocularcentric methods and visual techniques used by the commission, park service, and third parties to compile data and assess changes in Scenic Value. I look at the way visual monitoring points and photographs are used as forms of scenic accounting in the "Vital Signs Indicators Project State of the Gorge"[124] and "Columbia River Gorge Commission Data Review."[125] Finally I turn to "Building in the Scenic Area: Scenic Resources Implementation Handbook"[126] to demonstrate how the methods for accounting for Scenic Value are translated into disciplinary technologies that delimit how, and who, can materially shape the Gorge. I show how Scenic Value continues to be materially and ideologically constructed in our contemporary moment, and now, with legally codified mechanisms for enforcing its protection and production.

The Management Plan for the Columbia River Gorge National Scenic Area was originally adopted by the Columbia River Gorge Commission in 1991, and subsequently concurred upon

[124] Robert C. Burns, "Columbia River Gorge Vital Signs Indicators Resident and Visitor Study," report submitted to Columbia River Gorge Commission, June 30, 2011.
[125] Jessica Gist and Columbia River Gorge Commission, "Columbia River Gorge Commission Data Review: Getting Our Data House In Order," July 2017.
[126] Columbia River Gorge Commission and USDA Forest Service, "Building in the Scenic Area: Scenic Resources Implementation Handbook," December 2005.

by the U.S. Secretary of Agriculture in 1992.[127] The Plan was a legally required stipulation for the proper function of the Commission as instated by the CRGNSAA. The Plan has been revised and amended several times since its original adoption, largely in an effort to provide more administrable definitions of language used in the original draft and to codify specific parameters for evaluating success of the stated objectives.

The National Scenic Area Act divided the Gorge into three distinct categories that warranted differential regulatory treatment: Special Management Areas, General Management Areas and Urban Areas. In Special and General management areas, the Gorge Commission has the legal authority to adjudicate whether, and to what extent, proposed developments affect scenic resources. Whether structures are visually dominant, drastically alter the skyline, or have profiles and color palettes that match their surroundings—for example—all determine the approval of permits under the authority of the Commission according to NSAA provisions. These metrics and methods of measurement were designed as "a framework to guide actions of federal, state, and local agencies and private entities that may affect scenic resources in the Scenic Area."[128]

In order to judge whether proposed development does or does not affect scenic resources, the Management Plan assembled and analyzed an inventory: lists and maps of viewpoints and viewsheds, landscape typologies, photographic documentation, and quantitative rubrics for calculating and tracking Scenic Value across space and time. Within Special and General Areas, the resource inventory identified Key Viewing Areas, Scenic Corridors, and Landscape Settings in order to create a categorical structure for how Scenic Value would be measurably defined.

Key Viewing Areas are defined as vantage points, parks, roads, trails, and recreational sites that provide the public with important scenic views of the Gorge. There are twenty-six KVAs, the visibility and distance from which are major factors in deciding how any proposed development must be constructed, if at all. Landscape Settings are categories of land defined according to distinct characteristics that contribute to the beauty and diversity of the Scenic Area. Settings are determined by types of landform (such as cliffs and rock outcroppings), vegetation (such as oak forest, pine forest, pasture, or grassland), and existing land use (such as spacing of buildings, number of buildings, and type of building whether residential, industrial, or agricultural). These definitive rubrics for marking and measuring scenery—what I call Scenic accounting—are the material and ideological practices that enable the legal enforcement of the NSAA.

The map in Figure 6 marks the visual rubric through which Scenic Value is spatialized. It also serves as a referential document—an instructive cartography that directs future accounting. The bright pink dots, for example, are Visual Monitoring Points from which panoramic photos have been taken in 2016 and will be taken again in the future in order to track affects on scenery, a quantitative practice of enumerating buildings, vegetation, and infrastructure that can be seen from the viewpoint. KVAs and Landscape Settings are visual categories that define conditions of the landscape according to ocular observation. As categories, they both represent a "base-line" of what can be seen in the Gorge as well as a prescription for what *should* be seen in the future.

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[127] Columbia River Gorge Commission and USDA Forest Service, "Management Plan for the Columbia River Gorge National Scenic Area," as amended through August 2016.
[128] Ibid, I-1-2.

Thus, such categories route the present scene through ocularcentric paradigms of valuation and in turn project such valuations onto a scene of settler futurity, materially and ideologically.

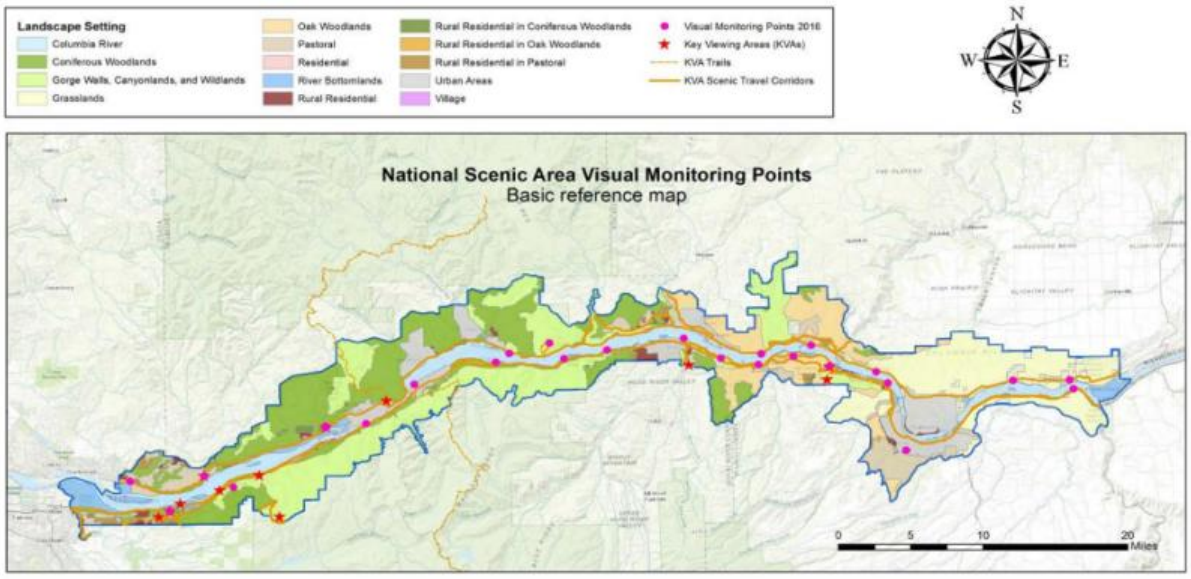

Figure 1. *National Scenic Area Landscape Settings, Key Viewing Areas, and Visual Monitoring Points*

Figure 6 National Scenic Area Visual Monitoring Points: Basic reference map and key. Note the bright pink circles and red stars denote "Visual Monitoring Points 2016" and "Key Viewing Areas (KVAs)" (2017).[129]

In order to "understand and track changes to the condition of gorge resources" the Commission partners with third-party agencies to conduct the Vital Signs Indicators Project, a core component of which is Scenic Resources. Conducted with the help of a technical advisory team, and community advisory team of residents, experts, and other stakeholders, the Project aims to account for current value and were as a starting point for future reporting and repeatable, replicable calculations. The first chapter of the 2009 "State of the Gorge" report, produced by the Commission and the Forest Service, narrates the tracking of scenic resources:

> "Scenic Resources— The scenic resource story is about establishing a base for future comparison. This chapter provides new information on three important scenic resource issues: 1) the amount of development that noticeably contrasts with its surrounding landscape; 2) the amount of visual impairment of views caused by vegetations; and 3) the amount of development within landscape types."[130]

In order to quantify the "amounts" of development and visual impairment, as outlined by the issues to be measured above, the Vital Signs Indicators Project conducted regular monitoring at twenty seven Visual Monitoring Points (VMPs) throughout the gorge (identified on the map above, Figure 6). Every winter and summer of 1988, 2003, 2009, and 2016 panoramic photos from twelve of these viewpoints have been used to track changes in the number of visible

[129] "Columbia River Gorge Commission Data Review," 4.
[130] Columbia River Gorge Commission and USDA Forest Service Columbia River Gorge NSA, "Vital Signs Indicators Project: State of the Gorge 2009," May 2009, 9.

buildings and vegetation patterns. As in the 1860s, when Carleton Watkins produced panoramic images for the Oregon Railway and Navigation Company, photographic documentation assists in federally sanctioned decision making about the current and future management of the Gorge. Now, a contemporary evidentiary pictoral record systematically renders the aesthetic values of the scene into discrete, definable, and differentiable components: Components that appear as various parts in a broader ecosystem, that must be scientifically managed. Vital signs that indicate the measure of the Gorge's health.[131]

What We Know:
Using the visual monitoring point photographs taken in 2003, 357 noticeably contrasting buildings exist in the landscape when viewed from the public vantage points listed below:

Vantage Point	1988 Building Count	2003 Building Count	Change
Steigerwald Lake	17	30	13
Crown Point	57	74	17
Cape Horn	29	29	0
Upper Beacon Rock	44	43	-1
Dog Mountain	3	6	3
Mitchell Point	13	14	1
Hood River Jetty	49	43	-6
Straights Point	17	22	5
Memaloose Overlook	40	42	2
Rowena Crest Viewpoint	49	41	-8
Squally Point	11	11	0
Avery Boat Launch	1	2	1
Total	**330**	**357**	**27**

Assessment:
Between 1988 and 2003, 27 additional buildings noticeably contrasted with their surroundings as seen from the 12 representative public vantage points used for this indicator. This eight percent increase over 15 years was not uniformly spread across the gorge from end to end, however. The majority of new noticeably contrasting buildings occurred in the west end near Troutdale, Oregon and Camas, Washington. Because this data relies on human interpretation of imperfect photos, it is estimated that counts could be as much as 10 percent higher or lower than the reported figure.

Figure 7 A table enumerating number of buildings counted in photographs, and calculating change in visual number over time, from "public vantage points."[132]

Within the report, tables present numerical data derived from readings of the evidentiary pictoral records. A table (Figure 7) names the vantage points—the Visual Monitoring Points—from which panoramic photographs are taken. Then, in reading the images for structures that "noticeably contrasted with their surroundings," a "building count" is produced for each year that a visual record was produced. The final column presents the change in number of buildings. A simply interpretation of the final column might suggest that a higher number equates to greater decrease of scenic value in a given view shed. The higher the number, the larger the amount of "contrasting buildings" can be seen in 2003 than could be in 1988. And yet, the report offers a caution: "this data relies on human interpretation of imperfect photos" and the results could fluctuate as much as 10 percent higher or lower than the reported figure. This warning hints at a desire for greater perfection, with less room for subjective error on the part of imperfect human judgements.

[131] See "Vital Signs Indicators Project: State of the Gorge 2009," and "Columbia River Gorge Commission Data Review."
[132] "Vital Signs Indicators Project State of the Gorge 2009," 3.

A 2017 report, "Columbia River Gorge Commission Data Review," agreed with and built upon this critique. In an effort to inventory the datasets and methods currently under use by the Commission, the report offered a more fine-grained analysis of the "building count" with the assistance of additional visual technologies. While past photo-comparison models provide planners with a "coarse filter and conservation indication of which KVAs may be impacted by a development," the report argued, more advanced tools such as GoogleEarth and topographic profiles can assist in evaluating scenic impacts with greater specificity and nuance. The change in building count might be a good indicator of where a "closer look" is warranted: one with the capacity to analyze color and reflectivity, architectural style, and visual subordidance of developments in the context of their Landscape Setting:

> "The appearance of a new building on the landscape is not necessarily incompatible with, for example, a Rural Residential Landscape Setting or a Pastoral Landscape Setting. In the example below (Fig. 1), there are fewer buildings in the foreground of this view in 2003 and 2009 than there were in 1988. In this case, aging barn structures were removed from an agricultural parcel. While the number of visible buildings decreased, distinctive features of the pastoral character of this area were lost. It is tempting try to reduce visual impacts to quantitative trend data. However not all buildings or structures are created equal. We recommend a re-focusing on compatibility with well-defined Landscape Settings. Staff from both agencies are pursing efficient ways to achieve this using the data we already have."[133]

The re-focus recommended in this passage requires a more qualitative, and aesthetic read of the evidentiary pictoral record: rather than "reduce visual impacts to quantitative trend data" the report asserts that "not all buildings or structures are created equal." It is through gathering photos of "Landscape Settings and their exemplary characteristics" that will enable the Commission and their contractors to better compare specific developments with the appropriate color palettes, architectural angles, cultural connotations (such as the "pastoral character" of the barn above) of the particular scene in which they are situated in order to "evaluate compliance with the compatibility standards in the Plan."[134] Landscape photographs become data that, when collected, can be used to calculate changes in scenic value (Figure 8). Such visual evidence must be read according to quantifiable and categorical qualities. Visual Monitoring Points position the contemporary surveyor in a trackable and repeatable place from which to systematically conduct a legally-codified practice of scenic accounting.

[133] "Columbia River Gorge Commission Data Review," 5.
[134] Ibid, 4.

Figure 2. *Visual Monitoring Point photos capture change over time from 27 locations in the Gorge.*

6 | Page

Figure 8 "Visual Monitoring Point photos capture change over time from 27 locations in the Gorge." This is a composite of three juxtaposed panoramas taken from the side of Highway 30 years apart. As the eye moves down, time progresses forward.[135]

Such methods for accounting for Scenic Value are used not only to evaluate the success of the Plan in protecting and enhancing Gorge resources, but also to implement on-the-ground practices that *produce* protection and enhancement. Local officials, corporate developers, and property-owning private citizens are also expected to carry out these calculations. The "Building in the Scenic Area: Scenic Resources Implementation Handbook" demonstrates how scenic accounting is translated into disciplinary technologies that delimit how, and who, can materially shape the Gorge.

> "Welcome to the Building in the Scenic Area Handbook. As a landowner in the Columbia River Gorge National Scenic Area, you have an important role in preserving the beauty of the Gorge's landscape.
> […]
> This Handbook is provided to help you:
> -Learn about regulations for developing land that can be seen from Key Viewing Areas.
> -Understand the reasons for these scenic regulations.

[135] Ibid, 5-6.

-Make informed choices when selecting building sites, structural designs, landscaping, colors, and exterior building materials.
-Prepare an application for scenic review of a development proposal."[136]

This Handbook is written for a land-owning home-builder who has "an important role in preserving the beauty of the Gorge's landscape." In order to increase efficiency of various permit processes and compliance evaluation, the Handbook prepares property holding Gorge residents with step-by-step instructions for how to assess their proposed development in accordance with its impact on scenic value. Gorge counties and the Commission itself must asses a landowner's "application for scenic review of a development proposal," and the more compliant the application the less time-consuming and tedious the assessment process. Landowners are responsible for "selecting building sites, structural designs, landscaping, colors, and exterior building materials" that comply with scenic regulations, lest they be refused proper permitting to carry out their plan, or be subject to legal action such as sanctions and fines.

Technologies of scenic accounting thus discipline people. The inventories and datasets on KVAs and Landscape Settings discussed above are used to construct scenic value, and in the Handbook they are also used to manage the activities of landowners. The below figures taken from the Handbook illustrate how methods of measurement also function as productive practices (Figures 9-11). The diagrams' function is instructive: With these images, a landowner is provided with directions on how to assess multiple characteristics of their proposal's visibility.

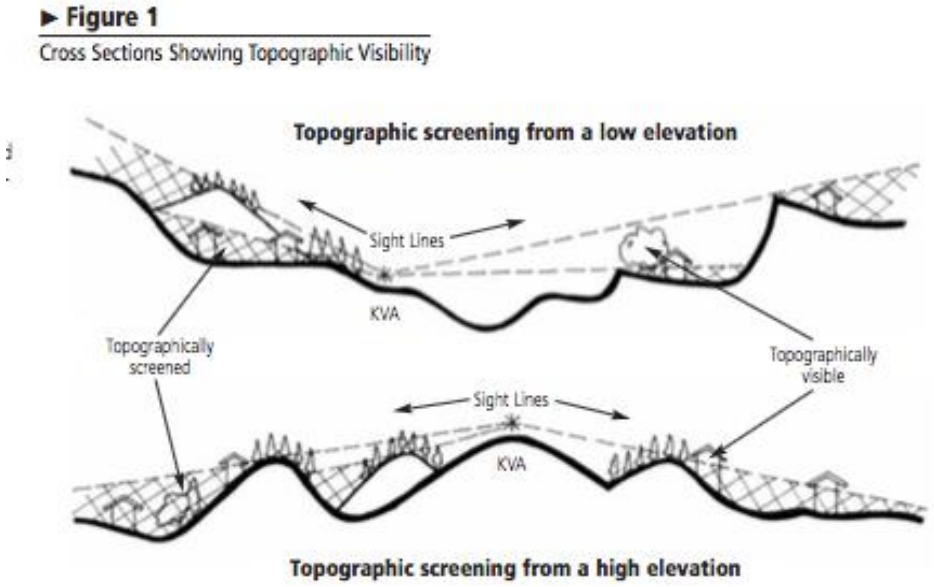

Figure 9 Topographical diagram indicating sight lines from different elevations—instructs the reader how to assess "topographic screening" requirements from their location.[137]

[136] "Building in the Scenic Area," 3.
[137] Ibid, 5.

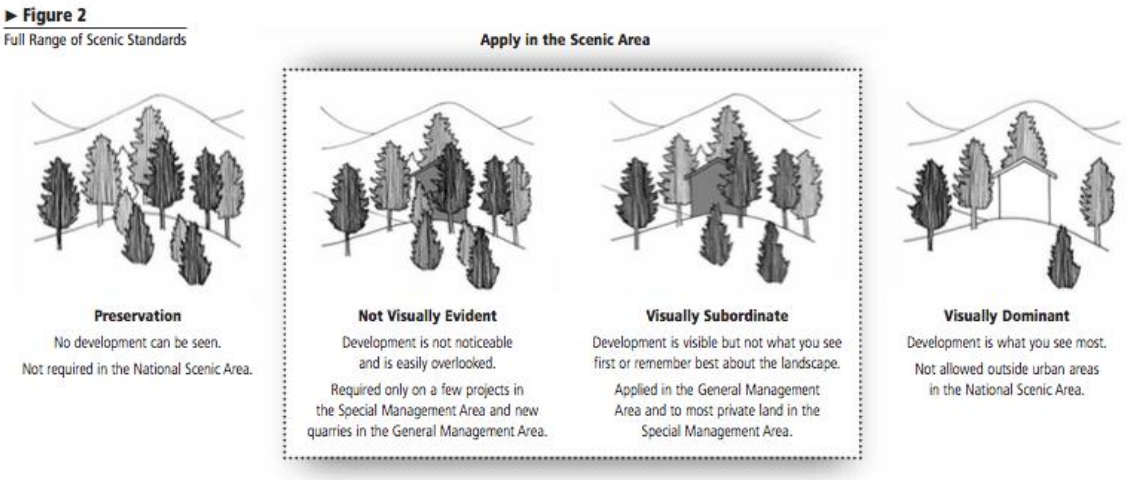

Figure 10 This visual diagram illustrates the "Full Range of Scenic Standards." The pop-out boxes in the center demonstrate acceptable modes of development in the scenic area—"not visually evident" and "visually subordinate."[138]

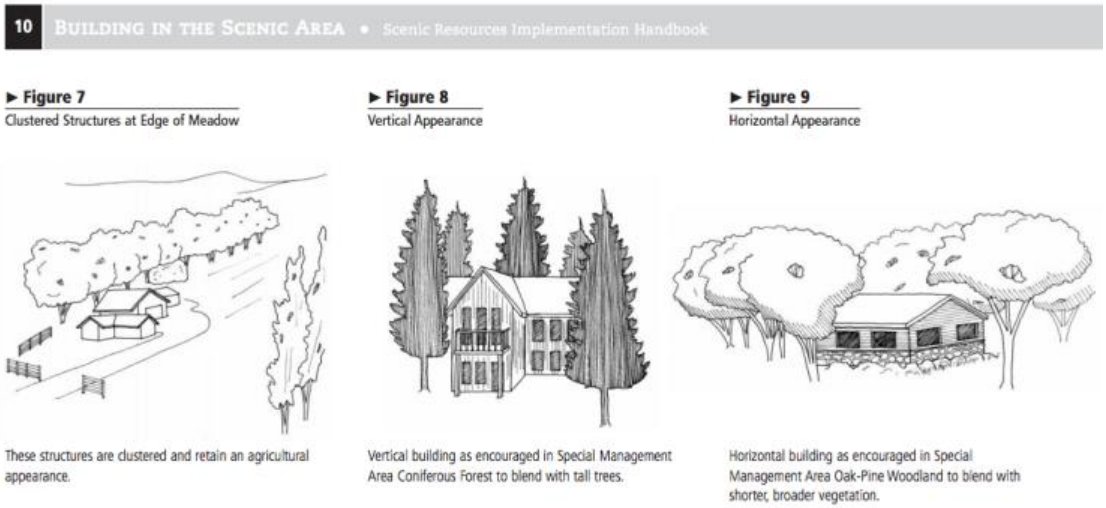

Figure 11 Visual diagram illustrating variation in "landscape settings" and offering examples as to what aesthetic, architectural, and structural layout of a home are naturally and culturally appropriate in each.[139]

A structure must be topographically screened, visually subordinate, and culturally and aesthetically blended with its surroundings. A Handbook reader is encouraged to use these illustrations as guidelines for the making of a "site plan"—a map and corresponding descriptive text that indicates how a development will look on the property. Is a building visible from a viewpoint atop a bluff? If so, does it stand vertically to blend in with tall trees, or horizontally to

[138] Ibid, 6.
[139] Ibid, 10.

mirror broader vegetation? Is the building painted in dark brown earth tones to match the landscape of the eastern Gorge?

Figure 12 "Finding colors in the landscape" features four images of the Gorge, from "west" and "east," and locates points on the image where selected "dark earth tones" come from.[140]

The aesthetic conventions of scenic value are authorized by systematic modes of measurement and accounting. Scenic value thus appears to emerge naturally from the landscape, an inherent quality of landscape that—with the proper techniques and technologies—can be scientifically calculated. Such scientific calculation, in turn, authorizes not only the legal codification of Scenic Value but the propensity of federal agencies like the Park Service and Gorge Commission, and environmental groups like Friends of the Columbia Gorge, to enforce compliance. Visual qualities are transformed into objective, evidentiary values. Values that, in and through techniques of landscape surveillance, are simultaneously rendered protected properties of a settler public as well as incriminating records of noncompliance in the context of federally-sanctioned regulations.

Conclusion: Scenery Against Sovereignty

I return now to consider the ways in which Scenic Value as a category that continues to route imperial power through the Gorge today. This chapter opened with excerpts from a newspaper article, written by the executive director of Friends of the Gorge, in opposition to the Confederated Tribes of Warm Springs proposal to develop a casino in the Gorge (either on trust

[140] Ibid, 17.

land adjacent to the city of Hood River that the Tribe had owned for nearly 40 years, or on land they sought to acquire at the port of the City of Cascade Locks). Both plots were located within the Columbia River Gorge National Scenic Area, on the Oregon side of the river, and—as all development in the cities and villages along the water line—adjacent to the river, the transcontinental railway, and the Historic Columbia River Scenic Highway.

Friends of the Columbia Gorge (FOG), and other anti-casino citizen groups, penned dozens of statements—on their websites, in local news sources, and Oregon's largest paper—against the casino plans and in defense of scenic protections, in an effort to appeal to long-standing anti-gaming anxieties amongst the settler public. The Oregonian Editorial Board also published a statement advocating the same position, writing: "The casino shouldn't go there. That property lies in a place too beautiful, too unspoiled, too important, to mar with a 75,000-square-foot casino, acres of blacktop and thousands of cars and motor homes."[141] The majority of these pieces are unabashedly racist and anti-Indigenous, directly inciting long-standing settler anxieties about the "spillover" of Native economies, populations, and immoral gambling socialities beyond reservation boundaries. The same rhetoric would also appeal to a colonialist paternalism that cast public opinion as in the best interest of all Native nations in the U.S., seeking to protect both "regular citizens" and Tribes from the degeneracy of financial gaming. The casting of casino construction on tribally owned land as a matter of public opinion, debate, and ultimately refusal, is a strategy to deny the treaty rights and legal capacity of the Confederated Tribe of Warm Springs as a sovereign nation, whose government-to-government negotiations are *trans*national ones that should be conducted as such.

On February 28, 2006, in the Oversight Hearing on Indian Gaming, Conservation Director Michael Lang of FOG submitted a testimony before the US Senate's Committee on Indian Affairs. The testimony supported reform of the Indian Gaming Regulatory Act (IGRA) to require greater community consultation for "off-reservation gaming" and the amending of the IGRA to prohibit "Indian gaming casinos within our national parks and national scenic areas."[142] FOG's testimony began with a description of their membership; hundreds of citizens who not only "live and work in the Columbia Gorge, they use the National Scenic Area for hiking, photography, plant and wildlife viewing, camping, rock climbing, river travel, windsurfing and other recreational pursuits." The CRGNSAA, they explained, was passed in Congress in 1986 to protect the very resources that make such lifestyles and activities possible—the Act "protects and enhances the aesthetic, biological, ecological, economic, and recreational values of the Columbia River Gorge." With the citation of this federal act as the starting point for the claims they proceed to make, Friends then describe the ways in which Warm Springs' proposed casino complex would disrupt the "carefully balanced land use plan that has been achieved under the National Scenic Area Act":

> "The proposed casino and its immense parking areas would be visible from the Pacific Crest National Scenic Trail, the Historic Columbia River highway, Interstate 84 and the Columbia River. These are all designated as "key viewing areas" within the National

[141] I found the quote from this *Oregonian* editorial in the text of Brooke Colley's Oregonian Editorial, as found in Brooke Colley's book, *Power in the Telling,* 68.
[142] Michael Lang on behalf of Friends of the Columbia Gorge, "Testimony Before the Committee on Indian Affairs: Oversight Hearing on Indian Gaming," February 28, 2006, 1.

> Scenic Area. The proposed casino would be visible for miles along the Columbia River Gorge and would adversely affect the scenic beauty of the Columbia River Gorge[…]The casino is projected to attract three million visitors each year, increasing automobile traffic and causing air pollution in an area that is already suffering from this problem."[143]

As the casino impacts a *national* area, the testimony argues, Friends must turn their attention to the regional and national implications allowing such a casino to be build. The Indian Gaming and Regulation Act as it currently stands fails to prevent such a deleterious precedent, they claim, and therefore they write in support of amending the IGRA to "protect the people of the United States" from the actions of Indigenous Nations:

> "Your legislation is designed to protect the people of the United States from the ills of reservation shopping and trust land roulette. The purpose is to restore some balance to communities while still allowing full sovereignty on reservations. Why don't we deserve the same protection?
>
> Senator, the desires of the residents of the Gorge and indeed the desires of the people of the State of Oregon have been ignored."[144]

In the context of the historical examination of profit and play in the Gorge, the repetition of "desire" in this passage is instructive. The testimony cannot claim that the sovereign rights of "the people of the US" are under legal violation, however, the "desires of the people" turns on a longstanding entitlement to pleasure in this place. That desire might be considered a claim of equal contestation to that of the federally protected rights of a sovereign Tribal nation is evidence of the ongoing imperialist machinations of play and recreation in the Gorge.

> "It is no surprise that Oregon residents are opposed to an off-reservation casino within one of the crown jewels of our state. The Columbia River Gorge National Scenic Area is precisely the kind of location that should be protected from development of this nature.
>
> Our lives, our land and a jewel in America's crown are being sold and paid for with reservation shopping and land trust roulette…"[145]

A benign, environmentalist citizenry is constructed in direct opposition to—and through the vilification of—Warm Springs. FOG argues that Warm Springs is the only tribe that has "pressured the State to allow it to exploit the natural values of the Columbia River Gorge to advance its economic self-interest." The Tribe is cast as greedy and extractive, without any relation to the lands in the Gorge other than one of opportunistic predation on its resources and susceptible citizens. Here, it is worth remembering that the Gorge constitutes part of Warm Springs' ancestral homelands from which they were forcibly removed and incarcerated on reservation lands far from the river in 1855. Of course, tribal members continue to live, fish, conduct business, and hold ceremony in the Gorge, although it is now a place dramatically spatially and socially rearranged by rail, highway, industry, and inundation. Yet, FOG's

[143] Ibid, 2.
[144] Ibid, 4.
[145] Ibid, 6.

discourse moves beyond mere erasure of the historical and ongoing dispossession of the nation from their lifeways and resources in the Gorge:

> "The Warm Springs Tribe has been long recognized as an extraordinarily successful tribe in a number of sources, including Sharles Wilkinson's book 'Blood Struggle', which features Warm Springs as a prime example of a self-sufficient tribe. Please consider that the Warm Springs Tribe has a vast reservation with U.S. Highway 26 running through it and an intersection with U.S. Highway 97 only 10 miles from the eastern boundary of the reservation."[146]

The final paragraph of FOG's testimony repeats the opening summary of the protections afforded the Gorge by federal law, and then poses questions to the committee with racialized and fear-mongering rhetoric, thereby clearly delimiting the white possessive "we" whose contest to control the Gorge is an ongoing imperialist project.

> "The Columbia Gorge National Scenic Area was established by Congress to protect and provide for the enhancements of the scenic, cultural, recreational and natural resources of the Columbia River Gorge. That legislation, out of respect for native peoples, required the protection of archaeological and cultural significant sites. It also required that development take place in a way that would not adversely affect the scenic, cultural, recreational or natural resources inherent in the Columbia Gorge. Shouldn't the protections of your bill be extended to the residents of the gorge and the Portland/Vancouver area who are the real target of this proposal? Shouldn't our national scenic treasure be protected from being turned into a Mecca for casino gambling?"[147]

The residents of the Gorge and adjacent metropolitan areas are imagined to exclude enrolled tribal members of Warm Springs, and perhaps Indigenous peoples as an imagined monolith. They are constructed as a cohesive citizenry, in need of protection from the threat of an unnamed, yet outsider, mass. Though the word "mecca" has taken on metaphorical use in common parlance, I cannot help but consider the possibility of intentional signaling here: In the abstracted conclusion to the rail against a quite specific and complex case, what affective work might a clearly negative and invasive casting of "Mecca" do here? Does such a choice evoke the racist, islamaphobic anxieties of a senate engaged in the global war-on-terror, inviting listeners to project their fear of foreign brown bodies gathering and circulating through the Gorge?

Throughout chapters one and two I have demonstrated how Scenic value was constructed in and through entangled military, financial, industrial, and scientific discourse and practice. That scenery has been a category with financial, legal, and corporate purchase in the longue durée of colonial occupation in the Pacific Northwest, and the Gorge specifically, demands that contemporary delimitations of Scenic value be scrutinized as a continuation of such. The greenwashed settler anxieties of environmental opposition to Warm Springs' casino circulated not only in public discourse, but in federal political and legal arenas as well. Beyond the immediate implications of casino construction in the Gorge, Friends extended their argumentation to intervene in a broader debate about the necessary nation-wide restriction on

[146] Ibid, 6.
[147] Ibid.

Indigenous economic activity. As in their opinion pieces, their submitted commentary likewise routes countersovereign sanctions through a rubric of categorical and legally codified Scenic value.

Two primary lessons emerge here. One, that in the context of the Columbia River Gorge NSA and broader project of Pacific Northwest Regional Planning, Scenic Value has been constructed as a shifty, malleable, and socionatural category whose affinities and parameters can bend according to settler interests. Scenery is routed and routing; it is trafficked and traffic-making: A political tool that has assisted the US nation-state in mediating the circulation of capital, scientific knowledge, bodies, and subjectivities. And two, that the edification and virility of settler subjectivities are coproduced in and through the ongoing construction of a scene that has historically depended on supplanting Indigenous peoples. The capacity of scenic beauty to function as a universal, common-sense value in contemporary settler culture is one that has been forged through entanglements of engineering, education, archaeology, aesthetics, and recreation.

CHAPTER 3

Contested Sonic Space at Celilo Falls

Introduction

> "It was a constant roar, you could hear it echoing off the bluffs from up there at Celilo Village where we used to camp. And there was tons of water coming over those falls and rocks. You get down there closer to it, that's all you could hear. And it was a sight to see, and people came from all over just to see and be at the Falls and take pictures, take pictures of the Falls, take pictures of themselves being there."
>
> —Johnny Jackson (Columbia River Indian chief, Cascade and Klickitat), 2007[148]

> Dislocated from one another, we are now flooded,
> resting in place.
> We suffocate in the backwater of decadence
> and fractious contempt.
> Purity of the ancient is the language without tongues.
> The river elegantly marks swirls on its surface,
> a spiral that tells of a place
> that remains undisturbed.
>
> – Elizabeth Woody (Warm Springs, Wasco, Yakama, and Navajo), 1994.[149]

It is 2015 and just east of The Dalles Dam on the Oregon shore of the Columbia River, I am looking out across Lake Celilo, a wide and slow flowing artificial reservoir, from a picnic table in Celilo Park. I hear the steely rumble of an oil tanker train along the Union Pacific line, the resounding horn of a cargo barge plodding down-river, and the whoosh of highway traffic on the I-84. Standing at the river's edge, my face is wet with rain and ears full of wind—I hear the quick, whipping polyester monofilm sail of a wind-surfer and the crashing crests of world-renowned mid-river waves. Between lulls in the gusts, I hear the methodical gurgle of Lake Celilo's waves, a slow-flowing, artificial reservoir that laps at Celilo Park's rocky shore.

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[148] Johnny Jackson and Wilbur Slockish, Jr. quoted in "Oral History Excerpts," *Oregon Historical Quarterly,* 108, no. 4 (2007): 709.

[149] This is an excerpted stanza from excerpt from Elizabeth Woody's poem "Waterways Endeavor to Translate Silence from Currents," *Luminaries of the Humble* (Tucson, AZ and London, GB: The University of Arizona Press, 1994), 97. The full poem is reprinted with permissions later in this chapter.

Celilo Park is a Treaty Fishing Access Site on Nch'I-Wàna,[150] which (for now) is commonly called the Columbia River. Along with public recreational shoreline and tree-shaded picnic tables, there is also Treaty mandated infrastructure: A boat launch, fish cleaning tables and structures for net-drying, a parking lot with electric outlets, and bathrooms with showers. The most heavily used of 31 Sites along the river, Celilo Park is one node in a federal compensation system aimed to reserve Mid-Columbia River tribes' Treaty Right to half of the river's salmon.[151] All throughout the Columbia River Basin, Native fishing grounds, villages, homes, burial grounds, farms, sacred places, and commercial infrastructure remain inundated—and salmon runs decimated—by 20th century hydropower development in what now amounts to over 60 dams throughout the Columbia River Basin watershed. Demarcated by Congress, and constructed by the U.S. Army Corps of Engineers (ACE), the Sites provide commercial fishing locations at the "usual and accustomed places" for fishers of the Nez Perce Tribe, Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes of the Umatilla Reservation, Confederated Tribes and Bands of the Yakama Indian Nation.

Before the 1950s and for centuries preceding, however, the visual, sonic, and geopolitical landscape of this stretch of the river did not look or sound the way I have just described. What I cannot hear in Celilo Park at present is the sound of falling water. Beneath the floating fishnets on Lake Celilo is Wy'am, Celilo Falls.[152] Elizabeth Woody, whose poetics of sonic geography

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[150] This is the mid-Columbia River Sahaptin dialect name, as phonemic orthography, for the Big River: See Hunn, E., James Selam and Family, 1991). However, it is important to note that Sahaptin is not the name that many Sahaptin speakers use for their language, but the common mis-assigned name by colonial settlers and anthropologists who learned this assignation from the Columbia Salish. For example, the Yakama Nation's tribal cultural resource program uses the name Ichishkíin Sínwit ("this language") instead of the Salish language term Sahaptin: See Virginia Beavert and Sharon L. Hargus, *Ichishkíin Sínwit Yakama / Yakima Sahaptin Dictionary,* (Toppenish and Seattle, WA: Heritage University and University of Washington Press, 2009).

[151] Celilo Park is one of the most heavily used of 31 Treaty Fishing Access Sites along the Columbia River have legally protected land and amenities designated for exclusive use by native fishers under the ongoing U.S. District Court litigation known as *U.S. v. Oregon,* starting in 1950s/60s. Tribal access to historical fishing grounds, guaranteed to Tribes by treaties formed in the mid-1800s, was lost due to dam construction along the Columbia River system. The Columbia River Treaty Fishing Access Sites (CRTFAS) Program was implemented to restore those rights to Tribes. The project spanned over 25 years of legislation, planning, design, and construction, and involved projects along nearly 150 miles of the Columbia River, from Bonneville Dam to the foot of McNary Dam between the states of Oregon and Washington. The four Treaty Tribes—the Nez Perce Tribe, Confederated Tribes of the Warm Springs Reservation of Oregon, Confederated Tribes of the Umatilla Reservation, Confederated Tribes and Bands of the Yakama Indian Nation—are the mid-Columbia River native nations who were forced to cede millions of acres to the expanding US settler nation-state through Treaties in what was then recently incorporated "Oregon Territory" in 1854-1855. In these treaties they reserve their rights to fish, hunt, and gather at all "usual and accustomed places" off their reservation. These four nations also comprise the Columbia River Inter-Tribal Fish Commission, an agency responsible for almost all of the significant legal and ecological strides in fish-run protection, recovery, and fishery management in the Columbia River. Apart from the four Treaty Tribes historically, Columbia River Indians have lived off reservation, identify their ancestry as that of River People, and are not federally recognized but have organized their tribal governance through community and loose confederation as Columbia River Tribe. Columbia River Indians continue to live and fish in their ancestral homelands along the Columbia River, at Celilo Village, and "in-lieu fishing sites" among many other places in Washington and Oregon. The narrative above is based on my accumulated research, but I relied substantially on the documentation and analysis by Andrew Fisher in his book *Shadow Tribe: The Making of Columbia River Indian Identity,* (Seattle, Washington: University of Washington Press, 2010).

[152] People live at Wy'am today, and have since time immemorial. If you turn right off of Interstate-84 instead of left, you would arrive at Celilo Village: A small community of about 100 people, twelve houses, a long house, and a

runs through this paper, has translated the Sahaptin word Wy'am to mean "echo of falling water" or "sound of water on rocks."[153] Before inundation by the rising backwaters of The Dalles Dam on March 10th 1957, this was a geophysically complex stretch of the river. At Wy'am the nearly 900yard wide channel constricted to less than sixty, and dropped more than twenty feet in elevation, charging the flow drained from 237,000square miles of watershed through basaltic islands and outcroppings in thundering falls and rapids, whirlpools and eddies. On those narrowed rocky cliffs, fishermen constructed seasonal platforms and their dip-nets brought in prolific catch, as millions of salmon forged the constricted current toward their spawning grounds up-river. Celilo Falls—presently inundated by Lake Celilo, the 330,000acre feet of impounded, plodding waters I see from Celilo Park—was part of the most productive inland fishery and hub of commercial, cultural, and political exchange in the region.

