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The Nature of Gold: An Environmental History
of the Alaska/Yukon Gold Rush

by

Kathryn Taylor Morse

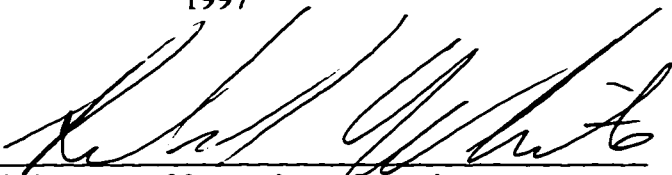
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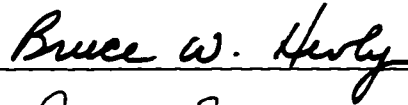
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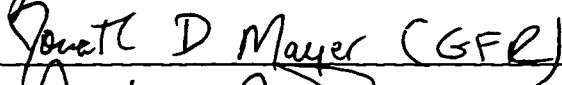
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Abstract

**The Nature of Gold: An Environmental History
of the Alaska/Yukon Gold Rush**

by Kathryn Taylor Morse

**Chairperson of the Supervisory Committee: Professor Richard White
Department of History**

Between 1897 and 1900 thousands of miners flocked to the Yukon interior of Canada and Alaska in search of placer gold on the Klondike, Stewart, Manook, Fortymile, and other tributaries of the Yukon River. Through a close reading of gold miners' journals and letters, newspapers, political tracts, and government reports, the dissertation reveals the interconnections between nature and culture in gold and the gold standard, and in the three major areas of gold rush labor: placer mining, transportation, and supply. Through this work, gold miners forged connections between the Yukon interior and the outside industrial world, particularly the city of Seattle, and became part of the larger story of the linkages formed between American cities and hinterlands with the expansion of capitalism.

Gold and gold mining demonstrated how complicated were the ways in which people valued parts of the natural world. Late 19th-century Americans gave gold cultural value, but called that value natural. They understood gold to be naturally money and believed that their industrial economy and their very civilization required growing stocks of metal money. Seeking escape from the restrictions of urban, industrial labor, miners made a journey to a place they deemed natural to extract gold from the earth and

return with it to civilization.

What humans valued had far-reaching consequences for both humans and ecosystems. Miners stripped ground vegetation, cut and burned riparian forests, dug and sluiced tons of earth, and dumped sediment in streams and rivers. The foods they ate and the diseases they carried transformed the material and cultural world of native peoples who provided miners with fish and meat and guided them over the Chilkoot and up the Yukon. The miners' labor demonstrated that the ways in which human beings took resources from the earth involved living systems and reorganized those systems into new patterns of production and consumption. Everything harvested from the material world was connected to other resources, and to human culture. Gold revealed that the material world, even at its most remote and wild, was both a thoroughly cultural and a thoroughly natural place.

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Over the course of seven years and many projects, the staffs of the University of Washington Libraries Department of Manuscripts and University Archives, and Department of Special Collections put up with countless requests and questions. I thank Karyl Winn, Richard Engeman, Carla Rickerson, and others for their kind tolerance and assistance. In the fall of 1995 I was fortunate enough to do archival research in the Yukon Territory and Alaska. Mac Swackhammer at the Dawson City Museum allowed me free access to the rich materials in the Museum Archive, unlimited reign over his xerox machine, and even kindly lent me his truck for up-close exploration of the Klondike mining sites. The staffs of the Yukon Archive in Whitehorse and the Manuscripts and Archives division of the University of Alaska, Fairbanks library

provided invaluable assistance in finding sources, making xeroxes, and shipping materials to me in Seattle. Prof. Terrence Cole and the staff of the UAF History Dept. helped with the logistics of life in Fairbanks. Two good friends, Meg Sherman (in Haines) and Gail Lotenberg (in Whitehorse) opened their homes and hometowns to me, vastly enriching my northern trip. I am especially thankful to them for their hospitality.

My greatest debt is to Richard White, who directed this dissertation as well as my Ph.D. program. Richard patiently shepherded this project for several years before I started writing. Once I finally began, he read multiple drafts with energy and interest (and yet more patience), and offered detailed comments and help with key ideas and concepts, and with organization. My intellectual debts to Richard are clear herein to any reader who knows his work, especially The Organic Machine. His teaching and writing have shown me new ways to read historical sources, with new questions, and have thoroughly shaped my thinking and writing about nature, culture, and gold. Richard's unswerving commitment to the teaching and practice of history and to the training of young scholars sets an unreachable standard for his students. Luckily, he tempers his skill and brilliance with constant humor and understanding. I am grateful to him for his willingness to laugh, and for his enjoyment of historical silliness.

I am also fortunate to have been Bill Cronon's student as an undergraduate at Yale. Bill's work also shapes this dissertation to a profound degree. His 1992 essay, "Kennebec Journey"--not to mention Nature's Metropolis--both literally and figuratively got me started, as is evident in my introduction and throughout. Many, many times, while struggling to clarify ideas, I returned to this essay and its articulation of the basic themes

and imperatives of Western environmental history. The intellectual process of messing around with Richard's work and Bill's work, bouncing their ideas off of my own sources, and off of my own embryonic ideas, has been a lot of fun. I am grateful to Bill, as well, for his continued interest and support, and for numerous conversations in the last few years.

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On August 24, 1993, my sister Stephanie took her own life at age 21, ending a long struggle with major depression. The four years since have been a dual struggle to research and write this dissertation and to survive the initial stages of an immeasurable loss. They were not compatible tasks to say the least, but it was impossible to separate them. I could not have gotten as far as I did on either front without a lot of help. Richard White gracefully got out of my way and stayed there for what must have seemed like a long period of time. When it came to apply pressure to write, it was a gradual process. For that I am very thankful.

I am equally grateful to the many friends who saw me through. Lori Sherman was nearby in Tacoma, which probably saved me. Lori, Marcie Sidman, and Brian Norris opened their various homes in that beloved city with humor and solace, providing much-needed refuge and plenty of food and singing. On the east coast, Helen Bronk got me through fairly numb Christmas vacations, and stuck tight throughout in phone calls, e-mail, and letters. Lots of folks listened well, took me kayaking, and brought me wisdom: Mary Cunningham, Dan Halpern, Matt Klinge, Lisa Maki, Will Prust, Robert Self, Mary Sullivan, Cristal Weber. Maggie Miller walked with me up countless mountain trails in the Cascades, and through a lot of tough stuff. I could not have imagined that such a loss would also bring such a friend.

My parents, Deanne and Stephen Morse, fought both battles with me, the dissertation and the grief. They have financially supported my education beyond all reasonable expectations with generosity, love, and an impressive amount of patience. They funded room and board for parts of several low-income summers, and for the entire

summer of 1994. In the course of my graduate school education alone my parents also paid for: one Subaru station wagon (1985), two computers, three Christmas vacations in warm exotic places (two in freezing cold exotic places), a good chunk of the Alaska/Yukon research trip, much mental health care, and countless, countless plane tickets. Those tickets got me to a lot of weddings and funerals and allowed me to maintain a meaningful social and family life on both coasts, especially after Steph's death.

Far beyond such material things, my parents gave me steadfast encouragement to follow this project to its conclusion, as did my brother Peter. In five years my parents lost three of their own parents and a close family friend as well as their youngest child. Their courage and "mostly enormous grace" in the midst of overwhelming illness, pain, and loss not only kept me functioning, it showed me the way forward. I thank my parents for their example, and for many other gifts. This dissertation--with all its flaws--was finally completed the month of their 35th wedding anniversary. In honor of that event, it is for them.

For M&D

Introduction

There are many ways to make the journey to Bonanza Creek, the place where the last great gold rush in North American history began. Most university libraries hold at least a shelf of diaries, memoirs, and histories that will take you to that creek and dozens like it, back at the turn of the century. Another way to make the trip is actually to go there. Dawson City, Yukon Territory, sits on the narrow floodplain where the Klondike river tumbles into the Yukon. It is an easy trip, a six or seven hour drive from Whitehorse, a much quicker ride by plane.

The road from Whitehorse does not stick to the riverways that gave gold rushers their path to the richest ground on earth. But the road crosses that pathway at points as it traverses the high arid plain of the Yukon plateau, through endless stretches of scrub pine and birch and aspen that roll toward distant mountains. These days, as for most of the last century, it is easy to tell when you have entered the Klondike valley. It is marked by miles of mining tailings, long snaking mounds of river stones dredged from the river, sifted for gold, and cast back to the earth in distinctive sinuous patterns.

At the end of the valley, the heaps of stones give way to a different set of patterns, the brief urban grid of Dawson. This is the end of the line. From here, the Yukon reaches north across the border to Alaska, and to the other gold rush towns and creeks: Nation, Circle City, Rampart City, Fairbanks, and, on the Bering Sea near the mouth of the river, Nome. Dawson City sports a few blocks of green, pink, and red buildings with false fronts, hotels and restaurants, banks and saloons restored in the style of the turn of the century. The streets bustle in summer with tourists seeking past mining glory. It is easy to pick up a map and head up the Klondike to Bonanza creek, following the path that

miners took to Grand Junction, the crazy-quilt mining camp they built where Eldorado Creek joins Bonanza. As a miner named Alfred McMichael wrote in June 1898, this was "a place the reports from which have set a continent on fire with greed for gold."¹ There is nothing there today, other than some historical markers and a narrow muddy creek. It is a decidedly undramatic place, revealing little of the past. It looks a bit like a moonscape, and it is tempting to say that it looks ruined.

This is a natural place, though, shaped by the creeks that still manage to flow through it, and by the extreme seasons of the Yukon basin. It is also a profoundly cultural place, shaped by the work and technologies of unearthing gold. Gold was and is here by nature. Its value to those who mined it was cultural, rooted in economic and social value that gave gold complex meanings. Standing in that place, with morning fog hanging gently over the gulches, it is difficult to tell where nature stops and culture begins, where the line is between the powers of the natural world in shaping this place, and the powers of gold and gold mining. That this place is a creation of history, though, of both nature and human action together, is clear.

It is even more clear, when I stand in the research room at the Yukon Archive, and open a large musty volume labelled "creek book." This volume, it turns out, is another way to journey to that same foggy place above the Klondike. This is the book of one of

¹Alfred "Mac" McMichael letter, June 19, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive, Whitehorse, Yukon Territory [hereafter Yukon Archive]. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive.

those creeks, Eldorado, the book in which Yukon Territory officials recorded miners' claims to the banks and benches along and above the creek. The most important place in the book is halfway through, at dead center. Here they recorded the Discovery Claim, the first gold claim on that creek. This claim was placed in the middle so that claims below discovery, downstream from that point, could be recorded on pages moving backwards from the center. This left the rest of the book, toward the back, for claims upstream from discovery. Turning the pages of the Eldorado creek book backward and forward from Discovery, I can once again walk up and down the banks of the creek, but this time seeing the names and dates of claimants and their legal transactions.

Moving up and down the creek in these pages, it struck me again that, here, too, the creek was both natural and cultural, though in the pages of the book, more cultural. In the book, there was no water or mud, no rocks, scraggly brush, no sun or fog or crisp, autumn air. But the creek book is an extraordinary cultural representation of a creek at a series of moments in the past. Here was a creek, defined not by its source or watershed, not by its volume or the direction of its flow. Here was a creek defined from and by one central point, the point at which miners first discovered yet another element of the natural world, gold. Here was a creek understood in terms of gold, managed in terms of gold, divided and owned in terms of gold. This book was very much a cultural construction of one creek, a cultural reading of a natural place. It gives us a glimpse of the relation between a natural place and the human understanding of that place. In doing so, the creek book shows us again the difficulty of finding the line between nature and culture.

This is an environmental history of the Yukon/Alaska gold rush. As such, it takes

as its subject the material elements of that event, the creeks, gravel, mud, water, wood, flour, and fruit that humans brought together in pursuit of the central element: gold. I use the material stuff as a tool to explore the ways in which nature and culture meet, and the line between them blurs. I argue that it is nearly impossible to find or maintain the line between nature and culture in this, or any, historical event. It is impossible to keep these human categories of thought separate, for everywhere in the gold rush that nature appeared, human culture appeared as well. Where we usually see nature--in physical elements like gold; in extractive industries like gold mining--this history seeks culture. Where we usually see culture--in political discourse, in cities, in social life--this history seeks nature and the natural.