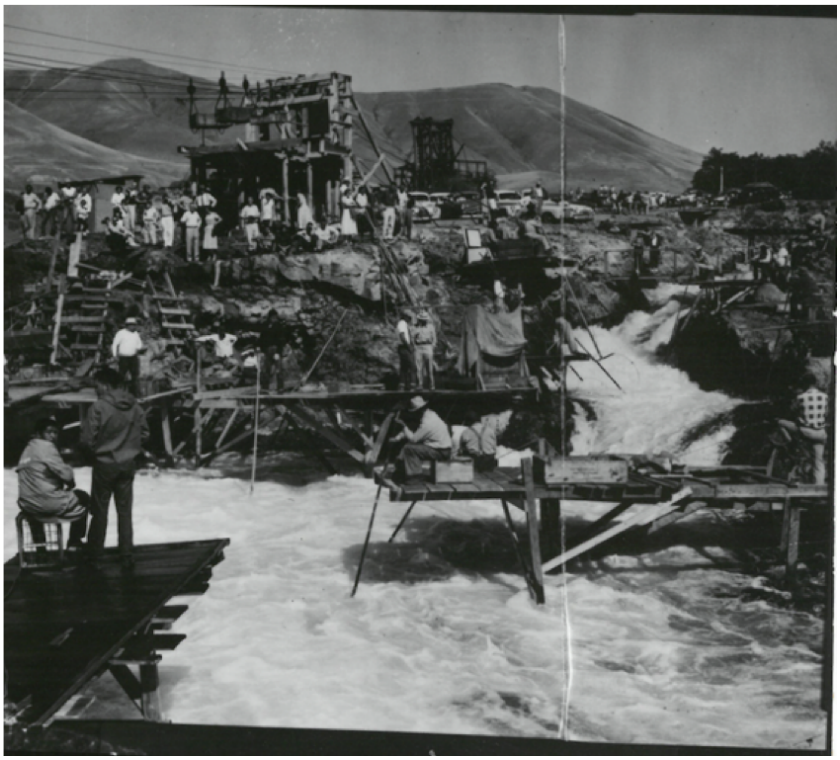

Figure 13 "CARS LINE AREA NEAR CELILO FALLS WHERE INDIANS DIP-NET FOR SALMON, SPECTATORS OBSERVE ACTION FROM ROCKS ABOVE."[154]

On the heels of the 1957 inundation's 50-year mark, the Portland District U.S. Army Corps of Engineers (ACE) was faced with mounting pressure from environmental activists and Native peoples to provide definitive evidence as to whether they had dynamited the basaltic formations

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community center. Native people have done tremendous work to remember the expansiveness and vitality of Wy'am before the 1950s, as a central node of far-reaching economic, political, cultural, social, and spiritual relations between native peoples and their more-than-human relations from what is now commonly called Alaska to California, and the Great Plains to the Pacific Coast. This history and present is discussed in scholarship previously cited in this dissertation, see the work of George Aguilar, Carol Craig, Katrine Barber, Ed Edmo, Andrew Fisher, Johnny Jackson, Lillian Pitt, Wilbur Slockish, Tabitha Whitefoot, and Elizabeth Woody.

[153] Elizabeth Woody, *Luminaries of the Humble,* 97.

[154] OHS neg., CN 007466. Photograph by Les Ordeman, Casco County: 1955.

in the river channel during dam construction.[155] The ACE turned to visual data to disprove such indictments, and in a public act of settler (re)discovery enabled by technology that "sees with sound,"[156] produced new images of Celilo Falls. In April of 2007, an ACE survey team led a boat fitted with a multi-beam sonar scanner onto the flat waters of Lake Celilo to generate a sonogram of the riverbed. *The Oregonian* newspaper published the cartographic images, explaining, "new sonar maps produced by the Corps of Engineers reveal a virtually unchanged Celilo Falls beneath the murky water of the Columbia."[157] The article begins with historical and political context for the survey:

> About 10 miles upstream of The Dalles, the Columbia River once thundered over fierce rapids and a big horseshoe-shaped waterfall where generations of Native Americans gathered to catch salmon by the hundreds.
>
> The lake that rose behind The Dalles Dam swallowed Celilo Falls in 1957. As if that weren't destruction enough, government demolition teams blasted the falls to ruins ... or so the stories said.[158]

This narration of historic settler violence begins, as many do, with a description of a distant and completed event, a people past, and a dismissal of intergenerational memory. The narrative erases persisting Indigenous existence and use of this place, and neglects the well-documented history of ACE dynamite-demolitions at fishing sites, homes, sacred places, and burial grounds throughout the twentieth century. Historical and ongoing destruction is diminished, and the ACE appears innocent in the face of fallacious accusations. Yet at the same time, the Indigenous interviewee's featured in *The Oregonian*'s article expressed relief to see an image that suggested their ancestral fishing grounds had not be dynamited. Further still, these interviews suggested that sonic cartography might be useful for land reclamation struggles, and thus politicized the ACE sonograms as an opportunity to (re)assert the futurity of Indigenous relations with Celilo Falls.

How do we contend with the use of technoscientific imaging processes toward seemingly contradictory ends: As tools to bolster both settler-state authority as well as Indigenous claims to land? In this chapter, I extend this question to examine the role of sonic visualization in divergent conceptualizations and claims to space on the Columbia River. How does "seeing with sound"[159] (re)configure the settler nation-state's relationship to contested territory? This chapter addresses these questions through an analysis of the production, circulation, and various political deployments of images created by the 2007 ACE sonar survey of Celilo Falls. I take up feminist materialist analytics developed by Native American and Indigenous Studies studies scholarship on cartography and refusal,[160] in conversation with the sonic geographies of

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[155] V. Patton, "New images show Celilo Falls still intact," *Oregon Public Broadcasting,* 2008.; J. Rojas-Burke, "Sonar shows Celilo Falls are intact," *The Oregonian,* November 27, 2008.
[156] Max Ritts and John Shiga, "Military Cetology," *Environmental Humanities,* 8, no. 2 (2016): 196-214.
[157] J. Rojas-Burke, "Sonar shows Celilo Falls are intact."
[158] Ibid.
[159] Max Ritts and John Shiga, "Military Cetology."
[160] Here I am referring to the work of Mishuana Goeman (Tonawanda Band of Seneca), *Mark my words: Native women mapping our nations,* (Minneapolis, MN: University of Minnesota Press, 2013) and Audra Simpson

Columbia River Indigenous writers,[161] to argue that "seeing with sound" is a fraught, contested, and political process in and through which land claims come to matter and make sense.

Emerging from Indigenous literary representations of sound at Celilo, I want to begin this chapter with a theoretical framework for considering the affordances of sonic knowledge in unsettling colonial cartographies. To further elucidate the political stakes of "seeing with sound," the second section uses archival maps and critical sonar studies to historicize the material production of sonograms at Celilo. As a militarized cartographic technology, I consider the 2007 ACE sonar survey in a much longer context of U.S. settler and imperial practices of imag(in)ing territory: Enclosing lands with maps, and surveilling waters with sound. From this history, I then examine sonar's representational politics in the present moment. In this third section, my close reading of newspaper articles and state legislation demonstrates how the sonograms take on political life in ways that repackage ocular centrism, assuage settler guilt in cultural and legal spheres, and thus authorize ongoing U.S. enclosure of Indigenous lands.

Throughout this chapter I complicate my argument with attention to multiple political valences and possibilities of sonic cartographies, and the enactments of anti-colonial resistance in both constituting and contesting the sociopolitical life of the images. Thus, the final section engages with Tonawanda Band of Seneca scholar Mishuana Goeman's[162] call to theorize spatial justice through Indigenous womens' cartographic practices. As such, I focus on the role of sound in a politics of refusal[163] to the maintenance and memorialization of settler control at Celilo Falls. Turning back to Elizabeth Woody's poem, I examine sonic geography as a spatial framework for thinking anti-colonial land politics and undoing the logics of settler cartographies.

Sound Matters

How does sonar technology authorize the claim that Celilo Falls are "intact" when water is in fact *not* falling? What cultural and political work does this claim do in the maintenance of ongoing settler control over this space, and more broadly, how do contesting forms of sonic knowledge undo, undermine, and exist outside of this claim? As many scholars have demonstrated, settler colonial control over land and "natural resources" never fully coheres—it is never complete or stable—but often maintains a veneer of legitimacy vis-a-vis scientific practices.[164] When asking after the social and spatial orders produced in and through sonar imaging, Native and Indigenous studies' formative critiques of settler colonial sciences and cartographies offer a route to engage with the political refusals and futurities of anti-colonial

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(Kahnawà:ke), *Mohawk Interruptus: Political life across the borders of settler states,* (Durham, NC: Duke University Press).

[161] Here I am referring to writings by Allen V. Pinkham Sr. and Elizabeth Woody that are analyzed in this chapter.

[162] *Mark My Words*.

[163] *Mohawk Interruptus*.

[164] For more engagement with Indigenous science and technology studies see the work of Kimberly TallBear, *Native American DNA: Tribal Belonging and the False Promise of Genetic Science,* (Minneapolis, MN: University of Minnesota Press, 2013), and Jen Rose Smith, *Indeterminate Natures: Race and Indigeneity in Ice-Geographies,* (University of California Berkeley, Doctoral Dissertation, 2019).

geographies and sovereignties that exceed settler governance.[165] Indigenous non-visual accounts of the Falls must frame an examination of the material consequences, and potential spatial (re)organizations, borne out of the sonograms' enrollment in various constituencies' spatial claims along the Columbia River.

Columbia River Treaty Tribes and Columbia River Indians continue to take fish at Celilo Park in a place visually, sonically, and geopolitically (re)spatialized by the territorializing projects of settler colonial occupation. Allen Pinkham is a historian, storyteller, and Nez Perce elder who has written about his contemporary relation with Celilo Falls, in part, through sonic memory. The following excerpt from Pinkham's "Childhood memories of fishing at Celilo Falls"[166] describes his visits to Celilo in terms of what he has heard and no longer hears:

> "I have stopped at Celilo over the years, and the silence is a terrible thing to experience. There are no sounds of mothers and grandmothers cooking or washing dishes after a meal that included fresh salmon or eels. No sounds of mothers and daughters cutting salmon and eels to dry for winter storage and use. No sounds of men chopping wood for cooking or smoke-drying at the old village site. No sounds of children running, playing, and shouting at each other. Near where fish were being caught, there are no sounds of nets going into the currents or of fish being clubbed when brought onto the scaffolds and put into fish boxes…Now, there are no sounds of hand cable cars being pulled across to the various islands; their wheels are quiet."[167]

Pinkham's memory routes a historical and material account of life at Celilo Falls through a sonic register. His tracing of past and present sounds at Celilo affords an account of space that is historicized, gendered, and persistent in its sociality and materiality. Here, women and more-than-human beings are the central agents in the production of relational biological and economic productivity. He describes an interrelated set of Indigenous socialities and technologies that are reproductive and relational. Relations between mothers, grandmothers, salmon, eels, nets and cable cars, constitute an "intact" Celilo Falls as intimate, sustaining, and sound-full. Pinkham's repeated "terrible" experience of silence over the years—a dense and layered series of "no sounds"—registers that which cannot be seen, the violence of material enclosure and social dislocation, as a series of many acoustic absences. Pinkham constructs a historically specific sonic knowledge that is both an intimate claim to Indigenous social space and an indictment of the constant invisible terror of ongoing occupation.

Similarly, Elizabeth Woody's poem "Waterways Endeavor to Translate Silence from Currents" produces a dislocated, yet animate, sonic geography. Woody is a highly acclaimed poet, educator, and founding member of the Northwest Native American Writers Association. Her poem, an excerpt from which serves as an epigraph for this chapter, begins "First of the voices

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[165] Here, in addition to Goeman and Simpson, I am also thinking with Kevin Bruyneel's book *The Third Space of Sovereignty: The post-colonial politics of U.S.-Indigenous relations,* (Minneapolis, MN: University of Minnesota Press), and Joanne Barker's book *Critically Sovereign: Indigenous Gender, Sexuality, and Feminist Studies,* (Durham, NC: Duke University Press, 2017).

[166] Allen V. Pinkham, Sr., "Childhood Memories of Fishing at Celilo Falls," *Oregon Historical Quarterly,* 108, no. 4 (2007): 586-595.

[167] Ibid, 592.

are innocent, from memory/" and ushers the reader into a multitudinous, resonant remembrance. The poem's scaffolding stands on images of resounding Columbia River beings—hissing fissures and songs linger—while spiraling through a flooded place of dislocation. Akin to Pinkham's insistence on the vital relations that constituted Celilo Falls, Woody's poem likewise represents Celilo Falls in its own right. Further still, Woody's poem evokes futurity through an emplaced and communicative river. The final three lines depict a Columbia that might be caring for itself, "elegantly" caressing its own "surface"—"The river elegantly marks swirls on its surface,/a spiral that tells of a place/that remains undisturbed." The symbol of spiraling water generates a sense of falling, as well as continuous movement. A place "that remains undisturbed" appears both persistent, and brought into being by continuous story-making, although perhaps only legible as such to the closed and specific "we" of the poem. Neither spectacular nor ocular, Celilo is irreducible to geophysical structures that can be made-sensible by visual measurement alone.

Pinkham's sonic memories and Woody's sonic geography turns our attention to the ways that sound and silence are historical, material, and spatial. Yet, neither Pinkham nor Woody describe the social, cultural, and spatial dislocation brought on by inundation as "death" (Barber, 2010). Sound and silence figure prominently in Columbia River Indian peoples' memory of an acute event of primitive accumulation, experience of ongoing dispossession, as well as the collective maintenance of relation to the vitality of Celilo as an ancestral person in its own right. The silencing of Celilo's thundering waters—the "echo of water on rocks"—is a form of violent dispossession: A kind of ongoing and incomplete sensory enclosure, as U.S. settler colonial spatial orders are always undergoing constant maintenance and contestation.[168] Put another way, what I refer to in this paper as sonic knowledges figures centrally in contemporary contestation surrounding what counts as life, personhood, and legitimate claim to place across interlocking cultural, social, and political spheres. Sonic knowledges refers to the various ways in which sound waves are experienced, described, represented, and codified as material truth claims, or ontological facts. The historic echo of pounding waters, memories of reverberating dynamite blasts, and pings of under-water sound-waves, are multitudinous sonic knowledges that converge and diverge in the same place, but toward the production of vastly different spatial politics and with uneven power relations.

Imaging Matters

Dan Proudfit—head of the Portland District US Army Corps of Engineers (ACE) survey section—led a boat over Lake Celilo in April of 2007. As his team cruised the reservoir's surface a multi-beam sonar scanner's projector emitted pings toward the intended deflecting structure, or target: The geomorphic basalt formations of the Columbia riverbed. These sound pulses reverberated from their target back to the water's surface, and were received by the scanner's hydrophone. A transducer converted these reverberations to electrical impulses that could then be spatially visualized as a series of black and white sonograms. Akin to photo negatives these images were then inverted and "falsely" colored through computer

[168] Here again, to name but few, I am thinking about ongoing structural maintenance of U.S. occupation with Alyosha Goldstein, Manu Karuka, Mark Rifkin, Audra Simpson, Jennifer Rose Smith, Patrick Wolfe.

processing.[169] Evocative of a colorful 3-D topographical model, the resulting images convey the geophysical structures—in this case, the basalt cliffs— as they might appear without water running through or over them. The sonograms' red-to-green color gradation indicates an increase in depth (from about twenty to 120 feet) along the river floor and the shadowed indentations, ridges, and cuts indicate spatial dimension. In so doing, ACE produced yet another visualization of Celilo Falls in a long line of measurements, maps, and surveys of this stretch of the river. This time, they used sound.

While the bottom of Celilo Lake had never once been mapped since The Dalles Dam was completed, US map-making of Celilo Falls is not new. Throughout the nineteenth and twentieth centuries, ACE produced and deployed images of the Columbia's geophysiology for the purposes of expanding riverine navigation, preventing floods of settler developments, irrigating agricultural lands, and generating hydroelectricity for a rapidly increasing settler population and war-time industry.[170] In the pacific northwestern U.S. more broadly, land and water surveys assisted the quantification, invasion, and enclosure of the land by the settler nation-state throughout the fur trade, Lewis and Clark Corps of Discover expedition, westward expansion of railroads, and urbanization of western territories.[171] Federal plans for the conquest of the Columbia River Basin specifically, relied on visual representations of waterways to imagine and enact the expansion of homesteading, commercial agriculture, hydropower, and military industry.[172]

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[169] Description of sonar survey technology is informed by J. K. Peterson's book *Handbook of Surveillance Technologies (3RD ed.),* (Boca Raton, FL: Taylor and Francis Group, CRC Press, 2012).

[170] See Craig Allen, "'Boils Swells and Whorl Pools': The Historical Landscape of the Dalles-Celilo Reach of the Columbia River," *Oregon Historical Quarterly,* 108, no.4 (2007): 546-559.; and Diana Fredlund, "The Corps of Engineers and Celilo falls: Facing the Past, Looking to the Future," *Oregon Historical Quarterly,* 108, no.4 (2007): 688-697.

[171] See Stuart Banner, *How the Indians Lost Their Land: Law and Power On The Frontier,* (Harvard, MA: Harvard University Press, 2007).; Ned Blackhawk, *Violence Over the Land: Indians and Empires in the Early American West,* (Harvard, MA: Harvard University Press, 2006).; Patricia Limerick, *The Legacy of Conquest: The Unbroken Past of the American West,* (London, GB and New York, NY: W.W. Norton and Company, 1987).

[172] See William Lang, "The Meaning of Falling Water: Celilo falls and The Dalles in Historical Literature," *Oregon Historical Quarterly,* 108, no.4 (2007): 566-585.; and Richard White, *The Organic Machine: The Remaking of the Columbia River,* (New York, NY: Hill and Want, 1995).

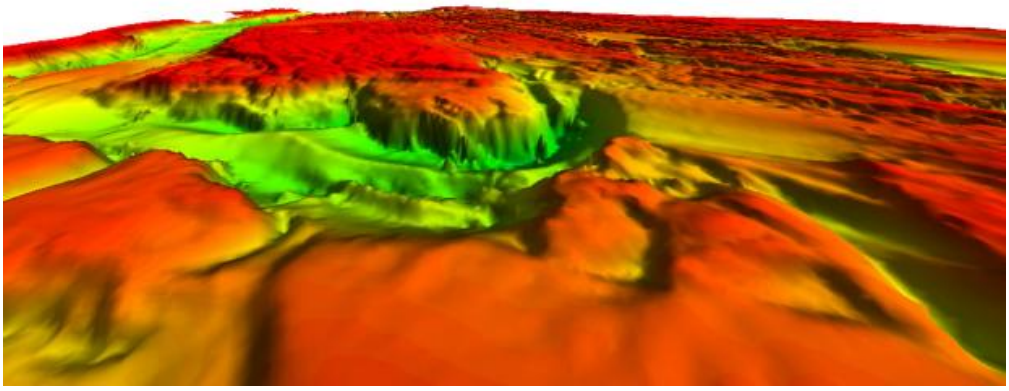

Figure 14 Sonographic Still of Horseshoe Falls, one of several plunging cataracts that constitutes Celilo Falls.[173]

U.S. map-making of Celilo Falls is not new. Throughout the 19th-20th centuries, the ACE has deployed technologies of visual measurement and representation of the geophysical structures in this stretch of the river for the purposes of expanding riverine navigation, preventing floods of settler developments and irrigating agricultural lands, and generating hydroelectricity for a rapidly increasing settler population and war-time industry. While the bottom of Celilo Lake had never once been surveyed since The Dalles Dam was completed, the ACE had charted and mapped Celilo Falls many times over the course of the last century. In the pacific northwestern U.S. scientific charting of the Columbia River's geophysical landscape made possible the quantification, invasion, commodification and enclosure of the land by the settler nation-state throughout the fur trade, Lewis and Clark Corps of Discover expedition, westward expansion of railroads, urbanization of western territories, and development of agricultural and hydropower empire. Cartographic practices shape the settler legal, social, and cultural apparatuses that violently (re)spatialize the material life and political geographies of Indigenous peoples at Celilo Falls, and erase these legacies of ongoing dispossession from the national imaginary.[174]

[173] Image produced by the U.S. Army Corps of Engineers (public domain), printed in *The Oregonian*. http://blog.oregonlive.com/news_impact/2008/11/newcelilo.jpg Accessed September 26th, 2016.

[174] Again, this content in this paragraph is substantiated by a significant body of literature on history of the U.S. "West" and "Pacific Northwest," with a focus on Indigenous history and environmental history, including Craig Allen, Stuart Banner, Katrine Barber, Ned Blackhawk, John Dougherty, Diana Fredlund, William Lang, Patricia Limerick, and Lindsey Schneider among many others.

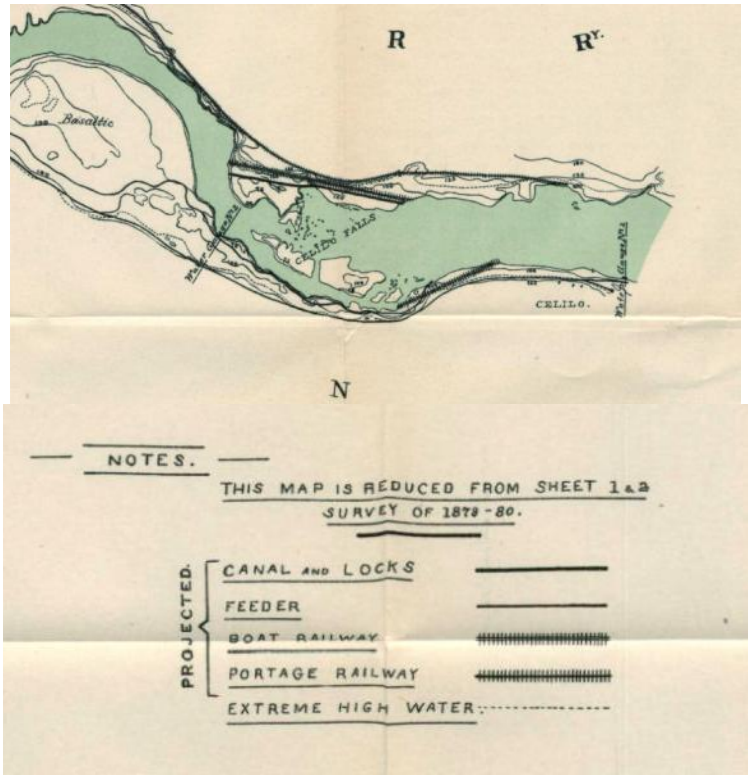

Figure 15 Close-up of Celilo Falls reach in "a section of the Columbia River, showing proposed canals, feeders and railways. Also shows fall and rapids, water gauges, and "basaltic" region.[175]

In the imperially expanding U.S. settler-national imaginary of the late 1800s through the 1950s, the geophysical characteristics of Celilo Falls were simultaneously constructed as obstacles thwarting the growth of river commerce, as well as an ideal site for the production of vast hydroelectric power and industry. As en example, see Figure 1A, a close-up from "Map of Columbia River from The Dalles to Celilo, Or." made by the ACE in 1888. This map, part of a preliminary report produced by the ACE regarding the feasibility of a boat railway at The Dalles and Celilo Falls, was submitted as a letter to congress from the Secretary of Water in order to outline the obstructions to navigation in the Columbia River and offer visual representation of the recommended plans for spatial reorganization at the Falls. The map is an instrument of erasure—it erases the countless villages, fishing structures, roads, homes, and burial grounds present at Celilo Falls in the 1880s. Its authority derives from its scientific conventions—proportionate, geophysical, survey document. A constructed *terra nullius,* blank land available for utilitarian use, the map produces a material-semiotic settler future. As can be seen in Figure 1B, it is one in which "projected" canal, locks, and railways are envisioned on top of empty, unpopulated basaltic formations. The "projected Railroad, and Canal and Locks" envisioned in this map were approved and funded by Congress and the ACE completed their construction in 1915.

[175] **Figure 3** shows two sections from sheet 1 & 2, survey of 1879-80. 1B Map Key indicating projected development. Both are selections from "Map of Columbia River from The Dalles to Celilo, Or. (1880)" created by the U.S. Army Corps of Engineers Office.

Following decades of planning and constructing navigational infrastructure, the ACE also lead prospecting, engineering, and maintenance of hydropower projects in the Columbia River Basin from the 1920s to today.[176] Federal plans for pacific northwestern settlement and development required physical, technical, and political (re)arrangement of the river in order to increase commerce, travel, and industrial capacity of an increasingly populated agricultural and cosmopolitan region, and hub of defense industry during the cold war. Following rapid development of navigational infrastructure at the turn of the 20th century, such as The Dalles canalization project, historian William Lang explains that "Celilo Falls and The Dalles, rather than the object of concern as an obstacle to navigation, suddenly became a location for an economic bonanza, where engineers sought to exaggerate the river's fall and create a bountiful source of power."[177] The agency's 1925 survey of the nation's rivers in 1925, the scientific groundwork underlying federal plans to systematically develop entire watersheds throughout the U.S., advocated for the construction of ten large dams on the Columbia, The Dalles Dam being one of them.

ACE maps visualized a spatial reorganization toward settler futurity and enabled such project's material implementation. Red, on this 1949 ACE survey of the Columbia, demarcates a "proposed reservoir" project behind the "recommended project" at The Dalles (Figure 4). Evocative of the blue and red anatomical depictions of blood-filled veins, the Proposed Project seeps east. Bright ink floods and exceeds the empty, outlined reach of the Columbia River — covering a small, hollow black circle labeled "Celilo/Celilo Falls" (Figure 4).

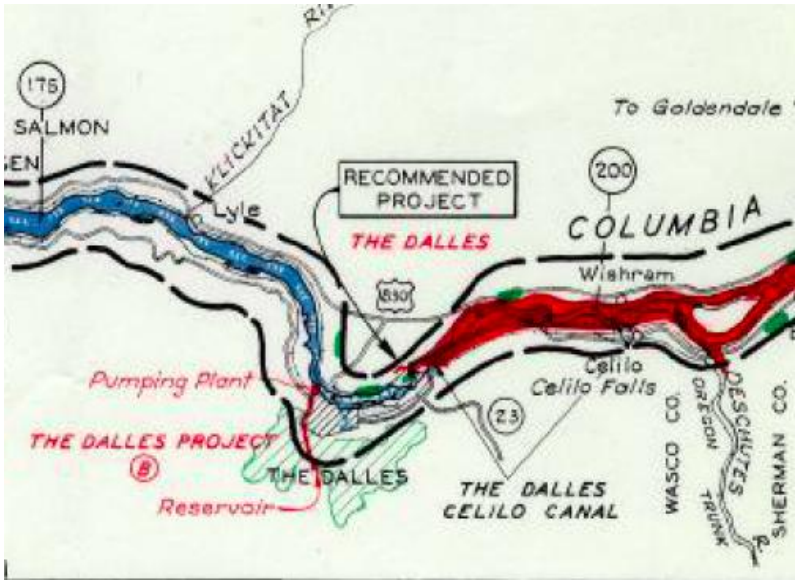

Figure 16 Close-up of Celilo Falls reach, contained in 1950 Letter from the Chief of Engineers to the Secretary of the Army[178]

[176] William F. Willingham, *A History of the Portland District U.S. Army Corps of Engineers,* (Washington, D.C.: U.S. Government Printing Office, 1992).
[177] *The Meaning of Falling Water,* 574.
[178] Columbia River and Tributaries, Northwestern United States, Letter from the Secretary of the Army from the Chief of Engineers, June 28th, 1949.

Figure 17 Map legend indicated "Proposed projects" and projected flooding.[179]

Technocientific systems designed to produce maps or aerial views of land assist projects of U.S. territorial control, military expansion, and cultural formation of a nationalist imaginary.[180] From safari cameras and WWI hot air balloons, to the War on Terror's unmanned aircrafts and "Curiosity" (NASA's Mars Rover), scholars have contended with the violent consequences of power-laden visualization technologies and ocularcentric ways-of-knowing especially imbricated in projects of empire building through territorial conquest. In a similar but different vein, feminist science studies scholars have predominantly theorized sonography as an instrument of visualization in the context of the body, gender, reproduction and subject-formation.[181] Similarly, acoustic technologies enabled scientific and military detection and

[179] Ibid.
[180] There is a robust literature on this, for examples see James Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed,* (New Haven, CT: Yale University Press, 1999).; Kate F. Chandler, "A Drone Manifesto," *Catalyst: Feminism, Theory, Technoscience,* 2, no.1 (2016): 1-23.; Derek Gregory, "Drone Geographies," *Radical Philosophy,* 183, no. 183: 7-19.; Caren Kaplan, "Mobility and War: The Cosmic View of U.S. 'Air Power'," *Environmental and Planning A: Economy and Space,* 38, no. 2, 2006: 395-407.; and Caren Kaplan, *Aerial Aftermaths: Wartime From Above,* (Durham, NC: Duke University Press, 2017).
[181] For critical, feminist scholarship on biomedical sonograms, see L. Cartwright, *Screening the body: Tracing Medicine's Visual Culture,* (Minneapolis, MN: University of Minnesota Press, 1995).; Donna Haraway, *Modest_Witness@Second_Millennium.FemaledMan©_Meets_Oncomouse™ : Feminism and Technoscience,* (New York, NY and London, GB: Routledge, 1997).; J. Taylor, *The Public Life of the Fetal sonogram: Technology, Consumption and the Politics of Reproduction,* (New Brunswick, NJ and London, GB: Rutgers University Press,

visualization of underwater sound-waves to enable a kind of "seeing by listening."[182] Adjacent to medical sonograms, geophysical sonar survey systems are run-through with implications for defining and ordering what counts as valuable and vital, or enemy and Other. However, the role of sonar imaging technology as an instrument of settler colonization in the U.S. remains underexamined. In particular, I argue sonography (re)configures nationalist imaginaries of land as a primarily visual and exploitable "natural resource." Moreover, as I argue in this paper, geophysical sonograms can both uphold and break with the cartographic legacy of settler state control over contested territory. An acronym for *so*und *na*vigation and *ra*nging, sonar was first widely developed and deployed during WWII for the detection of underwater military targets, such as submarines.[183]

Critical studies of sonar have traced its emergence from the Cold War to contemporary securitization of oceanic space and underwater landscapes. This work shows how the instruments and sense-making systems that perceive and translate underwater sound arose from an inextricable relationship between military naval and security research, and sciences of cetology and oceanography.[184] As these sonar studies lay bare the co-constitution of military and scientific technologies, they show how underwater spaces become configured as "marine battlefields."[185] A term that both reflects the positivism of military discourse, it also historicizes and politicizes the underwater landscapes in which instruments of surveillance and management produce effects of (re)territorialization. This work shows how the development of instruments, categories, and sense-making paradigms that pick-up, perceive, order, and translate underwater sound were made possible by the inextricable relationship between naval and security research, and cetology and oceanography.[186] Oceanographic and deep-sea technology development was oriented around acoustic listening—forms of sonic surveillance that detected, collected, and translated under-water sound-waves to enable a kind of "seeing by listening."[187] The sonar detection and translation technologies, such as the hydrophone, that were developed to detect Soviet submarines were the same technologies that enabled the discovery of sea-floor vents, and their corresponding unique ecosystems, landscapes, and geochemical systems.[188]

Imagining and imaging underwater landscapes as "battlefields"— frontiers of expansion, and original scientific discovery—reshapes longstanding notions of the oceanic boundaries of sovereign powers and extends material claims to territory. There is an urgent opportunity, here, to interrogate the role of geophysical sonar discourses and visualizations—from images of riverbeds to archeological digs—as political actants enrolled in sociocultural and legal contestations over the legitimacy and futurity of Indigenous claims to ancestral territory. Federal

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2008).

[182] Winthorp N. Kellogg, *Porpoises and Sonar, (*Chicago: University of Chicago Press, 1961).

[183] J. K. Peterson, *Handbook of Surveillance Technologies (3rd ed.).*

[184] See Max Ritts and John Shiga as well as Naomi Oreskes, "A Context of Motivation: US Navy Oceanographic Research and the Discovery of Sea-Floor Hydrothermal Vents," *Social Studies of Science,* 33, no. 5 (2003): 697-742.

[185] This term emerges from my engagement with an article by B. Kaushik, Don Nance, and K. K. Ahuja, "A Review of the Role of Acoustic Sensors in the Modern Battlefield," published by *American Institute of Aeronautics and Astronautics,* from 11th AIAA/CEAS Aeroacoustics Conference, May 23-25, 2005: 1-13.

[186] Max Ritts and John Shiga, *Marine Cetology*; Naomi Oreskes, "A Context of Motivation."

[187] Winthorp Kellogg, *Porpoises and Sonar*.

[188] (Oreskes, 2003).

agencies like the Environmental Protection Agency and National Park Service draw from their readings of technoscientific images to make decisions about the validity, import, and response to environmental and sovereignty struggles on the part of Indigenous peoples. Sonar surveys are used in the arbitration of legal and regulatory processes such as Environmental Impact Assessments and NAGPRA proceedings.[189] In the context of ongoing settler colonial occupation and enclosure of under-water land, what can be learned from examining the ACE sonograms as an act of national security-making that deployed acoustic surveillance and mapping of an "underwater battlefield"?

Politics of Representation

> Louie Pitt Jr., [a] Warm Springs tribal member, said historical photographs seem to show blasting at the site of the falls. "Are they still there? Were they dynamited? That questioning has been going on for years," said Pitt, director of government affairs and planning for the tribe.
>
> — "Sonar shows Celilo Falls are intact," *The Oregonian,* 2008.[190]

> State and federal fisheries managers agreed there was one good thing about The Dalles Dam: It would end Indian fishing at Celilo Falls. Although the fisheries people fought the dam down to the start of construction, they took comfort from the expectation—or at least hope—that drowning Celilo Falls would end Indian fishing on the Columbia and disperse the Indians.
>
> –Roberta Ulrich.[191]

Shortly after the survey's completion, *The Oregonian* published an article titled "Sonar shows Celilo Falls are intact."[192] Oregon's largest newspaper circulated an article featuring a black and white aerial photograph of the Columbia River from the 1940s set alongside its contemporary mimetic equivalent, the 2008 ACE survey of land underwater (Figure 6). This visual juxtaposition, the abutting proximity of an historical aerial landscape photograph and a present-day colorized sonogram, was offered as authoritative evidence and conclusion: The Celilo Falls that existed above water in the 1940s is intact beneath the river in 2007, thus disproving accusations that the ACE had used dynamite to strategically destroy them. These discursive conventions hinge on the political and cultural capacity of settler-science to authorize ocularcentric representations of land and maintain evidence of settler innocence.

The article's title and narrative content suggests that Celilo Falls was not destroyed by the construction or operation of The Dalles Dam. This map does not mark gravel bars for

[189] (see Oregon State Historic Preservation Office, 2013; U.S. Army Corps of Engineers, 1999).
[190] Rojas-Burke, para4.
[191] *Empty Nets: Indians, Dams, and the Columbia River,* (Corvallis, OR: Oregon State University Press, 2007): 80.
[192] Rojas-Burke, 2008.

demolition or channels for dredging, as so many Corps' maps have in the past, and the sonic transducer did not pick up blips of enemy submarines for target launch. Taken at face value, this appears to be an innocent, well-intentioned map—a visualization of invisible sound waves that reveals an un-altered geophysical structure of the once roaring waterfalls and rapids. The affect of generous enactment in assembling and conducting the survey here constructs the event as a benevolent gesture on the part of the very same state agency that was responsible for flooding Celilo fall sin the 1950s. Correspondingly, the sonogram is constructed as an evidentiary (arti)fact, demonstrating that the falls were not destroyed. The ACE's production of a new map of Celilo Falls thus enabled a public record of innocence in response to rumor-based accusations of explosive settler violence.

Amidst many forms of media attention, in the Oregonian's 2008 article, "Sonar shows Celilo Falls are Intact", the journalist reported: "New sonar maps produced by the Corps of Engineers *reveals a virtually unchanged Celilo Falls beneath the murky water* of the Columbia" [emphasis my own]. He describes Portland District Corps' Col. Thomas O'Donovan's decision to request a detailed sonar survey from Proudfit's survey team as a "wade into the Celilo Falls controversy." He quotes a prior O'Donovan interview and contextualizes it with a description of the sonograms' results:

> " 'My team came to me and said*, 'Look, we don't think we blew the falls up,*'… I said, *'Well, that really isn't gonna cut it in terms of sitting down with the tribes and talking about this important cultural resource that it is for them…'*
>
> Even though the team "didn't know what to expect"…the sonar images show rocky outcrops, carved basins and channels that match aerial photographs from the 1940s."[193]

These representational conventions articulate with Cothran's theorization of the settler-American public's belief in "their fundamental innocence in the face of settler colonial legacies of violence."[194] Cothran's framework emerges from his examination of how tourist and cultural economies work as "different marketplaces [that] have commoditized remembrances of U.S.-Indian violence in the Klamath Basin to sustain and reproduce the myth of American innocence on a grand scale."[195] Here, I suggest that feminist materialist analyses examine how *scientific* imaging processes also contribute to the production of a "vision of American settler colonialism as benign, benevolent, and beneficial."[196]

[193] Ibid, para10.
[194] Boyd Cothran, 24.
[195] Ibid, 23.
[196] Ibid, 25.

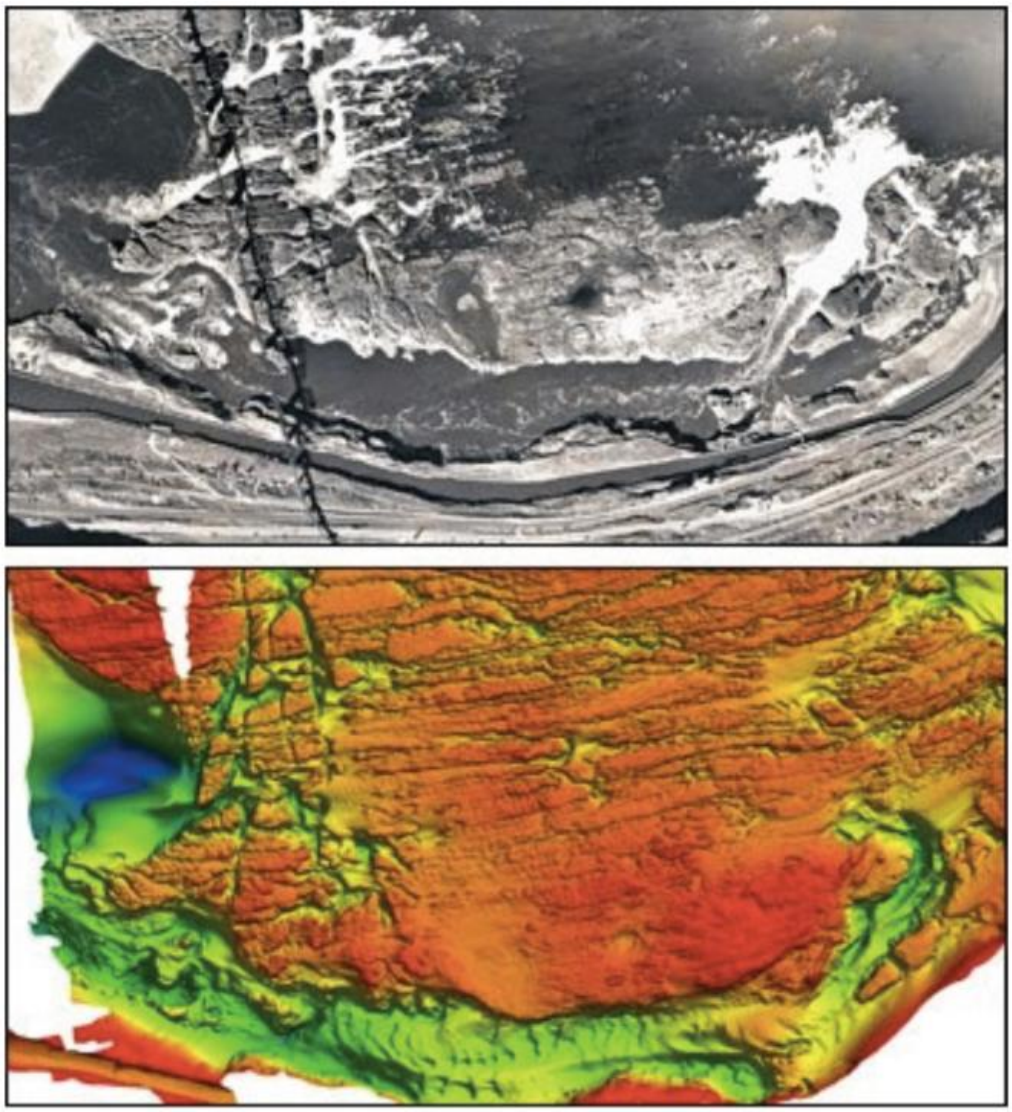

Figure 18 The main cataract at Celilo Falls is seen in October 1933. The falls were flooded by the construction of The Dalles Dam in 1957, and rumor had it that the U.S. Army Corps of Engineers demolished them.[197]

Scientific visions, too, are enrolled in the cultural work of maintaining settler control over land, and obscuring the historical violence of this control. The ACE is willing to deploy innovative technologies, and circulate visual evidence, in order to deliver a scientifically substantiated claim to historical truth. The ACE—those who wish to "correct history"[198]—publicly reveals this new narrative of what happened at Celilo Falls as a kind of gift, in exchange for previously flawed and falsely-indicting narrative. The truth-claims authorized by cartographic conventions articulate with a performance of good-intention, serving to dismiss Indigenous testimony and suggest that the material violence committed by ACE at Celilo was not as bad as "rumor had it".

[197] Images produced by the U.S. Army Corps of Engineers (public domain), printed in Rojas-Burke, 2008.
[198] Ibid, 189.

However, *The Oregonian* article quoted about did not situate the sonograms in historical material context. The ACE has consistently used dynamite to alter the geophysiology of the Columbia River throughout the nineteenth and twentieth century. In 1873, for example, the ACE dynamited obstruction to navigation—Basalt rock formations, like those at Celilo Falls—for the first time.[199] During The Dalles Dam construction there is at least one significant instance of dynamite use in1956, as shown in Figure 7: "More than 20 tons of powder, and removed 60,000 cubic yards of basalt". The ACE maps analyzed in the previous section were used as blueprints for dynamite placement during canal, lock, dam, railroad, and highway construction from the late 1800s through the 1950s.[200] Explosives were a technology of territorialization for the expansion of state control and capital in the Mid-Columbia River, and countless places used and occupied by Indigenous peoples since time immemorial we destroyed by ACE detonations.

Figure 19"Final major blast at the Dalles dam, removed 60,000 cubic yards of basalt, more than 20 tons of powder used." 1956.

The visual rendering of sound waves echoed off riverbed rock and the way it is made sensible in mainstream media authorizes a subordination of Indigenous claims to the sonic and social spatiality of Celilo Falls, and erases a legacy of the ACE's role in dispossession from the public historical record. Yet, there are multitudinous—and potentially disruptive—methods for making-sense of the sonograms, some of which elicit feelings of relief and visions of Indigenous futurity. In the same news article I analyze above, Elizabeth Woody, whose poesis of sonic geography guides the trajectory of this paper, situates the sonograms in a longer process of holding the Corps accountable for its major role in the dispossession of Indigenous life on the Mid-Columbia:

[199] This event is included in Katrine Barber and Andrew Fisher, "Significant Events in the History of Celilo Falls," *Oregon Historical Quarterly,* 108, no.4, 2007: 721.
[200] Cain Allen and William Willingham discuss the use of dynamite throughout construction in the Gorge during this time period.

> "The rumor was that the U.S. Army Corps of Engineers had in fact blown it all up…I actually cried, I was so relieved that it wasn't destroyed."
>
> Those living in the village at Celilo Falls *heard and felt blasts set off for excavations at the dam, Woody said, and believed the government had used dynamite to demolish the falls*. [emphasis my own.][201]

Woody brings non-visual senses to bare on geophysical knowledge production and the making of history. She provincializes sight and centers Celilo Villagers' experience of hearing and feeling blasts as constitutive of the explosion's event. Woody continues to argue: "People said the Corps had dynamited Celilo *so no one would fight for the dams to come down*" [emphasis my own]. Conversing with Woody during this interview, Louie Pitt Jr. (member and director of government affairs and planning for the Confederated Tribes of Warm Springs) also exerts power to contend with the sonograms with agency, and on explicitly Indigenous terms. The sonograms assist his imag(in)ing of future Indigenous geographies outside of, or beyond, settler colonial structures: "Someday those dams will be gone," Pitt said. "When that day comes the falls will return. Indians will be waiting."

While Woody and Pitt Jr. refer to the sonograms as providing relief and potential enrollment in the "fight for the dams to come down," they decenter the process of imaging Celilo Falls. Rather, their language enrolls embodied and auditory senses to construct an emplaced history of hydropower development at Celilo. Woody explains that the sonic knowledge of those "living in the village" offers, "in fact," a challenge to the ACE's use of visual evidence to maintain a record of public innocence. She regards sonic memories of dynamite as undoubtedly "heard and felt," and politicizes visual representations of land as potential claims-making tools in a struggle against dispossession.

I suggest that Mishuana Goeman's theorization of (re)mapping as an engagement with "the power of Native epistemologies in defining [Native] moves toward spatial decolonization, a specific form of spatial justice"[202] and Audra Simpson's (Kahnawà:ke) politicized Indigenous refusal of settler "sense," together open more possibilities of understanding how Indigenous sonic cartographies do productive political and spatial work toward shaping the futures of Indigenous places "within and apart from settler governance."[203] Woody's evocation of an un-dammed future for the Columbia River implies that the scientific and legal authority afforded these sonograms might assist in future efforts to make claims to land that is currently under-water. Likewise, Pitt Jr. affirms the certainty of such a future on the Columbia River where Indigenous peoples not only survive the violences of the ACE, but also anticipate and prepare for the inevitable dissolution of its infrastructure. In the following section, I further examine how sonic knowledges are used to politicize visual representations and take up the ACE sonograms as a technology for producing Indigenous futures and refusing settler spatial orders.

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[201] "Sonar shows falls still intact," *The Spokesman-Review,* Nov 29, 2008, paras 4-5.
[202] *Mark My Words,* 4.
[203] *Mohawk Interruptus,*11.

Sounding Refusal and Indigenous Futurity

Nearly eight years after their initial release, the same ACE sonograms that had trafficked as geophysical evidence of ACE innocence, publicly entered the juridico-military sphere. In the 2015 Regular Session of the 78th Oregon Legislative Assembly, a House Joint Memorial measure—HJM-15 (Figure 8)—was introduced to "[Urge] United States Army Corps of Engineers to provide preliminary statement of feasibility for lowering Lake Celilo to a level sufficient to reveal Celilo Falls during a certain period." This period of revelation was specified as lasting one to two weeks, between January 1, 2016 and January 1, 2020. A copy of HJM-15 was sent to the Commanding General and Chief of Engineers of the US Army Corps as well as the Commander and District Engineer of the US A.C.E., Portland District. On April 16th, 2015, an article in the Northwest News Network drew a connection between the ACE sonograms and this new political initiative to physically reveal the Falls:

> In 2008, the Army Corps of Engineers released a sonar survey of the river bottom in front of Celilo Village. The underwater survey showed the falls and surrounding rock formations remain intact.
>
> In recent years, several small nonprofits have emerged to advocate for restoring Celilo Falls and its historic fishery. They include The Friends of Celilo Falls, which takes pains to say that it does not represent or speak for Columbia River tribes…
>
> In written testimony, Friends director Sean Aaron Cruz said a permanently restored Celilo Falls could perhaps become a UNESCO World Heritage site.[204]

The state-sanctioned move to uncover, (re)cover, and memorialize Celilo Falls, is integrally constituted by imaging processes. In addition to understanding the very material (re)organizations that such a move suggests and makes possible, this case requires a critical examination of how technoscientific images are—like Cothran's examples of stage performances, postcards, and tourist sites[205]—also enrolled in the cultural production of historical knowledge, settler memory, and settler common sense.

Yet as I have shown, contradictory meanings can be produced and mobilized to very different political ends using the same images. The commentary submitted during HJM-15's legislative proceedings offer an opportunity to analyze how sonar images are simultaneously enrolled in, and critiqued as, cultural and legal projects of settler-state redemption and territorialization.

[204] Tom Banse, "Proposal to Resurrect Columbia River's Celilo Falls Draws Flak," *Northwest News Network,* April 16, 2015: para13-15.
[205] *Mohawk Interruptus*.

House Joint Memorial 15

Sponsored by Representative HELM

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure **as introduced.**

Urges United States Army Corps of Engineers to provide preliminary statement of feasibility for lowering Lake Celilo to level sufficient to reveal Celilo Falls during certain period.

JOINT MEMORIAL

To the Commanding General and Chief of Engineers of the United States Army Corps of Engineers and the Commander and District Engineer of the United States Army Corps of Engineers, Portland District:

We, your memorialists, the Seventy-eighth Legislative Assembly of the State of Oregon, in legislative session assembled, respectfully represent as follows:

Whereas Celilo Falls was inundated on March 10, 1957, by the rising waters of Lake Celilo due to the commencement of operations of The Dalles Dam; and

Whereas Celilo Falls has not been seen since that day in 1957; and

Whereas a 2008 survey completed by the United States Army Corps of Engineers revealed that many features of Celilo Falls remain intact under the waters of Lake Celilo; now, therefore,

Be It Resolved by the Legislative Assembly of the State of Oregon:

(1) The United States Army Corps of Engineers is respectfully requested to provide to the Governor of the State of Oregon and the Legislative Assembly of the State of Oregon, by December 31, 2015, a preliminary statement of feasibility for lowering Lake Celilo to a level sufficient to reveal Celilo Falls for one period lasting one to two weeks, at a time of year to be selected by the United States Army Corps of Engineers, that would occur between January 1, 2016, and January 1, 2020.

(2) A copy of this memorial shall be sent to the Commanding General and Chief of Engineers of the United States Army Corps of Engineers and the Commander and District Engineer of the United States Army Corps of Engineers, Portland District.

NOTE: Matter in **boldfaced** type in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted. New sections are in **boldfaced** type.

LC 3627

Figure 20 House Joint Memorial 15.[206]

[206] Lead author representative J. Helm, "House Joint Memorial 15," 18th Oregon Legislative Assembly--2015 Regular Session. 2015.

The Public Hearing for HJM-15, conducted by The Committee on Rural Communities, Land Use and Water on April 15, 2015, generated public debate regarding whether Celilo Falls should be temporarily "revealed." This next section examines anti-HJM-15 comments submitted by three Indigenous writers to demonstrate how settler visual representations of Indigenous lands are continuously contested. I have intentionally selected testimonies that reject the primacy of the visual, and in so doing both critique and refuse the spatial politics undergirding the settler state's imagined memorial. Of course, Indigenous responses to HJM-15 (of which I only consider the archived public commentary) were not monolithic and that is not what I show here. Instead, I choose these excerpts in order to explore articulations of historicized sound, sense, and sociality that de-center visuality and challenge the taken-for-granted value of imaging Celilo Falls. Like Donna Haraway's biomedical sonogram—"only one in a battery of visual artifacts that establish the fact of fetal life within political, personal, and biomedical discourse"[207]—this sonogram of the Columbia Riverbed, too, is enrolled in the sensing and sanctioning of Celilo's "fact of life."

Native American and Indigenous studies scholars have demonstrated how power can also be enacted through the calculated refusal of settler "gifts" such as state-sanctioned recognition and apology.[208] Audra Simpson theorizes Indigenous "refusal" as an alternative to the desire for legibility and inclusion within settler colonial nation states.[209] Building on her argument that "like Indigenous bodies, Indigenous sovereignties and Indigenous political orders prevail within and apart from settler governance,"[210] Simpson demonstrates how Indigenous refusal of "gifts"—things that "sensible" people might perceive as good for everyone, like passports, citizenship, and presidential apologies—in fact (re)shapes the politics, sense, and reason from which they emerge.[211] Refusal rejects the very conditions of recognition and instead requires "having one's *political* sovereignty acknowledged and upheld, and raises the question of legitimacy for those who are usually in the position of recognizing."[212] Taken up under this framework of refusal, the following public testimonies in opposition to HJM-15 can be read as assertions of Indigenous political sovereignty and challenges to settler state legitimacy.

How is sound enrolled in a politics of refusal? Might attending to sonic knowledge as a strategy of refusal enable robust and critical engagements with Indigenous spatial politics? Tabitha Whitefoot's testimony,[213] submitted in opposition to HJM-15, demands robust contention with the politics of sonic, sensory, and social space. Her testimony is worth quoting at length:

> *Please listen to the voices of those individuals with a real stake in the prospect of revealing Celilo Falls, the descendants of those people who were displaced, who lost their homes and sense economic and social order. These late comers know nothing of this heritage, to them it is but a series of pictures and news reports*. To us it is our story, our

[207] *Modest_Witness@Second_Millenium,* 300.
[208] Audra Simpson, *Mohawk Interruptus*.
[209] Ibid, 1.
[210] Ibid, 11.
[211] Ibid, 1.
[212] Ibid, 11.
[213] Tabitha Whitefoot. "Testimony Submitted to Oregon State Legislature," Regular Session: House Committee on Rural Communities, Land, Use, and Water, 2015. Retrieved from, https://olis.leg.state.or.us/liz/2015r1/Downloads/CommitteeMeetingDocument/65658.

> life. Ask the leaders of the treaty tribes, whose tribal members were displaced and impoverished by dam building.
>
> I was four years old the year of inundation. My grandmother, Edna Thompson Kurtz, the daughter of Chief Henry Thompson, believed it was important that I be at the village, March 10, 1957. *My eyesight was severely impaired, so I have to depend on my other senses to report this out to you.*
>
> *First, you cannot imagine the original smell of Celilo. It was a sweet, smoky, fresh, compelling, odor. I can close my eyes and bring it forward. The sound, was indescribable, the closest I have come, is where you can hike behind the falls at Silver Falls State Park. But that sound is directly overhead, and the sound at Celilo actually reverberated off the cliffs…like a hum of industry and nature combined. The air was sometimes scrubbed clear by the winds and dry air, other times the mist could make you damp. These memories are powerful and evoke a sense of security and joy to me…* [emphasis my own.][214]

This excerpt offers an elucidation of sonic and sensory knowledges that trouble ocularcentric accounts of land and challenge the authority of visual sonography to evidence that "Celilo Falls still exists." Whitefoot makes an explicit connection between displacement and imagining processes: Visual consumption has political and material consequences for "those individuals with a real stake in the prospect of revealing Celilo Falls." She critiques settler representations of Celilo Falls as "but a series of pictures and news reports," made by "newcomers" with little knowledge of Celilo heritage and no experience with economic and social loss there. Interrupting her settler audience's overreliance on the visual with a historicized and emplaced testimony, Whitefoot refuses the terms of state-sanctioned revelation laid out in HJM-15. For Whitefoot, Celilo's vitality is not seen. Rather, she "can close [her] eyes" to bring forward smells that her audience "cannot imagine" and sounds that are "indescribable." Taking up Simpson's framework of refusal, we might read Whitefoot's rich descriptions of Celilo's sounds (hums and reverberations), olfactory and tactile sensations (sweet, smoky and fresh odor; winds and dry air), and material-affects (security and joy) as not only an alternative to settler recognition but a political enactment of Indigenous sovereignty and spatial production. Like Pinkham and Woody's texts, Whitefoot's testimony demands attention to the political possibilities that sound might afford in Indigenous claims to sovereignty and space.

Susan M. Guerin, member of the Confederated Tribes of Warm Springs, also articulates the incongruence between "seeing" the Falls and enhancing the well-being of the Columbia River and the people who fish at Celilo. Guerin explicitly names the settler-state's memorializing gesture as a "spectacle" with no potential to benefit her people, marine life, and waters:

[214] Ibid, 1.

> …It is the opinion of my family that the feasibility study suggested by HJM-15 will not enhance the health and well-being of the marine life and waters of the Columbia River, and should therefore not be approved by this committee.
>
> …If passed, this study may result in the lowering of the waters to reveal our ancient fishing grounds; but for what gain? My people can't return to Celilo Falls to fish. It won't mend the broken hearts of my family from whom the Celilo Falls were taken. The study will tear off wounds long scabbed-over, and for what; the benefit of spectators? To what end would this temporary spectacle serve? My family strongly admonishes this committee to show compassion to us by voting no on HJM-15.[215]

Guerin's description of the study as a process of "tear[ing] off wounds long scabbed-over" identifies a contemporary instantiation of settler violence. She suggests that this proposed revelation will benefit spectators--for what gain?" "to what end?"—rather than "mend the broken hearts of [her] family" or facilitate their "return to Celilo Falls to fish." Guerin rejects HJM-15 as a reparative gesture. Instead, she names the further psychic and material violence committed against Indigenous peoples for "the benefit of spectators."

Even more explicit connection between redemptive violence and visual spectacle is forged in Se-ah-dom Edmo's testimony. Edmo (Shoshone-Bannock, Nez Perce, and Yakama) is a Celilo Village descendent whose father witness the 1957 inundation. She wrote to urge "a no vote on HJM 15 and to call into question any motivation or movement to temporarily lower The Dalles Dam to reveal the falls." She explains:

> Uncovering Celilo would be like digging up the grave of a relative - just so well meaning non-native progressives can feel good about themselves and the work they are doing. What we really need is to work to empower the people who suffer generational trauma because of environmental racism. HJM 15 is misguided, I urge you to vote NO![216]

Edmo's language, "like digging up the grave of a relative," presents a much more familial, and vital relationship to Celilo Falls than the newspaper articles that tout sonograms as evidence of its "still there"-ness, as though the basalt formations alone—and not the relations and life they coproduced—constitute Celilo Falls. Edmo evokes death and burial, foregrounding the loss, violence, and covered reality of the Falls. Together, these testimonies complicate media proclamations that Celilo Falls was not destroyed during dam building.

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[215] Susan Guerin, "Testimony Submitted to Oregon State Legislature," Regular Session: House Committee on Rural Communities, Land, Use, and Water, 2015: 1. Retrieved from, https://olis.leg.state.or.us/liz/2015r1/Downloads/CommitteeMeetingDocument/65658.

[216] Se-Ah-Dom Edmo, "Testimony Submitted to Oregon State Legislature," Regular Session: House Committee on Rural Communities, Land, Use, and Water, 2015: 1. Retrieved from, https://olis.leg.state.or.us/liz/2015r1/Downloads/CommitteeMeetingDocument/65658.

Conclusion

Sonic knowledges are multitudinous: They do not take on the same forms, nor do they move unidirectionally toward the same political ends. Importantly, scholars of sound studies have demonstrated that not all forms of sonic knowledge are afforded equal amounts of ontoepistemological legitimacy in the popular imaginary, or political and legal spheres.[217] Sonic cartographies and imaging processes are contested practices of territorialization, as well as methods for unsettling imperial and colonial geographies. Whether Celilo can be "seen" is an insufficient testament as to Celilo's mattering and vitality as being held in interrlated spiritual, cultural, economic, and political relations. To say that Celilo Falls is dead or does not exist, risks placing life at Celilo as gone and past, and erases contemporary Indigenous relations with Celilo. However, to say that Celilo Falls still exists would be an act of willful ignorance, historical erasure, and rhetorical violence.

Let us consider again how Woody and Pitt Jr. mobilized sonic visualizations toward an anti-colonial, materialist sense of Indigenous futurity. A combination of their statements might align as follows: People said the ACE had dynamited Celilo so no one would fight for the dams to come down. Someday those dams will be gone: When that day comes the falls will return and "Indians will be waiting." I turn to poetry as a text with imaginative capacity for reorganizing space, following Goeman's demonstration that "the literary (as opposed to other forms of discourse, such as journalism, surveys, BIA/field reports, Indian agents' diaries, etc., in which Indigenous women are continually a shadow presence) tenders an avenue for the 'imaginative' creation of new possibilities, which must happen through imaginative modes precisely because the 'real' of settler colonial society is built on the violent erasures of alternative modes of mapping and geographic understandings."[218]

Mishuana Goeman asserts an engagement with the multiple and simultaneous spatial politics that cartographic technologies afford, when she proposes "that in considering the map as an active apparatus that restructures spatial domination, social relations, and epistemological violence, we move away from romanticized notions of resistance."[219] Goeman clarifies that by interrogating the possibilities of spatial interventions she is not proposing "a utopian recovery of land through mapping pure ideas of indigeneity (which [she] finds troublesome) on top of colonial maps."[220] Rather, she contends, (re)mapping is "not just about regaining that which was lost and returning to an original and pure point in history, but instead understanding the processes that have defined our current spatialities in order to sustain vibrant Native futures."[221] As such, we ought not contend with this sonogram as though the power emergent in it, to represent and claim space, only runs in one direction.

Elizabeth Woody, whose interview constructed the narrative I just paraphrased above, is a highly acclaimed poet, lecturer, and educator and founding member of the Northwest Native American Writers Association. She is the 8th Poet Laureate of Oregon, and has received

[217] A. Goh, "Sounding Situated Knowledges: Echo in Archaeoacoustics." *Parallax,* 23, no3, 2017: 283-304.
[218] *Mark My Words,* 2.
[219] Ibid, 166.
[220] Ibid, 3.
[221] Ibid.

highly notable awards for her work including the William Stafford Memorial Prize, Hedgebrook's JT Stewart Award, and the American Book Award. This poem, from her 1994 book *Luminaries of the Humble*, might offer an example of Indigenous women's cartography of Celilo Falls:

Waterways Endeavor To Translate Silence From Currents

First of the voices are innocent, from memory,
desolate synthesis of weeping, rain,
into dry creek beds.

Stone with roots, companion of guardians,
bares itself toward the summit of crowns.
The exchange of bones for sawdust, for silt, for worthless currency.

The clouding springs hiss into veins of fissures,
topsoil wears into desert, an illusion of property,
fringed by momentum of cutting down origin.

The hiatus is the flourish of sword and degeneration.
In our genesis, the beginning of words
meant that we would not be without land or relationships.

Vacuity, the lack of emotion etches into destruction
the scaffolds of abundance, rapids, falls, spawning beds,
the echo of falling water. The nascent place of all

the songs lingers amongst the multitude of ancestors,
commonly wedged into bone hills, vandalized and cataloged.

Dislocated from one another, we are now flooded,
resting in place.
We suffocate in the backwater of decadence
and fractious contempt.
Purity of the ancient is the language without tongues.
The river elegantly marks swirls on its surface,
a spiral that tells of a place
that remains undisturbed.

Poetry itself is a sonic genre—spoken and heard—and the passage I have selected here turns on "the echo of falling water. The nascent place of all," "lingering song," and "language without tongues." The "stone" in Woody's poem has "roots" and "companions", and an agential reality in and through which it "bares itself." Life is evident in "scaffolds of abundance" and "spawning beds," a human--more-then-human entanglement *produces* the place: Celilo Falls is thus irreducible to a "cataloged" geophysical formation, or abstract space, but an always-emergent, relational place.

Inundation is configured as neither complete nor past. Flooding is more than a hydromorphological event: "Dislocated from one another, we are now flooded/resting in place." The collective plurality of those flooded is rooted in place—"resting—and the "we" implies a collective, related set of subjects beneath the water. Implied as an agential subject is the Columbia itself. The river acts. It "elegantly marks" itself, in "a spiral that tells of a place/that remains undisturbed." The figure of the spiral evokes a sense of continuous motion inward and outward, suggesting a vitality and futurity to that which "remains undisturbed." While I do not claim to arrive at a shared understanding of or relationship to the place Woody writes about here— I grew up as a settler who frequently visits the Columbia River, I cannot —I do highlight the collective voice, importance of *place,* and contention with inundation through sound. How does Woody *sound* place? Or, image/imagine place using sound? These questions emerge from Woody's poem and suggest that we must take seriously the ways in which sound imagines/images place. And of particular importance, in this case, are the possibilities for sonic claims-making and contestation to refute ongoing, yet unsuccessful, projects of settler-state territorialization.

The politics and technologies of settler colonial occupation in the pacific northwestern-U.S. manifest violently in the maintained inundation of Celilo Falls, albeit not without tremendous and persisting resistance and undoing. Much scholarly, journalistic, and personal analyses of Celilo Falls foregrounds the political, legal, scholarly and cultural work of Columbia River Indian peoples toward securing fishing rights, sovereign territory, and un-dammed indigenous futures: The persistence of Indigenous relations to salmon, other more-than-human beings, and Wy'am in its impounded (for now) yet no less animate form.[222] This paper is made possible by this body of knowledge. I aim to privilege specific, historicized, and relational Indigenous cartographies and theorizations of space, while also critiquing the settler nation-state's ongoing deployment of science and innocence toward liberal colonial ends in the contemporary moment.

I have analyzed how sonic cartographies are made legible in different ways, with what consequences and for whom. I argued that overlapping and conflicting deployments of sonic imaging play a major cultural, political, and material role in the (re)mapping of Celilo Falls. As evidenced by the analysis of newspaper coverage above, the ACE sonar survey technology—and the visual cartographies their deployment and translation of under-water sound-waves they produced in 2007—was allegedly sufficient evidence to dismiss as "rumor" the collective and persistent Indigenous accounts of hearing and feeling destructive explosions at Celilo Falls 50-

[222] Again, this statement draws from work on the persistence and power of Columbia River Treaty Tribes and Columbia River Indian lifeways, polities, and relations. See George Aguilar, John Dougherty, Lindsey Schneider, Roberta Ulrich, Katrine Barber, Jon Daehnke, and Elizabeth Woody.

years ago. Yet testimony in opposition to HJM-15 centers non-visual experiences and ways of knowing Celilo Falls, and positions imaging processes as unhelpful—and potentially antithetical—to addressing questions of access to land. These accounts refute the benefits to Native people of revelatory imagining of Celilo Falls on terms that can help us think about what anti-colonial spatial practices demand of imaging processes and cartographic practices.

There is much opportunity to engage with the possibilities for sonic claims-making and contestation to refute ongoing, yet unsuccessful, projects of settler-state territorialization.[223] This paper demonstrates that overlapping and conflicting deployments of sonic imaging play a major cultural, political, and material role in the (re)mapping of Celilo Falls. The visual rendering of sound waves echoed off riverbed rock and the way it is made sensible in mainstream media authorizes a subordination of Native claims to the sonic and social spatiality of Celilo Falls, and erases a legacy of the ACE's role in dispossession from the public historical record. Yet I show how Columbia River Indigenous sonic knowledges have positioned imaging processes as potentially antithetical to addressing questions of access to land and self-determination. Interviews, public testimonies, and a poem refuse the settler state's visual revelation of Celilo Falls on terms that can help us think about what anti-colonial (re)mapping practices demand of contemporary cartographic imaging processes. Attending to sonic knowledges under conditions of settler-ocular centrism might enable robust and critical engagements with Indigenous spatial politics.

[223] See again Max Ritts and John Shiga.

CHAPTER 4

Fish Matter: Biological and Cultural Reproduction on display at the Bonneville Fish Hatchery

Introduction

The Bonneville Fish Hatchery is recommended by guidebooks, travel blogs, and visitor centers across Oregon for its educational and interpretive exhibits[224]. This place is equally well structured to rear and release tourists and elementary school children, as it is salmon. On a nice summer afternoon in the Columbia River Gorge, a visitor is lucky to find a parking spot at the Hatchery amidst thousands of others who may be in and out of the facility on a single day. They are luckier still if Herman the Sturgeon is feeling active. He is the Hatchery's living mascot, and Oregon's State Fish. If he is swimming slowly by the glass window of his viewing pond, an eye-to-eye encounter with him makes for one of the most popular and "ugly-but-lovable" photo-ops along the Columbia.

On just such a mid-June day in 2015, I count myself among the luckiest: I follow head fish technician Robert's[225] footsteps on a more-than-narrated tour of the Hatchery. He meticulously answers all of my questions. We are standing on the cement walkway overlooking Rearing Ponds D and C:

> "This is really kind of like a park. People come here thinking of it as a park space – look at the manicured lawn, the grounds, the historical part, the gift shop. So, people ask me questions while I work. I can't always answer all of them even though I understand why they are asking. I've just been here for so long that it all feels repetitive…but people love it. They come here and say it's almost exactly like it was when they were a kid, or they had grandparents who worked here and it's exactly how they remember."

I had arrived at the Oregon Department and Wildlife's largest hatchery facility, with the technological capacity and expertise required to produce over 7 million fish, wondering how labors of curation and translation co-constitute the technological and material practices of fish husbandry here. For example, pressure washing is important here: After fingerlings grow to the correct size, such that they can safely be loaded onto a truck and taken upstream for further growth or released into a tributary that will carry them to the river, the crew needs to eliminate all the sediment that collects on the bottom of their rearing ponds. Robert has worked as the fore man of this whole operation for eleven years. For over a decade, he has facilitated the circulation of eggs, wild salmon, cameras, sick sturgeon, children, software, journalists, trucks of fingerlings, and fisherfolk, in, around, and out of the Hatchery grounds. He manages a crew of

[224] For the remainder of the chapter, I will refer to the Bonneville Fish Hatchery as simply "the Hatchery" for the sake of brevity. Any other hatchery mentioned herein will first be introduced by its full name.
[225] I use pseudonyms to protect individuals' identities.

nine people: Two are maintenance and servicing crew members, and five are fish technicians with an additional two seasonally as the fish runs come in. Unsurprisingly, the grounds – "because it is like a big park, a giant park full of fish" – takes a lot of work to maintain.

Robert says the most important part of daily work is prioritizing fish safety, but it is also the most challenging. If a tourist asks him a question while he is carrying or moving a fish, or measuring water temperature, turbidity, or dissolved oxygen of a holding pond he waits to answer the question until the fish are safe. "Usually, back in the water." However, it is not these fish – the ones Robert monitors meticulously, the ones the hatchery releases to mitigate the decline in their natural runs – that visitors most want to see.

> "Tourists want to see Herman; they want to see the [salmon] when they are coming in, and [people] flood in for that, but they just really want to see Herman. And also feed the rainbow trout, which are just here for people to feed they are not stocked anywhere."

Robert's descriptions of activity on the grounds demonstrate that there is more than the mechanics of fish production at work here. The Bonneville Fish Hatchery in Cascade Locks, Oregon works both to mitigate the damage done to salmon runs by Bonneville Dam, as well as circulate nearly 1 million annual human visitors through tours of holding ponds, salmon catchment and counting, artificial spawning, incubation, and eye-to-eye encounters with the state fish: Herman the Sturgeon. Herman the Sturgeon once toured the State with the Oregon Department of Fish and Wildlife since the 1930s. Now (2019), he lives permanently in his interpretive center at the hatchery. Yet, the Hatchery does not rear sturgeon, and the Bonneville Dam permanently severs all of the up-river populations of the long-lived anadromous fish from access to the Pacific Ocean. Herman's role in (re)populating sturgeon does not come from a biological process of spawn and release, as do the thousands upon thousands of salmon and trout at the Hatchery. Instead, I examine how Herman is enrolled in (re)producing native ecology in the imperial imagination. The ideological work of the Hatchery, as a key biological viewing area, naturalizes the ecological devastation wrought by technologies of occupation. This work even attempts the recuperation of those very technologies—in this case, the Bonneville Dam—as necessary nodes in the salvation of the Columbia's native ecosystems.

In this chapter, I argue that Herman's exhibit occludes the ecological devastation that conditions, and emerges from, the inseparable complex of hatcheries and hydroelectric infrastructure on the Columbia. I show how seeing-underwater is a simultaneously scientific *and* cultural practice that is enrolled in "rendering-technical" the deeply social and political questions surrounding how to manage river relations in a time of ongoing occupation.[226] Herman the Sturgeon offers a socionatural entry point into further analysis of curated encounters with inundated scenes in the Gorge. As in previous chapters, rubrics of play and edification converge in the Hatchery: a hybrid space of industrial commerce, living laboratory, and amusement park. Likewise, I find an another assemblage of the recreating settler subject, a space of collection and exhibition, and practices of accounting (or taking-stock), visualizing, and preserving imperial possessions. Chapter Four, thus, builds on the analyses of all preceding chapters through further examination of the makings of settler common-sense vis-à-vis *underwater* viewsheds. Here, in order to extend

[226] Timothy Mitchell, *Rule of Experts: Egypt, Techno-politics, Modernity*, (Berkeley, CA: University of California Press: 2002).

the theoretical and empirical trajectories of Part One, I pay much closer attention to ecological materialities under threat from hydropower infrastructure. Additionally, I add a focus on the reconfiguration of human-nonhuman relations through the persistent commodification of Columbia River life and enclosure of fish away from Indigenous claims and socialities.

In the first part of this chapter, I situate the Hatchery in the historical context of capitalist expansion and corresponding imperial infrastructure in the lower Columbia River. First, I briefly discuss how construction of the Bonneville Dam respatialized the lower Columbia River in the 1930s. The Dam dramatically altered the material and social realities of Indigenous claims to, and uses of, land and fisheries. A constitutive part of this alteration was not only the severe inundation of fishing places, and village and commercial sites, but the near complete decimation of anadromous fish runs: Salmon, lamprey, sturgeon, and many other species can no longer migrate too and from the ocean without having to navigate the often unsurvivable wall of turbines, ladders, and spillways that span the entire width of the River. Within this assemblage of technologies of occupation—the hydropower system—I then consider the Bonneville Fish Hatchery grounds as a complex reproductive technology. Through a close reading of Hatchery exhibitions, and a close focus the visual curation of a charismatic nonhuman character (Herman the Sturgeon), I explore how the scientific industry of reproducing nonhuman bodies under conditions of colonial occupation is also a deeply cultural project. From this interrogation of visual encounters with underwater scenes, I conclude by making connections to the ongoing surveillance of Indigenous fishers. I analyze the late-1990s Oregon State Police sting "Operation Broodstock," in which predominantly Tribal fishermen were indicted for sturgeon poaching, and call attention to how settler concern for the nonhuman is also enrolled in a broader regime of biological regulation as countersovereign strategy.

Bonneville Dam as a Technology of Occupation

The view from the tourists' auxiliary parking lot at the Bonneville Fish Hatchery looks out onto the Columbia River, choppy in its struggle to regain a steady current after being caught up in the turbines of the Bonneville Dam less than three miles up-river. This is the beginning of the lower Columbia, the only free-flowing portion of the 1,243 mile long river that finally meets with the Pacific Ocean about 140 miles west of where I stand. During the course of this research, my drive to and from Portland and the Hatchery, only 40 miles, has always felt much faster than it always did as a kid—jostled along in the back of the bus, east on Highway 84, and eager to see some fish. These elementary school field-trips usually involved releasing salmon fry that we had raised from eggs in a classroom fish-tank: an hour long bus-ride up the Willamette Valley and through the Gorge always felt very long when I knew our arrival meant witnessing the release of all those little babies into Tanner Creek, which down behind the Hatchery and into the Columbia.

Figure 21 Aerial view of Bonneville Fish Hatchery (bottom right) and Dam (center).[227]

Just like when I was young, the Hatchery today continues to raise mostly chinook and coho salmon on a massive scale. This focus on salmon stems from a more than century long co-constitutive relationship between hydroelectricity infrastructure and fish husbandry. What I mean by this is, the network of hatcheries along the Columbia River work the way they do today *because of* the decimation done to salmon runs by the construction of more than 60 dams on the Columbia River and its tributaries throughout the 21st century. The Bonneville Fish Hatchery and neighboring Bonneville Dam[228] are perhaps the most obvious example of coproduction between hydroelectric infrastructure and fish husbandry in the Columbia River Basin. Not only are they usually visited as two constitutive parts of a single tourist stop, but the history of each infrastructure's development—and their contemporary operation—are physically and politically inextricable. In this section I briefly present the role of the Bonneville Dam as a technology of occupation that continues to dispossess Columbia River Indigenous peoples of territorial and political claims to land, water, and fish. I do so in order to elucidate how the Hatchery's biological and ideological (re)production of river life has long been structured by conditions of maintained occupation. In other words, the ongoing history of enclosure, inundation, and decimation of human-fish relations comprised the obscured (or perhaps recuperated) backdrop of "life" at the Hatchery. The scientific and cultural practices of seeing and surveilling fish today are borne from decades of imperialist endeavors to commodify nonhuman populations and counter Indigenous sovereignty in the Gorge.

227 Photo by Philip Corwin/Corbis. https://s-media-cache-ak0.pinimg.com/736x/59/6f/92/596f925cb4da4a14220ac631438dff34.jpg. accessed December 5th, 2015.
228 Bonneville was named for U.S. Army Captain Benjamin Eulalie de Bonneville (1796-1878) who was the first commandant of Vancouver Barracks.