Everywhere that humans worked and lived during the gold rush, in Alaska, the Yukon and beyond, there was nature. This nature was not just a primordial or savage nature, though Yukon miners certainly encountered wildness. Neither was this nature confined in one place, on the gold creeks themselves, or on the trails or rivers. This nature existed every place that miners went, and in some that they never saw. There was nature all along their journeys to and from the North. There was nature in their labor, in the rapids they ran, in the gravel they unearthed, in the trees they harvested to burn through permafrost, and to fuel steam engines. There was nature in Seattle, in the sacks of flour that lined the streets as gold miners flocked off of railroads onto north-bound steamers. There was nature in the wheat fields that produced that flour. And there was nature in the gold, whether it was in the ground, or hidden in a coffee tin, or deposited at the Seattle assay office.

None of that nature would be part of this history, however, were it not for the ways in which humans understood and used it, gave it meaning and value, put it in motion, and ultimately transformed it. Everywhere that miners encountered nature, they carried meaning and value and use: culture. There was culture first and foremost in gold, understood and valued as the most precious substance in the earth. Humans valued gold within a specific 19th-century American cultural discourse of money, economic principles, and political power. There was culture not only in the miners's desire for gold, but also in their desire for productive labor in the earth at the end of a period of intense industrialization. There was culture in the work itself, in wages and the division of labor, in the seasonality of permafrost mining, in the economics of Chilkoot packers and winter dog sleds, in the wheat and apples and potatoes grown throughout the West to feed miners. There was also culture in Seattle, where you might expect it, in the organization and re-distribution of the commodities flowing into the city on railroads, and out on ships to Alaska and the Yukon. In the gold itself, in the creeks that held the gold, in the rivers, towns, and trails, and in Seattle, nature and culture came together in an indivisible chaotic mixture.

Why tell stories about chaotic mixtures of nature and culture? In the usual representations of American history, the East stands for culture and the West for nature. Such representations are obviously inadequate, as much recent work in Western history has gone out of its way to show. But what happens when we go further, to write histories in which nature and culture, West and East, are thoroughly intertwined? The Yukon/Alaska gold rush offers such a history, because gold and gold mining contain such

powerful mixtures of nature and culture, and because the event itself is about the intertwining of West and East. The presence of gold along the Yukon River drew gold seekers from all over the United States and the world. Through the work of gold mining, transportation, and supply, those miners forged a new set of economic and cultural connections between this western place and the industrialized economy of the United States, both East and West. The city of Seattle in turn became a key economic center, a gateway city. It organized the flow of people, merchandise, food, and gold between East and West, North and South. These connections had consequences, for the northern environment, for native peoples, for Seattle, and for the miners themselves. They transformed Yukon creeks from local places into peripheral places, places linked to and dependent on outside economic centers like Seattle by virtue of the natural resources they held--in this case, gold. The Yukon/Alaska gold rush is thus part of the larger story of the linkages formed between East and West, and among Western places, with the expansion of market capitalism.

Another reason to tell stories about nature and culture is that such stories bring a new perspective to the event itself. In this history, I define the Yukon/Alaska gold rush to include low-technology placer mining on both sides of the U.S./Canadian border between 1896 and roughly 1900. The rush focused on the Klondike, but gold prospectors and miners had been moving back and forth across the border seeking gold since the 1880s, and continued to do so after the Bonanza discovery. In mining, commerce, and transportation the Yukon River defined the event and miners treated the Yukon River corridor between the Klondike and the sea as a single gold-mining region. The natural

world was much the same on either side of the political border, and miners on either side of the line were more unified in their common struggles with the natural environment than they were divided by national identities. The exception with regard to the natural environment was the Nome rush of 1900. There, the relative ease of beach mining and summer ocean transportation made both mining and supply different tasks, and thus somewhat of a different story. I focus then on interior mining along the Yukon at Canadian sites including the Stewart and Klondike Rivers, and at American sites downriver at Circle City, Rampart City, Fourth of July Creek, and others.

This gold rush presents other problems of definition. It is an event in both Canadian and American histories. It unfolded largely in the Yukon Territory, but was populated predominantly by American miners and suppliers, at least at first. Historians have treated the event differently within the two broader national narratives. This dissertation is an American history--that is, a history of the United States--and as such assumes all of the biases inherent in such a project: a bias toward U.S. American participants, U.S. American sources, U.S. American meanings, and the ultimate significance of the event for Alaska and other U.S. American places. Such biases weaken the project in some ways, but the American emphasis also brings a new focus to the gold rush's meanings in Alaskan and American history. Terrence Cole, who has written extensively on gold mining at Nome and Fairbanks, said recently that in Alaskan history, the gold rush was practically the moment at which time began.² Though Alaska and its peoples had a history before 1896, the gold and gold miners of the 1890s made Alaska

²Terrence Cole talk, March 8, 1997, University of Washington Libraries.

part of the world in a new way. They connected Alaska, and thus the Yukon, firmly to the United States economy, and thus made Alaska and the Yukon part of a fast-growing industrial giant.

A third reason to examine the blurring of nature and culture in the gold rush, is that such a history counters older, powerful stories that accept "nature" and "culture" as monolithic, separate categories. The gold rush produced some gold, but its more lasting legacy outside of the Yukon and Alaska included Jack London's novels and short stories, which have a cultural resonance and popularity that outweighs general knowledge of the gold rush itself. What we know of the Klondike/Alaska gold rush more often than not comes from him, and the images we carry reflect the basic narratives he created. In Call of the Wild (1903) and White Fang (1906), London sent his protagonists (two dog/wolves: Buck and White Fang) on complementary journeys. Buck journeyed from South to North, out of civilization and into nature in the northern wilderness; White Fang came North to South, out of that wildness, into civilized peace and light. Though London made no claims to an historical argument, these stories established two opposing forces: wolf and domesticated dog; the wild and the tame; wilderness and civilization; North and South; nature and culture. London's nature was physically located in Alaska and the Yukon, his culture and civilization at home, in California.

London brought this nature/culture dichotomy to life through a brilliant metaphor. Buck, "an unduly civilized dog" was kidnapped from his Santa Clara, California home, and bundled by train to Seattle to be sold to Klondike gold rushers headed north. He "had been suddenly jerked from the heart of civilization and flung into

the heart of things primordial." Through stages of "decivilization" and the "going to pieces of his moral nature," Buck regressed into his true wild nature and emerged a wolf.

[E]ach day mankind and the claims of mankind slipped farther from him. Deep in the forest a call was sounding, and as often as he heard this call...he felt compelled to turn his back upon the fire and the beaten earth around it, and to plunge into the forest....He was a killer, a thing that preyed, living on the things that lived, unaided, alone, by virtue of his own strength and prowess, surviving triumphantly in a hostile environment where only the strong survived.

Buck "became a thing of the wild."

White Fang, on the other hand, three-quarters wolf by blood, was born in a Yukon wolf den, but ended up a loving household guardian on a California ranch. He, too, passed through several stages on his journey. Tamed by an Indian family, and then sold to cruel miners, he became "a dog that was rather wolfish," menacing the gold miners' dogs, "fresh from the soft southern world." White Fang "was the Wild--the unknown, the terrible," and these other dogs feared him, because he "stood for terror and destruction." A kind American saved him from the dog-fighting ring, and took him home to Santa Clara, California. There, White Fang learned to play with the children, and to distinguish in his hunting between chickens and jackrabbits, thus "qualifying himself for civilization." Still, the "Wild...lingered in him and the wolf in him merely slept." White Fang's master came under threat from an escaped criminal named Jim Hill, a "ferocious man...a human beast...best... characterized as carnivorous." White Fang attacked the intruder and saved the day. Badly injured, the dog "straight from the Wild" survived--and

took a new name: Blessed Wolf.³

London's stark dualities have shaped our histories of the Klondike/Alaska gold rush. According to his narratives, humans in search of gold moved out of civilization into a savage environment. Gold miners journeyed into nature in the north because gold pulled them, acting as a natural force. Buck made his forced journey into wildness because of gold. "[T]he ancient song surged through him...and he came because men had found a yellow metal in the North...." In that North, wild nature brought out a wilder human nature that combined toughness and physical strength with ruthless savagery, violence, self-interest, and greed. Like Buck, London implied, miners journeyed into their own human natures. They lost themselves to the darkness, the wildness, and the void. If they survived, the return to civilization restored their full humanity.⁴

No matter how compelling, London's stories ultimately fail the Yukon/Alaska gold rush as an historical event, for the same reason that the Eldorado Creek Book seemed so striking. Nature and culture are not so easily divided. London created a geographical gulf between them, putting nature in Alaska and keeping culture in California, but such a separation was and is itself cultural, a product of the American

³Jack London, The Call of the Wild and White Fang, in Novels & Stories (New York: Library of America, 1982), 15, 21, 77-78, 195, 206, 269, 277. Together, these stories reflected London's broader social agenda. Human nature was wild and savage, but human beings were products of their social environment. A wolf in the wild became wild; in loving hands, cared for, he became strong and loyal, but tame. Jim Hill, mistreated and savaged all his life, became a savage human, himself wolf-like. London inscribed his social message on specific environments, however. Even if wildness were possible in any environment, he tended to tie it to "uncivilized" natural places.

⁴London, 21-23.

romanticization of nature that proved so strong at the turn of the century, and remains strong today. That separation did not hold; nature and culture together pervaded every place and activity throughout the gold rush, and it was impossible for miners to move "out" of either of them, or to physically journey between them. They did journey between California and the Yukon, between Boston and the Yukon, between South and North, East and West. It would be possible to narrate these as journeys into and out of nature, but this dissertation presents instead a set of journeys and labors within nature and culture, a messy interweaving of the human and the non-human. Such a mongrel narrative--part wolf and part dog--leaves room for the wild in the human, and the human in the wild, and for greater range and complexity in the ways in which we define either category. A miner named Tom Boldrick hinted at such complexity while prospecting on the Stewart River, a Yukon tributary south of the Klondike. He recorded a "dreadful night" in his diary. "[W]e saw men this night loaded with packs on their backs going scooting through the brush like wild animals in their mad rush for a claim. [O]ne feller was halted by a large Cinnamon bear who made him give the road which he done gracefully."⁵ Here gold miners acted like "wild animals" in their quest for a rare yellow metal given the highest cultural value. Yet they were confronted in their efforts by an actual wild animal. Jack London's narratives of the gold rush began either in savagery or civilization. This history begins and ends with gold, for few other natural substances carried quite so much cultural weight in the late nineteenth century.

⁵Tom Boldrick Diary, July 3, 1898, Vertical File MS, Klondike Miners, University of Alaska Fairbanks Manuscripts and Archives, Fairbanks, AK [hereafter UAF Archive].

Chapter 1: "As Good as Gold": Nature and Culture in the Currency Battles of the 1890s

For Americans in the "Gilded Age" gold carried a lot of meaning. That meaning derived from a long history of thinking about gold, money, value, and labor in western society. These meanings spilled out in the political arena, but also in gold rushes, particularly the Alaskan gold rush which followed hard on the heels of the most heated debate over the meaning and value of gold in American history. Both the gold rush and the infamous political debates about gold and silver bared the contested border of nature and culture in American social and political life, and in the environment itself.

Gold money occupied a powerful place on that border between nature and culture. Gold coins were problematic objects. They had a dual identity. They were both gold and coin, a cross between commodity and symbol, between value and representation of value. Gold came from nature, but its forms, uses, and value came from human culture. That value was rooted in the complicated process by which human beings divide up elements of the physical world according to categories of use and value. Americans (and others) designated gold a commodity of great worth, and a monetary standard. They did not acknowledge those designations as cultural, however. Some Americans in the 1890s believed that gold's value was natural, created by God or nature. Economists, politicians, writers, businessmen, workers, and miners, often in contest with each other, naturalized gold's value and everything that went with it: gold currency, the gold standard, and even gold mining. Human beings, the story went, had a universal attraction to and desire for gold. The human drive to rush out and wrestle it from the earth occurred by nature, like an epidemic disease called "Klondike fever" or "gold fever." Gold's value and allure

worked according to natural laws, outside the realm of culture and history.

In the twentieth century, historians have continued to portray gold rushes as ahistorical events. They unfolded at great distance, far from "civilization," close to "nature." They remained, according to historian Paula Mitchell Marks, "essentially the same from year to year and place to place...outside history...."¹ In setting the context for the Yukon/Alaska gold rush, historians mention the depression of the 1890s, and little else. People were desperate; the economy was stagnant. Americans blamed a lack of gold for the economic woe, and believed that an increased gold supply could only help.² Given the attractions of real and instant wealth, rushing off to the Yukon seemed a sensible, even natural, thing to do. Gold was on everyone's mind anyway. It was, as Pierre Berton termed it, "the magic word of the nineties."³ The rest was not so much history, as nature.

In Gold Seeking, a recent cultural history of the 1850s gold rushes in California and Australia, David Goodman agrees that mining histories fail to "see the need to ask how the gold rushes were understood at the time, as though it were the most natural thing that men should leave all that was valuable to them in one part of the world, to seek for

¹Paula Mitchell Marks, Precious Dust: The American Gold Rush Era, 1848-1900 (New York: William Morrow, 1994), 15.