As Robert and I navigate the cement walkways, he explains this very history to me. "The hatchery existed before the dam was built, in 1908. It was built by the Oregon Department of Fish and Wildlife to compensate for the impacting of overfishing on fish and then after the dam was built mitigation was centered around compensating for the loss of runs." When we talk about the dam, I look again toward the water. I have driven past the Hatchery many times on my way to the Bonneville Dam tourist compound; the entrances to both tourist sites share the same small road, NE Bonneville Way. To enter the visitor-accessible grounds of the Dam, though, I keep right to go through the roundabout, and then pause at the security checkpoint where Army Corps officers speak to me through my rolled-down window. Sometimes they peer briefly into my back seat, or check out the trunk. The U.S. Army Corps of Engineers began construction of Bonneville, the first federal hydropower dam on the Columbia and the beginning of a New Deal era in navigation and electric infrastructure on the river, in 1933.[229] By 1937, then-president Franklin D. Roosevelt symbolically pressed a button starting the Bonneville Dam's first power unit. Not more than five years prior, Roosevelt had boosted the dam's construction on his campaign trail through the Pacific Northwest, in his famous speech on "power" and "progress" in Portland.[230] Once elected to office, Roosevelt oversaw the approval of Bonneville's construction as Federal Project No. 28, under the authority of the National Industrial Recovery Act.

At the Cascades, before the Bonneville Dam was built, the river was squeezed to a narrow 150-yard torrent between the basalt cliffs of the Gorge. Dropping in elevation by forty feet in only two miles, the current was powerful, and salmon returning to spawn had to climb the whorls, pools, and eddies. These hydrological and geophysical conditions were presented as the preeminent reasons why the Cascade Locks were constructed to enhance navigation for commercial and military ships, and then later served to naturalize the location as a site begging to be "harnessed" for its power: The locks had grown insufficient to accommodate the increasing amount of traffic in the early 1900s, and the thundering rapids represented wasted force that when put to use churning turbines, would manifest the river's electric destiny.[231]

Roosevelt and his administration discursively constructed the dam project as one that that would provide much needed employment, ensure increased and efficient river navigation, and generate vast amounts of inexpensive electricity. In his 1937 speech at the dam site, addressed to a cheering audience of hundreds, Roosevelt presented an overtly nationalist technoimaginary of regional vitality. One that elided the near-future reality of a booming war-time aluminum industry, soon to be made possible by the dam's hydroelectricity,[232] in favor of a seemingly benevolent, pastoral vision of small communities full of happy children:

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[229] The federal "plan" for Bonneville was outlined prior to this, in the 308 Report published by the U.S. ACE in 1929, which recommended 10 dams on the river. Implementation of the 308 Reports findings and recommendations only began with the Roosevelt administration and the New Deal.

[230] See for example writings from the time by Marshall N. Dana. One example is Fred Lockley and Marshall N. Dana, "More Power To You," *The Oregon Journal,* 1934.

[231] For more literature on this history Diana Fredlund, "The Corps of Engineers and Celilo Falls."; Cain Allen, "Boils Swell & Whorl Pools."; and William Willingham, *A History of the Portland District U.S. Army Corps of Engineers*.

[232] John Dougherty discusses this in *Dammed By Progress,* as does William Willingham, 43.

> "Truly, in the construction of this dam we have had our eyes on the future of the Nation. Its cost will be returned to the people of the United States many times over in the improvement of navigation and transportation, the cheapening of electric power, and the distribution of this power to hundreds of small communities within a great radius.
>
> As I look upon Bonneville Dam today, I cannot help the thought that instead of spending, as some nations do, half their national income in piling up armaments and more armaments for purposes of war, we in America are wiser in using our wealth on projects like this which will give us more wealth, better living and greater happiness for our children."[233]

Columbia River Indigenous peoples, and those who relied on salmon relations and fishery economies for across seventy square miles east of the new dam, were dispossessed of their land, smoke-houses, homes, fishing sites, and nonhuman relations when the Bonneville Dam was finished. The wealth and wellbeing Roosevelt promised the settler public on September 28, 1937 rendered sacrificial the Indigenous claims and lifeways on the riverbanks. The Bonneville Dam was not only an imperialist technology of occupation on the continent, it enable global U.S. militarism throughout both World Wars.

Columbia River Indigenous peoples have taken salmon and sturgeon from places beneath the Bonneville Reservoir since time immemorial. They still do—there is a Treaty Fishing Access Site on the north bank in Bonneville and an In-Lieu Fishing Site on the south bank in Cascade Locks, just a ten-minute drive east on I-84. There are twelve treaty protected fishing sites on the stretch of the river between the Bonneville Dam and The Dalles Dam. These sites were constructed by the U.S. Army Corps of Engineers over the course of the second half of the 20th century as part of the agreements reached between the U.S. and federally recognized Indigenous nations regarding how the settler state would honor the terms of the 1855 Treaties, all-the-while destroying ancestral homelands and fishing sites with massive engineering projects.[234] At the outset of the Dam's design, tribal governments and fishers sought to hold the U.S. accountable for what would amount to direct violation of their reserved rights to fish on the river.

In Chapter One of this dissertation, I analyzed early cartographic, aesthetic, and commercial representations of the Cascade Rapids in the lower Columbia. Those rapids, the ones described by Isaac Stevens and photographed by Carleton Watkins—the ones labeled "bad" and described as difficult and dangerous by the Corps of Discovery—are the same rapids whose power was "harnessed" and cascades "conquered" by the Bonneville Dam. The description of the imperialist conquest of Celilo Falls and its adjacent shoots, narrows, whorls and eddies, through the construction of The Dalles Dam (as outlined in Chapter Three, just preceding this one) was in fact borne of the same survey, engineering, and political strategies of the 1920s and 30s. The plot and proposal for the Bonneville Dam marked the beginning of decades of U.S. territorialization of Columbia River space and political power vis-à-vis hydroelectric infrastructure. Bonneville Dam simultaneously opened the river to greater commercial activity by steam-ship and barge, and generated electricity that would power a boom in settler population and military industry. Inextricably linked with these imperialist projects of capitalist expansion and resource enclosure

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[233] Franklin D. Roosevelt, "Address at the Bonneville Dam," September 28, 1937.
[234] Chapter Three also investigate the history of hydropower infrastructure and dispossession.

was the countersovereign strategy of inundating Indigenous homes, land-claims, and economic self-determination during the reorganization phase of Federal Indian Policy.[235]

I focus specifically on the loss of land and the loss of relations wrought by Bonneville Dam and corresponding settler colonial political regimes. Many scholars and Indigenous residents have documented the additional forms of genocidal violence that occurred with the loss of access to fish—spiritual, ceremonial, sensory, and cultural losses. When the gates of the Bonneville Dam closed on December 1st, 1937, the water up-river covered seventy square miles of shoreline, along forty miles on both sides of the river, and submerged over two dozen sites where Wasco, Yakama, Umatilla, Walla Walla, Cayuse, Nez Perce, and other Columbia River Indians have lived, governed, and taken fish since time immemorial. Journalist and historian Roberta Ulrich has thoroughly documented the geophysical and political details of this inundation as an imperialist structure in her monograph *Empty Nets: Indians, Dams, and the Columbia River*.[236] She centers expertise, activism, and oral histories from Indigenous fishers, residents, and their families to recount the violence—and resistance to—Bonneville Dam's construction:

> "Behind Bonneville the river would rise sixty feet to spread over the narrow strip of lowland shrubs and basalt between the old river bank and the high cliffs of the Columbia Gorge. The dam would change the Columbia into a mile-wide stream flowing sluggishly, giving little hint of those eddies, rapids, and whirlpools where Indian fishermen had caught their family's food since time immemorial."[237]

Ulrich uses contemporary oral histories from elders, and affidavits from the 1930s, to present an account of "the narrow strip of lowland shrubs and basalt" as social, relational, and lively places. Places where some Indigenous peoples lived along the river and fished all year round, or travelled from allotments and reservations during the time of salmon-runs from the spring and trough the late fall.

In an interview with Johnny Jackson, who was Chief of the Cascade Band at the time, Ulrich elicits an account of Underwood, a village at the mouth of the White Salmon River where Jackson lived before moving to higher ground where the Army Corps "built one of the sites it acquired in meeting part of its 1939 promise" to replace lost fishing grounds with parcels elsewhere. The passage is worth quoting at length:

> "During his boyhood, 'This used to be a village here. There were a lot of people lived here, buildings from where the road is now…" He waves an arm at Washington Highway 14 where cars whiz by on an embankment twenty feet above the asphalt pavement of the fishing site parking lot, and just a few feet from the Bonneville pool sore. "There was no road there then. Drying sheds were down this way. My two grandmothers had drying sheds and my mother would be here in summer until way late in the fall. Then we'd move home…I was seven, eight, nine years old. I remember going down to the water. The river

[235] "Reorganization" (1932-1945) followed "assimilation" (1887-1932). Following the Meriam Report (1928), the Indian Reorganization Act was passed by Congress in 1934 (otherwise known as the Wheeler-Howard Act).
[236] Here, I read Roberta Ulrich's scope of work--as a journalist--through the lens of NAIS scholarship on settler colonialism as an ongoing set of structures, or modes of relation, ala Patrick Wolf, J. Kehaulani Kauanui, and Manu Karuka.
[237] Roberta Ulrich, 15.

> used to run the other side of the bank. When I was a kid I used to stand over there and throw rocks at the fish.
>
> Jackson was too young to remember any of the Indians' negotiations with the Army, but he remembers what his parents told him. "What I've learned from my mother, my aunts and some of my elders was that when Bonneville was being completed and they were going to flood these sites…the Army told the people they'd be flooded and they'd have to get out. They promised other sites on high ground and said they would relocate them—replace the housing and drying sheds. That never happened."[238]

In this excerpt from Ulrich's conversation with Chief Johnny Jackson, he references layered technologies of occupation that reshaped the world he knew as a child. Buildings, people, and drying sheds constituted a "village" where "a lot of people lived." Likewise, Ulrich describes a conversation with Reginald Winishut (Warm Springs), who "was a child when the river backed up behind the dam and covered is family's riverbank home east of the town of Cascade Locks, Oregon."[239]

> "Winishut's memory remains vivid. Losing their homes 'was worse than terrible' for the dam-displaced families. He believes his family received no compensation for their house, the shed where they dried eels and salmon, or their fishing places just west of The Dalles and on an island. Had the Army offered compensation, it probably would have been very little. The government was acquiring 'flowage easements'—permission to flood the land—not title to riverside property. Newspaper articles record a $676 jury award for six acres of flooded land and a $300 award for five acres near the Winishut home. The land was largely shrub-covered and gravelly, at the time considered useless. Land owners built dikes to keep the rising water off the few fertile shelves, such as fruit and vegetable gardens at Bingen, Washington."[240]

The 1855 Treaties between the U.S. government and Columbia River Treaty Tribes ceded ancestral territories in exchange for the reserved right to forever fish, hunt, and gather at the "usual and accustomed places." The rapids, rocky outcrops, smokehouses, drying sheds, and homes that were destroyed, disrupted, or disappeared by the Dam were protected by federal Treaty. That these infrastructures and socialites would be inundated was known and calculated by U.S. agencies: The Bureau of Indian Affairs sought to prepare empirical evidence for Indigenous claims to resources in the state sanctioned sacrifice zone. Places like Underwood and the village of Underwood and the Winishut's home were profiled, photographed, and mapped by BIA agent Patrick Gray attorney Kenneth R.L. Simmons and Wasco, Cascade, Yakama, Nez Perce, and Umatilla fishers who made with Treaty protected fishing sites and rights along the shorelines where flooding was projected[241].

In January of 1939, Indigenous fishers utilized this documentation to petition the Army Corps of Engineers with a claim for damages to twenty-three locations, each including several fishing sites, and replacement of those same resources. Their language asserted that the loss of space and

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[238] Ibid, 28-9.
[239] Ibid, 23.
[240] Ibid.
[241] Ibid, 22-27.

infrastructure due to dam construction was in direct violation of Treaty protected rights and a matter of U.S. impingement on sovereign governance and economic self-determination. Rather than financial compensation, the signees demanded a replacement of the places lost: "These fishing sites represented food and a means of living for the Indian. They wanted only similar sites or facilities for getting this food in exchange for the ones that had been lost."[242] The petition, submitted to Colonel Theron D. Weaver (the army officer in charge of Dam construction) was successful in spurring a long, bureaucratic process of negotiation between Columbia River Treaty Tribes and the federal government (in the form of the U.S. Army Corps of Engineers). The Corps promised "replacement"—or in-lieu fishing sites—in the form of approximately 400 acquired and outfitted acres across six locations, four in Washington and two in Oregon. Upon submitting the agreed resolution to the Army's Chief of Engineers for approval, Tribal governments emphasized that this represented compensation for physical fishing places lost, *not* the loss of fish themselves as the dam would ever-increasingly prove fatal to migrating populations. Of the near 400 promised acres, it took the ACE twenty years to clear land and build docks at the first five sites, totaling only 40 acres.[243] It was not until 2012, and incredible persistence on the part of Tribal officials, Indigenous fishers and activists, that the ACE completed 31 sites.[244]

Dispossession by Fish Decimation

> Weaver had asked the Indians to supply details of damage and assigned a civilian from the Corps, G.W. Shoemaker, to hear their complaints. Fishermen responded in the February 28 meeting with a litany of their losses. Alex Saluskin, the Yakama leader, and Henry Charley of the Cascades painted the bleakest picture. Charley said Indians on the north side of the river had been unable to catch enough fish for their own food in the past two seasons. Saluskin said he caught 1,500 pounds of fish a day in 1926. In 1938, he fished for three days and caught nothing.
>
> —as quoted in Roberta Ulrich.[245]

The Indigenous authors of the 1939 Petition above made the strategic choice not to include valuation of fish loss in their demands for compensation for fishing sites. At the time, scientific studies—and technological designs for fish passage—conflicted in their accounts of how ecosystems, salmon runs, and other species would be altered by the Dam. As I have

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[242] Ibid, 30.
[243] Andrew Fisher. *Shadow Tribe: The Making of Columbia River Indian Identity*. 212.
[244] It is crucial to note, however, that the duty to find, provide, or replace permanent new housing and fishing infrastructure for displaced tribal fishing families was never fulfilled by the U.S. Army Corps of Engineers. See Stephanie Phillips, "Columbia River Tribal Housing: Federal Progress Addressing Long Unmet Obligations," *Ecology Law Quarterly,* 44, no.22, 2017: 545-554. Therein, Phillips analyzes the U.S. Army Corps' self-evaluative report on Tribal Housing: Cooper Zietz Eng'rs, Inc., "Columbia River Treaty Fishing Access Sites, Oregon & Washington," Fact-Finding Review on Tribal Housing, Final Report 25, 2013, http://www.eenews.net/assets/2015/12/21/document_daily_01.pdf.
[245] *Empty Nets,* 32.

demonstrated in previous chapters, scientific techniques of valuation and accounting have long been enrolled in projecting imperialist objectives and futurities onto the human and nonhuman landscape of the Gorge, and the case of measuring and predicting fish numbers is no exception. Fixing an underestimated number of projected salmon losses for the post-dam ecosystem was a strategy that enabled the settler state to under-quote the material and financial value of Indigenous economic loss that resulted directly from hydropower projects[246]. Doing so was essential to substantiating the claim that the U.S. was *not* violating Treaty rights, and ensured that they would pay Indigenous nations very little by way of compensating for future dispossession.

While salmon are not the focus of this chapter, the decimation of their numbers warrants brief explanation here. The decline of salmon runs is one of the most central issues of ongoing struggles for Indigenous sovereignty on the Columbia, and has been since the mid-1800s. Not only did the Bonneville Dam destroy locations from which Indigenous peoples took fish, it also posed a barrier for the anadromous migratory fish to access the various habitats of their life-cycle and most importantly, approximately 75% of their spawning grounds.[247] The dam threatened to slow the flow of the river, increase water temperatures, deepen shallow-water egg-laying beds, prevent juveniles from reaching the Pacific Ocean where they would mature, confuse adults making their way to tributaries in Washington and Idaho to spawn, and even incarcerate entire populations in single reservoirs thus fragmenting entire genetic lines. The question of Indigenous futures on the Columbia in this case was directly tied both to sovereignty over territory as well as the health and liveliness of nonhuman species. Yet, it was the interest of commercial fishing and fish canning industries—not a federal concern for sovereign rights—that heavily financed political lobbying to ensure the Corps built sufficient fish passage over the seventy-two foot Bonneville Dam.[248]

[246] Greater detail on the history of housing and fishing site dispossession, and the Army Corps' negligence in meeting Treaty right obligation, see Lisa Mighetto and Wesley Ebel, "SAVING THE SALMON: A History of the U.S. Army Corps of Engineers' Efforts to Protect Anadromous Fish on The Columbia and Snake Rivers," *Historical Research Associates, Inc*. September 6, 1994.
[247] William F. Willingham, "Water power in the 'wilderness': The history of Bonneville Lock and Dam," US Army Corps of Engineers, Portland District, 1987, 47.
[248] See the work of historians of the U.S. Army Corps, such as Lisa Mighetto and Williams F. Willingham.

Elevators for FISH

TO SAVE SALMON CANNING INDUSTRY

By ARTHUR GRAHAME

Figure 22 "Elevators for Fish To Save Salmon Canning Industry."[249]

Salmon abundance dropped from a pre-WWII average of 30 million pounds per year to less than 10 million from the mid-1950s to present, predominantly due to over-fishing by commercial industry as well as life-cycle disruption and habitat loss caused by dams. Salmon populations were already over-exploited by the intensity of settler commercial fisheries prior to main-stem dam construction on the Columbia. Unlike the seasonally calculated and rigorously socially regulated platform fishing and dipnetting of ancestral Indigenous fisheries, settler commercial enterprises utilized fish wheels, traps, gill nets and ocean purse seines to capture vast amounts of fish for sale to large-scale cannery operations.[250] The proliferation or rail-lines, barge traffic, and refrigeration technology enabled a massive up-scaling of salmon (and other fish) extraction decades before the walls and turbines of hydropower dams constricted migrating populations and destroyed spawning habitat.

[249] "Elevators for Fish To Save Salmon Canning Industry," *Popular Science Monthly*, March, 1935, 16.
[250] Roberta Ulrich.

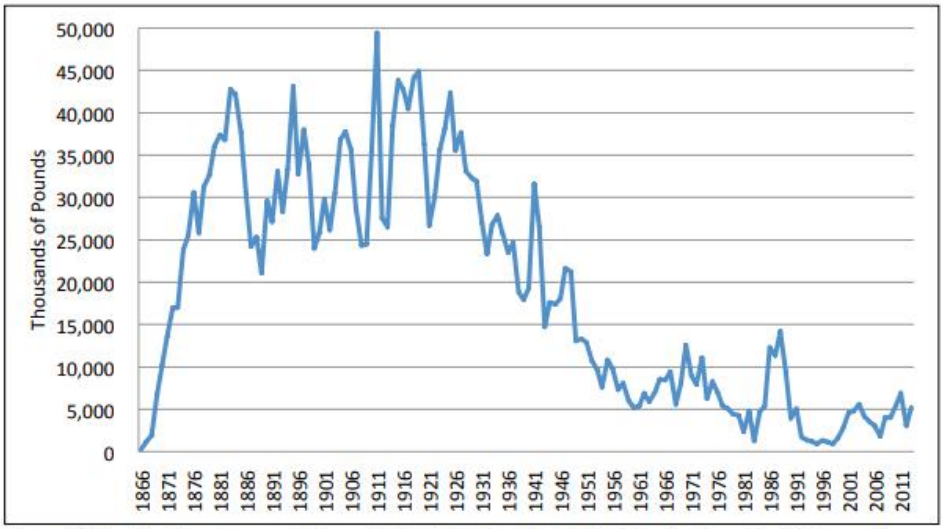

Figure 1. Columbia River commercial harvest, 1866–2013. Sum of catch statistics for all species of salmon with Columbia basin origins. Catch includes ocean and river commercial harvest, river and ocean recreational catches. Ocean fishing started near the mouth of the Columbia in the early 20th century and expanded to Canada and southeast Alaska. (Sources: 1866–1936, Craig and Hacker [1940]; 1938–1970, Cleaver [1951]; 1970–2013, Oregon Department of Fish and Wildlife and Washington Department of Fish and Wildlife.)

Figure 23 The decline of commercial harvest of all species of salmon from 1866-2013. Note the rapidity of decline in catch numbers from 1921-1961. [251]

Federal law mandated that the Army Corps of Engineers consider fish migration in the design and construction of Bonneville Dam infrastructure. The Federal Power Act of 1920 "required the builders of dams on public waterways to provide either fish passage or hatcheries in compensation for the loss of passage" and the Fish and Wildlife Coordination Act of 1934 "required that potential impacts on fish and wildlife be addressed in planning and building federal dams."[252] Yet, at the time of Bonneville's design, there was little technological precedent regarding best practices for fish passage, nor was there significant scientific work assessing the impacts of dam designs on various aspects of river hydrology and fish biology.[253] The ACE's design of the upstream fish passage at Bonneville was developed by the Interstate Fish Conservation Committee, a multi-agency effort that included representatives from national, state, and regional fisheries and game commissions, as well as university biologists and hydraulic engineers, and finalized by the U.S. Engineers.[254]

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[251] Cortland Smith, "Salmon Abundance and Diversity in Oregon: *Are We Making Progress?*" (Corvallis, OR: Oregon State University, 2014), 5.

[252] "Fish passage at dams," Northwest Power and Conservation Council.

[253] Abbie B. Liel and David P. Billington, "Engineering Innovation at Bonnevile Dam," *Technology and Culture,* 49, no. 3 (2008): 745. In this text, Liel and Billington argue, "In short, the Bonneville engineers tackled the fishway design problem at a time when there was no scientific consensus for good design."

[254] My claim here is derived from analysis of several primary sources on fish passage during the construction and expansion of dams on the Columbia, including: Harlan B. Holmes, "History, Development, and Problems of Electric Fish Screen," United States Department of the Interior, Special Scientific Report No. 53, (Washington D.C., 1948); "Annual Fish Passage Report, North Pacific Division, Bonneville, The Dalles, and McNary Dams, Columbia River Oregon and Washington," (Portland, OR and Walla Walla, WA, U.S. Army Engineer Districts, 1961); and "Dams

The Bonneville "fishway problem" required the committee to conduct multiple complex studies that synthesized hydrological information on changes in river flow, physical components of the dam's structure, and seasonal patterns of fish movements and growth.[255] For example, the dam had two separate channels, separated by Bradford Island in the middle of the river, wherein water flow would be regulated differently according to season and therefore require different modes of fish travel through each. Bonneville used novel turbine mechanics with the new Kaplan turbine and the committee evaluated injury and survival rate of juveniles passing through the churning blades as they swam to sea. The size and location of fishway entrances needed to actually attract fish migrating-upriver—luring them into the ladder and lock entrances, and doing so differently according to seasonal freshets that caused water-level to fluctuate 30-40 feet throughout the year.[256] Even still, just before dam closure in 1938 the U.S. Bureau of Fisheries stated "there is no way of determining in advance whether or not the fish-protective works will be successful or how much, if any, adverse effects the dam will have upon the fish supply."[257] Similarly, in his remarks at the dam's closing, Roosevelt said "all I can hope is that the salmon will approve the [Bonneville fishways] and find them really useful even though they cost almost as much as the dam and the electric power development."[258]

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and the Problem of Migratory Fishes," Department of Research: Fish Commission of the State of Oregon, (Salem, OR: State Printing Department, 1940).

[255] Harlan .B. Holmes, 183.

[256] Ibid, 185.

[257] William F. Willingham, "Water power in the 'wilderness'," 51.

[258] This is a quote from A. L. Riesch Owen, *Conservation under FDR* (New York, 1983), 27.

A great deal of time was devoted to study of the design of fishways for the passage of the upstream migrants. Working models of the project, which were constructed by the U. S. Engineers for their study of the structures, were utilized for extensive studies of flow conditions below the dam. An effort then was made to design and place the fishway entrances so as to take advantage of these flow conditions to direct the fish to the fishways. Figure 5 shows a small scale model of the spillway dam with a group of federal, state, and commercial fishery representatives observing one of the fishway studies.

Before deciding upon the types of fishways to be installed, a thorough study was made of fishway practices, including those in Europe as well as in this country. It was found that the problem at Bonneville Dam, from the standpoint of its magnitude, importance, and complexity, stood in a category by itself, and that past experience could not be relied upon to indicate what might be accomplished. There arose many differences of opinion regarding the merits of various fishway features that might be employed. This lack of certainty, plus the shortage of time which would have been required for extensive experimentation, brought forcefully to attention the fact that the fishways should be looked upon as experimental, and that they should be adapted to permit rapid adjustment while in operation, so as to make possible the selection of the most efficient operating conditions. The fishways finally installed are accordingly somewhat more elaborate than would have been required if more information had been available.

Two types of fishway structure were selected for detailed consideration. One was the pool type of fish ladder; the other was a fish lock. General designs of both types first were prepared with a view of selecting one or the other for construction at each of the several points at which fishways were required. It later was decided that both types should be constructed at each point, thus giving dual facilities, and providing greater assurance of complete success.

Figure 24 Passage from the report "Dams and the Problem of Migratory Fishes," 1940.[259]

The fish passage system completed in the 1930s was far more complex and costly than the ACE initially predicted.[260] Rather than constructing a simple set of either fish ladders or fish locks, as was common at the time, the ACE built combinations of multiple ladders, locks, collecting systems, and spillways "reflecting the uncertainty in the engineering and fisheries communities and in keeping with a spirit of experimentation, the designers (led by Holmes and Bell) decided to install both [fish ladders and fish locks], establishing the dam as a sort of laboratory for future fishways study."[261] While a cursory read for the complexity and costliness of this system might at first indicate comprehensive ecological care on the part of the ACE, the studies and design decisions presented above were conducted with the future profitability of commercial fishing and cannery industries as the predominant objective.[262] There were no Indigenous representatives on the Interstate Fish Conservation Committee. Nor was there accounting for the migration and habitat of species of no interest to settler industries at the time, such as lamprey and sturgeon.

[259] "Dams and the Problem of Migratory Fishes," 1940, 185.

[260] Original cost was estimated as no more than 640,000$, but the final total was more than seven million.

[261] The weir-type fish ladder developed at Bonneville was used in many other dams—both on lower Columbia and also other dams throughout the nation, it became a kind of "standard," as explained by Abbie B. Liel and David P. Billington, 746.

[262] The failure of the fishways and the symbolic importance of dams in the environmental movement, particularly in the Pacific Northwest, are an interesting story that is, however, outside the scope of this work. See, for example, Richard White's *The Organic Machine*; Joseph Cone's *A Common Fate: Endangered Salmon and the People of the Pacific Northwest* (New York, 1995); the National Resource Council Committee on Protection and Management of Pacific Northwest Anadromous Salmonids, Board on Environmental Studies and Toxicology, also published a relevant report titled "Upstream: Salmon and Society in the Pacific Northwest," (Washington, D.C., 1996).

Sturgeon

> In 1879 the sturgeon were so thick in Baker Bay that we did not consider it safe, early in the season, to put our gill nets out. The fish were so numerous and large that they were able to destroy a great amount of netting. For years every sturgeon taken was mutilated or killed with an ax and thrown back into the water. The shores of the river would be lined with dead sturgeon, and numbers could always be seen floating down the river. It is quite different now.
>
> -- Mr. M. J. Kinney, an early cannery operator.[263]

The white sturgeon of the Columbia—*Acipenser transmontanus*—are slow growing fish with long reproductive cycles, that can reach over 1000 pounds and up to 20feet in size (white sturgeon). White sturgeon, like salmon, need to migrate back and forth from the Pacific Ocean to their breeding grounds up-river. Unlike salmon, however, white sturgeon migration through, over, or around the Bonneville Dam was not considered in the design of fish passageways in the 1930s, nor was the hatchery system involved in sturgeon husbandry to maintain any sustained commercial white sturgeon fishery. At the time of dam construction, there were no sturgeon canneries or sturgeon wheels: The settler public, at large, did not have a palate for the large botton-feeders. As such, the economically undesirable fish species was not incorporated into the lobbying efforts of industry representatives and politicians—the Interstate Fish Conservation Committee did not consider where sturgeon would fit safely through turbines on their down-stream migration or make it up fish-ladders when returning to tributaries to spawn. The effect of excluding sturgeon from the study of fishway practices and design of novel technologies at Bonneville Dam ensured that the sturgeon populations would be entirely severed at its gates, bifurcating habitat at the dam so completely that Bonneville now marks the genetic division between lower Columbia River sturgeon and all other sturgeon populations above the dam.[264]

Though not prized by fresh markets and canning industry in the 1930s, sturgeon were heavily commercially fished and their numbers suffered depletion prior to dam construction, just like salmon. Indigenous sturgeon fisheries have been lively since time immemorial, but Indigenous methods and scales of taking sturgeon constituted sustainable practices. White sturgeon are high in fat, protein, and vitamin D: the flesh rivals the nutrients of salmon, and eggs (roe) were valued as caviar. Sturgeon were harvested by the Kiksht Wasco and all the Lower Chinookan clans in the big eddy areas on the mid-Columbia River.[265]

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[263] Marshall McDonald, "Bulletin of the United States Fish Commission," (Washington, DC: Government Printing Office, 1895), 206.

[264] For more on sturgeon population and genetics in the Gorge, see "Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan," Oregon Department of Fish and Wildlife Ocean Salmon and Columbia River Program, August 2011.

[265] George W. Aguilar Sr. continues on to explain "The fish were taken by using baited hooks on a long line and back-eddy set nets. An uncle named Joe Esterbrook, who stayed near the Wac' áqs year-round, was an adamant fisherman for this fish." *When the River Ran Wild!*, 93.

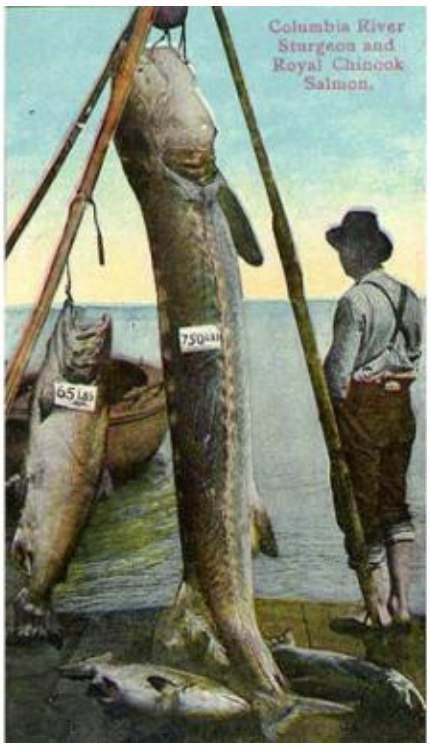

Figure 25 A penny-postcard depicting prize sturgeon and salmon for sale, Columbia River.[266]

Yet it was not until the late 1800s that settler industry treated sturgeon as much more than a nuisance to nets and wheels[267]. They were often considered a safety hazard prior to the shift in ecological and economic conditions that rendered their commercialization profitable. Sturgeon were sometimes taken as incidental by-catch when fishing for other species, predominantly salmon, they were frequently injured or killed when they would become ensnared in fishing operations targeting other species, like eulachon, shad, or salmon[268]. Though sometimes kept, they were more frequently discarded regardless of size. They were often viewed as pests because they had little value yet were so large and strong as to often clog and break equipment, and unmoor and tear nets. It was not until the decline of salmon runs from over-fishing pushed commercial industry to target previously unexploited fisheries, and the adoption of catchment techniques such as setlines and large-mesh gill nets enabled fishers to take sturgeon from the river en masse.[269]

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[266] "Columbia River sturgeon and Royal Chinook salmon, probably vicinity Columbia River, Oregon, n.d." PH Coll 1294. University of Washington Digitized Archives. https://digitalcollections.lib.washington.edu/digital/collection/indocc/id/464/rec/27.

[267] Sturgeon were frequently injured or killed and tossed, and occasionally kept, when they would become ensnared in fishing operations targeting other species, like eulachon, shad, or salmon. Until sturgeon became a marketable commodity in their own right, they were often viewed as pests because they had little value yet were so large and strong as to often clog and break equipment, and unmoor and tear nets. See Joseph A. Craig and Robert L. Hacker, "The History and Development of the Fisheries of the Columbia River," Bulletin of the Bureau of Fisheries, 49, no 32, 1940.

[268] "Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan," 22.

[269] In "The History and Development of the Fisheries of the Columbia River," on page 205 the bulletin explains:

Figure 26 "Columbia River Sturgeon Caught by S. Schmidt & Co., Astoria, OR, ca. 1915."[270]

The first verified record of white sturgeon commercial sales by settlers occurred in 1884.[271] Within the next four years, a bustling commercial sturgeon fishery had developed on the lower Columbia River—a fishery so productive that it seconded that of catch and sale to the commercial salmon fishery.[272] The industry capitalized on pickled and smoke sturgeon, but with the introduction of freezer cars and the expansion of rail lines, the expanse of commodities and their reach were increased: frozen fresh fish and caviar were transported to markets as far as San Francisco and New York City.[273] Yet in the absence of strict harvest regulations, and the

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"Until 1880 sturgeon were caught incidentally to the salmon fishery. Seines, wheels, gill nets, and traps all captured these fish. As sturgeon fishing became a definite and specialized occupation two types of gear were developed for the taking of those fish. These were set, or trawl lines, and large-mesh gill nets. The gill nets were made of cotton webbing with meshes from 12 to 19 inches, stretched measure, and were from 600 to 900 feet long."

[270] Courtesy of the UWA Digital Collections.
https://digitalcollections.lib.washington.edu/digital/collection/indocc/id/124/rec/2

[271] See D. L. Hanson, T.G. Cochnauer, J.D. DeVore, et. al., "White Sturgeon Management Framework Plan," Pacific States Marine Commission, 1992.

[272] J. A. Craig and R. L. Hacker, "The History and Development of the Fisheries of the Columbia River," U.S. Bureau of Fisheries Bulletin, 49, no32 (1940).

[273] Ibid, 204.

prioritization of profit-making in settler commerce, the white sturgeon fishery peaked under a decade later. In 1892, only the fourth year of intensive fishing and exploitation, the sturgeon harvest reached its apex at approximately 5.5 million pounds.[274] That year of tremendous catch saw the depletion of the stock, and even after the addition of more gear to the commercial fishery, this high level of catch could not be maintained. The size of the sturgeon in the meager catch had also decreased dramatically, and with significant implications for the sustainability (word?) of the population as a whole. While in the early years of the fishery, sturgeon on the lower-mid Columbia River could reach as large as 1,200 pounds, by 1895 they were between 50 to 60.[275] Gill netters harvesting other species (predominantly salmon) on the lower river often destroyed many of the young sturgeon—6 to 12 pounds—before they could age into the large-sized adults desired for the caviar and flesh their bodies would bring to market.

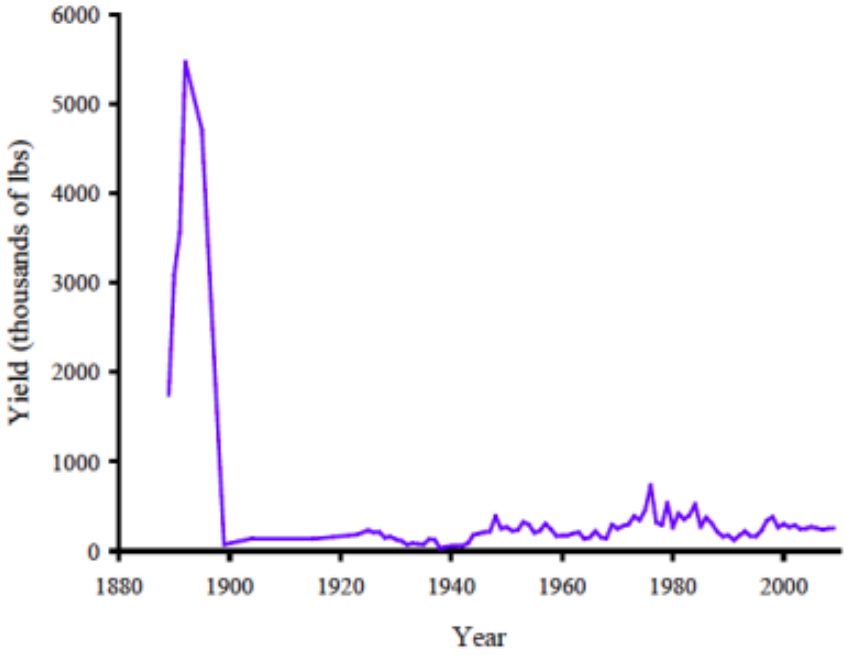

Figure 27 Annual commercial yield in pounds of lower Columbia River white sturgeon, 1889-2009.[276]

[274] "The History and Development of Columbia River Fisheries," 206.
[275] Henry R. Richmond III, ed., "The History of the Portland District Corps of Engineers, 1871-1969," U.S. Army Corps of Engineers, (Portland, OR: 1970), 250.
[276] This is Figure 4 from the "Lower Columbia River and Oregon Coast White Sturgeon Conservation Plan," 23.

The condition of the sturgeon fishery is outlined in the following quotation taken from a letter written by C. B. Trescott to the United States Fish Commissioner on February 15, 1894 (Smith, 1895):

Sturgeon fishing has completely failed on the Columbia. There has been no fish caught since last November to amount to anything. At present the entire catch on the river does not amount to over 1 ton of dressed fish a day, and is growing less. We do not expect to be able to fish longer than the 15th of March, and what few we get now do not pay for handling. At present we do not have much faith in the sturgeon business on the Columbia. Usually we have a good run of fish in January or February, but there are no fish this year and there is every indication of the fish being caught out. We have thought that we would have our usual run of sturgeon on the Columbia in January and February. The sturgeon season will begin again on the 15th of August, and if we do not have our usual run of fish then it will prove that the sturgeon fishing is done for here. There is every indication of the sturgeon business having seen its best days on this coast. The total catch for this season has not been 25 per cent of the catch of last season, and what fish were caught were caught in August, September, and October.

TABLE 26.—*Sturgeon production of the Columbia River* [1]

Year	Washington	Oregon	Total	Year	Washington	Oregon	Total
	Pounds	*Pounds*	*Pounds*		*Pounds*	*Pounds*	*Pounds*
1889 [2]			1,746,736	1926	76,880	132,262	209,142
1890			3,084,925	1927	80,676	130,835	211,511
1891			3,561,998	1928	61,266	86,256	147,522
1892			5,466,831	1929	66,463	93,184	159,647
1895			4,704,409	1930	54,660	74,581	129,241
1899			73,295	1931	43,990	68,866	112,856
1904	128,809	8,854	137,663	1932	30,966	40,466	71,432
1915 [3]	37,088	97,785	134,873	1933	38,915	45,553	84,468
1923	68,945	113,911	182,856	1934	31,000	48,100	79,100
1925	93,053	138,309	231,362				

[1] Data from Report of Fishery Industries.
[2] Data appearing from 1889 through 1899 converted to round fish on the basis of a 45-percent dressing loss.
[3] Green sturgeon entered catch in 1913.