²Pierre Berton, Klondike: The Last Great Gold Rush, 1896-1899 (Toronto: McLelland & Stewart, 1958; rev. ed., 1972), 94-95.

³Berton, Klondike, 94.

precious minerals in remote regions...."⁴ The familiar explanations for gold seeking, greed, lust, and madness, naturalized events by ascribing them to "elemental" human passions. "One of the tasks of cultural history," he responds, "is to de-naturalise events." "It was not human nature which led men to seek for gold," he continues, "but a set of socially constituted ideas...."⁵

One of the tasks of environmental history is, or should be, to ask how and why historical events or processes were naturalized in the first place. To unravel the naturalization of gold, it is necessary to ask why humans perceived gold's value and function as natural. There are plenty of clues. The naturalization of gold was at the center of the American debate about gold in the 1890s, and that debate leads directly to the broader history of gold's place in the political economy of the United States and other nations. That history, the history of the naturalization of gold, gold money, and gold mining, begins with a basic question: Why did gold have value, and how was that value constructed by different human groups across time? That initial question prompts others: What was money, and where did it get its value? Where did gold money, in particular, gets its value, and how was that value connected to nature? What in fact, is gold, by nature and in nature? Americans in the 1890s fought over these questions, but the fights reached back much farther in time. That longer history is crucial to the American naturalization of gold money and gold mining in the 1890s. Most importantly for the

⁴David Goodman, Gold Seeking: Victoria and California in the 1850s (Stanford: Stanford University Press, 1994), xiv.

⁵Goodman, Gold Seeking, xiv.

gold rush of 1897-1900, the final round of this battle over the value of money produced a loud and popular contest over the meanings of gold and gold mining, and over who should have the power to act on those meanings. Americans did not merely dwell on gold in the 1890s. They believed that their economic lives depended on gold, be it good or bad, so they fought over gold, at length, and in numbing detail.

Gold and Monetary Theory: Antecedents

Both sides in the American currency battle used weapons from the past, older arguments about money, value, and nature. Over previous centuries, economic thinkers took two basic positions on the value of metal money: 1) A coin had value because of the value of the metal from which it was fashioned, a value which was natural, or intrinsic; and 2) A coin had value because of the power of the social group, the state, or the monarch to declare it valuable. The first position defined a gold coin as primarily gold, a natural substance, a commodity with market value. The second position defined a gold coin as primarily a coin, a social tool, a store and container of value. Hence the dual identity of gold as both natural and social, nature and culture. Aristotle was among the earliest economic thinkers to make these two sides clear. Some people, he noted, valued coins as the natural essence of wealth, equating money with value. Others, he wrote, "maintain that coined money is a mere sham, a thing not natural, but conventional only...because it is not useful as a means to any of the necessities of life...."⁶ These same

⁶Quoted in Fik Meijer and Onno van Nijf, Trade, Transport, and Society in the Ancient World: A Sourcebook (New York: Routledge, 1992), 12.

two positions, natural/intrinsic value and social value, appeared again on opposing sides of the American currency debates after the Civil War. One side looked at a metal coin and saw precious metal and natural value; the other side saw a useful symbol and social value.

From Thomas Aquinas to John Locke to gold standard advocates of the 1890s, some economic thinkers took the first position, arguing that the value of a coin was determined by the market value of the metal it contained. They believed this for a reason. In Aquinas's time, European princes coined gold and silver, marking the coins with a standard value that rested on the power of their decree. The problem with this regal value was that the monarchs systematically devalued coins. They reduced the amount of silver or gold in the coins, kept their face values the same, and pocketed the difference. As a result, people ignored the extrinsic, social, face value of the coins, and instead judged their worth to be the market value of the metal they contained. This lower value prevailed, and with it the practice of giving coins value, officially, according to their metal content.⁷ Aquinas and other philosophers agreed that debasements of coins were immoral acts, and that debts should be paid in coins with the same weight, the same intrinsic, or natural value, as the money borrowed.⁸

As these errant princes demonstrated, the dual identity of metal coins--that they could be given value as coins (social value) or as metals (intrinsic value)--caused real

⁷Arthur Eli Monroe, Monetary Theory Before Adam Smith (Cambridge: Harvard University Press, 1923), 25-27.

⁸Monroe, Monetary Theory, 28-29.

economic havoc. People holding coins could move them back and forth between their two identities, between coin and metal, depending on which identity reaped larger profits. If a coin was worth more as metal than as coin, its intrinsic value greater than its social value, then the person holding it melted it and sold it as a commodity. This was particularly dangerous in bimetallist nations, which coined both gold and silver. There a coin's dual nature could wreak tangible monetary damage, as currency entrepreneurs took either gold or silver coins out of circulation to cash in on their commodity value.

This conundrum of disappearing currency had a long history, which would come to bear once again in the American nature/culture skirmishes of the 1890s. Gold was always more valuable than silver, but their relative values varied with the rise and fall of supply and demand. Gold could be twelve times as valuable as silver, creating a silver-gold ratio of 12:1. If the gold supply increased, and gold's value decreased, the ratio fell. An ounce of gold was still worth more than an ounce of silver, but not as much more. This of course complicated the value of coins. Since intrinsic value was determined by the market values of the metal, the relative value of gold and silver coins shifted along with those market values. This was a recipe for monetary instability.

As early as the 14th century, economic writers including Nicole Oresme and Henry of Ghent noted that the shifting ratio of value between gold and silver caused coins of one or the other precious metal to vanish from circulation, leaving the other to serve as currency. An anonymous 14th century source described the problem of not "adjusting gold and silver" in pithy terms: "[S]ometimes silver eats gold, sometimes gold eats

silver."⁹ In the late 16th century a British economist, Sir Thomas Gresham, codified the problem as "Gresham's Law," which stated simply that "bad money drives out good." In a bimetallist economy, the more plentiful, or cheaper, currency always replaced the scarcer, more valuable metal, especially when different nations set different silver-gold ratios. This made one or the other metal more valuable across national borders than at home.

Most of the strongest statements of money's intrinsic value, and of its social/cultural value, emerged from national currency crises brought on by the effects of Gresham's Law. In the late 1690s, certain British Parliamentary factions tried to change the value of English shillings because people were slipping across the channel to trade silver, which was worth more as bullion in France than as coin in England, for gold. People also clipped silver from silver coins, melted the shavings, and traded that for gold in Europe.¹⁰ This left London with a battered and dwindling supply of money. In a clear statement of the socially created value of money, certain parties in the government moved to cast new silver coins with less silver in them, in order to maintain a functional level of currency. This meant that it did not matter how much silver was in the coins. The government could legislate the value of coins in the national interest, no matter the weight of the coin or the value of the metal.

⁹Quoted in Monroe, Monetary Theory, 37.

¹⁰Joyce Oldham Appleby, "Locke, Liberalism, and the Natural Law of Money," Past and Present 71 (May 1976), 45-46. See also Glyn Davies, A History of Money: From Ancient Times to the Present Day (Cardiff: University of Wales, 1994), 244-247. Davies discusses Locke's 1695 Short Observations and Further Considerations Concerning Raising the Value of Money, 245-246.

John Locke disagreed. He argued that the gold and silver coins had intrinsic value. That value came from the "unique esteem" that human beings had for gold and silver, and that esteem for precious metals was universal, inherent in both human nature and the nature of gold and silver.¹¹ "[A] Law cannot give to Bills that intrinsick Value, which the universal consent of Mankind has annexed to Silver and Gold."¹² People used gold and silver as money not by choice, but because intrinsic value made it possible for the metals to measure and store the value of other commodities.¹³ The value of money came from its being made of precious metal, not from legislation, and not from government. In the United States in the 1890s, William McKinley and the Republican Party made a similar argument. In their campaign for the gold standard, they tapped Locke's liberal ideology and his succinct position of the natural value of money.

In the 1890s, Populists and others argued against the intrinsic value of gold money, and they too drew on older arguments. Locke's arguments won the British silver debate in the 1690s, but the opposing point of view drew plenty of articulate support. Following Aristotle's clear view of the issue, Nicholas Barbon contested Locke's ideas, writing in 1696 that money did not in fact have to be gold or silver, as long as it was made of something stable in value and difficult to counterfeit.¹⁴ Money served a

¹¹Appleby, "Locke, Liberalism," 49-50.

¹²Appleby, "Locke, Liberalism," 66-67. The intrinsic value argument continues to this day among gold standard advocates. See Anna J. Schwartz, "Alternative Money Regimes: The Gold Standard," in Money in Historical Perspective, ed. Anna J. Schwartz (Chicago: Chicago University Press, 1987), 370.

¹³Appleby, "Locke, Liberalism," 48-49.

function. It was socially created and useful, and its value came from public authority. It was not itself valuable. "Things have no Value in themselves," Barbon wrote, "it is opinion and fashion brings them into use, and gives them a value."¹⁵

The Labor Theory of Value

In the 18th and 19th centuries economists from Cantillon to Marx formulated the labor theory of value, which complicated the two basic positions on the value of gold and money. In 1755, the French writer Cantillon wrote that "[t]he Price and Intrinsic Value of a Thing in general is the measure of the Land and Labour which enter into its production."¹⁶ Adam Smith agreed, writing in 1776, that "Labour is the real measure of the exchangeable value of all commodities....Labour alone...never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared."¹⁷ The labor theory did not do away with the idea of natural value, or the idea of social value. It mediated between them and in doing so it proposed new answers to the question of gold's value.

By making labor the ultimate source of economic value, labor value economists strengthened natural value as a theory, making it more complex and interesting. They

¹⁴Monroe, Monetary Theory, 86-87.

¹⁵Appleby, "Locke, Liberalism," 52, 55.

¹⁶Eric Roll, A History of Economic Thought, 4th ed. (London: Faber, 1973), 123.

¹⁷Adam Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, ed. R.H. Campbell and A.S. Skinner. vol. 1 (Oxford: Clarendon Press), 25-26, 29.

expanded the idea of gold's intrinsic value to include labor, which they deemed a similarly natural source of value. Classical economist David Ricardo wrote that "[g]old and silver, like other commodities, have an intrinsic value, which is not arbitrary, but is dependent on their scarcity, the quantity of labour bestowed in procuring them, and the value of the capital employed in the mines which produce them."¹⁸ Labor value theories connected the economic value of gold to the whole process of industrial production, removed it from the fuzzier, instinctive realm of the human attraction to yellow metal. Marx denied that exchange value could be an inherent quality, the physical property of a thing itself. "So far," he wrote, "no chemist has ever discovered exchange value either in a pearl or a diamond."¹⁹ The value was natural, but not chemical. It came from work. This was the natural value inherent in any commodity, the value of the labor required to produce it.

Marx and other theorists of the labor value thus affirmed the natural value of gold, but it was not Locke's natural value. At the same time, they recognized that money, no matter what it was made out of, had a different kind of value, a social value. True value came from labor, and money represented that value. A unit of money, a coin, was a unit of labor, a store of labor value, distinct from the work itself. Money was crystallized labor value; it made it possible to move and exchange labor, and thus value, through space and time. John Stuart Mill and Marx affirmed that money was a social tool and a

¹⁸Quoted in Maria Cristina Marcuzzo and Annalisa Rosselli, Ricardo and the Gold Standard, trans. Joan Hall (New York: St. Martin's Press, 1990), 42.

¹⁹Karl Marx, Capital: A Critique of Political Economy, trans. Ben Fowkes (New York: Random House, 1977), vol. 1, 177.

social creation. Marx wrote of the real distinction between "the specific natural form of the commodity gold" and money, or "the universal equivalent form" of value.²⁰ That form could be made of gold, or any other substance. The commodity gold became money through social action, by social consensus.²¹ Using an apt governmental analogy, Marx wrote that "[c]oins are like uniforms worn at home but taken off when gold and silver appear on the world market."²² He realized that gold and silver had a dual identity, that they could slip in and out of uniform at will.

The labor theory of value affirmed certain aspects of both natural value and social value. It forged connections between them, but only partially solved the paradox of the dual identity of gold and silver coins. Gold--and silver for that matter--had natural value rooted in the labor of production. But gold and silver money were social agents, in uniform, with social purpose. This recognition of the dual identity of gold coins raised its own set of questions. If gold's value came from the labor required to produce it, then how was the value of that labor to be measured? How were economists to get a grasp on the value of labor as captured in the gold itself? Furthermore, if labor was the natural measure of the value of gold bullion, was it also the measure of value for a gold coin? If gold had natural value, and money had social value, what kind of value did a gold coin have? How was it to be measured? Gold coins still contained nature and culture. Which determined their value?