Figure 28 Narrative and statistics documenting the fall of the sturgeon fishery.[277]

By the end of the 19th century, the U.S. was largest producer of caviar in the world—producing 600 tons a year—and sturgeon roe from the Columbia was being shipped across the east coast and Europe.[278] The fishery collapsed under such exploitation in the late 1890s, with a total catch of less that 100,000 pounds in 1899.[279] In the face of this sharp decline in catch, there were some restrictions placed on the fishery in 1897 and then even more in the early 1900s: Regulations restricted the type of equipment permitted for use in catching sturgeon, as well as the size and number of individuals that could be taken. Despite these, the fishery went nearly commercially "extinct" and did not rebound to numbers sufficient for much fishing until the 1950s.[280] While white sturgeon populations below the Bonneville Dam remain relatively stable today, all

[277] "The History and Development of the Fisheries of the Columbia River," 207.
[278] "American Caviar—Think American Caviar!" What's Cooking America, https://whatscookingamerica.net/caviar.htm.
[279] "The History and Development of Columbia River Fisheries," 205.
[280] Virgina L. Butler, "Where Have All the Native Fish Gone? The Fate of Fish That Lewis and Clark Encountered on the Lower Columbia River," *Oregon Historical Quartlerly,* 105, no. 3 (2004), 455.

populations above the dam—blocked from access to the Pacific—remain so reduced that they can support little fishing pressure today.[281]

The commercial and cultural craving for sturgeon, however, persists: Top-shelf sturgeon caviar can sell for up to 200$ an ounce in stores and restaurants.[282] The biggest female sturgeon can carry up to 100 pounds of eggs, meaning the eggs from one sturgeon could ultimately be worth hundreds of thousands of dollars. Only one percent of sturgeon survive the 15 to 25 years it takes them to start reproducing, and mature fish are essential for sustaining a population for a long time—the older they get, the more eggs they can produce. White sturgeon is becoming more and more of a premium item in the culinary world. "American caviar now rivals Russia's in quality" and after the U.N. ban on export of beluga sturgeon caviar form the Caspian Sea, American chefs are now looking to American caviar. By the end of the 19th century, the U.S. was largest producer of caviar in the world—producing 600 tons a year.[283] Today, Indigenous, settler commercial, and sport fisheries are all heavily regulated on the Columbia River. Multiple Tribal, U.S. federal and state agencies currently implement conservation programs aimed at maintaining sturgeon numbers and restoring their most sensitive habitats.[284]

We can think of the Hatchery as a contemporary node in the historically entangled imperialist economies and spatialities of fisheries, industry, and electricity.[285] The trends in salmon populations and dam construction are directly linked to the development and functional objectives of the Columbia River fish husbandry programs, of which the Bonneville Fish Hatchery was and still is a central node. By the end of the 1800s, hatcheries were used throughout the Columbia River Basin as a way to compensate for fish losses and insure profitable commercial harvests, particularly for salmon and steelhead. The Central Hatchery, what would later become the Bonneville Hatchery, was built in 1909 at the mouth of Tanner Creek. It was the largest in the world at its time of construction, with a global reputation as a leader in salmon propagation and management.[286]

The construction of the Bonneville Dam was accompanied by an increase in state and federal resources for hatchery programs along the Columbia. From 1935-36 the original grounds were raised, and the State transferred nearly 10-acres to the federal government for construction and expansion of new hatchery grounds that would accommodate relocation of the railroad and provision of road access to the new Bonneville dam project.[287] Soon after, in anticipation of exacerbated declines in fish-runs from the construction of the Dam, congress passed the Mitchell Act (Public Law 75-502) in 1938. The Mitchell act appropriated financial funding for surveys, habitat improvement projects, and the construction of fish ladders, hatcheries, and husbandry research. With the advent of the Mitchell Act, federal agencies' reliance on technology to

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[281] Richard S. Wydoski and Richard R. Whit ney, Inland Fishes of Washington, 2nd ed. (Seattle: American Fisheries Society and University of Washington Press, 2003), 43.
[282] "American Caviar—Think American Caviar!"
[283] Ibid.
[284] See for example he Yakama Nation Fisheries "White Sturgeon Management Project," as well as the Columbia River Inter-Tribal Fish Commission's "Wy-Kan-Ush-Mi Wa-Kish-Wit," a Spirit of the Salmon Plan and Tribal Restoration Plan.
[285] White.
[286] Willingham, *Water Power in the "Wilderness,"* 51.
[287] Ibid.

address ecological damage shifted from built-in infrastructure for river-bound fish, to the reproductive technologies of fish husbandry and regulatory techniques on fish retention, pollution, ranching, and logging.[288]

Historian of the Columbia, Richard White, has argued that the economic and political power wielded by hydropower industry in the Columbia Basin, coupled with valuation of fish as commodities, lead to the standardization of technical fixes for fish management. During the hatchery program's development, dominant preservation discourse defined salmon as "capital." This model compensated for damage using artificial systems, rather than preventing it with better damming practices. This produced a lasting legacy of "hatcheries instead of spawning grounds; rehabilitating old rivers to replace rivers blocked by dams; barging smolt downstream to replace the current that once flushed them to the sea…regulating and allocating the catch to try to both maximize production and ensure that enough spawners returned to propagate new runs."[289] This chapter takes seriously the assertion that fish are more than "capital," and White's framework certainly accounts for the hatchery as not merely "artificial," but as a comingling of organisms and technologies, a socionatural assemblage.

The physical space of the Columbia River has been dramatically rearranged and reallocated by hatcheries, because they "divert salmon from their home streams and their journeys; they replace the space of the river and the stream with the holding pond. Salmon whose ancestors spawned on gravel beds now yield their eggs to the knife and the eggs are fertilized and matured in tanks."[290] However, fish husbandry has yet to systematize and up-scale the artificial reproduction of sturgeon in hatchery systems. In the next section, I connect the history of over-fishing, dam construction, and anadromous fish-decline with the evolution of the hatchery systems as simultaneously commercial and scientific *as well as* cultural and political technologies on the Columba.

The Ecopolitics of Exhibition

> "But by far the most curious attraction is next door [to the Bonneville Dam] at the Sturgeon Viewing and Interpretive Center at the Bonneville Fish Hatchery. This is where Herman the Sturgeon lives, an ugly-but-sort-of-lovable 10-foot-long white sturgeon who weighs in at more than 400 pounds."
>
> -*Oregon Curiosities*.[291]

Hatcheries along the Columbia are technologies of reproduction, generating biological organisms and virtual representations of the river's material systems that in turn influence the actual spatiality and material composition of the river. The Bonneville Fish Hatchery does more than

[288] White, 97.
[289] White, 97.
[290] Ibid, 111.
[291] *Oregon Curiosities,* 2010

transform the materiality of the river and the fish bodies that swim therein. It also provides education and entertainment to tourists, serving as a point of entry to the world of ecological experts and Columbia River management that is generally inaccessible to the public. As the state manages the Columbia River and its fish it also disciplines human tourists. Biological and cultural reproduction cannot be separated at the hatchery. The Hatchery is a kind of borderlands,[292] legible to some as a spatialized order of necessary scientific techniques and organic materials for making animals, and to others as a "giant park full of fish." At stake in the configuration of this space is the degree to which the scientific practices and organisms on display occlude or lay bare the historical conditions of ecological devastation with which they are entangled. How do the techniques of visual representation – in this open laboratory come open-air natural history museum -- curate tourists' encounters with non-human life?

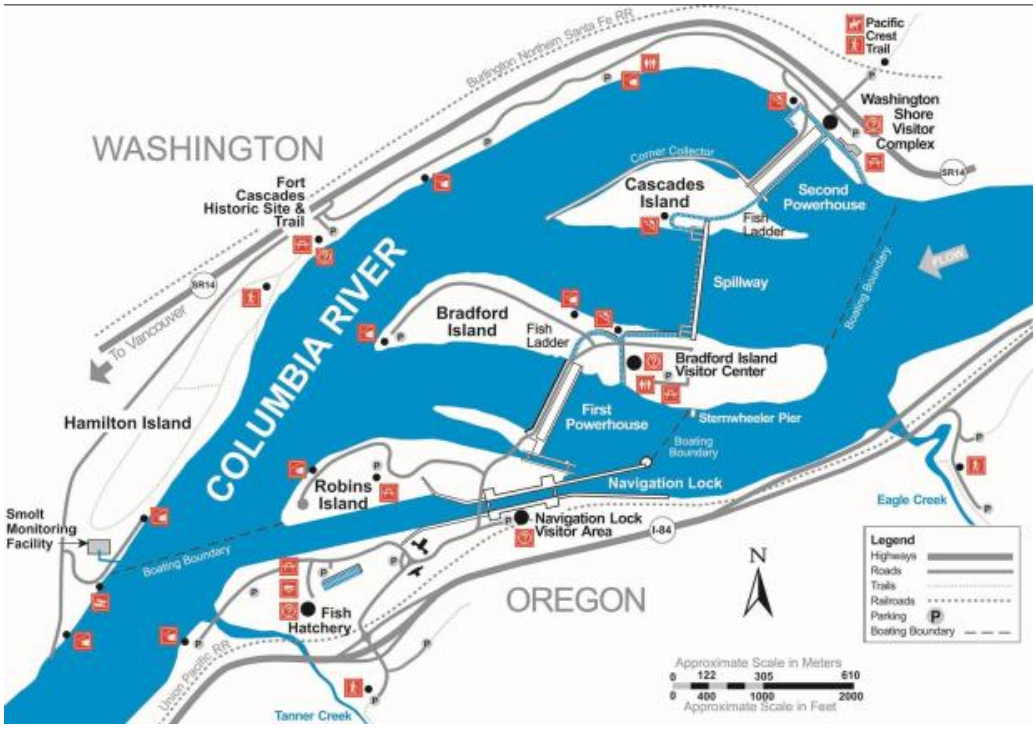

Figure 29 Aerial map of the tourist locations and paths at The Bonnville Dam and Hatchery complex.[293]

The Hatchery's near 500,000 annual visitors can witness the process of bringing in runs, sorting and spawning fish, incubating eggs, and raising fry. While at the Hatchery, visitors are encouraged to walk the self-guided tour through open air holding ponds, the historic egg incubation building, and spawning room. From September to November, adult fall chinook and coho arrive: this means you can watch all of it. Videos of this process play in the incubation house year-round. The egg-tanks, rearing ponds, and adult holding tanks – even when uninhabited by fish – evidence the ongoing scientific practices of the Hatchery. Descriptive

[292] Susan Leigh Star and Gresiemer, "Institutional Ecology, 'Translation' and Boundary Objects: Amateurs and Professionals in Berkeley's museum of Vertebrate Zoology, 1907-39." *Social Studies of Sciences,* 19, no. 3, (1989): 387-420.
[293] Visitors map to the Bonneville Lock and Dam, author's own collection.

placards, signs, and brochures are printed with information that gives context and meaning to the socionatural processes visitors witness. The tour and texts give order to the sights, sounds, and smells that emerge from the otherwise physical, bloody, and confusing assemblage of guts, waders, boots, buckets, thermometers, chemicals, and babies.

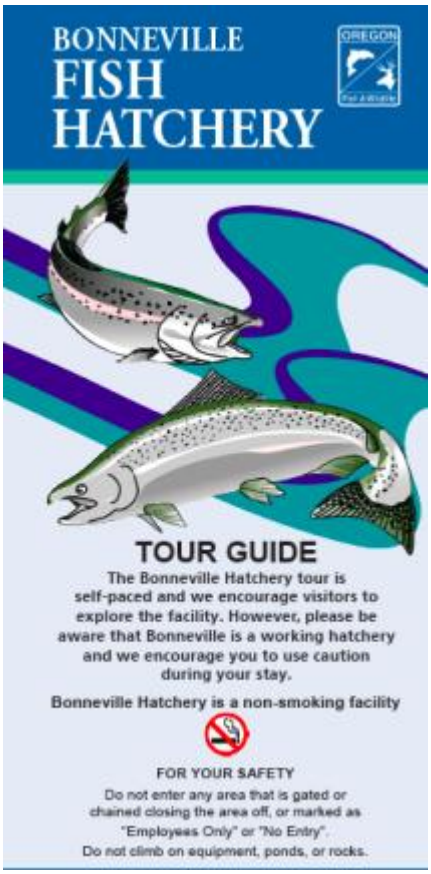

Figure 30 Cover of "Tour Guide" brochure for the Hatchery.[294]

As I follow the self-guided tour to the Sturgeon Viewing Center I experience a distinct change in surroundings from pavement and picnic tables to heavy native vegetation. Herman's pond is tucked away behind a cool pocket of air and scent of pine trees, away from the exposed concrete holding ponds on the facility's central grounds. The pathway to the sturgeon declines in elevation, ushering my body down into a small, white building – one that reminds me of an historic wooden house- with a large glass window into greenish, almost turquoise, water. Waiting my turn behind other curious onlookers, I read the chronological map hanging on the left wall, "Columbia River Sturgeon Through Time," that diagrams significant population and ecological changes for the species. Mounted just below the map, I study the life-size plastered replica of a White Sturgeon, hard, bony, and gray. As viewers part ways and an opening is made to the cold glass wall, Herman appears. He swims slowly, and his catfish-like whiskers waver gently. This is the only space in the Hatchery where I come face to face with a fish.

[294] cite

Figure 31 Illustration of Herman the Sturgeon, and child viewer: drawn looking from above, yet also below water.[295]

This hatchery neither spawns nor rears white sturgeon, but the Sturgeon Viewing Center is the Hatchery's most popular attraction. While Robert has been here for over a decade, Herman the Sturgeon has been here even longer. Herman was about 75 years old when Robert first started, so that would make him around 90 now. 90 years old, over 10 feet long, and more than 450 pounds. Robert and I bring our faces close to the glass, and peer.

> "Herman is here only for people to look at – and they love him. People just come down in here and stare at him. He's a dinosaur…He is maybe the 4th or 5th Herman. There were other hatcheries a while ago that would take sturgeon to the state fair -- in the 1970s. The sturgeon here looks different than the ones in the river because he has been in the holding tank. He has a scar, he has things growing on his gills, he has some different coloration than what he would have in the wild…"

Visitors have not always been able see Herman "eye-to-eye." In fact, Robert explained that it was only recently that they began pumping fresh well water into the tank "right in front, to get Herman to swim closer to the glass." He prefers the fresh water, Robert expounds, and swimming in the cool current means sticking close to the glass "so people can look at him."

For Haraway, exhibition in the context of natural history is a practice of producing permanence, arresting decay, and conserving degraded natural resources, while masking extractive industry as the very source of this decay and degradation.[296] She argues that natural history museums serve the purpose of public education and scientific collection through "naked eye science," using

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[295] Color Reproduction Travel Print of Herman the Sturgeon at the Bonneville Dam in Oregon, https://viuspace.viu/ca/xmlui/handle/10613/1672.

[296] Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, (New York, NY: Routledge, 1989), 55.

visual exhibits as "meaning making-machines."[297] Part of a larger social project of "possession, production, preservation, consumption, surveillance, appreciation, and control of nature,"[298] natural history museums use multiform hierarchies of race, sex, species, and class that necessarily structure our own human subjectivities in relation to "nature" and the "other." Seeing a visual representation, like an exhibit, not only adheres to scientific conventions of establishing the "real" and "factual,"[299] but also allows for heightened control, circulation, and consumption of naturalized hierarchal orders of knowledge and relationality.[300]

The techniques of visual (re)presentation that constitute natural history exhibits and "naked-eye" science are at play in the hatchery. Herman's pond, shaded by the vegetation that enshrines his pool, is intentionally constructed to appear natural and native to the Columbia River. Evidence of hatchery equipment and the hydroelectric industry is hidden. Tucked away from the power-washers, thermometers, plastic bins, knives, and rectangular cements pools, visitors have walked down into a scene of the original and pristine state of river ecology, one with inflections of ancient and eternal life. The naturalness and liveliness of this scene emerges both from the very material conditions of fish death, both in captivity and in the wild, and the degree to which the exhibition can successfully *obscure* or *bracket* those violent conditions.

Figure 32 Oregon State Fair Sturgeon pond exhibit, with viewers. ca. 1930s. [301]

The "Home for Herman" is an inhabitable underwater scene that immerses the visitor in a diorama of native ecology. State newspaper articles and internal ODFW documents from the 1980s detail the coordinated efforts of the ODFW and the Oregon Wildlife Heritage Foundation

[297] Ibid, 54.
[298] Ibid, 45.
[299] S. Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life,* (Princeton, NY: Princeton University Press, 2011).
[300] Haraway, *Primate Visions*.
[301] ODFW Archives, personal communication with Daniel G. Green, August 15th, 2015.

to design "Home" that was emblematic of Oregon ecosystems and easily consumed. After decades of trucking the large sturgeon between shallow holding ponds and temporary state fair pools, ODFW and state parks officials wanted to build a permanent water and habitat display. The components of their plan included "a 60,000-gallon tank, meandering stream, waterfalls, spawning ponds and a place to see Herman…The idea is to give viewers an underwater snapshot of the salmon, steelhead and sturgeon habitat that makes Oregon's outdoors special."[302] Budgeted at $300,000, and was funded through donations, agency funds and a grant from the department's Restoration and Enhancement program,[303] the renovation contributed not to expanding fish husbandry at the hatchery but to reproducing a consumable proxy of Oregon's exceptional habitat.

Making Herman Live(ly)

Herman is a white sturgeon--*Acipenser transmontanus,* meaning "sturgeon beyond the mountains"—the largest freshwater fish species in North America, known to reach 1,799 pounds, 20 feet, and live beyond 100 years. A slow-growing cartilaginous, amphidromous fish, sturgeon have changed little since they first appeared over 175 million years ago in the Jurassic period – thus, they have the appearance of an ancient, shark-like fish.[304] The Columbia River's white sturgeon population was heavily depleted by commercial fishing in the late 1800s, and further still by hydroelectric development in the 20th century. Dams caused fragmentation of sturgeon habitat, blocking access to the Pacific Ocean and disrupting historic spawning habitat, resulting in the isolation of white sturgeon into 17 landlocked subpopulations upstream of the Bonneville River. Ironically, Sturgeon often use dam structures such as draft tubes or offline turbine sluices during maintenance, and are the killed by impact when turbines are brought back online, or stranded during dewatering.

Herman is not only one Herman. As sturgeon in the wild die, Herman does too, albeit of different causes. He one in a line of several other sturgeons, originating in the 1930s, who have appeared at the Oregon State Fair in Salem, one died of disease there, one was kidnapped from the Bonneville exhibit, and one even survived attempted murder by stabbing. The death or disappearance of a single organism, however, has never meant the end of Herman's life. On several occasions, the loss of one Herman has meant public mourning and vehement contestation, police hunts for poachers, as well as behind-the-scenes replacement (so nobody would suspect a thing). Herman renders the effect of "permanent essence of life" through the use of multiple consecutive living organisms – replacing one after another upon death or illegal removal – placed against a backdrop of always-flourishing native flora. From within the pond, Herman appears unthreatened and unchanged since the Jurassic period. The nature of his future is unquestioned but seems infinitely possible, belying the lived reality of sturgeon outside the exhibit.

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[302] "Herman the sturgeon could return to state fair," Mail Tribune, published September 7, 2006. ODFW Archives, personal communication Daniel G. Green, August 4th, 2015.
[303] "Herman the sturgeon has a new home as state revives pond," Kitsap Sun, November 1, 1998. ODFW Archives, Personal Communication with Daniel G. Green, accessed August 4th, 2015.
[304] Ibid.

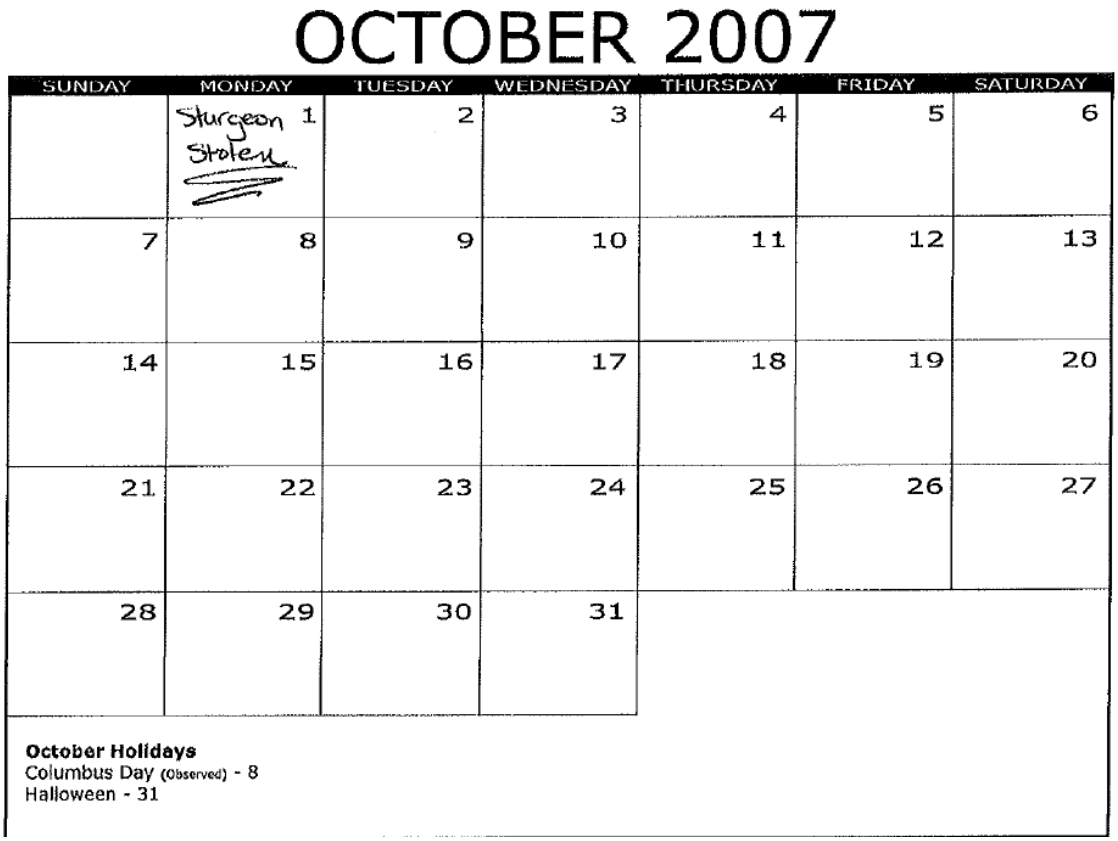

Figure 33 Groundkeeper's calendar of October 2007: The only even marked, "sturgeon stolen." [305]

Haraway's analysis of taxidermy as a politics of reproduction that satisfies (or at least attempts to) the desire to represent and to be whole is useful in examining how this same desire makes possible the collected series of swimming sturgeon bodies that have comprised Herman over the last seven decades. Haraway argues that although our bodies are forbidden entry by the glass front of the diorama, our gaze is unmediated. The gaze invites our visual penetration, as the "animal is frozen in a moment of supreme life, and man is transfixed. No merely living organism could accomplish this act."[306] I agree with Haraway that the visual consumption of Herman is inflected with the promise of mans' biopolitical power. However, I wonder, what do we fail to account for if the Herman on display is conceived of as a "merely living organism," incapable of freezing a moment of supreme life, as Haraway has argued? What if he is a layered coming-together of spatial practices and bodily (re)placements, put into motion by the circulation of tourists and changing patterns of consumption over decades, and in this way also fulfills "the fatal desire to be whole"? An animate spectacle?[307] Let us expand the analysis of how dead animals in dioramas "have transcended mortal life, and hold their pose forever"[308] to account for the ways in which an eternally lively Herman is enrolled in a politics of reproduction.

[305] Grounds' Record Log, ODFW Archives, personal communication with Daniel G. Green, August 15th, 2015.
[306] Haraway, *Primate Visions,* 30.
[307] Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect*. (Durham, NC: Duke University Press, 2012).
[308] Haraway, *Primate Visions,* 30.

Days after my own close encounter with Herman at the hatchery I had a conversation with Jack,[309] ODFW's supervising fish and wildlife biologist at the time. I contacted Jack because I had seen and read his interviews in the Oregonian and on Oregon Public Broadcasting in my research on sturgeon. I had remaining questions for him about threats to their numbers in the Columbia, state and tribal management plans, and Herman's configuration as a mediator – or living boundary object – between ODFW and the public. Jack explained that "he is a visible, or she, is a visible tangible thing that people can see, maybe not touch, but at least see. See on a regular basis. Salmon is kind of like the cultural icon on the river, but when people see sturgeon they are pretty awe inspiring and people don't forget it I don't think, at least I want to believe that." I asked Jack what role Herman plays in education and entertaining visitors to the hatchery:

> "He definitely plays a role, he prompts questions. If you haven't see a sturgeon and you see a 10 foot fish and realize that swims in the river, about 100 feet away, that's pretty awe inspiring. Entertaining, I guess it's entertaining too... "Many of Herman's visitors are impressed – meditative, surprised, disgusted -- by their encounter with a seemingly personable, ugly, or tranquil sturgeon. Write ups in the paper and on travel blogs reinforce Jack's account: "Some people just stand down here and look at the fish, there is something about watching fish that never gets old."[310]

Beyond the genre of travel writing, Herman has figured prominently in National Geographic T.V. series "Monster Fish" and nature and science writer Brian Doyle's oeuvre. Herman is a kind of boundary being. Emerging from the Columbia, curated by the ODFW, financed by the BPA, embedded in a spawning lab, and circulated online in photos and videos, he exists in multiple social worlds – across time and space - and has different identities and meanings in different moments. As key members in a larger river management network, the ODFW and BPA use Herman as a specimen of ideal type, in size and age, and an embodied set of scientific, ecological data. Through him, they have the potential to access people who have very little direct involvement or expertise in ecological restoration and hydroelectric development.

Herman's particular kind of boundary work is as a proxy for native fish and ecosystems in the Columbia River.[311] As a cultural symbol, Herman embodies an ancient and intact Columbia River ecosystem. He is an accessible, familiar, and "ugly-but-lovable" face that generates enthusiasm and intimacy between visitors and the natural ecosystem of the Columbia, the practices of the hatchery, and corresponding governing institutions. At the Viewing Center, potentially conflicting sets of concerns surrounding environmental degradation and governance on the Columbia are rendered superficially neutral and non-technical with regards to the underlying causes and responsibilities of addressing said degradation. Herman is enrolled in the translation of economic, scientific, and technical problems by informational placards and brochures. Herman, however, is alive. Unique in size and bulgy in eyes, Herman's materiality and historically constructed personality have garnered public affection and wide circulation in newspaper, blog, and Facebook photographs and stories for decades.

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[309] This is a pseudonym.
[310] Brett Requa, "Visit Herman the Sturgeon." *Oregon.com*.
[311] Ursula Hiese, *Imagining Extinction: The Cultural Meanings of Endangered Species*, (Chicago, IL: University of Chicago Press, 2016).

Figure 34 Life-size mascots—two individuals, each dressed in furry costumes of Herman (left) and Smokey (right) at Oregon State Fair. [312]

Herman's material liveliness—his giant size, old age, visible eyes, slow, calm behavior, and well-known status as a living example of a native and prehistoric species—are conducive to affective experiences along cultural, sensory, and corporeal lines. Geographer Jamie Lorimer has similarly theorized how the physical and behavioral particularities of corncrakes (a bird in the rail family) and stagbeetles. Lorimer locates the properties of organisms that render them perceptible to humans, and thus possible to evaluate, along a spectrum of "nonhuman charisma."[313] He argues that nonhuman charisma operates and is mobilized within assemblages of environmental governance, like biodiversity conservation, and how "flagship species" work as

[312] There is room here to consider Jake Kosek's analysis of Smokey the Bear in his book *Understories: The Political Life of Forests in New Mexico,* (Durham, NC: Duke University Press, 2007). Herman certainly does not have the same kind of cultural power or circulatory capacity. However, the proximity here is an opening: Herman's proximity to Smokey in this image and space places him within the context of a larger state sanctioned agenda to enroll interpersonal relationships and the comportment of environmental subjectivities as part of a disciplinary project to "conserve" or "protect" Oregon's resources. Image courtesy of ODFW, personal communications.
[313] Jamie Lorimer, "Nonhuman Charisma," *Environmental Planning D: society and space,* 25, no.5 (2007): 912.

"catalysts" that generate popular support for conservation and as "boundary objects" that allows different "epistemic communities" to collaborate on particular species conservation assemblages.

The biological and aesthetic properties, or nonhuman charisma, of Herman deterritorializes human viewers in a moment of awe-some or enchanting proximity to another animal. The visual impact and affections triggered by Herman's appearance in an instantaneous encounter is attributed both to Herman's own materiality, but also constructed and manipulated by the conventions of the Hatchery as an open laboratory and museum, as I have previously analyzed. Herman, unlike the fish eggs, gutted females, and clusters of fry in open rearing ponds, provides an accessible "vessel" for the "public display of affection towards the nonhuman in an epistemic community in which this would normally be anathema."[314] Human proximity of this kind is in fact explicitly prohibited in the rest of the Hatchery, by signs and maps that command: "Do not linger over the pools, do not feed the fish, do not tap on the glass." The popular emotional attachments to Herman are shaped by "the alternative taxonomy" of nonhuman charisma, borne of lookings, emotions, corporeal movements, and narrative, in contrast to the panoptic and utilitarian spatializations of the rest of the hatchery. Herman's liveliness makes this kind of relationality possible.

"Meeting Herman" is a socially and materially structured moment that both upholds and unsettles some of the dominant logics that structure conventional science and natural history. The personalities and passions generated through human relations with Herman overflow the "confines of a scientific epistemology configured around a modern subject-object dualism."[315] This is perhaps why a place like the Bonneville Hatchery has the potential to generate encounters that forge a "more-than-human" understanding of agency and ethics: a different kind of relationality to nonhuman animals, that translates beyond the dominant discourses of hydroelectric economics and conservation ecology. Yet, this framework is insufficient in answering to the maintained history of ecological devastation and Indigenous dispossession that structures the hydro-hatchery complex at Bonneville demands a more closer scrutiny of the cultural work such nonhuman charisma does when it is always already adjacent to violent practices of seeing and surveiling fish. Seeing and counting fish on the Columbia has never been a politically neutral practice.

Conclusion: Fishy Science and Surveillance

Tourism at the Bonneville hydro-hatchery complex is not a contemporary phenomenon. As I have documented in Part One of this dissertation, thousands of visitors were already travelling by car and train through the Gorge in the 1930s when Dam was built. The fish ladders were a significant tourist attraction, and articulated well with the imperialist rhetoric of a lively and edified national subject. The seeing fish at the Dam provided a proprietary scene of controlled natural abundance and industrious technology.

Seeing fish attempt to survive at the Bonneville Dam was also a scientific practice: Underwater scenes were built into its infrastructure for the purpose of ascertaining visual evidence as to the

[314] Jamie Lorimer, 926.
[315] Ibid, 911.

success of its fish passage system. Fish-counters at viewing chambers were part of the Army Corp's method to substantiate that migrating fish numbers were significant. Counting stations were installed in each ladder to monitor their operation.

Figure 35 Visitors at Bonneville Dam look over a fish ladder from above.[316]

Figure 36 A "fish counter" sits on wooden platform (left) documenting fish seen from above as they swim through the dam's fish gate (center).[317]

[316] "The History of Portland District Corps of Engineers, 1871-1969," 252.

This visual methodology of high stakes knowledge production—seeing, counting, and making migration numbers that would absolve or indict the ACE's compliance with fish protection—did not go uncriticized. Thomas K. Yallup (Rock Creek Indian, enrolled at Yakama) was the principal investigator of Indian Service's 1937-38 Bonneville Dam surveys. A constitutive part of his work on the survey, in service of the Celilo Fish Committee, was to critique the settler ocularcentrism of the fish-counting system at the Bonneville Dam. While the visual monitoring system was publicly celebrated as a successful scientific innovation, Yallup's expertise of fish behavior and migration lead him to argue that the fish-counting at Bonneville was unethical: The monitoring system was inaccurate, prioritized the convenience of "sight" for the fish-counters, and was done without consultation with Indigenous fishers and with costs to the salmon.

> "Yallup insisted, second, that this fish-counting was inaccurate. He had seen the fish-counters at work. They did not know their business. No accurate count could rest on the confusions of people unable to distinguish a steelhead from a coho. They counted shadows and clouds. They counted the same fish repeatedly as they roamed through the water or fell back over the dam.
> […]
> He said the gates were blocked at night for the convenience of the fish-counters. This interfered with migration.
>
> This simple fisherman had raised a central issue in the philosophy of science—whether the observer distorts the phenomenon being observed. Yallup had spent his adult life with the no-night fishing rule of the Celilo Fish Committee. He understood that the fish often traveled at night. Fish knew best. It was a variable and problematic thing for fish-counters. It was a profound 'scientific' error to run the Bonneville fish-counting stations on the convenient assumption that fish did not travel at night."[318]

In this passage Yallup intervenes in the practice of counting fish through the ladder windows. Yallup troubles visual observation as a method that can accurately produce information about how salmon navigate the dam. Underlying his critique is not only a troubling of the reliability of seeing as an objective way to generate data and produce knowledge: Such a method, he points out, was being implemented in a way that did not take into account the lifeways of the fish themselves. The "assumption that fish did not travel at night," he asserts, is a convenient one for the visual generation of data, but in the context of Yallups life on the river as a fishermen, he knew that "fish often traveled at night."

Seeing sturgeon within and beyond Dam and Hatchery walls has been a practice of settler consumption on co-constitutive economic and cultural registers since the early 1900s. Figure 18 offers an example of the penny-postcards circa 1895-1915 featuring white male subjects posing with enormous and copious catch. The individuals in postcard appear to meet the camera's gaze,

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[317] The description for this photograph (ca. 1937-1942) reads, "The man sitting on the platform at the left counts salmon as they use a Bonneville Dam fish ladder to work upstream." The Bonneville Dam was constructed with the assistance of the New Deal's Public Works Administration. Photo courtesy of the National Archives.
[318] This excerpt is from pages 286-288 in Joseph C. Dupris, Kathleen S. Hill, William H. Rodgers, Jr. eds. *The Si'lailo Way: Indians, Salmon, and Law on the Columbia River,* (Durham, NC: Carolina Academic Place, 2006).

and many of the figures hold postures of proud resolution—arms folded across the chest, or shoulders squared with hands deliberately pocketed.

Figure 37 "Catch of Sturgeon from the Columbia River" penny postcard. [319]

Yet as sturgeon now become objects of the co-constitutive aims of settler science and pleasure, practices of fishy accounting are increasing put to work toward the criminalization of those who take sturgeon for sustenance or sale. In 2006-7, "wildlife police" working in Washington and Oregon ran an undercover sting targeted at sturgeon poachers. Officers went undercover pretending to be the customers of poachers they say were selling white sturgeon roe off the Columbia, in a mission they called "Operation Broodstock." Officials reported that the estimated value of caviar they confiscated was two million dollars—1.65tons from around 2000 sturgeon. "Operation Broodstock" was designed "to catch people poaching [and] breeding fish for their eggs" aimed for sale in a global market wherein caviar prices were skyrocketing at the outset of the Caspian Sea sturgeon collapse: The Columbia, officers hypothesized, was now an important and well-routed target for poachers.[320]

"Operation Broodstock" lasted more than a year, and identified a total of 33 suspects during its activity: Many of whom were Indigenous fishers. Policing and criminalizing Indigenous fishing practices has a long history on the Columbia River. "Salmonscam," an undercover federal sting operation in the 1980s for example, specifically targeted tribal members who caught and sold fish out of season per settler state regulations. Indigenous fishers such as Wilbur Slockish and

[319] "Catch of Sturgeon from the Columbia River." Identifier: OI: P23. 1.1 CN: Cat.6774F. Washington State University Digital Collections. https://content.libraries.wsu.edu/digital/collection/cchm_photo/id/4448/.
[320] Cassandra Profita. "World's Appetite for Caviar Sends Poachers After Columbia River Sturgeon." *Oregon Public Broadcasting*. Jan 12, 2016.

David Sohappy, Sr. (Yakama) and Sohappy Jr. (Yakama), were fined by federal court and imprisoned for three and five year sentences respectively.[321]

Enforcement officers pose with a sturgeon illegally caught by poachers. The officers' faces are obscured because they were working undercover on a sting that was code-named Operation Broodstock.

Courtesy of Oregon State Police

Officers with Operation Broodstock pose with an illegal sturgeon.

Courtesy of Washington Department of Fish and Wildlife

Figure 38 Undercover officers pose with sturgeon illegally caught by poachers. *Oregon Public Broadcasting*.[322]

Tribal leaders, including the Columbia River Intertribal Fish Commission, were not involved with or consulted on the execution of "Operation Broodstock." When interviewed by popular Oregon media outlet *Oregon Public Broadcasting,* then-executive director of the Columbia River Intertribal Fish Commission, Paul Lumley (Yakama) argued:

> "They continued to gather information and used it as a way to try to embarrass the tribes or make their enforcement programs like they're not doing a good job," he said. "So I told them to their face I thought their behavior was really quite disgusting because if they really cared about the natural resources, they would have come and talked to us. We work very, very hard to restore these fish runs."[323]

In this interview with OPB, Lumley highlights the failure of settler officials to adequately collaborate with Indigenous officials and experts in a way that echoes the critique made by Yallup in the 1930s. The story continues on to state that Lumley explained this operation as another instantiation of recurring structural racism in the management of Columbia River fisheries. While his criticism does not deny that sturgeon poaching is harmful to the population, he asserts that the are Tribal governance structures already in place to protect the sturgeon

[321] This federal sting operation was undertaken by the National Marine Fisheries Service, in which Sohappy and four other Columbia River Indian fishers were accused of selling illegally caught fish to an undercover agent in 1981. Tribal Yakama court found all defendants innocent and ruled that they were entrapped by federal law enforcement offices. For more on this history see J. Dupris et. al. eds. *The Si'Lailo Way* and the work of John Dougherty and Andrew Fisher.

[322] "World's Appetite for Caviar Sends Poachers After Columbia River Sturgeon."

[323] Ibid.

fishery and suggests that the disproportionate burden of consequence for conserving depleted fish numbers falls on Indigenous peoples. In the next and final chapter of this manuscript I further investigate how human-nonhuman relations shape, and are shaped by, surveillance technologies. I build on my examination of how underwater scenes and seeing underwater are technologies (albeit, incohesive) of routing imperial power through space and bodies. Chapter Five shifts to the sky to analyze how seeing scenes from high above, using thermal and infrared technologies, has also been a practice of surveilling both animals and landscapes, as well as human targets.

Chapter 5

Scenic Hellscapes: Seeing Terrain at Home and Abroad

Introduction

On September 27th, 2018, I walked into the "Drones and Droids" symposium at Intel's headquarters in Hillsboro, Oregon to talk to local industry leaders about what happened in the Gorge last year. Hosted by the local "Cascade Chapter" of The Association for Unmanned Vehicle Systems International (AUVSI).[324] I had already scoured the speaker agenda to find that plenty of the industry representatives presenting at the symposium were headquartered in the Columbia River Gorge National Scenic Area and had been directly impacted by sweeping Eagle Creek Fire the year prior. I had prepared questions for CEOs, engineers, and roboticists: How did your company respond to, and recover from, the wildfire that ravaged your neighborhoods and new offices along the Columbia River? As drone designers and pilots who have found a new hotbed for your industry in the Gorge, what was it like to suddenly be in the midst of a battle to abate this blaze? Not a battle in Iraq or the Indian Ocean this time, but in your own beautiful backyard?

The previous September (2017), many of my family and friends feared the National Scenic Area was burning to the ground. The Eagle Creek wildfire raged for months that fall, on the heels of a summer draught, and threatened to destroy everything in its path—homes, scenic lookouts, park benches, factories, and railroads. News outlets and social media sites were overwhelmed with pained exclamations of loss, and sweeping panoramas of an unrecognizably engulfed and smoke-choked scene. Many residents and tourists feared the vistas, waterfalls, and historic buildings would be forever lost. The glowing orange and red flames consumed tremendous swathes of the Oregon shore of the river, from Troutdale to Hood River. Now, approaching the one-year anniversary of the Eagle Creek Fire's full containment, I hoped to meet a few of the people who had produced some of those first tactical thermal surveys of the scenic landscape-cum-"inferno" at the 2018 annual AUVSI symposium.

Local unmanned aerial vehicles and systems companies had provided intelligence, surveillance, and reconnaissance (ISR) technologies and services to help fight the Eagle Creek Fire in ways historically unprecedented in the Gorge. As I perused the booths at the back of the conference room, I found local Gorge tech companies whose names I recognized from my newsfeed. CloudCap Technology from Hood River, Oregon had provided firefighters with infrared cameras and processing software. Insitu Inc. (Insitu), based in Bingen, Washginton, donated a crew and a ScanEagle drone for over fifty hours of unmanned night-time flights over the fire in its most

[324] AUVSI is the word's "largest nonprofit organization dedicated to the advancement of unmanned systems and robotics, represents corporations and professionals from more than 60 countries involved in industry, government and academia. AUVSI members work in defense, civil and commercial markets." The Cascade Chapter of AUVSI was formed in 2009, and represents unmanned interests in Oregon and Washington. https://www.auvsi.org/about-auvsi-cascade-chapter

dangerous and unpredictable first days. With the advent of the Eagle Creek fire, companies like CloudCap and Insitu had provided visual technologies, processing software, and unmanned aerial vehicles that imaged and mapped the scene in new ways. The extent and progress of the fire had proved difficult to track and tackle, both materially and socially. The striking landscape of the Gorge—the dense forest and undergrowth, canyons and cliffs, and gusty eastern winds that drew thousands of people to vistas, trails, and windsurfing spots—often made piloted aerial surveillance of the fire impossible. Under the National Scenic Area Act, the complexity of local, state, and federal agency governance over a mosaic of private, public, and protected urban, rural, and wilderness lands meant that all firefighting practices required detailed tactical information and approval by multiple regulatory bodies.

The scenery of the National Scenic Area has changed dramatically in the early decades of the twenty-first century, and so too has its socioeconomic landscape. Questions of how to envision the future of the Gorge are increasingly answered by the businesses and employees that have brought "renewed" investment to a region otherwise facing a decline in profits from natural resource extraction.[325] For the last twenty years, tech entrepreneurs have been settling, and growing, in the region's small urban zones. Counties historically dominated by timber, agriculture, and aluminum industries have seen an influx of financial and cultural capital as small tech companies in tiny towns like Hood River, Stevenson, and Bingen have swelled with development subsidies and defense contract dollars. When confronted with a raging wildfire last year, the resources and expertise of those same constituents—the engineers and pilots providing ISR systems for militaries around the world[326]—were at the center of protecting the scene.

At "Drones and Droids," technologies like Insitu's ScanEagle drone were center-stage. Company representatives and print materials presented the ScanEagle as a cutting-edge product designed with the mechanics and analytical capacities to ensure its success across both civilian and military markets: It was made to optimize decision making and deliver critical tactical data on both battlefields abroad and wildfires at home. During the Eagle Creek Fire, Insitu donated a ScanEagle team—the drone, the software, and the team of pilots and engineers that conducted over fifty hours of flight time. Their flights produced real-time infrared footage that enhanced the tactical decision-making of fire managers and on-the-ground responders.

This chapter is about the ScanEagle drone and the surveillance of thermal terrain both within and beyond the Gorge. I argue that the design and use of the ScanEagle's thermal imaging capacities trafficks a militarized practice of aerial surveillance across a multitude of diverse entities. Unmanned aerial vehicles and systems (UAVS) engender new ways of tracking bodies and spatializing landscapes. UAS are used by firefighters, environmental NGOs, and U.S. military operations alike to "fly the gaps" and "seek heat targets." The ScanEagle offers an entry point into further analysis of how discourses and practices of military strategy, tactical operation, and security-making are coproduced by practices of controlling intractable territories. Just as the ScanEagle visualized the National Scenic Area as a thermal terrain comprised of infrared objects

[325] Later in this chapter I address examples of this from the Columbia River Gorge Commission and the Gorge Technology Alliance.
[326] UAS Vision at www.uasvision.com is a useful source for searching company contracts, as they report on past and active activities: For example, "Insitu Gets $18M US Special Ops Contract," https://www.uasvision.com/2018/11/22/insitu-gets-18m-us-special-ops-contract/.

and features, it has done so across global military battlefields as well. As in previous chapters, the visual rubrics of settler ocularcentrism are reinforced, reconfigured, and ruptured through the workings of the ScanEagle. I find that representations of the Gorge, produced by the ScanEagle and regional tech industry more broadly, construct a spectacular scene whose unique materialities demand innovative technologies of visualization, wherein pleasure and profit converge. This chapter builds on the preceding chapters by further investigating the role of thermal imagining in expanding the environmental "battlefields" of U.S. continental and global empire. Here, I pay close attention to the discourse and practices that make landscapes into "intractable terrain" and "render tactical" aerial views. Additionally, I add a focus on the political economic production of UAVSI in the Gorge. In this way, the construction of scenery and protection of Scenic Value in the Gorge is revealed as a materially and cultural shaped by the local drone industry. Further, that such practices of construction and protection enable the transnational reaches of U.S. surveillance.

In the first part of this chapter I discuss the 2017 Eagle Creek Fire and the diverse narratives surrounding its visual representations across popular media and government documents. I explore how the advent of the wildfire in the Gorge sparked new practices of "seeing the scene" using drone technology from local industries directly affected by the fire. I examine the turn toward conceptualizing the National Scenic Area as exceptionally dangerous "terrain" and the role of the ScanEagle's thermal imaging in supplying firefighters with tactical logistics. From this contemporary context, the second section of this chapter focuses on the longer-standing relationships between the Gorge landscape, cultural configurations of scenery and settler subjectivities, and the "tech boom" respatializing the National Scenic Area today. Through newspaper and in-person interviews, I once again excavate the themes of "work and play," natural vitality, and technologies of occupation as they converge through the increase of tech workers, defense dollars, and real estate value in the Gorge. From this political ecology analysis of surveillance technology, I conclude by following the reach of one particular unmanned automated vehicle—the ScanEagle—through its deployment for military, police, and conservation surveillance. I analyze how the same thermal imaging provided by the ScanEagle to combat the Eagle Creek Fire is also used in border policing, counter-terrorist operatives, and anti-poaching missions. Ultimately, this chapter presents a case in which visual images of landscape become "tactical," and ecologically complex scenes become "terrain," through projections of U.S. control over environmental and military battlefields alike.

"A Hellish Vision": The Eagle Creek Fire

In the early days of September, 2017, views of the Columbia River Gorge National Scenic area would shift once-more—this time, abruptly and dramatically. On September 2nd, the drought-dried hills behind Cascade Locks and the Bonneville Fish Hatchery went alight in flames. The thickly forested cliffs on the Gorge's Oregon shore had endured an unusually dry summer and, sparked by an errant firework just off the Eagle Creek hiking trail, lit up like a tinder-box. During the next two months the Eagle Creek Fire would merge with a smaller adjacent blaze (the Indian Creek Fire), jump the river into Washington, and burn nearly 50,000 acres of the Columbia River Gorge National Scenic Area. Over 1,000 firefighters from across the nation poured in to rescue hikers, evacuate towns, close trails and roads, and map and control the

perimeter. It took until November 30th for the wildfire to be 100% contained. Highway I-84 was closed to all traffic for ten days; the Union Pacific rail-line was stopped for three; and navigation on the Columbia River was closed for two. Even over a year later, in May of 2018, small hot-spots in the Gorge continued to smolder. To this day, popular trailheads such as the Wyeth Campground and Trail still remained closed due to damage from the Eagle Creek Fire (July 2019).[327]

Local and regional residents experienced immediate material threats from the rapid, wind-whipped blaze. Schools and businesses in adjacent towns closed as air quality worsened and temperature rose. Hundreds of people were evacuated from the Gorge towns of Cascade Locks, Warrendale, Dodson, Larch Mountain, Corbett and others.[328] Evacuation shelters were established at Mt. Hood Community College in Gresham and a Red Cross shelter at Skamania County Fairgrounds.[329] More than one hundred and fifty trapped hikers were rescued from trails cut off by flames. The Cascade Fish Hatchery quickly released 600,000 fish into the Columbia River three months ahead of schedule for fear that they would be smothered by heat and debris. The city of Portland rapidly began preparing for a drinking water emergency as the smoke and ash threatened to bear down on the metropolitan area's main water supply, the Bull Run Watershed.[330] Four homes were burned to the ground. The U.S. Forest Service predicted that erosion and rockslides would continue to obstruct roads and hiking trails for years to come. Flames consumed the National Scenic Area and the Pacific Northwest looked on with shock and fear. In this section I situate the ScanEagle within a diversity of visual practices used to depict the Eagle Creek Fire. From "hellish visions" illustrating national news stories, to thermal maps of the fire's perimeter, I explore how the advent of the wildfire in the Gorge sparked practices of "seeing the scene" in new ways. In particular, I look at practices of aerial surveillance, thermal cartography, and infrared tracking.

[327] "Alerts & Notices," USDA Forest Service: Columbia River Gorge National Scenic Area, https://www.fs.usda.gov/alerts/crgnsa/alerts-notices.
[328] "Update list of Eagle Creek Fire evacuation," KATU News, Sep 5, 2017. https://katu.com/news/local/updated-list-of-eagle-creek-fire-evacuations.
[329] Andre Meunier, "Eagle Creek fire ravages Oregon's Columbia gorge for 5th day," *The Oregonian,* https://www.oregonlive.com/wildfires/2017/09/live_updates_eagle_creek_ravag.html.
[330] Ibid.

Figure 39 "View of the Eagle Creek Fire from Bonneville Dam." [331]

Figure 40 "The Bridge of the Gods in the foreground of the Eagle Creek Fire."[332]

Photographs and video footage of the Eagle Creek fire saturated local media outlets and appeared in national news sources that fall. In striking contrast to the usual panoramas of verdant and glistening conifers covering dramatic cliffs and hillsides— dotted with plunging waterfalls and divided by a plodding river—images of the burning National Scenic Area evoked a deadly hellscape. Scenic viewsheds throughout the Gorge were dramatically occluded by heavy smoke for weeks, and media sources printed engulfed and smoldering scenes likened to a "hellish vision"[333] and the "setting of Dante's *Inferno*."[334] Sights from popular tourist viewpoints, like the Bonneville Dam (Figure 1), Bridge of the Gods (Figure 2), and Multnomah Falls, documented what much of the public feared to be the impending, fiery destruction of cherished landscapes and locales. In a public lament entitled "As Eagle Creek fire rages, why we mourn for the gorge"

[331] Jarod K. Norton, Rachel O. Stolt, David P. May, Christopher P. Haring, "Changes in the Columbia River Gorge: The Eagle Creek Fire," U.S. Army Corps of Engineers, 2009: 2.
[332] Ibid.
[333] Jenna Garret, "Photo of The Week: A Hellish Vision of Portland, Oregon's Famous Gorge in Flames," *Wired,* Sep 9, 2017. https://www.wired.com/story/photo-of-the-week-a-hellish-vision-of-portland-oregons-famous-gorge-in-flames/.
[334] Ibid.

published in *The Oregonian*, author Jamie Hale wrote about the painful compulsion to look at the spectacular catastrophe:

> "I spent Tuesday like a lot of Oregonians, watching the Columbia River Gorge burn. On Monday it was a small sadness, but by dawn it was a catastrophe, doubled in size and blazing west through forests, down trails and past historic landmarks I know well. I scrolled through hundreds of photos, read heartbreaking tweets and watched the infrared video that showed the true devastation Tuesday night. On Wednesday morning I woke up and kept looking. I can't stop looking."[335]

Other major news outlets echoed Hale's distress over an impending loss of natural beauty, and the infrastructure necessary to access it—such as the old lodge at Multnomah Falls and the wooden bridges up to Larch Mountain. *The Willamette Week* ran a story entitled "Gorge No More: Sites And Hiking Trails Damaged By The Eagle Creek Fire," documenting a list "of the most popular burned and/or closed areas, in an effort to eulogize the massive loss of nature."[336] The New Yorker published a piece mourning "the transformation of [the region's] waterfall-fringed forests of Douglas fir and hemlock" entitled "Oregon's Eagle Creek Fire and The New Reality of Life in the Smoke-Filled American West."[337] The profundity of mourning evoked in each of these articles emerges from what the authors describe as a loss of natural beauty and awesome majesty—to see the gorgeous canyons of the Gorge up in flames meant witnessing an unfathomable destruction of luscious scenic vistas, at least 760 waterfalls, and countless hiking trails. In closing his *Oregonian* article, Jamie Hale invoked the spiritual claim to regional identity and possession of place that I have examined elsewhere in this dissertation:

> "I know the Pacific Northwest spirit well. As the fire burns, we'll mourn and rage in the face of destruction. But once smoke clears we'll be back on the trails, picking through the ashes of our temple to pray, in our own way, before the awesome majesty of the Columbia River Gorge."[338]

While much reporting on the Eagle Creek Fire attended to the destruction of the blaze, many outlets also discussed the ecological benefits and natural history of wildfire in the Gorge. Calling on fire ecologists and environmental historians to speak to both the causes as well as future impacts of the event, there was significant coverage of the process, patterns, and outcomes of the burn. Many articles offered a glimpse of scientific analysis couched in language of hope and vitality. The *Portland Monthly* published a piece by Randy Gragg, "The Columbia River Gorge Burned. We Could Make That a Good Thing," wherein Gragg argues: "Yes, the fiery photos and videos that raged across social media seared Oregon's collective heart…In the long run, however, the Eagle Creek blaze may yet prove more of a gift to the Gorge than a tragedy." Gragg quotes longtime ecologist with the U.S. Forest Service's Columbia River Gorge National Scenic Area Division, Robin Dobson, stating that, "fire is what makes the forest resilient. It isn't the

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[335] Jamie Hale, "As Eagle Creek fire rages, why we mourn for the gorge," *The Oregonian,* para2.
[336] Dana Alston, "Gorge No More: Sites And Hiking Trails Damaged By The Eagle Creek Fire," *Willamette Week,* Sep 12, 2017: para3.
[337] Michelle Nijhuis, "Oregon's Eagle Creek Fire and the New Reality of Life in the Smoke-Filled American West," *The New Yorker,* Sep 7, 2017.
[338] Jamie Hale, para13.

enemy. It's part of the system." He goes on to explain that the "mosaic" patterns of the burn will foster "much healthier and more diverse growth," and the closure of parks and trails give room for wildlife and flora to breath and multiple unencumbered by litter, noise, traffic, and thousands upon thousands of human feet. Reports by the U.S. Forest Service and U.S. Army Corps of Engineers explained that the Mid-Columbia region of Oregon and Washington burns robustly every 100-400 years.[339] Even though the "wet forest" of the Gorge's complex topography may seem like a temperate rainforest unnaturally subjected to a disastrous man-made fire, burns have always happened here.[340] The Eagle Creek fire, like the fires before it, "creates more diverse conditions for plant species, and more types of habitat for animal species, even boosting the forest's biodiversity in the years that follow the fire."[341]
During and after the Eagle Creek Fire the visual drama of the flames' destruction and the forest's regeneration were at the forefront of public-facing discourse. The topographical and ecological characteristics of the Gorge appeared on the brink of destruction, transformed into a spectacular "hellscape." Spectacular scenic vistas and towering firs were no longer visible and verdant—but choked and charred. The geophysical traits of the scenic area made surveilling and controlling the fire particularly difficult. Thick forest and steep cliffs thwarted the paths of foot-borne firefighters. Dense smoke collecting in the folded mountain canyons obscured aerial views of the fire perimeters. The (in)famous east winds that rush through the Gorge in the summer times—a force that draws windsurfers to Hood River from around the globe for world-class rides—spread sparks, merged blazes, and eventually enabled the fire to hop the river to the Washington shore. Funneled through the canyon toward Portland, the winds distributed smoke and ash sometimes at gusts of over 100 miles per hour.[342] Such atmospheric conditions expanded dangerous air quality to distant cities, and often foreclosed the flight of manned aircraft needed to monitor and abet growing flames.

While local residents and the broader public were seeing the Gorge in ways they never had before, emergency responders also sought new views of the landscape. Seeing the scene from above is a logistical practice essential to wildfire surveillance and containment. Data collected from aerial reconnaissance of the Eagle Creek fire was used to make maps of the perimeter, severity, and intensity of the burn. This data was represented still and moving cartographic images of the landscape. Images that were used tactically as well as predictively, both while the fire was actively being fought and afterwards in estimating the damages of its aftermath.

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[339] Penelope Morgan, Colin Hardy, Thomas W. Sweetnam, Matthew G. Rollins, and Donal G. Long, "Mapping fire regimes across time and space: Understanding coarse and fine-scale fire patterns," *International Journal of Wildlife Fire,* 10 (2001): 239-342.
[340] "Fire Management," USDA Forest Service: Columbia River Gorge National Scenic Area. https://www.fs.usda.gov/detailfull/crgnsa/fire/?cid=fseprd571121&width=full.
[341] Ibid.
[342] Apricot Irving, "The Fire at Eagle Creek," *Topic Magazine,* no 14 (2018).

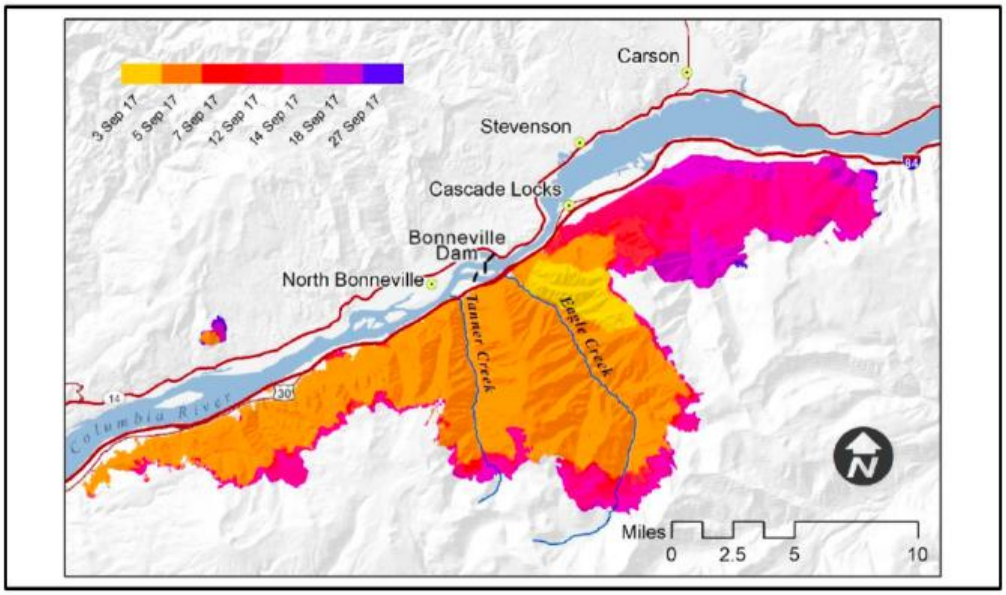

Figure 41 "The Eagle Creek Fire Progression."[343]

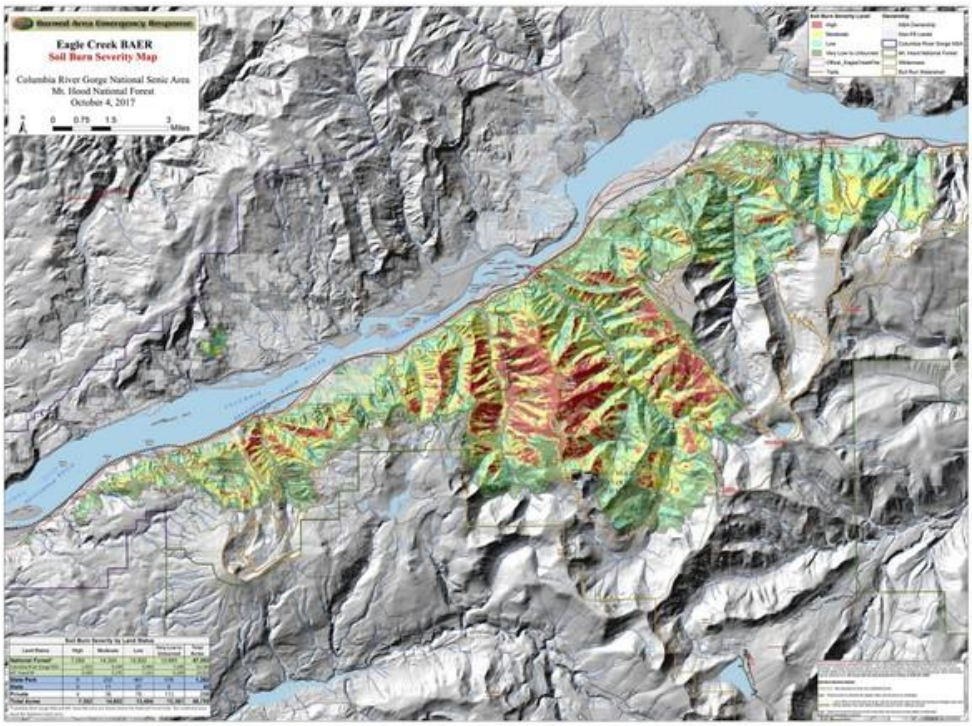

Figure 42 "Eagle Creek BAER: Soil Burn Severity Map."[344]

[343] "Changes in the Columbia River Gorge: The Eagle Creek Fire," 3.
[344] "Eagle Creek BAER: Soil Burn Severity Map," USDA Forest Service, Columbia River Gorge National Scenic Area, https://www.fs.usda.gov/detailfull/crgnsa/fire/?cid=fseprd567631&width=full.

Yet, conducting aerial surveillance of the Eagle Creek fire was not always easy or even possible using traditional methods. Thick smoke, quick winds, and the darkness of night often produced conditions too dangerous for pilots to conduct flyovers, or too obscure to collect visual data of any use. Just as firefighters in helicopters were unable to see their targets for water-drops, so too were surveyors unable to see flares and perimeters from their planes. Under these emergency conditions of ever-intensifying visual occlusion, local Gorge companies stepped in to offer their advanced technologies in aerial and sensory reconnaissance and surveillance.

The headquarters of Insitu, TecAero, and Cloud Cap technologies were in the direct path of the Eagle Creek Fire. As the wildfire advanced to the edges of towns like Cascade Locks and Hood River, OR and clouded Stevenson and Bingen, WA with smoke, the companies closed their facilities and many employees were evacuated from their homes. Yet dozens of engineers and pilots—most of whom had been in the Gorge no more than a decade, only having arrived at the start of the high-tech and defense industry boom in the region—kept at work as volunteers: the drones, infrared cameras, and real-time, long duration aerial fire mapping capacity of the technology they designed and manufactured right there in the smoldering Gorge would be put to use for fighting the fire.

Figure 43 Stills from Hood Technology produced infrared video of Eagle Creek Fire during aerial survey. [345]

Insitu is a subsidiary of Boeing defense and the biggest private employer in the Columbia River gorge National Scenic Area. An Insitu team "launched one of its ScanEagle drones just a stone's throw from the factory where it was made in Bingen, Washginton." The 4.5 foot long, 45 pound, high-tech drone carried high-resolution optical and infrared video cameras. The ScanEagle can stay aloft for up to 20 hours at a time, and while with long flights over the flames the ground team was able to carry out day and night surveillance. This surveillance produced complex digital maps of the fire zone and provided firefighting crews on the ground with real-time, long duration aerial fire-mapping of the Eagle Creek Fire's perimeters and progress. Rather than using outdated data gathered when smoke was clear enough to safely pilot a vehicle through air space, the ScanEagle enabled fire managers to track hot-spots and "fly the gaps" in hours that were otherwise too dark or too smoky for manned planes.

[345] "Eagle Creek Fire 04SEP17," Hood Technology, https://vimeo.com/232415582.

The Oregon Department of Forestry (ODF), the Federal Aviation Agency (FAA) and the Department of the Interior (DOI) coordinated the ScanEagle flights over the Gorge in what amounted to over 66 hours of flight-time in the course of eight days of firefighting.[346] Media accounts, federal reports, and Insitu's press releases described the ScanEagle as offering the "ability to see hotspots and fly where no other aircraft can fly."[347] Jill Vacek, Insitu spokesperson, explained that the thermal imagery generated from data collected and processed by the ScanEagle's payload "enabled fire officials to pinpoint the fire's perimeter, identify areas of intense heat and assess infrastructure affected by the event." Andrew Duggan, then vice president of Insitu Commercial, explained:

> "One of the benefits of flying UAS over difficult and rugged terrain is mitigating the need for firefighters to physically walk it when locating and extinguishing hot spots…By flying UAS at night, fire incident commanders have the advantage of significant fire intelligence and heightened situational awareness for their early morning planning meetings in determining where to most effectively and safely dispatch their resources and personnel."[348]

While the bulk of Insitu's profits are comprised of U.S. defense contracts, in this case, their IRS technology was used to contain and control a domestic hellscape. Though the sensors and cameras designed to spot heat signatures and provide rapid video feed of critical infrastructure are used by U.S. military operations across the world, in the Gorge, they helped identify endangered historical buildings and safe ingress routes for firefighters. The ScanEagle has a small footprint. It takes off by a runway-free catapult-launch and is landed with a sky-hook catchment system, enabling deployment at sea and in constricted terrain. These mechanical traits proved essential for staging aerial surveillance from below the steep burning cliffs of the Columbia River's canyons.

The use of the ScanEagle drone to map the Columbia River Gorge in 2017 was not the first time that the landscape was aerially surveyed and visually represented using military logics, as this dissertation has shown. Yet it did mark an emergent proliferation of a new kind of geospatial imagery of the Gorge: thermal maps made possible by infrared sensors and electro-optical cameras. Further, such images not only took the form of still maps—or fixed representations of the fire's perimeter and hotspots—but was also streamed live to fire managers and the public in the form of real-time video feed. On KATU-News, OregonLive, and YouTube, drone footage of the Gorge on fire offered viewers a technologically advanced scene of the hellish "front-lines."

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[346] Tom Banse, "Boeing's Drone Subsidiary Flies Missions Over Wildfires Bearing Down on it's Home," *Northwest News Network,* Sep 11, 2017.; Dominic Gates, "Boeing Insitu drones work to monitor hurricanes, Oregon wildfires," *The Seattle Times,* Sep 8 2017.
[347] "Boeing's Drone."
[348] Ibid.

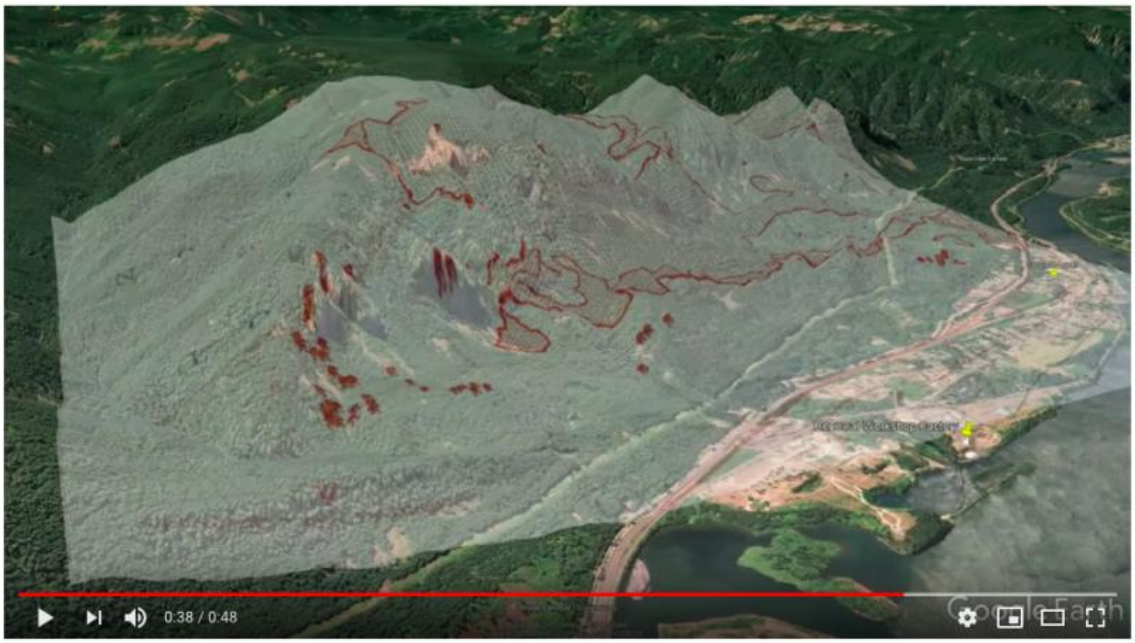

Figure 44 Screen-shot from a video posted by an Insitu employee. Video shows scan produced from data collected by the infrared sensors aboard Insitu's ScanEagle is overlaid on topographical satellite imagery of the Cascade Locks and surrounding hills from Google Maps. [349]

The ScanEagle drone reshaped how the Gorge was seen at a moment when seeing the landscape as defendable terrain was an urgent project of protecting human and non-human life in addition to scenic resources. Yet even before this moment, the ScanEagle drone *itself* was constitutively shaped by the socioeconomic and material conditions of natural resource management and economic development in the Gorge. After decades of federal protection, regulation, and planning under the directives of the Columbia River Gorge National Scenic Area Act, timber and aluminum industries have given way to recreation and tech, forests and defense dollars have grown thicker and denser, and the values of homes and foot-traffic on trails have increased. The protection of scenery in the Gorge has neither spatially nor visually fixed the landscape. Rather, new scenes and new ways of seeing are constantly emerging.

The "High Tech Boom" in the Gorge

> Forget the storied orchards and iconic wind sailors. Dozens of tech companies producing everything from unmanned aircraft to solar energy are finding the Columbia River Gorge is the place to do business."
>
> - *Oregon Business*[350]

[349] "Eagle Creek Fire - thermal scan, 9-8-17," posted by Dave Russell, https://www.youtube.com/watch?v=PeHn44ZbVuI.
[350] Michelle V. Rafter, "Vibrant tech cluster takes root in the Gorge," *Oregon Business,* Dec 31, 2007.

The growth of tech in the Gorge is directly shaped by practices of protecting scenery. The implementation of the National Scenic Area Act (NSAA) has established avenues for encouraging and regulating different industries in different ways, and as of 2019, tech has benefited. One of The Columbia River Gorge Commission's federally mandated responsibilities, as delimited by the NSAA, is to "establish, implement and enforce policies and programs that protect and enhance the scenic, natural, recreational and cultural resources of the Columbia River Gorge, and to support the economy of the area by encouraging growth to occur in existing urban areas and allowing economic development consistent with resource protection."[351] On their website, the Columbia River Gorge Commission states:

> "People visit the Scenic Area to view the unspoiled scenery and take advantage of the Gorge's unparalleled recreational opportunities, which helps fuel the Gorge's booming visitor and recreation industries. In recent years, new firms have located here in part due to the quality of life associated with these outstanding scenic and recreation resources."[352]

Insitu is one of the new firms the Commission refers to here. The unspoiled scenery, recreational opportunities, and quality of life referred to in this passage are itemized as crucial to sustaining the Gorge's "economic health", and identified as reasons why "new firms" decide to locate there. Rhetorically and materially, the "unspoiled scenery" of this landscape is acknowledged as directly contributing to the entry and growth of tech entrepreneurs in this area.

As one method for fulfilling its mission to support the economy of the area, the Gorge Commission established Investment Boards that continue to delegate financial assistance to private entities:

> "The Columbia River Gorge National Scenic Area Act created funds to provide grants and loans for economic development in the Gorge. Each state created an Investment Board to determine what projects are eligible for grants and loans."[353]

The Oregon and Washington Investment Boards began "doling out the first of $5 million federal development loans and grants to Gorge businesses, including tech companies, in 1999."[354] While each investment board assists applicants with the certification process, all selections must adhered to the objectives and regulations of the National Scenic Area Act.[355] The Gorge Commission is ultimately responsible for certifying all the activities undertaken with an Investment Board grant or a loan are consistent with the "purposes of the Act, the Gorge Management Plan, and the county Scenic Area land use ordinances."[356] In this way, even the financial resources and entrepreneurial ventures in the Gorge are shaped by the federal mandate to protect Scenic Value.

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[351] CRGNSAA (see appendix for full text.)
[352] Columbia River Gorge Commission, http://www.gorgecommission.org/about_scenic_area.cfm, accessed oct. 2, 2015.
[353] Ibid. http://www.gorgecommission.org/economic_development.cfm accessed Oct 2, 2015
[354] "Vibrant tech cluster."
[355] Columbia River Gorge Commission, http://www.gorgecommission.org/economic_development.cfm accessed oct 2, 2015.
[356] Ibid.

As the economic landscape of National Scenic Area counties has changed over the last several decades, Bingen, Washington is an example of a small town changed by "new firms" locating in the Gorge.[357] Though still undergirded by a strong agricultural sector, the small town of Bingen has only made its way onto the regional map of tech economies with the growth of Insitu. From its headquarters in Bingen, Insitu began expanding offices throughout the region. There are offices throughout the Gorge, in The Dalles, OR, and Vancouver, Washtingon. Insitu is a major private employer in the National Scenic Area, providing jobs for nearly 1,000 people there. There are interrelated ironies to many of the celebratory narratives of Insitu's expansion in the Gorge: Claims that the company's contributions to a vital tech industry have rejuvenated the circulation of cultural and financial capital in the region often underexamine the reality that most employees are newcomers to the area.[358] The secure, well-paid jobs provided by tech are not evenly distributed amongst locals with backgrounds in timber, aluminum manufacturing, and fishing. Additionally, as the rejuvenating power of companies like Insitu reshape the availability and accessibility of resources in the area, they are also directly imbricated in the production of technologies that kill. In this section of the chapter, I examine prominent narratives surrounding how the Gorge, a rural region "known for scenic vistas, windsurfing and pear-farming [became] a hotbed of the unmanned aerial industry."[359]

Insitu is a leading innovator in the Gorge's Tech Boom and in the defense industry more broadly. "In 2008, the same year Boeing bought Insitu for $400 million, Insitu upped its commitment to aggressively woo international customers, opening a branch office in Queensland, Australia. Winning contracts with the U.S., Canadian and Australian militaries, the company has already logged more than 200,000 hours in Iraq and Afghanistan alone."[360] Insitu is credited with helping create a UAVS cluster here in Oregon, and Oregon has become one of the test sites in the emerging commercial drone industry as part of a partnership with Alaska and Hawaii – the great Pan-Pacific UAS Test Range Complex.[361] Yet when the *Willamette Week,* a popular local Portland Newspaper, published an article on "the Gorge's growing industry for war," it was Insitu's humble and organic origin-story that drove the narrative.

[357] "Columbia Gorge Economic Development Strategy 2017-2022," Mid-Columbia Economic Development District, 2017.
[358] Troy Brynelson, "Aerospace industry, led by Insitu, lifts economies of Columbia River Gorge communities," *The Columbian,* June 4, 2017.; Tom Banse, "Drone Maker Outgrowing Columbia river Gorge, But HQ and Production will Stay Put," *Northwest News Network,* Aug 5, 2017.
[359] Zach Wener-Fligner, "Dronetown USA: How a rural region known for windsurfing and pear-farming became a hotbed of the unmanned aerial industry," *Quartz,* May 14, 2015. https://qz.com/398665/dronetown-usa/.
[360] James Pitkin, "It Came From the Gorge: Hood River: home to windsurfers, microbrews, and military drones that help kill America's enemies," *Willamette Week,* March 2, 2010.
[361] "Dronetown, USA."

Figure 45 Photo of Tad McGeer [362]

Through interviews with two friends, Tad and Andy, Insitu—latin for "In Place"—emerges as a very emplaced entrepreneurial endeavor. Tad McGeer and Andy von Flotow are the co-founders of Insitu and they started working together while studying at Stanford. The *Willamette Week* story is organized around the environmental proclivities of the two men:

> "Like many others, von Flotow came to [the Gorge] for its rural charm and killer windsurfing. McGeer's needs were more immediate—motivated by the technical challenge and the desire to start his own business, he was designing an unmanned plane and needed space to fly."

The article further explains:

> "von Flotow is the original reason InSitu is in the Gorge…Just installed on his 100-acre orchard is a 200 foot tube of plastic sheeting connected to a 100-horsepower fan…the tunnel is part of von Flotow's efforts to make InSitu's ScanEagle drone into a quieter flying machine…His otherwise bucolic farm features Bartlett pears, Bing cherries, and Honeycrsip apples."

According to this story, the landscape of the Gorge—its pear orchards, world-class wind surfing, and provisioning of healthy, active lifestyles—is the fruitful terrain upon which Andy and Tad's technological creativity grew into a business venture with global impact.