²⁰Marx, Capital, 162-163.

²¹Marx, Capital, 183-184.

²²Marx, Capital, 222.

Labor Value and the Labor of Miners

The labor theory of value raised these complicated questions with regard to natural value and social value. Apart from general economic theory, labor value also brought up the problem of the actual value of precious metals as determined by the actual labor that produced them. One of Locke's contemporaries, William Petty, offered an early indication of why this question proved vexing. Petty tried to figure out how to measure actual labor value. To start, he asked how much corn was actually worth, in labor (natural) value, as expressed in money. In response, he proposed that it was worth "as much as the money which another man producing money (i.e. the money commodity) can save during the same time above his expenses of production."²³ To illustrate, he proposed that one man mined silver for a certain amount of time. After feeding himself during that time, he took the silver that remained to a field of corn. The corn produced by a farmer, in the same period of time, would be worth the amount of silver the miner had left. Both had labored the same amount. If the farmer produced 20 bushels of corn, and the miner brought 20 ounces of silver, then a bushel of corn was worth an ounce of silver, measured essentially by labor time.²⁴ This was its natural, labor-based value, or price.

Petty's example indicated that this system could never work. The value of gold and silver (or corn) might come from the labor needed to produce them, but the economy could not function if that labor had to be measured and compared every time someone

²³Roll, Economic Thought, 104-105.

²⁴Roll, Economic Thought, 104-105.

wanted to exchange gold or silver for another product. There was no direct way to translate the value of one kind of labor into the value of another kind of labor. They were incomparable. This was why money came in handy in the first place, to make labor values usefully comparable. In practice, the market value of gold and silver did not stem directly from the specific time and physical effort necessary to dig them out of the ground. That time and effort gave gold natural value, but natural value differed from their market value, which was determined by other forces, such as scarcity, supply, and demand.

John Stuart Mill confirmed this idea through empirical observation. In 1852, following the gold rushes in California and Australia, Mill observed that it did not really matter how much it cost to produce gold. The costs were fairly low, given the primitive technology of gold mining. The market price of gold really depended on the quantity of gold produced and the total supply of gold available in the market, no matter what it cost to produce gold.²⁵ In the real world of the 19th century economy, labor value, or natural value, had very little to do with what gold was worth. In theory gold's value was based on the labor of gold miners. In practice that labor did not seem to have much affect on the value of gold itself, because human beings went ahead and did the labor whenever it seemed worth doing, and no matter how much labor was required. This raised an important question: Why didn't the law of supply and demand, when it raised the price of gold, also increase the value of the labor that yielded gold? One answer was that most of

²⁵John Stuart Mill, Principles of Political Economy, ed. W.J. Ashley (1848; repr. London: Longmans, 1940), 503-504.

that labor yielded little gold. Due to the drastically uneven distribution of gold in the earth, much of the miners' labor was poorly rewarded. This broke any direct linkage between the value of gold and the value of the labor of gold mining. Miners did not seek gold because it paid them well to do so. There were other forces at work. They sought gold, the argument went, when the natural laws of supply and demand dictated that it was worth doing for the economy as a whole, part of a larger natural process of maintaining the stable value of precious metals. In the labor theory of value, the labor of gold mining was naturalized.²⁶

Gold Debates in the United States

When the gold standard arose as an important issue in the United States after the Civil War, the problem of the dual identity of gold money reared its head again. It brought American economic thinkers and common citizens to this border between nature and culture. Did gold money have natural value, because it was gold? Or social value, because it was money? As in Aquinas's time, and in Locke's, there were real implications involved, pertaining to the currency supply. As Americans faced each other across this border, they wielded age-old arguments about intrinsic and social value, while drawing as well from the labor theory of value. The American currency crisis was uniquely

²⁶The idea that people would mine for gold when the economy needed gold, and that its value stemmed from adjustments in the total supply, was the general economic belief of the late 19th and early 20th centuries. See David Kinley, Money: A Study of the Theory of the Medium of Exchange (New York: Macmillan, 1904), and Amasa Walker, The Science of Wealth: Manual of Political Economy (1866; Philadelphia: Lippincott, 1872).

American, but it echoed with the longer history of gold, money, and labor in the western world.

In 1792, following the sage advice of Alexander Hamilton, the young United States established a bimetallic monetary standard based on a silver-gold ratio of 15:1. The treasurer coined dollars in both silver and gold. The gold dollar contained $24 \frac{3}{4}$ grains of gold, grains being an age-old system of measuring the weight of precious metals, based originally on grains of wheat. The silver dollar contained fifteen times that weight, or $371 \frac{1}{4}$ grains of silver. The two different dollars were equal in value, each worth one dollar, and thus interchangeable.²⁷ The mint produced coins of various denominations, from ten dollars to a half cent, in gold, silver, and copper, gold for the higher denominations, silver in the middle range, copper for pennies. Each coin contained the amount of metal equal in value to the denomination of the coin.²⁸

Hamilton recognized that the key to a successful bimetallic standard was keeping the coinage ratio, 15:1, as close as possible to the market ratio of silver and gold, i.e. the relative values of silver and gold bullion on the open market, where they were bought and sold for uses other than coinage. There were, as always, two different markets for gold and silver. A miner could sell them to a jeweler or artist, or to the U.S. Mint or to the mint of another country. The problem lay, as it had since the 14th century, in the

²⁷Edwin Walter Kemmerer, Gold and the Gold Standard (New York, 1944, repr. New York: Arno Press, 1979), 61-63. For general source on currency history in the United States see Herman E. Krooss, ed., Documentary History of Banking and Currency in the United States, (New York: Chelsea House, 1969).

²⁸Kemmerer, Gold and the Gold Standard, 67.

inevitable divergence between the coinage ratio of value and the market ratio of value. After Hamilton's plan went into effect at 15:1, the market ratio rose to 15.6:1. At the same time, the coinage ratio in France stood at 15.5:1. This meant, as always, that it was possible to take gold dollars to a buyer on the open market, or to France, melt them down, sell the gold bullion for silver dollars, and make a profit in the process. The raw gold in one dollar was worth \$15.50 in silver in France, so it was possible to make fifty cents on each gold dollar. Given this opportunity, people with gold coins took them out of circulation in favor of silver, and gold disappeared from the American monetary system.²⁹

To rectify the situation, the Treasury in 1837 shifted the ratio to 16:1, well above France's 15.5:1. As a result, it became more profitable to sell gold to the U.S. Treasury than to the French, and gold flowed back into the United States to be re-coined as dollars. This event, coupled with the gold rushes of the 1850s and the resulting fall in gold's value in relation to silver and other commodities, made gold the dominant form of currency at mid-century. Silver disappeared from circulation.³⁰ The Civil War generation rarely saw a U.S. silver dollar. The country was on a de facto gold standard, and all currencies, paper or coin, were ultimately backed by gold.³¹

In the 1860s, however, manufacturers of everything from guns to clothing

²⁹Kemmerer, Gold and the Gold Standard, 69-72.

³⁰Kemmerer, Gold and the Gold Standard, 78-80; Richard Timberlake, Monetary Policy in the United States: An Intellectual and Institutional History 2d ed. (Chicago: University of Chicago Press, 1993), 46; Walter T.K. Nugent, Money in American Society, 1865-1880 (New York: Free Press, 1968), 6-12.

³¹Arthur Nussbaum, A History of the Dollar (New York: Columbia University Press, 1957), 81-83.

expanded production to meet the new demands of the Civil War. They drew on existing gold reserves to finance this expansion. The gold supply in banks dwindled and with it the amount of money in circulation.³² Under pressure to finance the Union Army, Congress went off of Hamilton's original bimetallic standard and issued paper money. Between 1862 and 1879, these paper dollars, or greenbacks, were backed not by gold or silver, but by government promises. There was no direct tie between the U.S. dollar and precious metal.³³ The greenback dollar's value was determined by international exchange. If you took a greenback dollar to the bank you would get less than a dollar's worth of gold, if you could get any gold at all.

By 1865, when greenbacks had done their job in seeing the Union to victory, these paper dollars exchanged for less than fifty cents worth of gold.³⁴ Because of this inflation, a greenback was a much "cheaper" dollar than a gold dollar. Certain elements of the Reconstruction Congress, led by Treasury Secretary Hugh McCulloch, wanted to end the disparity between the values of the two dollars. To do so, they pushed the national economy back toward a gold standard, toward resumption of a metallic basis for

³²Irwin Unger, The Greenback Era: A Social and Political History of American Finance, 1865-1879 (Princeton: Princeton University Press, 1964), 14.

³³Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States (Princeton: Princeton University Press, 1963), 7, 25, 85; also on general history of American monetary policy and gold/silver debate see Robert A. Degen, The American Monetary System: A Concise Survey of Its Evolution since 1896 (Lexington, MA: Lexington Books, 1987); Timberlake, Monetary Policy in the United States; and Schwartz, ed., Money in Historical Perspective.

³⁴Friedman and Schwartz, Monetary History of the United States, 26-27.

the value of all currency. There were half a billion dollars in greenbacks, and the government had to figure out a way to make them "as good as gold."³⁵ The plan was to reduce the number of greenback dollars in circulation, while increasing the amount of gold in the U.S. Treasury. By lowering the number of dollars and increasing the amount of gold, the two would slowly converge. When they met, and each dollar was backed by a dollar's worth of gold, the nation would be on a gold standard. Making a greenback dollar "as good as gold," or resuming the payment of gold for paper currency, became known as Resumption.³⁶

The choice of gold as the metal of resumption made sense, not only because of the higher value and general superiority attributed to gold, but because no one had seen much silver in several decades. The silver:gold ratio had for years favored silver as relatively more valuable. Gold was actually the cheaper metal, due to the plentiful new supplies from California and elsewhere.³⁷ This meant that people sold their silver dollars on the open market, and used gold specie when they needed metal money. Silver was such a non-issue that Congress, in 1873, passed a law ending coinage of silver. This switched the country to a de facto gold standard, which the government expected to take effect

³⁵Unger, Greenback Era, 16.

³⁶Timberlake, Monetary Policy in the United States, 88-89.

³⁷A silver dollar was worth \$1.03 or more in gold before 1873. Allen Weinstein, Prelude to Populism: Origins of the Silver Issue, 1867-1878 (New Haven: Yale University Press, 1970), 9-10. On cheapness of gold, also Timberlake, Monetary Policy in the United States, 121-123.

once the economy achieved full resumption.³⁸

Gold resumption was contested from the start. In the late 1860s those in favor of continued use of unbacked greenback currency, or "soft money" advocates, began to fight the gold standard plan. Some of them organized under the auspices of the Greenback Party to argue that paper money, and the inflation that went with it, maintained high prices and helped the common people, the "producing classes," who produced goods and commodities for market. The focus of the debate over resumption shifted dramatically in the early 1870s. Financial disaster struck in the Panic of 1873. Falling prices, bankruptcy, and business failures galvanized farmers and other producers in opposition to hard money.³⁹ Nevada silver miners then struck rich lodes in the Comstock. The rising tide of the silver supply caused silver prices to plummet. As a result, the relative values of silver and gold switched places, and silver became the cheaper, more plentiful metal. Anyone with gold coin or gold bullion profited by selling it on the market and using silver dollars as currency instead.

Unfortunately, there were no silver dollars. Silver producers and soft money advocates pushed to resupply the nation with silver dollars, and to base resumption on both silver and gold dollars. This would return the country to Hamilton's currency standard. The bimetallist cause met with a stumbling block, however, when the public

³⁸Friedman and Schwartz, Monetary History of the United States, 114-115. On the achievement of resumption in 1879, see also Schwartz, "Alternative Money Regimes," in Schwartz, ed., Money in Historical Perspective, 365.

³⁹On issues of prices see Timberlake, Monetary Policy in the United States, 166-67, 183. On Panic of 1873, Timberlake, chapter 8.

"discovered" that Congress, in the 1873 currency act, had indeed ended the government's coinage of silver. As a result of this "Crime of '73," greenbackers, silver producers, and other soft money men attacked Republican resumptionists as having criminally deprived the nation of a valuable source of hard currency, a source that, if freely coined by the U.S. Treasury, would increase the money supply and counter the deflationary effects of Resumption.