Imaginaries of the Gorge have long been inseparable from the technologies of occupation that are produced in, and in turn produce, the National Scenic Area. As earlier chapters in this

[362] "It Came From the Gorge."

manuscript demonstrate, articulated narratives and practices of leisure and technology have played a major role in constructing the scenic landscape.[363] Settler subjects—white men, in particular—have long been constructed as productive property owners in the Gorge; a positionality discursively and materially demarcated along lines of race, class, gender, and Indigeneity. Today, magazines and pamphlets are filled with real estate advertisements, profiles of outdoor recreation activities, and catch-phrases that demonstrate continuity with those from commercial and industry propaganda of the early 1900s.[364] This real estate company advertisement (Figure 8) is one of many such ads found in the magazines and brochures I picked up while attending the "Gorge Tourism Summit" in 2016.[365] Windermere is one of the largest real estate agencies in the Gorge. Sky high, a figure soars on a parasail—the most extreme vista, perhaps, that one might achieve in the Gorge. The viewer is invited to occupy the ocular perspective of the recreationist. The image is taken from a birds-eye-view not only of the wide and plodding River. And also, perhaps (depending on our own positionalities), we are interpellated to "see ourselves" in the position of these figures "looking out" over their property.

Figure 46 Windermere Real Estate Ad, "Columbia Gorge: Live Where You Play."[366]

[363] See Chapter One and Chapter Two of this dissertation.
[364] See the railroad and chamber of commerce print materials I analyzed in Chapter Two.
[365] The Gorge Tourism Summit was hosted by the Gorge Tourism Alliance to bring industry professionals and residents together to envision stimulating economies through sustainable tourism.
[366] *The Gorge Magazine,* Summer 2015.

At the Gorge Tourism Summit where I obtained this magazine, many of the attendees I met were techies. And, just a few pages past this Windermere ad, is a feature article on the "High Tech Boom"—a recent and rapidly growing cluster of entrepreneurial businesses and corporate firms: The face of the future. The text of the article warrants further attention, wherein the following excerpt renders technology, capital, and scenic beauty as inextricable from one another:

> "The Gorge is known for things that have put it on the map: wind, outdoor recreation, scenic beauty, fruit. There's also the lifestyle that has grown up around all this, a laid-back vibe with an ethos of working hard and playing hard…It's these very things that have also given rise to one of the most notable economic shifts to happen in the gorge since the downturn in logging more than three decades ago: The rise of technology as an economic driver…
>
> There may be no need to put a catchy label on the Gorge a la Silicon Valley. After all, we already have an enviable regional identity."[367]

[367] Ibid, 64.

Figure 47 Screenshots from *The Gorge Magazine* profiling industry leaders (notice they are all white men.)[368]

Stories about tech in the Gorge, like this one, draw on a settler imaginary of nature and culture. This narrative repeats the historical configuration of "work and play" enabled by an exceptional environment. Unlike Silicon Valley, the "enviable regional identity" that I analyzed in the archives is now enrolled in naturalizing yet another extension of technological innovation. Other media stories have also echoed this narrative, further describing "the Gorge effect"—the easy access to outdoor recreation as a cultural draw and business selling point for "athletic nerds" looking for the perfect place to settle down and still have fun. [369]

Tech industry leaders also participate in the discursive and material (re)population of the Gorge with purportedly environmentally-minded techies and techno-fixes. A 2007 economic report from the Gorge Technology Alliance (GTA) further elaborates on the figure of the work-hard, play-hard subject.[370] The report's narration of their member companies' relationship to the Gorge landscape is evocative of a pioneering-settlement narrative, one in which entrepreneurial businesses collectively migrate to the Pacific Northwest in order to reap the benefits of its natural resources both for profit and pleasure:

> "Almost all GTA micro business owners moved their companies to the Gorge, or launched their companies in the Gorge, out of a desire to live and play here. And they structure their companies in order to combine work with a lifestyle they believe is special in the Gorge. In sum, the Gorge attracts and cultivates disproportionately high number of

[368] Ibid.
[369] https://j460oregonbrands.uoregon.edu/; http://www.oregonbusiness.com/articles/30/589 accessed oct 2, 2015
[370] "Technology and Economic Growth in the Columbia River Gorge," The Columbia River Gorge Technology Alliance, 2007.

> 'lifestyle entrepreneurs' that look to the technology sector or use technology for the business opportunities that fit their values."[371]

This passage constructs the related figures of the "micro business" and "lifestyle entrepreneur" as a symbiotic pair that simultaneously appears to take up little space (micro) in, while also improving, the exceptional qualities of the landscape:

> "The image of a lifestyle entrepreneur helps define what is unique and special about the Gorge—its 'comparative advantage' in economic terms. The Gorge is simply very attractive to people who love to play outdoors and live in small rural communities close to a metropolitan area. In the past, dwindling employment opportunities put practical limits on how many people could move here. However, technology has created a vast array of opportunities for people to work from home, telecommute, set up satellite offices, and to start their own businesses. The lifestyle entrepreneurs are turning those opportunities into micro businesses in the Gorge, and some of those micro businesses are developing into very dynamic companies."[372]

Here, the image of a highly educated, leisure-class tech worker is positioned as both a definitive and exceptional subject in the Gorge. That such a subject is attracted to the Gorge is described as "simple": Rather than a result of socioeconomic structures or privileges, the techie's proclivity for the National Scenic Area is constructed as common sense and even benevolent, described as a "love" of "play" and "small rural communities." However natural the attraction between tech worker and Gorge, this relationship is also one that is described as "unique and special": Both the characteristics of Gorge landscape and community, as well as the lifestyle entrepreneurs who belong there, are figured as a "'comparative advantage' in economic terms." Techies and technology, together, have created a "very dynamic companies" in place once limited by "dwindling employment opportunities."

In this depiction of the Gorge and its newly naturalized population, however, the historical residents of the region are rendered absent. The distribution of benefits from economic growth in the Gorge is characterized as linear progress, and those both laboring and benefiting from such growth are described as playful beneficients. In this sense, the lifestyle entrepreneur's love of the outdoors is a cultural rationale that naturalizes the flow of incoming workers into the region, with little consideration for the consequences of yet another wave of (re)settlement in the Gorge. In this way, yet another iteration of industry is once again characterized as natural, linear progress. Though materially and culturally different from pre-existing extractive industries like timber, canning, and war-time manufacturing, the "Tech Boom" perpetuates less environmentally visible forms of violences and dispossession within and from the National Scenic Area.

The financial and discursive work of the Gorge Technology Alliance (GTA) also envisions Gorge futures. Most notably, they describe technology firms as natural allies in manifesting visions of local land uses and the preservation of natural resources. Regarding this point the GTA's 2007 economic report continues on to describe how the "inherently entrepreneurial population" of the Gorge with enhance lifestyle and landscape quality:

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[371] Ibid, 4.
[372] Ibid.

> "The most important finding of the GTA study is that technology is making it possible to create wealth and jobs across a wide range of economic sectors in the Gorge. Most importantly, the profile of technology firms fits well with the ways in which Gorge residents want to use their land, with an inherently entrepreneurial population, and a regional commitment to preserving natural resources."[373]

The report continues to explain:

> "High technology manufacturing provides most of the high paying jobs in the manufacturing sector. These figures demonstrate the point made earlier that businesses that create knowledge-based goods and services create relatively more value and therefore higher wages. It is precisely this reason that tourism, restaurant and hospitality, and other basic service industries pay minimum wage or close to it. And the same principal applies to light industry and manufacturing. Wages are higher in companies that produce sophisticated goods and lower in companies that assemble simple commodities."[374]

Though the excerpt above is concerned with creating more value ad higher wages for residents, the report does not investigate who occupies the high paying jobs in high technology manufacturing. A subsequent passage, however, tacitly acknowledges and projects "population and business growth" as an influx that Gorge towns and cities will "incorporate." The imagined future scenario of high tech growth is articulated in spatial terms of property ownership and land development:

> "Gorge towns and cities are able to incorporate population and business growth with only modest geographic expansion. Technology companies spread through Gorge communities to optimize available space and employees purchase homes throughout the Gorge. Land and home prices are more evenly distributed throughout the Gorge. The municipal governments encourage build-out and intensive occupancy with land use policies and Gorge towns develop into communities with creative mixes of residential, commercial and business buildings. Businesses that require large space for manufacturing move to fringe areas where land is available. High-value farm land is preserved."[375]

Such enrollment of "land use policies" and "preservation" articulate with the mission and objectives of the National Scenic Area Act, thus signaling again a natural alliance between the legal framework for protecting scenery and the growth of high tech culture and capital in the Gorge. This early 21st century wave of (re)settlement and defense development, described using language of "optimization," "intensivity," and "creativity," is newly inflected with militaristic logics of intense innovation, efficiency, and imag(in)ing.

In the above narratives, the Columbia River Gorge National Scenic Area is framed in two interrelated ways: As a scenic place of leisure and beauty, as well an economic region in need of

[373] Ibid, 1.
[374] Ibid, 5-6.
[375] Ibid, 7.

"revitalization" in the wake of a decline in "old" modes of industry and work. Through the articulation of these two frames, a script of "live, work, play" in the Gorge is bolstered by an influx of windsurfers and tech entrepreneurs, along with their economic and cultural capital. Many scholars have described the transition in the predominant modes of production in the Gorge as a shift from the "old west" to the "new west"; a shift away from extractive natural resource industry and commerce and toward service, recreation, and tech enterprise. Towns where timber, canning, and aluminum industries have historically generated the most employment and capital gains have experienced a decline in these industries. Some studies of the region's history and economy explain this decline as due in large part to increased environmental regulations and policies such as the Endangered Species Act and Clean Water Act, as well as a shift in the U.S. military-industrial complex away from nuclear weapons and aluminum warship production.[376] While timber, agriculture, and tourism continue to be the chief economic sectors in Gorge counties, state governments in both Oregon and Washington are allocating more and more financial resources to investments in tech companies, particularly entrepreneurial ventures, in the region. As I have show, popular media and industry leaders have described these new sectors as high-growth, sustainable industries that keep local unemployment rates low.

While the "High Tech Boom" is dramatically shaping the Gorge, the emergent patterns of extraction and dispossession are not entirely new. The influx of financial and social capital to small Gorge towns in rural counties on both sides of the river has not guaranteed an even distribution of economic benefits. Many local residents and other regional agencies contradict the assessment of current trends and the visions of a technologically fixed socionatural future in the Gorge.

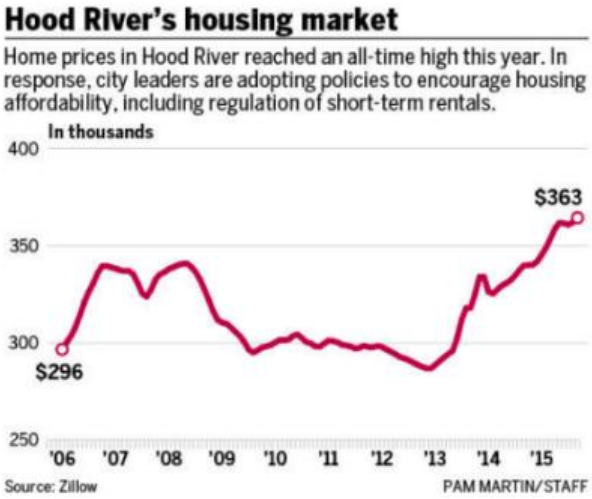

Figure 48 The Oregonian reported a % rise in housing costs from 2013 to 2015 using data from Zillow.[377]

[376] See again the work of Sy Adler, Carl Abbot, and Kathie Durbin.
[377] Luke Hammill, "Hood River, dealing with housing affordability issues, takes on short-term rentals," *The Oregonian,* Nov 1, 2015. https://www.oregonlive.com/front-porch/2015/11/hood_river_dealing_with_housin.html

The growing Gorge population, coupled with the steady increase in short-term rentals and vacation homes, has presented a challenge to entry-level and long-term affordable housing.[378]

Even the testimony of Gorge tech employees themselves reveals much more friction between newcomers and locals than industry reports, especially regarding the perceived economic and cultural good generate by the influx in engineers and military drones. At AUVSI, I had the chance to speak with some tech company employees about the ways they have seen the Gorge change since they first started working there. Additionally, I inquired after the interactions they had with locals who have been living in the Gorge all of their lives, if not for generations. One conversation was particularly illuminating and is worth paraphrasing here:

> A lot of the smaller, mini-businesses emerging in the gorge are springing off from Insitu and CloudCap technologies.
>
> Got here in the 1980s, they came up with their families in a packed bus. They were coming up here to windsurf and just loved it, or had already known that they liked it. This was in the 80s when sports/windsurfing was taking off. At first rented little spots all over the region—leased commercial spaces as well as old homes, etc. Did this kind of piecemeal development, first in meteorological work, then with schools of fish, with tuna, then the first trans-Atlantic flight and military contracts. The military picked up on it in the 90s and so more contacts started being formed and shaped, people in the local community were skeptical. Who are these people? Engineers doing defense projects? New people coming from the outside and engineering secretive works in their garage, etc.
>
> There used to be an aluminum plant, a lot of timber. There is still timber but not as much timber now. The economy has improved a lot, the median income has increased. But this is a different kind of industry and people are suspicious. Less so now, but still some. We had to make a concerted effort. Now people really understand better what we do, it's not a mystery; they understand that we don't only do military.

"The people" my interviewee is referring to are Gorge locals. When I asked him where he encountered suspicion from "people," he explained that local skepticism is expressed through formal and informal avenues. And, he seemed to suggest, that "people's" concerns about changes they associated with the tech boom—such as increasing housing prices—were actually happening before tech companies even arrived:

> All of the above! Sometimes people make comments, sometimes it's just in the community. Other times, yes, at meetings. People are concerned that we are newly coming in and driving the housing prices upward. But this was happening before we got here. The sports industry was already doing this, like windsurfing, recreation, and tourism. There are constraints to growth with the Columbia River National Scenic Area. We are a relatively small region, about 85,000 people and about nine communities. We had about 400 employees when I joined, but now have over 1600. About 1000 of those are in the headquarters region, in the Gorge.

[378] Ibid.

This conversation at "Drones & Droids" reveals a very recent, contiguous history of socioeconomic change in the Gorge: My interviewee was aware of the relationship between local housing crises and the influx of tech industry. He was also aware that the shift in class demographic and housing that implicated him today were inextricably linked with the pre-existing growth of tourist and recreation sectors. In this section I have media stories, industry reports, and interviews in order to reveal how work, play, profit, and scenery are intertwined in the Gorge. The scenic resources, entrepreneurial lifestyles, and expensive homes referenced in these narratives are part of the scenic landscape that was threatened by the Eagle Creek Fire in the Fall of 2017. The critical deployment of Gorge-made drones and ISR systems, by volunteers representative of a largely new community to the area, perhaps furthered the "naturalization" of Insitu as a force of good in the public eye: An assemblage of experts and technologies that assisted in preserving the National Scenic Area under unprecedented conditions. Yet, although the Eagle Creek Fire was the ScanEagles first major surveillance flight in the Gorge, it was not the drone's first tactical operation. In this next section I follow the flight of the ScanEagle, and its methods of seeing scenes as thermal terrains—and targeting bodies as infrared objects—through the global reaches of U.S. imperialist operations.

The ScanEagle

> When the ScanEagle flies the terrorists have no place to hide.
> —NATO Resolute Support, Afghanistan, 2018

> Not just any UAV will do. In order to effectively patrol the vast terrain that elephants and rhinos graze without disturbing their natural habitat, a long-range high-endurance UAV is needed. That's why we are working with Boeing and Insitu to utilize technology that our experts used in the field with the U.S. Government, and bring it into the conservation world. By doing this, we provide a sustainable solution that allows 24 hour, persistent surveillance of areas far from population centers where the poachers currently operate untouched.
> –AFRICANeye project http://www.africaneyeproject.org/the-platform

The September 2018 AUVSI conference agenda made clear that companies in the Gorge perceive the future of unmanned systems to be "taking shape right here in the Pacific Northwest" (see Figure10). The program of speakers boasted a multitude of companies with diverse specializations, from network communications, robotics education, test range operation, and thermal imaging.

Insitu is regarded as an industry leader in ISR drones. It is also considered the original force that drew so many engineers to the Gorge and put the region on the global-map of aerial intelligence technology hot-spots. Many of the representatives from a diverse array of companies who spoke with me got their professional start at Insitu before moving on to other positions or founding their own specialized business. No longer an orchard-bound start-up, the Gorge-based company is now a wholly owned subsidiary of Boeing and worth hundreds of millions of dollars and has twelve offices throughout the region. Their growth in employment, productivity, and profit is due to the military-industrial success of their ScanEagle drone, the company's "claim to fame."[379]

Figure 49 "Drones and Droids" agenda. Photo by author.

The ScanEagle has garnered dozens of multi-million dollar defense contracts, and mainstream publicity for its role in high-profile counter-terrorist missions in Afghanistan and Libya, and the Department of Homeland Security's policing of the U.S.-México Border.[380] In addition to regular streams of defense contracts, the ScanEagle is also used in environmental conservation projects, anti-poaching securitizations, animal biomonitoring and critical infrastructure maintenance. In this section I examine the local and global entanglements of scenery, surveillance, and biology through an analysis of the ScanEagle's design and deployment.

At "Drones and Droids" I spoke with current and former Insitu employees who told the origin story of the ScanEagle as the news-stories did. Several people described the two guys who made it, again through a lens of mutual entrepreneurial and environmental affinities. On the afternoon of the conference's first day, a patent agent and designer from Insitu addressed the audience with a history of Insitu's product pedigree and productivity. The story he presented mirrored the newspaper narratives analyzed above. A portion of his presentation is paraphrased here:

> Insitu was founded to pursue meteorological phenomena over the ocean. There weren't really systems for that. The team of guys built a whole new system for tuna fishing. That had some demonstration. In 2004 they got a contract with the Marines and went to Iraq—that was a raging success for us and the people we were watching out for. That has been the thing that has carried the company. We keep looking for the next things that will carry us. We have projects going in tracking marine mammals and fire fighting. And

[379] "Dronetown USA."
[380] Brett Clark, Col., *Small Unmanned Aerial Vehicles; DHS's Answer to Border Surveillance Requirements,* United States Army War College, Masters Thesis for Strategic Studies Degree, 2013.

> mines and pipelines. Rail safety. We did the first flight in the national airspace it has lead to a million hours that we have delivered ourselves, performed ourselves, for customers.

This presenter's language echoed that of many other representatives at "Drones and Droids": their products were designed to navigate otherwise intractable terrain, streamline the delivery of tactical information, and ultimately protect U.S. resources—be they forests, infrastructure, or troops on the ground.

The ScanEagle, the drone that goes "flying-the-gaps" over the domestic wildfires and international battlefields, is the descendant of the SeaScan. The SeaScan was originally designed to collect climatic data and track dolphins from fishing boats. Tad and Andy designed the drone to be "runway-free." In other words, to be easily launched and recovered from a very small and even mobile space, like the deck of a fishing boat. With a combination catapult launcher and folding "SkyHook" with catchline, the SeaScan could be sent off and recaptured in record time with no need for a runway (see Figure 11). Once airborne, its saline resistant sensors rapidly accrued visual data on the location of tuna schools and dolphin pods beneath the ocean's surface. The drone's payload included an inertially stabilized camera that tracked both fixed and moving objects for extended periods of time using an integrated GPS. Armed with this data, commercial fishermen could respond to their environment in real-time and make a catch that would reach supermarket shelves with a "dolphin safe" label.

Figure 50 ScanEagle vehicle, launchpad, and catchment system. [381]

The SeaScan was designed for "doing good." It relieved the labors of manning a helicopter in order to defend endangered dolphins in fishing zones. Such a small yet visually advanced drone requires no large-scale manufacturing: it is a specialized ocular device, built by highly educated engineers working out of their garages and orchards. In use and production, the SeaScan appears not to occupy much of the scene—its apparatus is mobile and it can quickly disappear itself. This drone does not disrupt its environment and is difficult to detect, designed to fly so quietly that it does not disturb the wildlife that surveyors aim to track. And yet, the SeaScan has now become an ocular technology that augments the capacity of armed forces to visually track and target "invasive" or "threatening" human bodies. Its adaptive payload can be equipped with thermal

[381] www.Insitu.com.

and infrared cameras, and sync with global positioning systems and stream real-time geospatial data. When Boeing first contracted with InSitu in 2001, the drone's spatial maneuverability and sensory systems appealed to defense contractors. Now, in its evolution as the ScanEagle, the U.S. military purportedly uses this drone to surveil formerly intractable environments, be it from a naval ship searching for pirates off the Somali coast or fishing boat hunting for schools of tuna. ""We've been all over the world with this thing," said Nation. "We've quite literally operated in the tropics, the desert, mountainous regions, maritime situations as well as Iraq and Afghanistan. The aircraft's extended limitations are especially important in places like Afghanistan where it might have to fly as high as 12,000 feet."[382]

For example, the New York Times reported that the U.S. secretly sold drones and missiles to the Iraqi government in order to fight against a resurgent al Qaeda in YEAR (2013). One particular arms sale, they reported, included 10 ScanEagle reconnaissance drones as "part of a larger package of aerial reconnaissance platforms delivered by the United States to Iraq."[383] The article describes the advantages of the ScanEagle's specifications:

> "The small drones, and in particular the ScanEagle, are the cornerstone of the security package.
> […]The choice of ScanEagle drones is not a surprising one. These and other small reconnaissance drones are being purchased by an increasing number of foreign militaries. Between the ScanEagles, the Ravens, and the Aerostat balloons, the importance placed on unmanned aerial reconnaissance for counter-terrorism and counter-insurgency operation clearly extends beyond the American military. The ScanEagle demonstrates why these small reconnaissance drones—and not the larger Predator or Reaper drones—are driving the development and adoption of unmanned technologies within the United States and abroad
>
> The ScanEagle drones made their first appearance in combat over Fallujah and western Iraq in 2005. At the time, the Marine Corps' First Expeditionary Force was engaged in a fierce battle of control of the city of Fallujah. The ScanEagles helped provide Marines with greater situational awareness."[384]

The ScanEagle is also an industry favorite for domestic policing and border security. As the Department of Homeland Security sought to create a "virtual fence" along the U.S.-México Border, drones were envisioned as important technologies of the three-dimensional attack on transnational crime. The Secure Border Initiative imagined an amalgamation of surveillance devices including tower-mounted sensors, radios, and radar for nearly 2,000 miles.

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[382] "Scan Eagle Flies High for Comstock and 13th Marine Expeditionary," U.S. Navy, May 5, 2011.

[383] Michael R. Gordon and Eric-Schmitt, "U.S. Sends Arms to Aid Iraq Fight With Extremists," *The New York Times,* Dec 25, 2013: para 1.

[384] Ibid, paras 3-5.

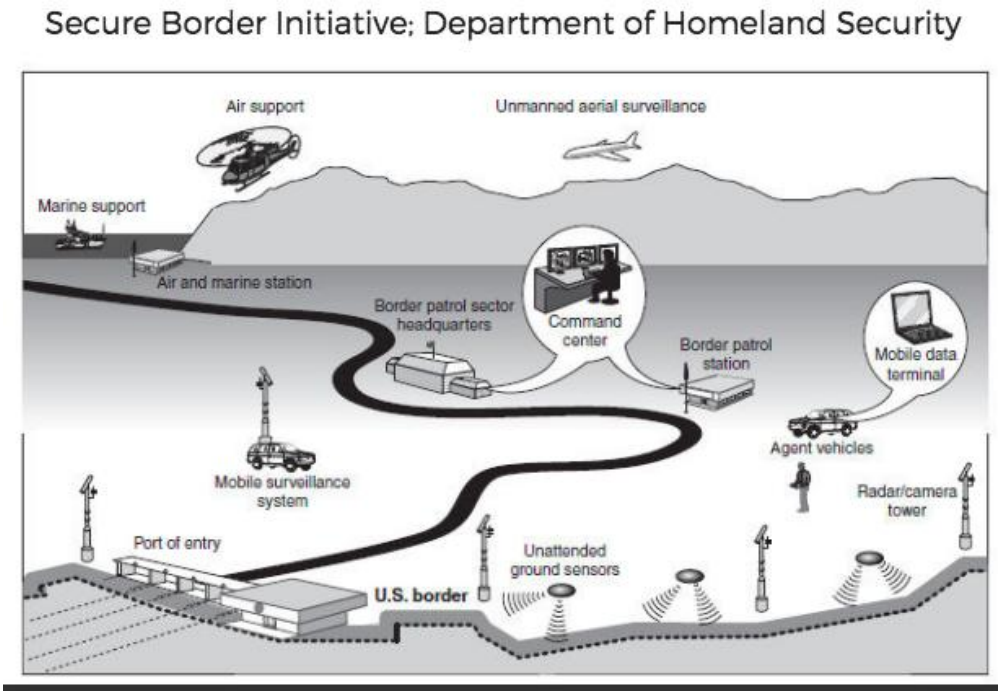

Figure 51 Mock-up design for Secure Border Initiative, DHS. [385]

The ScanEagle was proposed as a cutting-edge machine for this project of vertical and environmental militarization. InSitu's then vice president of commercial business development, Paul McDuffee, argued that the ScanEagle would police borderlands without themselves being seen.

> "Depending on whether you are looking for a tunnel under the earth, looking for somebody walking on land, or trying to identify a radio signal … you can tailor [the] sensor packages to fit the threat."
>
> The ScanEagle was "ideal for use as a force multiplier, to be deployed along isolate corridors where manpower was not available at all."[386]

New developments in other technical components of unmanned aerial systems have also expanded the scope of terrain and operations through which the ScanEagle provides IRS information. Advances in thermal imaging systems, like the mid-wave infrared camera (MWIR) used for the Eagle Creek Fire fly-overs, peaked interest and investment from a multiplicity of entities seeking to "see in complete darkness, and see through obscurants."[387] Insitu markets the ScanEagle's capacity to carry payloads equipped with a stabilized turret that reduces in-flight vibrations, and a sensor package with dual electro-optic imager for high-resolution daytime imagery and MWIR for "quality thermal imaging for nighttime and low-visibility flights."[388]

[385] Brett Clark, Col., *Small Unmanned Aerial Vehicles*.
[386] "U.S. Sends Arms to Aid Iraq Fight With Extremists."
[387] Randall Arnas, from FLIR, speaking at UAVSI on Sept 27.; Houston Police Dept tests ScanEagle.
[388] https://www.insitu.com/information-delivery/unmanned-systems/scaneagle/imagers#2

Figure 52 Insert—advertising material—for NighEagle™ , Insitu, Inc. [389]

From high elevation, for long duration, quietly and in dark or obscured conditions, InSitu claims that the ScanEagle provides constant real-time infrared imagery of "austere environments" (Figure 14). At "Drones and Droids," one presentation demonstrated how the video feed output tracks heat-signatures at a fine-grained scale, through dense infrastructure as well as foliage. As a clip of infrared drone footage played on the big screen at the front of the room, the presenter explained how thermal imaging assists in "finding people, anti-trafficking, anti-poaching, accident reconstruction, damage assessment, and SWAT and high-risk situation support."[390] In the video, the presenter explained, police located a "perpetrator" in "under eight minutes"—we watched as heat-signatures clearly outlined moving human figures, one a hunted perpetrator and two others in SWAT garb closing in with a dog.

The same thermal imaging technology showcased that afternoon at "Drones and Droids" has been used by environmental non-profits and government agencies world-wide "for good": In anti-poaching operations aimed at arresting "wildlife criminals" and saving sensitive species like rhino and elephants. The World Wildlife Foundation describes how their thermal infrared cameras "can identify poachers from afar by their body heat-- even in the dead of night—and it has since transformed the way rangers track down and apprehend criminals."[391] As a camera scans a one-mile radius, it creates live footage based on heat, "living creatures, such as people and animals, appear in a shock of white, while cooler objects, such as grasses or trees, show up in shades of gray. A ranger manning a camera can quickly communicate to his or her colleagues when an unauthorized person pans into view and guide them to the location. It's a surefire way for them to sneak up on and apprehend poachers."[392] In language that repeats the militarized discourse of targeting terrorists, WWF's Wildlife Crime Technology Project lead explained "poachers can no longer use the cover of night to run and hide. Their days of evading arrest are over. This groundbreaking technology allows them to search for poachers 24 hours a day, from

[389]"NightEage™ Insert," Insitu, Inc.
[390] The presenter was and employee of Global UAS Segment Leader from FLIR, "Dream in Thermal—Solving Global Problems with Aerial Thermal Imaging," Sept 27 at 10:45am.
[391] "New anti-poaching technology leads to dozens of arrests of wildlife criminals in Africa," World Wildlife Foundation, Nov 21, 2016, https://www.worldwildlife.org/stories/new-anti-poaching-technology-leads-to-dozens-of-arrests-of-wildlife-criminals-in-africa.
[392] Ibid.

up to a mile away, in pitch darkness. It's upping the game in our fight to stop wildlife crime across the region."[393]

In another example of self-described humanitarian tactical surveillance, The African Eye Project funds "projects that do good"—saving African wildlife with drone technologies.[394] Co-founded by U.S. army veteran and "UAV expert" Brett Velicovich and his business partners Reza Bundy and Jory Tremblay, The African Eye Project targets poachers who "regularly operate under the cover of darkness and along the borders of vast park ranges, far away from security elements' grasp."[395]

Figure 15 African Eye: "Our Mission. Drones For Good ®" [396]

The project, according to its mission statement and news coverage, will create "a 24/7 integrated information, visual intelligence and tracking system to deliver operational focus and awareness to national parks and private conservancies." Using the ScanEagle, the African Eye Project claims to "integrate and share information across the operating environment to better coordinate the fight."[397]

New techniques of seeing from the air generate new visual regimes of knowing and organizing the world.[398] The ScanEagle and its thermal imaging payloads enable 3-dimensional, vertical, and thermal surveillance. It has multiple specialty variants, such as the ScanEagle 2 and the NightEagle, whose payloads range from sniper locator, to bio-warfare agent detection, and night vision. The ScanEagle has enabled a wide array of entities to deploy the same surveillance technologies and practices for seemingly different ends: U.S. military forces, police units, corporate surveyors, firefighters and environmental NGOs alike use the ScanEagle to render visible "scenes" out of global terrains once intractable. The ScanEagle presents a case in which the private production of militarized visual sensory systems is made possible by economic opportunities of an occupied and beautiful landscape. From the material and cultural milieu of

[393] Ibid.
[394] The African Eye Project. http://www.africaneyeproject.org/home.
[395] Ibid.
[396] Ibid.
[397] Ibid.
[398] This assertion comes from my engagement with Caren Kaplan's work, and is an argument that she makes throughout her scholarship.

the Columbia River Gorge National Scenic Area emerge tools of U.S. imperial surveillance that extend as far as the southern border, Somali coast, and Iraqi mountains.

Conclusion

The Eagle Creek Fire and other "natural disasters" were discussed throughout the programming and during networking sessions at "Drones and Droids." I visited several company booths that featured software and sensors designed specifically with civilian and emergency responder markets in mind. Across the print material and presentation notes that I collected from the AUVSI conference, the discourse of tracking threats in real time and protecting particular populations with innovative technologies was ubiquitous. The visual rubric of high-resolution, geo-spatial aerial surveying—of rendering legible and tractable otherwise indecipherable and impenetrable scenes—was consistent across advertising for agricultural, disaster response, and defense missions. To conclude, I briefly return to discourse surrounding the ScanEagle deployments over the Gorge during the Eagle Creek Fire in 2017.

During and after flying the wildfire, industry representatives and ISR experts celebrate the particular capacities of UAVS for combatting wildfires and providing tactical information and aid during natural disasters more broadly. Andrew Duggan, then vice president of Insitu Commercial, described:

> "One of the benefits of flying UAS over difficult and rugged terrain is mitigating the need for firefighters to physically walk it when locating and extinguishing hot spots…By flying UAS at night, fire incident commanders have the advantage of significant fire intelligence and heightened situational awareness for their early morning planning meetings in determining where to most effectively and safely dispatch their resources and personnel."[399]

Throughout this chapter I have analyzed discourse that constructs drones as technologies that see scenes in new ways. By collecting, analyzing, and mapping sensory data rapidly, and often in real-time, drones deliver visual information to experts in ways that enable tactical decision-making and optimize on-the-ground responses. In this way, imag(in)ing a scene is a technique of constructing a terrain—one urgently in need of control, intervention, and or protection. In the case of the ScanEagle, this militarized logics are deployed across diverse landscapes for varying ends, but in ways that share the language of "targets," "frontlines," and "surveillance." These militarized modes of seeing the "scene" in the Gorge were a new practice, enrolled in combatting an ostensibly foreign force—a raging blaze—from destroying the very resources from which such militarized modes of sight have materialized.

Throughout previous chapters I have developed the concept of settler ocularcentrism—the dominance of visual technologies and representations as strategies of naturalizing, and disavowing, the pernicious violence of U.S. imperialist expansion and occupation. I argued that

[399] "Insitu's ScanEagle UAS Proves Effective as a Wildfire Suppression Resources," Insitu, Inc., Aug 21, 2018. https://www.insitu.com/press-releases/ScanEagleUASProvesValuableforWildfireSuppressionEfforts

settler colonial projects of territorialization are spatialized through regimes of visuality, using ocular techniques of charting, calculating, accounting and consuming human and non-human bodies and relations. In this chapter, I have demonstrated the ways the Gorge was imag(in)ed as a natural battlefield through aerial infrared surveys during the Eagle Creek Fire. I have also addressed the political economic conditions from which the UAVS industry emerged in the National Scenic Area. I have investigated the relationship between the figure of the "lifestyle entrepreneur" and the discursive celebration of technology growth couple with exceptional scenery. In so doing, I have trace continuities in the production of a settler subjectivity who "works and plays" in ways that accomplish a "natural" harnessing of the Gorge's unique resources. It is from this cultural and material milieu—presented today as a "Gorge Tech Boom" but continuous with the longstanding expansion of technologies of occupation, circulation of capital, and settling of Indigenous territories—that defense dollars and surveillance technologies now emerge. The ScanEagle drone, and its cultural and material production, have been at the center of my analysis in this Chapter. I have analyzed how this unmanned automated vehicle enables the use of ocular sensors and analytical software, across "difficult terrain" both domestically and abroad, in order to protect national resources. As the ScanEagle travels between Gorge canyons and Afghani mountains, between the U.S. marines and environmental NGOs, so too do the settler ocularcentric techniques of surveilling lands and lives–however reinforced, undone, or transmuted.

Conclusion

Sovereignty Against Seeing

I want to conclude this dissertation with an example of when settler ocularcentrism fails: When the compulsion "to look," to curate a scene for however benevolent or educational an imperative, is foreclosed by Indigenous claims to history, place, and representation. This dissertation focused on the respatializations and violences wrought by technologies of occupation, through practices of visualization, and productions of settler capital and property in the Columbia River Gorge National Scenic Area. I examined the quotidian and incohesive, yet nevertheless ongoing, modes of human, nonhuman, and territorial relations reconfigured by continental and global U.S. empire. I do not want the focus of this dissertation to occlude the persistence and power of Indigenous pasts, presents, and futures in the Gorge. My introduction to this manuscript entered the Scenic Area through the Confluence Project's *Bird Blind* in Troutdale, Oregon. Now I will exit through Confluence's proposed project at the eastern edge of the Scenic Area. In so doing, I bookend this work with a poignant case of the political stakes of representation, moves to settler innocence, and the relation between "seeing," "scenery," and sovereignty. This conclusion also affords the opportunity to briefly revisit places and people familiar from Chapter Three, where Indigenous cartographies and politics of refusal were most robustly discussed. We end with Celilo Falls and the writings of Indigenous women, including Elizabeth Woody. This time, in opposition to a proposed large-scale art installation, a "memory work," commemorating the loss of Wy'am (*Celilo Falls*) at Celilo Park.

Seeing, Science, and Scenes

> At seven sites marking the confluences of rivers and Native American tribes in the Columbia basin, Lin is instigating the restoration and creation of a series of parks. Each will be planted with native species and marked by artworks, some engraved with excerpts from the two explorers' famed journals, some with the myths of native peoples, some functional, some more ritualistic and conceptual. But she hopes each site will offer what she calls a "portal" into what the land was like 200 years ago and what it can be again.
>
> --"Maya Lin's Confluence with the Columbia," *The Oregonian*.[400]

In the early 2000s, environmental organizations, civil society non-profits, and small towns across the U.S. prepared to leverage the bicentennial of the Lewis and Clark Corps of Discovery to boost their conservation missions and tourist visitations. From the Sierra Club to Friends of the Columbia River Gorge, environmentalists "hitched a ride" with the Lewis and Clark narrative as a way to enlarge their audience and highlight the relevance of wilderness and biodiversity

[400] Randy Gragg. *The Oregonian*. "Maya Lin's confluence with the Columbia." November 13, 2005, para7.

initiatives.[401] Amidst these environmental conservation groups arose The Confluence Project. Confluence is a non-profit group borne out of organizing efforts and publicity surrounding the Bicentennial in the Pacific Northwest. The project describes themselves as a "collaborative effort of Pacific Northwest tribes, renowned artist Maya Lin, civic groups from Washington and Oregon and other artists, architects and landscape designers" with a mission to "connect people with the history, living cultures and ecology of the Columbia River system through Indigenous voices."[402] Organized in 1999 and having since expanded the scope of their activity, their work today includes landscape art installations, restoration projects, and educational programming on the human and environmental history of the Columbia Basin.