Greenback inflationists saw in silver both the natural value in the silver bullion itself, and the social value in the more abundant and thus more democratic currency metal. They latched onto this wronged metal, silver, as the inflationary money of choice, and the soft money cause shifted away from paper money toward free coinage of silver as the basis of its economic program. Silver as a political issue thus drew both from the inflationist philosophy and producerism of greenbackism, and from silver's status as a wrongly abandoned precious metal, a hard money in its own right.⁴⁰ For true greenbackers this was a major compromise, born of political expedience. As a lesser, but still precious, metal, silver had natural value which contaminated the pure social value of paper money. Contaminated or not, however, silver expanded to contain both kinds of value, personifying the dual identities of metal money. As a hybrid money, silver was deemed better able to withstand the political vicissitudes of the ensuing years. The soft

⁴⁰Nugent, Money and American Society, 195-200. Friedman and Schwartz, Monetary History of the United States, 48-49, 113-114. For in-depth discussion of the silver issue in Western states and the role of the West in the silver debates, see Robert W. Larson, Populism in the Mountain West (Albuquerque: University of New Mexico Press, 1986). For general role of silver and greenbackers in politics of resumption, Timberlake, Monetary Policy in the United States, 113-115.

money ideology, based on the social value of money, became a silver ideology, and a growing political force. The specific politicians and party alliances shifted over the course of the next few decades, but the fundamental issues and the central question of the natural and the social value of money, remained consistent from the 1870s on.⁴¹

Discontent with gold standard resumption was rooted in part in the steady fall in prices, which began in the 1870s and continued through the boom and bust cycles of the rest of the century.⁴² On a very simplified, hypothetical level, one can see the power of the reasoning that fueled producer discontent. If American farmers produced 100 bushels of wheat in an economy which had 100 dollars in circulation, then each bushel sold for one dollar. If Resumption-driven policy makers reduced circulation to 60 dollars, then each bushel sold for 60 cents. At the same time, production increased and farmers produced 200 bushels in an economy with 60 dollars in circulation. Then each bushel sold for 30 cents. A farmer who borrowed cash to buy land and equipment in an economy with 100 dollars in circulation, had to pay back that debt in an economy with 60 dollars in circulation. He had to pay debts with an income of 30 cents a bushel that he

⁴¹The major works on the currency issue, including Nugent's Money in American Society and Unger's Greenback Era, which are important sources here, focus on the debates of the 1870s. Both make clear that the fundamental ideologies expressed in that decade remained consistent in the debate of the 1890s. Many of the same writers were active in both periods, and many pamphlets written in the 1870s were distributed widely in the 1890s. For further work on the 1870s as a "seedtime" for silver issues, see Weinstein, Prelude to Populism.

⁴²Friedman and Schwartz, Monetary History of the United States, 8, 97. For concise analysis of the price trends and deflation in relation to the money supply, see Hugh Rockoff, "The 'Wizard of Oz' as a Monetary Allegory," Journal of Political Economy 98 (August 1990), 741-745.

had incurred while making one dollar a bushel. Producers felt squeezed by monopolies, banks, corporations, money, Resumption policy, and the gold standard. They staked their political and economic power on combatting those forces because they believed that their futures depended on the battle.⁴³

Of course, the Treasury Departments of the 1870s reduced currency circulation from 100 dollars to 60 dollars because the U.S. Treasury held only 60 dollars worth of gold. Farmers, silver producers, and soft money men believed that if the Treasury would open its doors and allow 40 dollars worth of silver in, then the nation would be back to having 100 dollars in circulation again, backed by gold and silver together. Prices would then rise. Pure Greenbackers, on the other hand, advocated a straightforward issue of 100 dollars of paper money, guaranteed by the government and not backed by metal at all. The question was, what should determine the number of dollars in circulation? The amount of gold, or gold and silver together? The amount of wheat produced? And where should the answer to that question come from? Should natural law, the government, or the people themselves determine the direction of economic policy?

Gold standard promoters at the time had every reason to predict economic disaster

⁴³Economists with a more skilled understanding of the way the economy grew after the Civil War have since argued that a bushel of wheat selling for 30 cents was not the social evil that the farmers perceived--though the perceptions were real and deeply felt. Scholar argue that it was not the contraction of the currency supply alone, but rather a combination of factors, that caused price declines, including the increase in production of the post-war industrial expansion. The economy simply grew faster than the money supply. Lower prices hurt producers, but they benefited consumers--a group that included farmers and urban workers. But falling prices in relation to a gold-based dollar were real, and had real repercussions for many of the Americans who expressed mounting discontent with monetary policy. See Unger, Greenback Era, 49.

should the inflationary programs of silverites and greenbackers take effect. Their predictions were quite sound, given the long-standing operation of Gresham's law, the tendency of the more valuable of two metals to disappear under a bimetallic system. In 1879, the market ratio of silver to gold was 18.39:1. In 1896 it was 30:1. By 1897 it was 34.20:1.⁴⁴ A program to coin silver and gold at a ratio of 16:1, as demanded by the Populists, posed a real risk in the face of those market ratios.⁴⁵ It meant that anyone could take a dollar's worth of gold bullion, and sell it on the open market for nearly two silver dollars. In 1897, that figure surpassed the two dollar mark. Free coinage of silver meant the certain disappearance of gold currency. The gold resumption forces, who had struggled since the mid 1870s to gain enough gold reserve to back all U.S. currency, and thus to sustain a viable gold standard, knew that the gold reserve would disappear under a return to unlimited bimetallic coinage.

This seemed even more clear in the wake of the Sherman Silver Purchase Act of 1890. The growing political strength of silverites forced this compromise, in which Treasury Secretary John Sherman purchased a set amount of silver each month, and paid for it with silver-backed notes. Anyone with such a silver treasury note could redeem it with the government for either silver or gold, at a time when a silver dollar was worth

⁴⁴Kemmerer, Gold and the Gold Standard, 88-90. On ratios also Timberlake, Monetary Policy in the United States, 171.

⁴⁵The Republican Party worked hard to make this clear, giving specific figures and explanations in economic and campaign literature. See Republican Congressional Committee, Republican Campaign Text Book (Washington, D.C.: Republican Congressional Committee, 1896), 67-68, 72-73. See also Gene Clanton, Populism: The Humane Preference in America, 1890-1900 (Boston: Twayne Publishers, 1991), 124.

half a gold dollar on the market.⁴⁶ Under the Sherman Act, silver holders redeemed their silver for gold, and the nation's gold reserve fell dangerously low. The Treasury did not have enough gold on hand to cover its own payments.⁴⁷ Goldbugs blamed this threat to the gold standard for the panic and depression of 1893; silverites blamed the gold standard. Following his 1892 election, Grover Cleveland convened Congress to repeal the Sherman Act, which it did in October 1893.⁴⁸ "The government cannot make its fiat equivalent to intrinsic value," charged Cleveland, "nor keep inferior money on a parity with superior money."⁴⁹

The fight over the resumption of the gold standard, having peaked the first time in the late 1870s, thus reached new heights with the Panic of 1893. From there, it gathered strength for a final bout in the Presidential campaign of 1896. In this last battle, the age-old problems of gold and silver money, of intrinsic value and bimetallism, emerged with unprecedented political strength. The familiar two positions remained, one side arguing for the natural value of money, the other side for money as a socially created tool, one side for gold, the other for silver. While silver shifted across the nature/culture border to represent money with social value, gold's value and the gold standard were naturalized even more convincingly. By the summer of 1896, when William Jennings Bryan gave his

⁴⁶Kemmerer, Gold and the Gold Standard, 95-96. Unger, Greenback Era, 350, 362.

⁴⁷Friedman and Schwartz, Monetary History of the United States, 104-106. On outflow of gold see Timberlake, Monetary Policy in the United States, 169.

⁴⁸Kemmerer, Gold and the Gold Standard, 99-100.

⁴⁹Timberlake, Monetary Policy in the United States, 170-171. On Cleveland and the repeal see also Clanton, Populism, 123.

famous speech denouncing the "cross of gold" and gained the Democratic nomination for President, gold carried all of the meanings, good and bad, that went with natural value, and silver carried all of the meanings, good and bad, that went with social value.⁵⁰

When Bryan took on McKinley over nature and culture in money, the fight reflected increasing divisions in party politics, sectional rivalry, religious belief, morality, and economic theory. By 1896, Gold vs. Silver was also Republican vs. Democrat and Populist, East vs. West, Urban vs. Rural.⁵¹ At a certain level, however, it remained a battle over the meanings of nature and the natural, over whether the solutions to economic chaos came from the free play of natural laws or from the social powers of political action, from nature or culture. If gold's value was natural, and if money was governed by natural laws, then those laws were responsible for stabilizing the economy, and the government should allow those laws to operate freely. If, on the other hand, gold's value and all value were socially constituted, then social institutions and choices were required to regulate the economy in the interest of all of the people. Here again was John Locke and his liberal ideology of natural silver coins, contrasted with the power of the law to adjust a coin's value in the broader social interest. As historian Michael

⁵⁰ For the text of Bryan's speech, see Arthur M. Schlesinger, jr., ed., History of American Presidential Elections, 1789-1968 (New York: Chelsea House, 1971), vol. 2. For the 1896 election, sources here include Arno Press, comp., Gold and Silver in the Presidential Campaign of 1896 (New York: Arno Press, 1974); Paul W. Glad, McKinley, Bryan, & The People (Philadelphia: Lippincott, 1964); Stanley L. Jones, The Presidential Election of 1896 (Madison: University of Wisconsin Press, 1964).

⁵¹ On Populism, money, and the election see Lawrence Goodwyn, Democratic Promise: The Populist Moment in America (New York: Oxford University Press, 1976); and Clanton, Populism.

O'Malley writes in his analysis of the currency rhetoric of the 1870s, on one side "money's value was intrinsic, governed like the value of gold by the laws of nature rather than society...." But, O'Malley continues, "if money and value come from culture, from civil authority, then civil authority could create value at will."⁵² The powers of civil authority came to hinge, once again, on where the value of money lay. As historian Gene Clanton writes, "The dispute ultimately involved the whole question of what money is, how its value should be determined, and what the role of government should be in determining its value and quantity."⁵³

In the 1896 election, the political and economic interest group in favor of the gold standard included most Republicans, academic economists, bankers, merchants, and Protestant clergy, as well as plenty of popular writers, and, in general, more Northerners than Southerners, and more Easterners than Westerners. That group also included, albeit without fervor, Republican presidential nominee William McKinley. These goldbugs wanted to link directly the amount of money in circulation in the economy to the amount of gold held in reserve. They took this linkage between gold and money and called it natural, or rather they defined it as a law of nature. Its value was created by God or nature, rather than by human societies. Historian Irwin Unger quotes a source that

⁵²Michael O'Malley, "Specie and Species: Race and the Money Question in Nineteenth-Century America," American Historical Review 99 (April 1994), 377.

⁵³Clanton, Populism, 121, 124. On the currency debate as a case study in the growth of the central government in the 19th century, see Richard Franklin Bensel, Yankee Leviathan: The Origins of Central State Authority in America, 1859-1877 (New York: Cambridge University Press, 1990).

declared the gold standard to be "God's will and the nature of things."⁵⁴ Goldbugs naturalized the value of gold and its status as the only acceptable basis for American currency.

These arguments about gold money rested on a few basic tenets: the intrinsic, or natural value of gold; the natural laws of supply and demand; the necessity of monetary stability and its importance for moral and social stability. Gold was, first of all, the ideal and divinely ordained substance with which to coin money because of its intrinsic value and the stability of that value. Intrinsic value was a slippery cultural concept.⁵⁵ Prior to the 18th century and the advent of the labor theory of value, it had carried the quite literal meaning that gold's value was really part of its physical nature, a divine and ahistorical creation. Some 19th century thinkers continued to hold to that view. Senator John Sherman argued that the value of gold was "as immutable as the law of gravitation."⁵⁶

Gold standard economists who wrote more systematically about the topic rooted intrinsic value not in gold's chemical structure or in a divine plan, but in the stability of its value. That stability was still natural, though, grounded in scarcity and the labor theory of value. One such economist, David Wells, wrote the popular goldbug pamphlets The Silver Question and Robinson Crusoe's Money in the 1870s. In these didactic economic tracts, he explained that two basic laws of nature, the law of scarcity, and the law of

⁵⁴Unger, Greenback Era, 124, 129, 144.

⁵⁵Michael O'Malley provides a more sophisticated and thorough discussion of the intrinsic value of gold as a 19th century issue in "Specie and Species."

⁵⁶Nugent, Money and American Society, 185.

supply and demand, in tandem with the labor theory of value, together insured the intrinsic value of gold. A bi-metallic standard, in contrast, he wrote, was "a violation of the natural laws of supply and demand."⁵⁷

As Wells explained it, gold was naturally scarce and, because of its beauty, permanence, and other qualities, always in demand. Due to its random distribution in places difficult of access, it required a lot of work, "vast labor," to extract it from the earth.⁵⁸ That work was only worth doing when the market value of gold was high. This occurred when demand was high, which was when money was scarce. With all those conditions in effect, it was worth it for people who usually did other jobs to turn instead to the vast labor of gold mining. When, Wells explained, the demand for gold in the economy was met, gold's value fell enough to send workers back to other jobs, which, with more gold in circulation, were once again productive. If the economy again outgrew the money supply, and demand for gold again rose, workers would go back again to find more gold.⁵⁹ This natural see-saw of supply and demand, gold mining and other labor, kept gold's value remarkably stable. Just as John Stuart Mill had described it previously, gold production and gold's value remained, through the cycling of supply and demand, in stable relation to each other. This stability, shaped and controlled by natural laws and the

⁵⁷David A. Wells, The Silver Question: The Dollar of the Fathers versus The Dollar of the Sons (New York: G.P. Putnam's Sons, 1877), 37. On Wells, see Jones, Presidential Election of 1896. Another key economist on the gold side of the debate was J. Laurence Laughlin whose text, The History of Bimetallism in the United States (New York, 1897) laid out the principles supporting a gold standard.

⁵⁸Wells, Silver Question, 41-42.

⁵⁹Wells, Silver Question, 15.

nature of gold, made gold the best commodity on which to base currency. Nature controlled the quantity of wealth, and of money, through its meting out of gold in the earth, and nature controlled the rate at which humans sought it out.⁶⁰

Scarcity and supply and demand were not the only natural laws that gave gold intrinsic value. Wells saw the gold standard as the product of the laws of evolution as well. Over time, he explained, human societies progressed from the primitive stages of barter to the use of shells or other commodities as money. As they experimented with different monetary policies, wrote Wells,

people, as it were by instinct, found out that a given quantity of gold represented more permanently a given amount of...human labor...than any other substance. And...gold...had further acquired two other attributes, which fitted, above all things else, to serve as money; namely...that it had become a measure or standard of value...and second, that its value or purchasing power was so constant and continuously inherent in itself...."⁶¹

The gold standard emerged atop the pyramid of evolution through the survival of the fittest. Gold's nature made it money.

In the detailed heart of intrinsic value there were gold miners hard at work, but not as agents of their own destiny. They produced gold according to natural laws of supply and demand, as cogs in the machine of natural law. Wells's theory rooted the

⁶⁰Wells, Silver Question, 37-38. Historian David Goodman writes that in the 1850s, during the California Gold Rush, this idea of natural laws operating to draw the labor of miners and thus adjust the gold supply was an emergent mode of thought, but not yet dominant. He quotes Thomas Hart Benton as saying "It is no matter who digs up the gold or where it goes. The digger will not eat it, and it will go where commerce will carry it." Goodman, Gold Seeking, 28.

⁶¹David A. Wells, Robinson Crusoe's Money (1876; rev. ed. New York: Harper, 1896), 42-43.

intrinsic value of gold in its scarcity and stability, and connected both to the great difficulty of finding and mining gold. He naturalized not only gold's value, but also the gold supply and the labor that produced it. Naturalization did not mean that there were no humans involved in giving gold value. There were: the workers who responded to the scarcity of gold by finding it and getting it out of the ground. The labor that went into mining gold was part of its natural value, and thus part of the natural gold standard system.

Gold standard advocates saw more in gold than the natural value and the survival of the fittest. They saw soundness and honesty, both financially and morally. Americans in the Gilded Age adhered to values of "progress, stability, and materialism," and they filled gold with that broader spectrum of cultural meanings.⁶² It was a sign and source of wealth, a bulwark of civilization, and an embodiment of moral values.⁶³ A U.S. Senator from Nevada, speaking in 1894, declared of gold that "So exact a measure is it to human effort, that when it is exclusively used as money it teaches the very habit of honesty. It neither deals in, nor tolerates false pretenses. It cannot lie, it keeps its promises to rich and poor alike."⁶⁴ Gold supporters saw in gold a divine mandate, and a moral platform from which to attack paper money and the free coinage of silver. Nature and God were

⁶²John Higham, "The Reorientation of American Culture in the 1890s," in The Origins of Modern Consciousness, ed. John Weiss (Detroit: Wayne State University, 1965), 27.

⁶³Unger and Nugent make clear in their studies of the 1870s money debates that gold contained a wide range of Protestant moral and economic meanings, above and beyond its status as naturally valuable and naturally money.

⁶⁴Republican Campaign Textbook (1896), 317-318

somewhat interchangeable for many goldbugs. God had intended gold for use as money. Its value stood as a divinely fixed point against which all other value could be measured. Gold stood not only for sound economic practice, but for proper religious values as well.⁶⁵ Protestant preachers and writers led the attack against the heresy of paper money, inflation, and silver in Christian newspapers and at the pulpit.⁶⁶ To refuse the gold standard with an "artificial" bi-metallic standard was "warfare against the beneficence of the Almighty."⁶⁷ The New York Christian Advocate claimed that "atheism is not worse in religion than an unstable or irredeemable currency."⁶⁸

Hard money believers recognized that greenbacks had been a necessary evil during the Civil War, but preached in the decades that followed that paper, because it had no intrinsic value, transgressed both economic and moral laws. Money not based on gold, they argued, had no real value. David Wells and other goldbug writers ridiculed the idea that paper money could represent value, having no intrinsic value itself. Wells called this the notion of ideal or imaginary value, that something it took no labor to produce could contain value. He used Thomas Nast's cartoon, showing paper milk ("This is milk by act of Congress") offered to a rag doll ("This is a baby by act of Congress"), to

⁶⁵Nugent, Money and American Society, 180-181; Unger, Greenback Era, 143-144.

⁶⁶Unger, Greenback Era, 123-124. On the moral discourse concerning money, work, honesty, especially within the Horatio Alger canon, see Carol Nackenoff, The Fictional Republic: Horatio Alger and American Political Discourse (New York: Oxford University Press, 1994), 146-161.

⁶⁷Wells, The Silver Question, 37.

⁶⁸Unger, Greenback Era, 121.

illustrate his outrage at the idea of money ("This is money by act of Congress"), and thus of value, as a socially created token standing in for something not present in the money itself.⁶⁹ Value could not be created out of thin air, by governments printing paper money or minting an overabundance of silver. Even Mark Twain jumped on the bandwagon in the 1870s, satirizing western speculators who declared "What we want is more money...Talk about basing currency on gold; you might as well base it on pork. Base it on everything!"⁷⁰

Paper or unstable silver money was thus a false creation, capable of being destroyed or devalued by the same social forces that brought it into being. Such money was corruptible in value, and formed a corrupt basis for society. To subvert the laws of nature with such valueless money was to threaten the very basis of civilization.⁷¹ It would according to William McKinley, "derange all existing values."⁷² If silverites and greenback radicals pulled the gold standard out from under the economy, they would destroy the foundation of values, in every sense. In opposition to that threat, gold became a symbol of stable social values, a check on discord, a force for order and reason in turbulent economic times. The argument about values, both monetary and moral, was

⁶⁹Wells, Robinson Crusoe's Money, 98-100.

⁷⁰Mark Twain and Charles Dudley Warner, The Gilded Age: A Tale of To-day (New York, 1873), vol. 2, 128.

⁷¹Goodwyn, Democratic Promise, 11-12; Nugent, Money and American Society, 189.

⁷²William McKinley, "Letter of Acceptance of Republican Party Presidential Nomination, 26 August 1896," Official Proceedings of Eleventh Republican National Convention (Pittsburgh: James Francis Burke, 1896), 151.

rooted in the symbol of gold, and through gold in nature, a nature created with certain purposes by a Protestant God.

Silverites and Populists contested the goldbugs' naturalization of gold and gold money. They took a stand for the long-held view that money and money's value were both social creations brought into use to facilitate the representation and exchange of real value, real wealth. Money was a set of counters, and gold was no more naturally money than silver or paper or seashells. It had no intrinsic value outside of the value set by people acting out of common interest. Tradition, superstition, custom, and law made gold into money, not Nature or God.⁷³ In one of the more successful silverite pamphlets Ignatius Donnelly called gold a "yellow accident," "a mere conventional symbol, with no value save what the common consent of society gives it."⁷⁴ In this pamphlet, two men, a farmer and a banker, argued the issue while journeying from Chicago to Seattle. They were joined by a young woman, whose naivete on the monetary question made her a sounding board for their arguments. The innocent woman declared, "I thought gold was the real wealth." Donnelly's farmer denounced this as "poisonous nonsense."⁷⁵

⁷³Goodwyn, Democratic Promise, 370-371.

⁷⁴Ignatius Donnelly, The American People's Money (Chicago, 1896; repr. Hartford: Hyperion, 1976), 133. On Donnelly see Jones, Presidential Election of 1896, 32-33.

⁷⁵Donnelly, American People's Money, 133. As many undergraduates are aware, several historians have argued that L. Frank Baum's The Wonderful Wizard of Oz is an allegory of the Populist Movement of the 1890s. Hugh Rockoff's 1990 article argued that the story is actually more specifically an allegory of the monetary debates, or at least contains numerous details that are direct references to the specifics of the monetary debates. See Hugh Rockoff, "The 'Wizard of Oz'." The word Oz, for instance refers to Ounce; the tornado is the free silver movement; the witch wears silver shoes, etc.

Populists and silverites denied the natural value of gold money, but nature and the natural played a key role in their definition of real wealth. They defined productive labor, rather than gold, as the natural source of wealth and value. They naturalized that labor in opposition to the goldbugs' naturalization of gold. While Goldbugs argued that nature created value in the form of gold, Populists believed that the real wealth came from labor and nature together, from the producers who brought forth abundance from the limitless resources of the land. Value and wealth did come from nature--but not as gold. Value came the soil, from the labor of people who worked with nature to produce goods for market, goods that fulfilled real human needs for sustenance. Soft money advocates celebrated the virtue of producers and the true source of wealth--the products of the soil. They denounced the "money power," those who manipulated wealth, but did nothing to produce it.⁷⁶ Populists themselves wanted to manipulate the money supply to re-calibrate the moral economy of the nineteenth century. They were not theorists, they were interests. The belief that labor created wealth had less to do with economic price theory than with, in the words of one historian, a "stubborn moral affirmation of the indispensability of those who toiled and produced."⁷⁷

This producer ideology was at the heart of Populism, and spilled over into silver ideology as well. It was in part a legacy of greenbackism, but also grew out of long-held strains of Jeffersonian agrarianism, which ascribed a "supreme economic function" to

⁷⁶Nugent, Money and American Society, 195. On agrarian West, South, and Midwest in the election, see Jones, Presidential Election of 1896, 90.

⁷⁷Daniel T. Rodgers, The Work Ethic in Industrial America, 1850-1920 (Chicago: University of Chicago Press, 1974), 213-214.

rural workers who produced for the good of society.⁷⁸ It embraced farmers first and foremost, but often extended to artisans, urban laborers, and producers of all kinds. Wealth came from people and nature, not from banks and their stores of gold. As Donnelly put it, it came from "the farmer who makes twenty bushels of wheat grow where one is sown...or the workman who converts the growing forest trees into houses...for they produce those things without which civilization could not endure. But the man who brings money into the country simply makes slaves."⁷⁹

In Donnelly's view, and that of other silverite writers, the gold standard, in limiting the amount of money available to represent the abundance of commodities in the nation, constricted the supply of money available to those who created true value, the producers. Hard work and a fertile earth did create real wealth but the money supply, restricted by dwindling gold reserves, could not adequately represent and distribute that wealth. The real, natural source of wealth was stymied by the gold standard, the money power's unnatural limit on productive labor. Donnelly described it as "an artificial interference with natural conditions."⁸⁰ Donnelly invented a metaphor of a child that, when small, was fitted with an iron band around his waist. As he naturally grew, the iron band failed to expand, and squeezed him to death, unable to accommodate his

⁷⁸Nugent, Money and American Society, 28. For broader view of producer ideology and labor theory of value in the U.S., see T. J. Jackson Lears, "The Concept of Cultural Hegemony: Problems and Possibilities," American Historical Review 90 (June 1985), 574-77.

⁷⁹Donnelly, American People's Money, 183.

⁸⁰Donnelly, American People's Money, 93.

expansion.⁸¹ And in a famous illustration, showing all of the gold in the world in one unimpressive cube in the Chicago wheat exchange pit, William H. Harvey, author of Coin's Financial School, questioned whether such a paltry chunk could possibly fuel the fastest growing economy in the world.⁸² The gold standard stopped the creation of real wealth; the gold standard "crie[d] out to the earth, 'stop multiplying they seed' to...man 'stop thy toil', to the wild beasts 'you are safe in your fastnesses, for man shall advance no more.'"⁸³

Donnelly's hyperbolic rhetoric was not without basis in reality. Gilded Age economic thinkers realized that there was rarely enough currency circulating in the country to purchase the abundant crops that farmers produced each season. They noticed that the annual demands for currency ran in cycles, attuned to the natural cycles of planting and harvest. Demand for cash reached its highest during and after harvest, when farmers moved their crops to market, and buyers sent back to banks for currency, and banks sent to New York for currency. Each year saw an annual flow of crops toward the

⁸¹Donnelly, Gabriel's Utopia, in George Brown Tindall, ed., A Populist Reader: Selections from the Works of American Populist Leaders (New York: Harper & Row, 1966), 110. Other document collections provide equally rich material include Vernon Carstensen, ed., Farmer Discontent, 1865-1900 (New York: Wiley, 1974); and Arno Press, comp., Gold and Silver in the Presidential Campaign of 1896.