During the time of the Bicentennial (2004-2006), Confluence publicized its proposal to eventually complete six installations throughout the Columbia Basin, on the shores of the Columbia and Snake Rivers, at locations documented by Lewis and Clark in their journals. At each place—from Cape Disappointment at the mouth to the Pacific, to Clarkston, Washington at the Snake River's confluence with the Columbia—Lin approached her designs asking: "Can I use Lewis and Clark as a frame and a voice into the past, and then play their view off the Native American's perspective, which is very different? We may be celebrating the 200th anniversary of Lewis and Clark, but could I use them as a verb as opposed a subject?"[403] After completing five of the six works by 2015, the final and crowning installation was slated to break ground at Celilo Park. Maya Lin and her studio, in consultation with the Confluence board, Tribal and non-tribal advisors, and Celilo Village residents, had designed multiple iterations of large-scale installation pieces meant to "educate people about Celilo Falls and honor the people who have lived and fished on this river for generations and will continue for generations to come."[404]

Yet just this past winter, in February of 2019, Confluence's executive director announced the suspension of the Celilo plan.[405] Quoted in a February 2019 *Oregonian* article, Yakama Nation Cultural Resources Program manager Johnson Meninick (Yakama) explained: "The resource known as Celilo Falls is not lost, dead or gone… We do not agree that our living culture and ties to our traditional land should be memorialized as if it were dead. We are opposed to any development or disturbance at this sacred property or any attempts to memorialize our living culture."[406] In a 2018 letter from JoDe L. Goudy (Yakama) to the U.S. Army Corps of Engineers, the agency who manages the land at Celilo Park, the Yakama Nation Tribal Council Chairman argued, "continued use of this location by the public risks further destruction of the Yakama Nation's cultural resources. The Yakama Nation does not support any development, disturbance or public attraction of any kind at this location."[407] Though the Yakama Nation is not the only Columbia River Treaty Tribe or Indigenous community with ancestral and current claims to Celilo, and their perspective does not represent this multiplicity, the published statements from

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[401] "Tales from the Trail: THE Lewis and Clark Bicentennial," *The Oregonian*, Sept 16, 2003; "Conservationists hitch ride with Lewis, Clark," *The Oregonian*.
[402] "About," Confluence Project, http://www.confluenceproject.org/about/.
[403] Randy Gragg, "Maya Lin's confluence with the Columbia."
[404] "Celilo Park," Confluence Project, http://www.confluenceproject.org/river-site/celilo-park/.
[405] Tom Banse, "Public Art Installation Beside Columbia River Put on Hold by Yakama Nation Opposition," *Oregon Public Broadcasting,* Feb 8, 2019.
[406] Ibid.
[407] Wil Phinney of CUJ, "Yakama decision halts Celilo art project," *Confederated Umatilla Journal,* Feb 2019, vol 27 issue 2.

Yakama officials prompted me to revisit texts I had read years prior: Letters submitted to Confluence that cautioned against a Celilo Park installation designed around an underwater view through which visitors could see the inundated Falls.

Throughout my fieldwork and archival collecting in the Gorge, I visited the Confluence Project office and files as well as their two project sites located in the National Scenic Area: the Bird Blind in Troutdale at the Sandy River Delta on the Scenic Area's western-most edge and Celilo Park in The Dalles at its eastern border. Amidst years of research on the politics of visuality emergent in technologies of occupation and environmental culture in the Columbia River Gorge, the rejection of settler practices of seeing—undoing the construction of a beautiful and benevolent scene—reminded me of the fragility of U.S. sovereign claims, and the persistent power of Indigenous refusal. It was just as I finished completing this manuscript that news broke of Confluence Project's decisions to indefinitely halt their installation plans for Celilo Falls. The event of a proposed, and refused, land-based art-installation on the shore of inundated Wy'am offers a concluding opportunity to review many of the main themes throughout this dissertation. "Routing the Scenic" has focused on settler sciences *as* historically contingent cultural projects, and the construction of "scenes" as always simultaneously cultural, social, political, and economic matters. I conclude by bringing my main questions and concepts together again through a brief examination of scenes, seeing, and sovereignty at the finished bird blind and the foreclosed fishing platform.

The Lewis and Clark Bicentennial Commemoration culminated in 2004-2006, but various non-profit organizations, state institutions, bicentennial councils, and historical societies began organizing events, travelling exhibits, and campaigns across the country—specifically concentrated at starting and ending points, and the trail traveled, by the Corps—in the early 1990s. The National Council of the Lewis and Clark Bicentennial received support from a William and Flora Hewlett Foundation Leadership Grant, the National Park Service Challenge Cost Share Program, Qwest, the Bureau of Indian Affairs, State Tourism Offices, and individual donors. While the commemoration aimed to reject "celebration" of the Corps, and instead present a more inclusive history with multiple viewpoints—for example, through the guidance of the Circle of Tribal Advisors, created by the Bicentennial Council—I have found through analyzing archived media, close-readings of Bicentennial materials, and Native scholars' critiques of the project, that at times the commemoration repeated a naturalization of settler occupation and validated colonial "exploration" as apolitical scientific knowledge production.

For example, in the introduction of historian and journalist David Sarasohn's 2005 book summarizing the Bicentennial, *Waiting for Lewis and Clark; the bicentennial and the changing west*, Sarasohn narrates the process, outcomes, and popularity of the event with a driven, impassioned tone and embellished language. In his first chapter, "Setting Out," he boldly claims:

> "What persists is the enormous iconic power of Lewis and Clark—literally, in America, names to conjure with—to be once again the vehicle for thousands of miles of hopes and plans. As shown by the response to Stephen Ambroses's book and Ken Burns' documentary and the drive by so many states to connect to the bicentennial, considerable numbers of Americans identify with the spectacular journey of a few dozen people who travelled from St. Louis to the

> Pacific Ocean and back—a group changed by what they saw and ultimately changed by everything they encountered."[408]

The maintenance of the expedition as a "spectacular journey" of "encounters," with "enormous iconic power" for "America," produces what Craig Howe and Kimberly TallBear have critiqued as the repeated fantasization and celebration of the expedition on the part of historians and popular writers as a way of "laying claim to the West as something discovered, documented, won, and deserved by white men."[409] In this instantiation, Sarasohn erases the interconnectivity of the natural sciences with colonial projects of categorization and settlement. The rhetoric of "change" and "hope" addressed to readers—implicitly constructed as unified by national belonging ("America")—translates the expedition narrative into a story of liberal environmental values.

For example, Sarasohn presents a quote from Robert Archibald of the Missouri Historical Society and President of the Bicentennial Council:

> "Lewis and Clark weren't very interesting to Americans in the 19th century, when they had more wilderness than they knew what to do with…Now, Lewis and Clark are a barometer. We can look at the West through the eyes of their journals and get a sense of what we've lost."[410]

Archibald uses the same "we" deployed by many mainstream environmental organizations, such as American Rivers and the Sierra Club, as they joined the Bicentennial on projects such as "Protecting the Rivers of Lewis and Clark" and campaigns like "In the Footsteps of Lewis and Clark."[411] This American "We," who possessed copious 19th century "wilderness" and maintains a continuous gaze on an imagined Western frontier, takes account of their losses using Lewis and Clark as a measuring instrument. Sarasohn goes on to quote Daniel Botkin, environmental historian and author of *Our Natural History: The Lessons of Lewis and Clark,* as stating: "We could consider the justifications for the conservation of endangered species in terms of many of the species first described by Lewis and Clark." To situate this quote, Sarasohn explains, "The environmental history of the West is bound by two lists. On one end are hundreds of species first described by Lewis and Clark; on the other are the western creatures on endangered or threatened species lists."[412] This passage attempts to cohere a national participation in imperial nostalgia, in which subjects are surveyors and settlers, interpellated into what Sarasohn then names a "terrific opportunity for environmental advocacy" using the Bicentennial as a vehicle for environmental stewardship agendas.

Discovery, surveillance, and possession of territory masquerades here as a universalized value of "caring" for what is "lost" in an always-already de-populated Western Wilderness. The dominant

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[408] David Sarasohn, *Waiting for Lewis and Clark; the bicentennial and the changing west*, (Portland, OR: Oregon Historical Society Press, 2015): 30.
[409] Craig Howe and Kimberly TallBear, eds., *This Stretch of the River: Lakota, Dakota, and Nakota responses to the Lewis and Clark Expedition and bicentennial*, (Oak Lake Writer's Society, 2006): 48.
[410] Ibid, 25.
[411] Ibid, 6.
[412] Ibit, 25.

environmental politic that came out of the Bicentennial continues to validate militarized and colonialist scientific knowledge production as an objective, reliable "barometer" to be used into the future—indicating a failure to take seriously Indigenous perspectives on the violent legacy of this colonial expedition. Rather, the historical techniques of accounting for natural and nonhuman resources for U.S. expansion into newly acquired territory are reconfigured as contemporary instruments of environmental stewardship and collective "national" loss.

The Confluence Project and Maya Lin's large-scale installations emerged from this milieu. In an interview with artist Maya Lin, Oregon Public Broadcasting described Confluence as "a series of installations commemorating the landscape, the people and the cultures that greeted Lewis and Clark when they explored the area." Lin said that the project is like "holding up a mirror to reflect back on Lewis and Clark's journey."[413] However, as this dissertation has demonstrated, visual representations of landscape are more than merely "mirrors" that reflect a real and ossified scene. Confluence is better understood a social and political process that produces both a material place and immaterial narratives run-through with power relations. Museums, historic landmarks, and heritage buildings draw millions of tourists to the Columbia River Gorge annually: capital circulates and so do curated narratives about Oregon's natural and social history. Interpretive parks and artworks, like Confluence's, are crucial sites for analyzing the relationship between environmental discourse, cultural production, and settler colonialism—a nexus layered with power relations, processes of subjectification, and the production of a certain kind of "knowledge" about the region.

Against the Celilo Arc

The introduction to this dissertation began with my critical encounter of the Confluence Project's finished Bird Blind at the western-most border of the Columbia River Gorge National Scenic Area. Now, I conclude with Confluence's proposed installation at the eastern-most border of the Scenic Area: Celilo Park, 13 miles east of the city of The Dalles, and discussed in-depth in Chapter Three. Like the Bird Blind, the proposed project at Celilo Park fit into Lin and Confluence's overarching conception of restoring, repairing, and remembering human-environment connections in the Columbia Basin. Here, however, Lin's proposals did not focus on the nonhuman animal life and its changing realities there. Rather, her designs foregrounded the geophysical landscape and Indigenous uses of the place prior to its inundation by the completion of The Dalles Dam in 1957. In this case the construction of a scene at Celilo Park is centered on seeing—or making visible—the history and presence of Indigenous occupation and loss on the landscape. And yet, it is precisely the settler compulsion to look that was refused by some of Wy'am's (*Celilo Falls*) Indigenous relations.

As with the Bird Blind, my first grounded encounter with the Confluence Project's plan for a Celilo Park installation happened on a guided visit—this time, with executive director Colin Fogarty. I met Colin at the Columbia River Gorge Tourism Summit[414] and he generously offered to walk with me through Celilo Park after a day of panels and presentations on boosting

[413] Chip Grabow, "Maya Lin and the Confluence Project," *Oregon Public Broadcasting*. Nov 11, 2010. updated April 2, 2015. https://www.opb.org/radio/programs/thinkoutloud/segment/maya-lin-and-confluence-project/
[414] January 20, 2016

recreation, beer making, viticulture, and sightseeing in the Gorge. As Colin and I walked through the park, both of us white settler intruders on expropriated Indigenous territories; we discussed the socionatural landscape of the shoreline and waters before us. We stopped to read the park's signage, and find the over-representation of Lewis and Clark and historical relegation of Indigenous peoples so characteristic of interpretive material in the Gorge.

Figure 53 Looking down-river over Celilo Reservoir from the western edge of Celilo Park on ground that would be broken for Lin's installation. Photo by author.

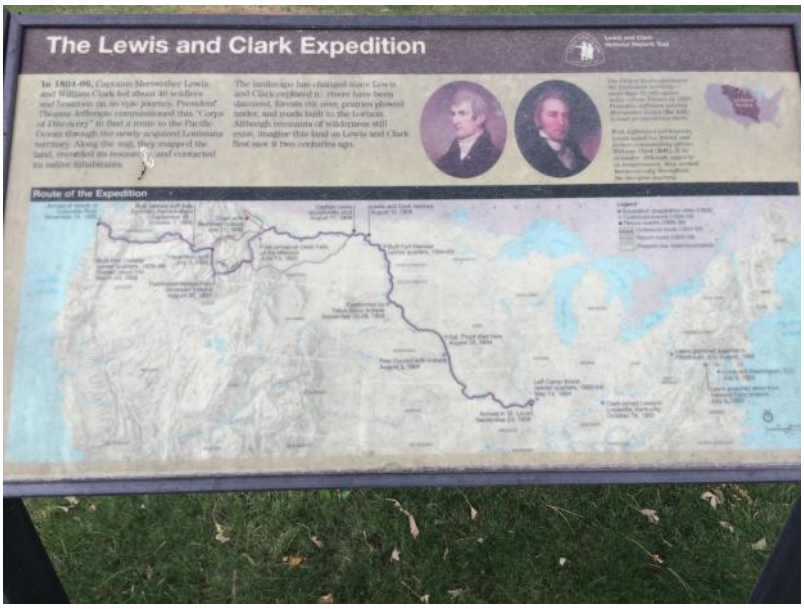


Figure 54 Interpretive signage at the entrance to the public portion of Celilo Park: it maps the "route of the Expedition" and describes how "the landscape has changed since Lewis and Clark explored it." Photo by author.

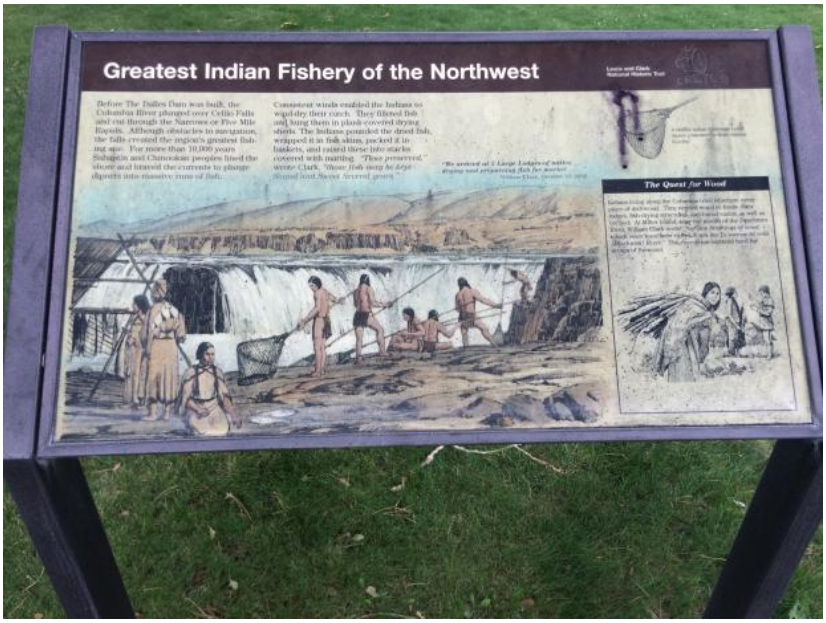


Figure 55 Interpretive signage at the entrance to the public portion of Celilo Park: Entitled, "Greatest Indian Fishery of the Northwest," it depicts an artistic rendering of dip-net fishers and explains "Before The Dalles Dam was built, the Columbia River plunged over Celilo Falls and cut through the Narrows or Five Mile Rapids. Although obstacles to navigation, the falls created the region's greatest fishing site." Photo by author.

Like many newspaper articles on the project, I remember Colin explaining the intention to install art on this land that would make visible the violent past and educate visitors about the Indigenous relations to Celilo Falls. Although often written about as a memorial or commemoration to loss, Lin has described the project as a "memory work" that both "brings you back to what it used to be like" and engages "actively with all the tribes so this isn't just about locking in an idea of where we were but also where we are going."[415] Lin's descriptions of her intentions and design directly link the written history, sound, and visual experience at the installation to both historic loss and future imagining: "We have to acknowledge the loss of this amazing place, but we also need to reveal what's below the water and it's still there…we have to use the past to shape a different future. As one tribal elder said, 'we know what happened in the last 200 years, we are much more interested in the next 200.'"[416]

In Chapter Three I discussed in great detail the violent inundation of Celilo Falls and life-giving power, and memory, of the sound, sustenance, and spiritual importance of Wy'am—as a relation and ancestor—for Columbia River Treaty Tribes, Columbia River Indians, and inland Tribal Nations that came to trade and network here. I also analyzed the political stakes of seeing and hearing Celilo Falls today, with particular attention to how settler ocularcentrism mediates practices of looking at violence and loss that often assuage settler guilt, entertain settler publics, and recapitulate settler occupation as a benevolent reckoning of a multiplicity of histories and cultures. While the discourse surrounding Confluence's Celilo Park design does not duplicate the

[415] "Maya Lin and the Confluence Project."
[416] Maya Lin speaking in short film "Confluence Project at Celilo Park," by Confluence Project: https://vimeo.com/54969754.

moves of Join House Memorial 15 from Chapter Three, I do find echoes of the compulsion to make seen, and make a scene, at a site of ongoing anti-Indigenous violence and occupation. The case of Confluence at Celilo raises questions about who is authorized to represent—even memorialize—Indigenous loss and life, and how visual techniques of representation mediate the revelation of violent histories.

The plan to install the Celilo Arc, put on hold in February 2019, was Lin's most recent concept of several: A 300-foot cantilevered wooden walkway extending from the park's western shoreline out over the river to the edge of where Celilo Fall's rocky outcroppings sit beneath the water's surface. The arc, Lin describes, is "very much inspired by the form of the historic fishing platforms that used to cantilever over out over the falls."[417] Along the walkway, visitors will encounter articulated textual passages, views, and sounds of the river:

> "First, the falls will be described from geologic time, then mythic, Native American time, then early accounts from Lewis and Clark; they barely made it over the falls. About two-thirds of the way along this wooden platform it goes silent until you get to the end, where we get one sentence, a historic account of what it used to sound like. And you're looking out on silence."[418]

Before reaching the arc, Lin envisioned visitors stepping "through boulders that are water worn and rolled—cutting a very large rock open and within it having the last recording of the sound of what the falls were. In the entry plaza…we will be able to show film of the falls…" and viewing/touching a map and sculptural railing, "the topographic relief of the riverbed. This is all still underwater. The rocks are all there. It will point out where you're looking and where you are."[419] As of 2014, Confluence was reported to anticipate investing $8.2 million to build the Celilo Arc, as well as "restore and redesign the land, improve facilities at the site, and promote access to tribal treaty fishing."[420]

Figure 56 Maya Lin studios' aerial mock-up of a railing for the Park, a sculptural relief of the riverbed. Scan by author, courtesy of Confluence Project archives.

[417] Allison Williams, "Maya Lin Heard Something Here," *Seattle Met,* July 24, 2015, https://www.seattlemet.com/articles/2015/7/24/maya-lin-heard-something-here
[418] Ibid.
[419] "Confluence Project at Celilo Park."
[420] Helen Silvis, "Celilo Arc Will Honor Tribes, Salmon and a Lost Way of Life," *The Skanner,* June 26, 2014, https://www.theskanner.com/news/northwest/21445-celilo-arc-will-honor-tribes-salmon-and-a-lost-way-of-life

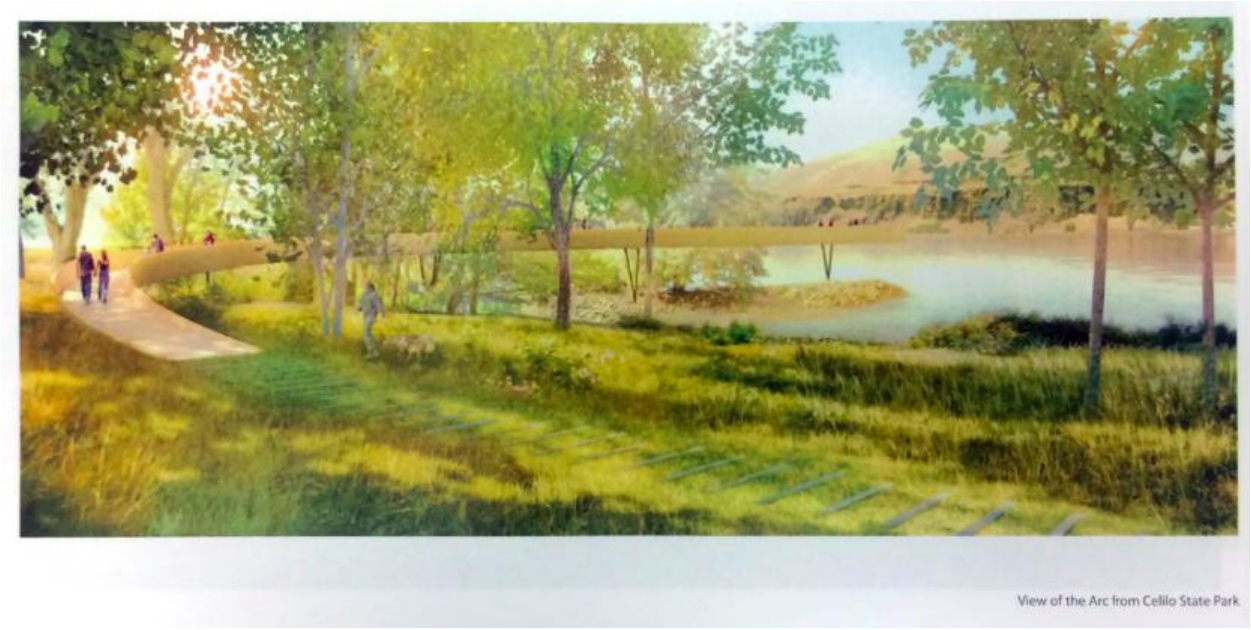
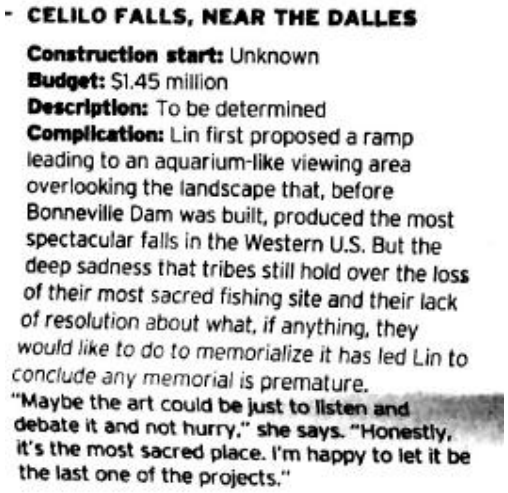


Figure 57 Maya Lin studios' mock-up of the Arc, a cantilevered wooden walkway over the river. Scan by author courtesy of Confluence Project archives.

Yet prior to the plans for the arc and the sound recording, Lin had proposed to "reveal what is hidden below the surface"[421] through much more ocularcentric techniques. In newspaper articles and Confluence's archives, there is evidence of conceptual proposals to construct views beneath the river's surface and provide visitors with a look at the inundated scene below. Though none of these plans endured, and Confluence adapted according to the critiques of Tribal governments and Celilo Village residents, the case warrants examination.

In 2004, *The Oregonian* published a piece explaining that "Lin wants to build a descending path to a waterproof window, with Native American legends on one side of a wall, and Lewis and Clark journal entries on the other. The writings might pertain to salmon. The window, with a submerged view of the Columbia River, would face in the general direction of Celilo Falls."[422] In 2006, in a special Lewis and Clark Bicentennial Sunday issue, Lin's past proposal was described as a "memorial" that had included an "aquarium-like viewing area."[423] In a Biological Impact Assessment Application submitted by Confluence, the project was described as having "Hard-case viewfinder replicas—three viewfinders (one ADA accessible) will point toward the location of the underwater falls, and show historical pre-flood video footage of the falls."[424] These early features were never modeled, nor will they ever be built at the park, but their proposal sparked critical response from highly acclaimed Indigenous women regarding the material and political stakes of "seeing" Celilo.

[421] "Confluence Project at Celilo Park."
[422] Allan Brettman, "Capturing the Currents of Culture," *The Oregonian,* July 26, 2004.
[423] Ibid.
[424] From author's visit to Confluence Project Archives.



CELILO FALLS, NEAR THE DALLES

Construction start: Unknown
Budget: $1.45 million
Description: To be determined
Complication: Lin first proposed a ramp leading to an aquarium-like viewing area overlooking the landscape that, before Bonneville Dam was built, produced the most spectacular falls in the Western U.S. But the deep sadness that tribes still hold over the loss of their most sacred fishing site and their lack of resolution about what, if anything, they would like to do to memorialize it has led Lin to conclude any memorial is premature.
"Maybe the art could be just to listen and debate it and not hurry," she says. "Honestly, it's the most sacred place. I'm happy to let it be the last one of the projects."

Figure 58 A scan of text from *Oregonian* article wherein Lin is interviewed and Confluence projects are described and mapped. Scan by author, courtesy of the Oregon Historical Society.[425]

Lillian Pitt (Wasco, Yakama, Warm Springs) and Elizabeth Woody (Navajo, Warm Springs, Wasco, Yakama) wrote letters to the Confluence Project in objection to creating "simply another 'roadside attraction'"[426] that would be "like putting salt on a wound."[427] Both Pitt and Woody are renowned cultural workers in the Pacific Northwest and U.S. more broadly whose ancestral homelands include Celilo Falls—Pitt is an artist[428] and Woody a poet.[429] As authors of letters to Confluence, each expressed a complex support for the Project and offered collaboration and consultation. Indeed, many Tribal officials and Indigenous community members have supported and partnered with Confluence, as Pitt herself would later do. Yet the writers were also sharp in their assertion that River people and Elders should determine where, how, and why Celilo should be "seen." Passages from their letters illustrate a direct refusal of a benevolent, nevertheless counter-sovereign, move to aestheticize the seeing—and scene—of Indigenous social space.

For example, Pitt presented quotes in response to the proposed Celilo Park installation from River people. This documentation is significant in that it represents the voices of non-federally recognized Indigenous people, many of whom live at Celilo Village and frequently use in-lieu fishing sites there, yet do not have formal government-to-government representation or legal protections. Pitt's speakers construct an inundated Celilo in material and embodied terms—an ongoing condition of poverty and pain:

> "Here are some of the comments from the River people about Celilo Art.
> […]

[425] Columbia River Gorge vertical file, Oregon Historical Society Archives.
[426] Letter from Elizabeth Woody to then-director at the time Jane Jacobson (August 31, 2004), Confluence Project Archives.
[427] From Lillian Pitt Studio (Received on September 2, 2004), Confluence Project Archives.
[428] Pitt works in diverse medium (predominantly sculptural) including clay, bronze, wearable art, prints, glass, and jewelry. See http://lillianpitt.com/lillian-pitt/.
[429] The reader will remember Elizabeth Woody and her work from Chapter Three.

> 'The artist could do something to honor the loss of Celilo but not at Celilo. Since the Celilo Village is just across the highway and is one of our poorest villages in Oregon. I think if a lot of money is going to be spent, it should be to help the local People improve their lives. Art will not be appreciated in Celilo Village.'
> […]
> 'Celilo is an open wound, it would be very painful to be reminded of our loss'"[430]

Woody wrote at length about the political implications of "underwater viewing." In Chapter Four I examined underwater views of *lively* animals, namely Herman and salmon, but here Woody problematizes the visual aestheticization of *lost* lifeways and submerged relations. She argues against memorializing Celilo using ocularcentric conventions intended to provide tourists the opportunity to "look" at Indigenous loss. Her letter is worth quoting at length:

> "Recently a news article appeared in the Oregonian of Maya Lin's proposed memorial at Celilo Park, Oregon. It entailed a vague description of a "glass wall" to allow for underwater viewing, and Maya Lin made a cursory statement about inclusion of Native American perspectives as important. With Antone Minthorn's presence on the board your organizational commitment to Native American perspectives is visibly significant with a person of his stature. What concerned me about the nature of the monument, as described, is that it will simply become another "roadside attraction." To add history and respectful future interaction with the memorial, the project should include the perspective of the Native peoples who love and respect the Columbia River, and know intimately the monumental absence of Celilo Falls. They are the ones who will live with this piece on a multi-generational level at Celilo Park, Oregon.
>
> The time for commemoration is an important one as people of Celilo, the Wayampum, being to speak again of amazing memories. As indigenous people and heirs of a monumental lineage we revere this place. Not as a "memory," but as a source and significant part of our tenacity and retention of a significant nationhood when many were disempowered and dispossessed.
> […]
> There cannot be a clear understanding from the viewpoint of people who lived there available to Maya Lin. It is hardly available to people of our own region. This project's plan, as I understand it, puts a window into our "Graveyard," as one native person called it. Now imagine Celilo Falls is our mother and buried under this backwater. Would you want a window to look at your mother in her grave? How would you feel?"[431]

Woody refuses the settler public's right to look, and rejects the notion that "seeing" Celilo could constitute a reparative act on the part of the settler public. She acknowledges Confluence's commitment to Indigenous perspectives, yet urges further collaboration with Wayampum, the people of Celilo. Within the text Woody shifts between discussing the project as a "memorial," a "monument," a "commemoration," and a "roadside attraction." Belying the muddiness of purported distinctions between a memorial and memory work, Woody's language calls into question whether a built installation at the site of inundation—let alone, designed by an artist

[430] From Lillian Pitt Studio (Received on September 2, 2004).
[431] Letter from Elizabeth Woody to then-director at the time Jane Jacobson (August 31, 2004).

commonly known for memorial architecture—could ever be perceived or experienced beyond the bounds of mourning and loss. Woody also uses a multiplicity of concepts to discuss the place itself; as a "Graveyard," a "mother," and "not as a 'memory,' but as a source and significant part of our tenacity and retention of a significant nationhood when many were disempowered and dispossessed." Herein, concepts of loss, death, burial, tenacity, and retention are coexistent and contextual. Indicative, perhaps, that a "window" beneath the water's surface fixes a view for consumption by visitors, rather than generating right relation[432] through complex and multi-sensory socialities.

In the writings of Pitt and Woody I read a politics of refusal: Refusing remediation on settler terms, refusing self-appointed settler right to look, and refusing a settler common sense that naturalizes and builds on top of Indigenous loss. In the Gorge, this refusal is up against deeply entrenched and longstanding practices of looking at scenery—along the horizon, under the water, and from the air. Practices of constructing, cataloging, and consuming scenic quality that have been inextricably linked to expropriating Columbia River Indigenous peoples' territory, commerce, and nonhuman relations. This manuscript has argued that settler ocularcentrism produces, and is in turn produced by, technologies of occupation that articulate with shifting forms of settler science and environmental culture. The case of the Lewis and Clark Bicentennial and the Confluence Project further caution a critical engagement with explicitly reparative and recuperative projects envisaged by settler environmentalists. Just as decolonization is not a metaphor,[433] "making visible" is not an abdication of ongoing occupation.

Routing the Scenic

The material analyzed in this manuscript was collected over a period of five years, from 2014-2019, though some analytical reflections have come from my childhood and years of public education in Oregon. The bulk of my data collection took place during 2015-16, when I moved to Portland to conduct fieldwork in the city, and towns and trails throughout the National Scenic Area. I attended dozens of hours of meetings held by the Gorge Commission, Greenpeace, Portland Rising Tide, and Friends of the Columbia River Gorge. I interviewed representatives from those organizations, as well as other activists organizing around mainstream as well as social justice environmental issues in the Gorge and Pacific Northwest more broadly. I also interviewed representatives of the Columbia River Inter-Tribal Fish Commission, local city planners, and railroad engineers. I attended and participated in events advocating against crude oil trains in the Gorge, as well as drone piloting and federal aviation association regulations. I spent countless hours at the Oregon Historical Society Davies Research Library, where I examined their collections on the National Scenic Area, history of Portland and regional development planning, and landscape photographs. I used the archives at the Columbia River Gorge Discovery Center and the Bancroft Library, as well as digitized archives of the University of Washington's map collections, the U.S. Army Corps of Engineers, Bonneville Power Administration, and Gorge Commission meeting minutes. Finally, I incorporated newspaper articles—predominantly from *The Oregonian, Portland Monthly,* and *The Columbian*—as well

[432] "Right relation" is a framework of reciprocal accountability for being in relation to human and nonhuman beings—I use this here based on what I have learned from Kimberly TallBear.
[433] Eve Tuck and K. Wang.

as brochures, magazines, artworks, films, museum exhibits, interpretive signage, and the geophysical landscape itself. My research methodology was promiscuous and expansive, situating archival material, cultural (especially visual) texts, ethnographies of place and interviews in conversation with one another.

The analyses in each of the five chapters likewise merged disciplinary frameworks and concepts, most prominently from Political Ecology, Native American and Indigenous Studies, Feminist Science and Technology Studies, and American Studies. The conversations I aimed to have through the admixture of these fields' analytics produced a manuscript that offered something in between a history of the present and a dialogue between case studies. The first two chapters provided a loose genealogical analysis of the construction of scenery in the Gorge from the mid-1800s to the present. I book-ended both with an analysis of the anti-Indigenous discourse of the *No Gorge Casino!* mobilization in order to demonstrate the contemporary political stakes of scenery's legal codification and protection. In Chapter One I looked at visual representations of landscape produced in and through the expansion of U.S. industry, and railroads in particular, through the Gorge. By setting cartographic land surveys, the historic landscape photos by Carleton Watkins, and railroad propaganda brochures side-by-side, I revealed an expansive yet contiguous archive through which the co-constitution of industry and scenery, and the pleasures of imperial possession, are articulated. In this way, we reconsidered the temporal bounds of scenic value, as a construct that far predates the passage of the National Scenic Area Act (1986) and reveals layers of violence against Columbia River Indigenous communities otherwise elided by today's conception of scenery as an inherent quality of the Gorge landscape.

The second chapter was directly contiguous with the first. Chapter Two continued to follow historical constructions of scenery and show how in the early to mid twentieth century, scientific discourses and practices emerged as important modes of cataloguing, curating, and quantifying scenic value. This chapter furthered the case for analyzing technologies of occupation as always already cultural projects: setting the ground for further examination of how a diversity of sciences authorize both the material and cultural enclosure of Indigenous lands and relations. The materials I analyzed—archeological narratives, a natural history museum proposal, and a scenic accounting how-to guide—revealed an archive of the settler sciences of salvage and aestheticization. Beyond the beauty of scenery, we came to understand how the Gorge became an exceptional site of discovery and development in geology, natural history, and archeology. Ultimately, I argued that in order to understand contemporary enrollments of scenery's legal protection—as exemplified by the anti-Indigenous discourse of the *No Gorge Casino!* mobilization—we must examine the longue dureé of the relationship between scenery, dispossession, capital, and science.

The next three chapters used this argument as a fundamental starting point. To it, they each added emplaced and historicized case studies of technologies of occupation and their attendant visual representations of landscape. While I used archival material, I drew most heavily from news and media sources, interviews, and participant observation. Chapter Three turned to the inundated Wy'am (*Celilo Falls*) and the ways that a U.S. Army Corps of Engineers sonar survey of the riverbed was variably enrolled in both bolstering settler innocence and imagining Indigenous futurities. This chapter examined the persistence of visual technologies in the (re)production of settler common sense, as well as ongoing assertions of Indigenous sovereignty

over scenes at the eastern end of the Columbia River Gorge National Scenic Area. Through examining newspaper interviews, public testimonies, and Elizabeth Woody's poem, I elucidated deployments of sonic knowledge that can help us think about what anti-colonial (re)mapping practices demand of contemporary cartographic imaging processes. I argued that "seeing with sound" is a fraught political process with the potential to both obfuscate and assist Indigenous claims to land.

Chapter Four looked at the Bonneville Fish Hatchery and its living mascot, Herman the Sturgeon. This chapter added a focus on the nonhuman—namely, sturgeon and salmon—to the overarching investigation of how U.S. capitalist expansion and settler occupation counted, commodified, and consumed animal life and fishing practices in ways that shape our contemporary moment. I paired Oregon Department of Fish and Wildlife archives, news stories about sturgeon and police stings, as well as interviews and observation at the Bonneville Fish Hatchery itself. I argue that Herman's exhibit occludes the ecological devastation that conditions, and emerges from, the inseparable complex of hatcheries and hydroelectric infrastructure on the Columbia. I show how seeing-underwater is a simultaneously scientific and cultural practice that is enrolled in "rendering-technical" the deeply social and political questions surrounding how to manage river relations in a time of ongoing occupation. Together, these materials showed how the maintenance of settler common-sense is also meted out through the biological and cultural (re)production of the nonhuman. To the manuscript as a whole, this chapter introduces a much closer attention to the reconfiguration of ecological materialities in the Gorge. Through an analysis of surveilling fish and surveilling poachers, it also contributes a turn toward a visual rubric of biopolitical control that is even further extended in the next and final chapter.

Finally, Chapter Five focused on the design and use of the ScanEagle's thermal imaging capacities as it traffics a practice of infrared aerial surveillance from fighting fires, "terrorists," and wildlife poachers. After having examined modes of mapping riverbeds with sound, and tracking fish underwater, this chapter added a look at how heat targets and temperature changes are rendered visual in order to tactically control a terrain. Using popular media, newspaper articles, government reports, infrared maps, and my own participation and interviews with drone engineers and industry representatives, I situated a loose archive of the ScanEagle's visual repertoire within a political-economic context of the place from which it emerged, the Gorge. I showed how the visual rubrics of settler ocularcentrism are reinforced, reconfigured, and ruptured through the workings of the ScanEagle. Yet further, this chapter urged a relational analysis between emplaced studies of the Gorge and transnational tracings of U.S. militarism. By investigating the role of thermal imagining in expanding the environmental "battlefields" of U.S. continental and global empire, we came to see the production of technology and practices of settler ocularcentrism in the Gorge as reaching far beyond the National Scenic Area.

Taken together, these chapters explore the frictive interstices of what can and cannot be made seen—as structured through the agential cominglings of bodies, landscapes, cultural texts, legislation, and commodities—afford understandings of the Columbia River Gorge National Scenic Area as a material, historical, and political construction. This dissertation historicized the forms of work enrolled in maintaining the Scenic Value that is protected by the Columbia River Gorge National Scenic Area Act today. This work, I show, is socionatural—inextricably material and cultural, biological and social—and is continuously adapting, shifting, and slipping in the

current moment. I do not claim to demonstrate a unitary origin point from whence the "scenic gorge" was first named or represented as such. Instead, I historicize scenery as an inherently political construction that has long been co-constituted with traffic-making endeavors of imperialist expansion. I show how scenery has never been a fixed or unitary object in need of protection from economic development or transit. Instead, from the mid to late 1800s and into the mid-twentieth century, the scenic value of the gorge has been enlisted in garnering congressional support for developing the Pacific Northwest as a commercial center of transnational enterprise, securing financial investment for the construction of transcontinental rail lines, and naturalizing the embodied pleasure of white men's settlement in the imperial imaginary.

Scenery in the gorge has been a critical material-semiotic instrument in and through which U.S. imperialist power has been—and continues to be—routed. I have examined the fraught and incohesive maintenance of U.S. occupation in the Gorge. To do so, I analyzed technologies of occupation that persist in the social relations and spatial organization of human and nonhuman life in the Gorge. I honed in on the seemingly apolitical and aesthetic traits of this place—its scenic beauty—to trace how this purportedly benign visual quality of the landscape is in fact deeply power-laden and run-through with violence. Ultimately, I have demonstrated how the daily maintenance of scenery in the Gorge is a project of U.S. countersovereignty: A form of imperialist claims making on Indigenous territories that is inextricably cultural and scientific; ideological and material; and ultimately incomplete and temporary.

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