⁸²William H. Harvey, Coin's Financial School, ed. Richard Hofstadter (1894; repr. Cambridge, MA: Harvard University Press, 1963), 87. On William Harvey, see Jones, Presidential Election of 1896, 32-33. William Jennings Bryan referred to this illustration in his speeches, stressing the unlimited abundance of agricultural products in contrast with this paltry cube of metal. See Schlesinger, ed., History of American Presidential Elections, vol. 2, 1858.

⁸³Donnelly, American People's Money, 92.

city and money away from the city. This caused panic over whether there was enough money to cover the incoming crops.⁸⁴ Two "natural" cycles, one based on crop harvests, and one based on the amount of gold that represented the value of those crops, failed to match up, creating financial imbalances. Some economists asked themselves whether the money supply might be made more flexible, and less natural, in order to handle the seasonal give and take of farm production without crisis.⁸⁵

The silverites' refutation of gold's natural value, combined with their naturalization of productive labor together constituted a strong statement of the social value of money. Money, they argued, was a social tool, rather than a natural entity. It did not matter what form it took, paper or metal, so long as it allowed all elements of society to benefit and be productive.⁸⁶ Through a plentiful supply of greenback dollars backed by government decree, rather than a shrinking supply of gold dollars, labor and capital could share in the wealth produced, rather than allowing capital to hoard a scarce supply of metallic money at the expense of the masses.⁸⁷

Donnelly and other Populists and silverites constructed gold as evil, as the money of the rich, the oppressors. Wealth came from nature through productive labor in the form of wheat and timber, not from gold. Silver was acceptable because it came from

⁸⁴Unger, Greenback Era, 66.

⁸⁵See Edwin Walter Kemmerer, "Seasonal Variations in the Relative Demand for Money and Capital in the United States: A Statistical Study," (Washington, D.C.: National Monetary Commission, 1910).

⁸⁶Nugent, Money and American Society, 51.

⁸⁷Nugent, Money and American Society, 39-41.

productive labor in silver mines, not from banks. It served the interests of real wealth, of wheat and timber. Populists and silverites linked wealth and nature, but through labor, not gold. Gold did not come from nature, nor from God. It came from banks, and was controlled by bankers who did no productive labor.⁸⁸

In 1896, the gold standard interests pitted the natural value of gold and money against the opposition's belief in the social value of money, nature against culture. Gold won. Following the election of William McKinley, and the world-wide increase in the gold supply from South Africa, the Yukon, and Alaska, the United States in 1900 officially adopted a gold standard currency system. In doing so, Americans joined most European nation states in bringing this naturalization of gold to its most powerful point in history. The money supply in many nations, and money itself, were directly tied to gold. Money and gold were identical. In the United States, between 1900 and 1914, wrote one historian of the gold standard,

to say an ounce of gold was worth \$20.67 was like saying a foot was twelve inches long; \$20.67 was, in reality, an ounce of pure gold put up in the form of money....⁸⁹

On to the Yukon

The American battle over the nature and culture of gold included both a celebration of gold money and a powerful attack against gold money. It thus formed a somewhat paradoxical context for the gold rush that followed. The silverites and

⁸⁸On general issues in election, and moral importance on both sides, see Jones, Presidential Election of 1896, 338-340

⁸⁹Kemmerer, Gold and the Gold Standard, 104.

goldbugs lambasted each other, in pamphlets, speeches, and cartoons, for their wrongheaded ideas about money, value, and wealth. Both, however, thanks to the labor theory of value, found something natural in gold and in gold mining. For goldbugs, it was the intrinsic value of the gold itself, based in natural laws of scarcity, supply, and demand. Those arguments naturalized the work of gold mining not only as the source of gold's value, but also as an integral part of the natural economic mechanism that governed the value of gold and assured its stability. And those arguments celebrated gold as an unquestionable source of goodness and wealth.

This naturalization of gold mining, however, was not limited to the goldbug side. Both sides used arguments about nature and the natural to justify their cause; both cried "nature" as a solution to economic crisis. In a strange twist, American producers, in their arguments for productive labor, built a point of view that celebrated gold mining as mining, rather than as gold. They made this form of productive labor a source of goodness and wealth as well. As a gold-rush old timer explained to Bob Marshall years after the gold rush, "gold mining is the cleanest living you can make. You're not robbing any one or hurting any one to get it. You're just taking it clean from nature."⁹⁰ Gold mining, at its most simplified, was productive labor that produced gold, or was supposed to produce gold. No matter which side you were on in the battle over money, believing in gold as the natural source of wealth and value, or in producerism as a natural source of wealth and value, gold production fit into your vision. Contesting visions of the natural

⁹⁰Robert Marshall, Arctic Village: A 1930s Portrait of Wiseman, Alaska (1933; repr. Fairbanks: University of Alaska Press, 1991), 157.

overlapped in a way that made the idea of mining for gold meaningful to both sides.⁹¹

From Aristotle to Locke to William Jennings Bryan, the debate over the dual identity of gold money answered the question of how and why humans naturalized gold in the first place. But the cultural work of naturalizing gold proved a constant challenge. The argument for the social value of money, at different historical points including the currency debates of the 1890s, mounted strong attacks on gold's natural power. In the 1896 Presidential election, this attack constituted a partial break in gold's cultural power. With the Klondike/Alaska gold rush, however, gold and gold mining again moved to the forefront of American thought. It began the process of naturalizing gold anew, providing a final blow against the silver forces and their attempts to de-naturalize gold. Gold and gold mining again took up a powerful position on the border between nature and culture.

⁹¹As the gold rush did not begin until after the 1896 election, the miners did not express opinions about the outcome of that contest between McKinley and Bryan. Some of those that remained in the north through November 1900 did, however, mention the second contest between the two candidates in that year. On October 23, 1900, Lynn Smith wrote home that "We will hold a mock election here but think Bryan has the upper hand." Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, Rasmuson Library, University of Alaska Fairbanks Manuscripts and Archives, Fairbanks, AK. Hunter Fitzhugh wrote earlier in the year that politics were scarcely part of life in the gold camps. But according to Fitzhugh's analysis, most miners were westerners, aligned with McKinley's expansionist tendencies, but with with Bryan's producer ideology of free silver. "I can't realize that there is any politics," he wrote on July 5, 1900. "We have nothing to do with it here, but from the way my letters and those of my friends sound, Bryan is the man. The trouble is that his non-Imperialism doesn't fit the West, and his free silver doesn't dovetail with the East. Most of my friends here are western men, and they are all Bryan men." Robert Hunter Fitzhugh Collection, Box 2, University of Alaska Fairbanks Manuscripts and Archives, Fairbanks, AK.

The Rampart City newspaper Alaska Forum on Jan. 17, 1901, on the other hand, sounded vehemently goldbug. "The silver issue was and is dead; the late campaign demonstrated further, that the United States is to progress. Nations like individuals cannot stand still; they must advance or deteriorate."

Chapter 2: Escape, Gambling, Wages: The Industrial Work of Gold Mining

When gold miners left their homes for the Eldorado of the North, they packed considerable cultural baggage along with the dead weight of woolen clothes and rubber boots: they carried cultural understandings of gold and of work. Some went in search of gold alone, but others also sought productive labor as gold miners, and thus came weighed down with strains of producer ideology and the American work ethic. But just as the 1890s currency debates changed the context of gold, so industrialization had transformed the methods and meanings of work.

Like gold, work sits on the border between nature and culture, and confounds our efforts to observe that border. Human beings mold and transform the physical world through work, and they also experience that world through their labor. At the same time, human beings build economic and social systems to organize their work, and give shared cultural meanings to that work. No matter how "natural" a pursuit it seemed at the time, the work of gold mining along the Yukon at the turn of the century was shaped by culture as well as nature. Miners' work brought them into intimate contact with the natural world, in ways to be discussed in the next chapter, but gold miners also labored within the context of a modern industrial culture. Their accounts of gold mining lead us in two directions--into the earth which they transformed, and into industrial modes of work.

Though gold rushes often seem to take place outside of society (and outside history), this gold rush was firmly connected to the industrial world. Gold mining began as an escape from industrialized work. It ended up not only as a replication of that work, but also as a heightened example of it, a metaphor for the very nature of modern work.

Some miners believed at the start that in the goldfields they would work as free men and women, and would get their rewards from nature, rather than from bosses or corporations. In addition to unencumbered work and certain wealth, the "poor man's gold rush" offered other remedies--adventure, invigorating physical challenges, a sense of independence and self-determination--to the ills of modern life. The quest for a different kind of work, outside the industrial system, constituted a strain of anti-modern thinking amongst certain gold miners. These anti-modern themes connected gold miners, and the gold rush, to central aspects of the industrial world.

Some of these miners found adventure, hard work, and independence in the course of their northern adventures, and in doing so expressed a clear critique of the industrial world that had failed to provide such satisfactions. Most did not. Most of them, in the actual work of gold mining, recreated the industrial labor system they sought to escape. Over the course of their northern adventures, the miners' attitudes toward mining changed. Their initial hopes and expectations faded as they recognized that gold offered no escape from undesirable kinds of work. Their disillusionment hinged on the realization that gold mining was, for reasons both natural and cultural, very much like industrial work, rather than an escape or reprieve from its pressures. Faced with these truths, miners fell back on the industrial discipline of wage work which constituted a hefty part of their cultural baggage. Their deployment of that culture made the northern gold fields more an integral part of the industrialized world than a distant alternative to it.

"I have cut loose": Escape From Industrialized Work

In 1898, two national events--the Klondike/Alaska gold rush and the Spanish American War--offered fields of action for American men (and women, in the goldfields) who sought relief from poverty and the industrial grind, or who sought, in the words of T.J. Jackson Lears, gravity, purpose, and the bodily testing of work or war.¹ The two events unfolded nearly simultaneously and appeared to attract the same types of participants. John C. Callbreath kept a close eye on northbound miners from his warehouses at Wrangell, Alaska, and his trading posts up the Stikine River. A first wave came through in the late summer and fall of 1897, then another in early 1898. With news of the outbreak of the war, the flood of goldseekers dwindled for a time. Callbreath wrote to a friend of the lull in business in July, 1898. "I suppose the war had a deal to do with it too[,] in calling away the footloose crowd that would otherwise many of them drifted up here."² Americans were attracted to mining and warfare in part because they felt lost, overcivilized, dislocated, deprived of "intense experience."³ They sought relief and escape in a whole range of activities that together constituted what Theodore Roosevelt called the "Strenuous Life." This broad cultural trend found expression in everything from bird-watching and nature walks to college football, boxing, and bicycling.

¹T. J. Jackson Lears, No Place of Grace: Antimodernism and the Transformation of American Culture, 1880-1920 (New York: Pantheon Books, 1981), 302.

²John C. Callbreath letter, Wrangell, Alaska, July 18, 1898, Letterpress Books, vol. 6, Callbreath, Grant, & Cook Papers, Charles Hubbell Collection, University of Washington Libraries, Department of Manuscripts and University Archives, Seattle, WA [hereafter UW MS and Archives].

³Lears, No Place of Grace, 42-47.

Roosevelt's western exploits as a cowboy and big game hunter served as a popular focus for his individual pursuit of "hard and dangerous endeavor."⁴ All of these forms of bodily engagement with a real (or imagined) world offered a remedy for the weightless, unreal existence of industrial life. For the middle and upper classes especially, life in the modern world had been "reduced to the quiet desperation of bureaucratic routine." They longed "to break out of the frustrations, the routine, and the sheer dullness" of their lives and jobs.⁵ They longed for experience and work that seemed real.⁶

Warfare had long served these classes well as a source of authentic experience, physical testing, a sense of self, and relief from boredom, and it would do so again in 1898. By that time, industrialized work was failing to meet those needs, forcing a search for new sources of revitalization, action, and "real life."⁷ The Klondike and Alaska offered just such a new source. Some miners wrote specifically of their choice between gold and war, indicating that they probably would have done one or the other. "[H]ad I been at home very likely I should have gone to the war," Lynn Smith wrote to his sister.⁸ "I believe I had rather go to war than do what I am doing," Jonas Houck of Detroit

⁴John Higham, "The Reorientation of American Culture in the 1890s," in The Origins of Modern Consciousness, ed. John Weiss (Detroit: Wayne State University, 1965), 26, quoting Roosevelt.

⁵Higham, "The Reorientation of American Culture in the 1890s," 27.

⁶Lears, No Place of Grace, 302.

⁷Lears, No Place of Grace, 98-101.

⁸Lynn Smith letter, 31 August 1898, Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, UAF Archive.

declared on hearing of the declaration of war, "but of course the chances of getting money are greater here."⁹

Like Jonas Houck, most miners wanted to get money, and at a certain level the gold rush was about a search for wealth. To fully understand that search, however, we need to look beyond simple greed to the question of how miners expected to get wealth, and why Alaska and the Yukon offered a better place to try to get money. One reason that Klondike gold proved so attractive was that people had run out of viable options at home. The economic slump of the 1890s left people of all classes in dire straits, toiling, in one government official's words, "for a bare subsistence" if they had toiled at all.¹⁰ Unemployment peaked at 18.4% in 1894, but remained as high as 14.5% in 1897, a year after wholesale farm prices bottomed out.¹¹ For thousands of men and women, those conditions severely limited the possibilities of steady work and steady income, let alone anything that could be called wealth.

Gold miners sought more than just wealth, however. Their letters and diaries spoke to other aspirations as well, including the desire for escape from industrial society and the need for hard, productive work. Superficially, these appear to be separate quests, but they were in fact linked. Work and escape might seem antithetical, but when miners

⁹Jonas B. Houck letter, June 30, 1898, Jonas B. Houck Papers, UAF Archive.

¹⁰Samuel C. Dunham, The Alaskan Gold Fields (1898; repr. Anchorage: Alaska Northwest Pub. Co., 1983), 9. This was originally published as "The Alaskan Gold Fields and the Opportunities They Offer for Capital and Labor," Bulletin of the Department of Labor, No. 16 (May 1898), 297-425.

¹¹For economic figures see Hugh Rockoff, "The 'Wizard of Oz' as a Monetary Allegory," Journal of Political Economy 98 (August 1990), 742.

talked about Alaska and the Yukon, the two merged. Escape, it seemed, involved work, and work promised escape from the industrial system because it was honest, independent, varied, self-reliant work--the kind of work unavailable at home. These two goals were not class specific; there was considerable overlap between middle- and working-class miners in their talk of escape and hard work. In the broadest sense, however, middle-class miners tended to see Alaska and the Yukon more as an escape, while working class men and women tended to see the northern goldfields more in terms of productive work.

The thousands of men and women who went north constituted a diverse group. They came from New England, New York, Iowa, Nebraska, Michigan, Wisconsin, Illinois, Louisiana, Texas, Colorado, California, and Washington; they also came from all over the world.¹² By all accounts from reporters, government officials, and miners themselves, Americans constituted at least half and up to three-quarters of the participants, but northern gold drew men and women from many social and ethnic groups. The gold rush drew middle-class clerks and teachers; it drew miners from Colorado and Montana; it drew working-class laborers. But they all tried to leave the industrialized world behind. Some of them quite self-consciously retreated from wage labor in search of nature and freedom.¹³ Others simply needed money. These shared goals and interests sometimes

¹²Henry Dow Banks, "Account of Voyage, ca. 1898," MSS 40, Acc. 82/240, Yukon Archive.

¹³This was in no way limited to the Klondike gold rush, but rather somewhat characteristic of 19th century gold rushes in general. Paula Mitchell Marks, in a comprehensive account of American gold rushes, concluded that some miners in all gold rushes "reveled in the freedom of mining" and that their celebration of their freedom carried "an implicit criticism" of the world they left behind, the noise, artificiality, and inflated standard of living. Paula Mitchell Marks, Precious Dust: The American Gold

masked the differences between miners, but these differences did not completely disappear. Class, ethnicity, gender, and race shaped the individual's experience of the gold rush. A Canadian miner, James McRae, worked with a lot of "Frenchmen", and took one job in the Klondike with two carpenters, one of whom was a "black fellow by the name of Ingills...."¹⁴ The businesses at Grand Forks on Bonanza Creek after the turn of the century included a German bakery, Isaac Levy's clothing store, and a Japanese restaurant.¹⁵ Social, national, ethnic, and racial diversity insured that gold itself represented vastly different things.

Most personal accounts of the gold rush--diaries and letters--come from middle-class miners, educated men and women. Despite originating from a narrow slice of the social spectrum, these records open a useful window on the world of the northern mines, and on the motivations that drew people to the goldfields. Rebecca and Solomon Schuldenfrei left a failing New York garment business to try their luck as miners and restaurant operators in Dawson City, to little avail. Jonas Houck hinted in his diary at being a lawyer, but he was desperate for money to send home to his wife Gertie in Detroit. Hunter Fitzhugh wrote home from Alaska with one basic concern: work. "I will

Rush Era, 1848-1900 (New York: William Morrow, 1994), 372-73.

¹⁴James A. McRae Diary, Oct. 7, 1900, Yukon Archive. Specifics on the population characteristics of gold miners in the Yukon and Alaska are difficult to come by. The 1900 census provides some basics, as analyzed in James H. Ducker, "Gold Rushers North: A Census Study of the Yukon and Alaskan Gold Rushes, 1896-1900," Pacific Northwest Quarterly 85 (July 1994), 80-93. There is little here to shed light on the questions of class, however.

¹⁵James E. Kingsley, "Reminiscences of Grand Forks," MSS 145, Acc. 80/86, Yukon Archive.

certainly stay in another year...but then I know if I were to go home 'busted' or almost so...there will come that problem: 'What next? Where will I get a job? Etc.'¹⁶ Bill Ballou, a railroad clerk from Somerville, Massachusetts, signed on with Boston mining investors because the venture promised "better wages than we are now getting." "I consider it an opportunity of a life time," he added.¹⁷ He jested with his mother about a hunting trophy at home: "When I come back from the K.[londike] with my fifty thousand I shall want that head to decorate my living room...."¹⁸

Middle-class miners like these could not speak for the many different social groups that sought gold along the Yukon, but their writings describe a world that all miners shared, regardless of social differences. The meanings drawn from the diaries and letters of literate American urbanites did not hold true for everyone, but they still shed light on the nature of the work that all gold miners did--regardless of class, race, or nationality--up and down the creeks. Because most gold miners did similar work in similar ways, good pictures of that work emerge from the more selective accounts that come down to us.

One of the first aspects of gold rush social structure that middle-class miners revealed was that in the work of mining, and in appearance, all of the different peoples headed north tended to merge into a homogeneous blur. "It is a great leveler--this Alaska

¹⁶Hunter Fitzhugh letter, July 2, 1899, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

¹⁷William B. Ballou letter, Nov. 5, 1897, William B. Ballou Papers, 1889-1918, UAF Archive.

¹⁸Ballou letter, Jan. 25, 1898.

country," observed Mac McMichael in Dawson in 1898. "The merchant, millionaire, the ox pusher, mule driver, and the ordinary individual who sleds his own outfit over the pass have the same rough and tough appearance."¹⁹ McMichael and others like him celebrated this erasure of class differences. It indicated to them that they had escaped the inequalities of industrial life. Beneath that surface, however, lay two anxieties. First, middle-class men did not want class lines, no matter how blurred, to disappear completely. They did not want to merge permanently with other classes of miners, who seemed to be transient manual laborers. Second, those transient miners revealed to the middle and upper classes that gold mining might yield wealth and adventure, but it was far more likely to yield only hard work, discomfort, and less money than they had made at home. Working among transients, middle-class adventurers realized quickly that gold mining was more industrial labor than independent adventure.

As Mac McMichael noted, physical labor worked as a social leveler. The rough clothing and physical challenges of the trails and lakes insured that men and women of all classes looked the same and did the same work. These appearances could not really disguise the social differences between those seeking money, freedom, and adventure, and migratory workers from the last gold or silver mine seeking another job. McMichael, a small business owner from Detroit, knew that he was different from other miners, and

¹⁹Alfred "Mac" McMichael letter, June 22, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive.

grew anxious that he maintain his own class status. On the steamer from Seattle to Dyea, he noted the homogeneity of appearance that had resulted from everyone adopting Klondike garb in Seattle, and he wrote a letter home asking for a photograph of himself. "I may need it to prove I am not a tough," he declared.²⁰ Seattle photographer Asahel Curtis had his eye on social class as well. He noted in his diary that "Seemingly every degree of the social scale has its representative...."²¹

Once at work in the gold fields, middle-class miners continued to draw clear lines between themselves and laborers who lived from strike to strike. At the Rampart Creeks, Bill Ballou, from Vermont and Boston, enjoyed the friendship of other New Englanders, even an Ivy League lawyer and footballer whose cabin looked like a Yale dormitory. But Ballou also worked with other, more exotic types, whom he described with great relish in his letters home. They included an Austrian named Mike who had come from the Pennsylvania coal fields, a German named Meyers who had been all over the world, a minister, a prize fighter, and a cowboy from Oregon who had been all over the West. "[E]veryone of them," Ballou wrote, had "that everlasting craving for change, travel, and excitement which keeps them on the go and always broke." Like any farmboy turned railroad clerk might, Ballou romanticized the life he observed among these men. "I like this life with these free and careless people any one of whom will take their winter's wages next spring and buck the first gambling table until not a dollar is left...and then

²⁰McMichael letter from Steamer Alliance, March 24, 1898.

²¹Asahel Curtis Diary, Asahel Curtis Collection, UW MS and Archives.

work their way up or down the river to some other camp."²²

Urban middle-class miners had other reactions to social difference along the creeks, however. Mac McMichael worked with transient miners along Fourth of July Creek, but did not envy their unstable way of life. Those lives revealed something of the true nature of mining, something that McMichael and others were in the process of discovering for themselves. Contact with "real" miners made it all too clear that mining was in no way a source of stable wealth, or of a stable way of life. About a third of the men along Fourth of July were migratory mine workers, and they clearly represented, both in the mode and meaning of their work, a different class. "When one sees the number of old miners on this stampede, it does not encourage one to make it a business," McMichael wrote. "Out of ten men in this camp, three have made a business of mining all the way from five to fifteen years.. They are all nearly broke. One has been [in] the quartz mines of Colorado, New Mexico and Arizona. Another has been in Australia, New Zealand and Costa Rica, Patagonia, Brazil and Lord knows where. He had mined within a few miles of Cape Horn and now here he is on the Yukon....Half the men one meets have not enough grub to last through the winter, with but very little money to buy more."²³ Tom Kearney wrote home from Dawson about an Australian miner he met. "...[H]e says he is very favorably impressed with the appearance of this district--and he

²²Ballou letters, Feb. 21, 1902; Dec. 3, 1898.

²³McMichael letter, Fourth of July Creek, July 13, 1898.

has been in many of the mining camps of the world."²⁴ James Cooper referred to a group of miners as the "Leadville outfit," in his diary of November, 1897, perhaps in reference to miners from the Colorado boom town. They had all given up on the mining, he observed, except for one.²⁵ Middle- and upper-class miners reflected on the unsteadiness of mining as a permanent way of life. For those groups, gold mining represented a pathway out of industrial society, but once in the gold fields they nervously sought to locate and re-establish some of the basic social markers of that world.

Although gold rushes are often treated as colorful sidelights to industrializing society, as throwbacks to older ways of life, they stand in much more complicated and interesting relation to the industrial world. The goldfields drew men and women from across the social spectrum of the industrial society, and encompassed the same social attitudes and conflicts at work in that society--including class difference. Industrial society and Alaska can serve as mutual prisms, each revealing the components of the other.

Even as middle-class miners worried over the loss of class distinctions, they consciously thought of themselves as escaping--and thus critiquing--the society that produced those distinctions. Bill Ballou, Hunter Fitzhugh, and others like them struck themes beyond jobs and wages and hopes for great wealth. They expressed discontent with modern urban life and relished the freedom that the gold rush supposedly offered.

²⁴Thomas J. Kearney letter, August 4, 1898, Diaries File, File Collection, Dawson City Museum, Dawson City, Yukon Territory [hereafter Dawson City Museum].

²⁵Diary of James S. Cooper and Associates, Nov. 15, 1897, Diaries File, File Collection, Dawson City Museum.

This group included educated young men and women, professionals, lawyers, physicians, bankers, teachers, local politicians, and small business owners.²⁶ There were also farmers, urban laborers, storekeepers, clerks, and bookkeepers. When Harper's reporter Tappan Adney shipped for Dyea in August 1897, half those on board were American. They included "a house-builder from Brooklyn, a contractor from Boston, and the business manager of a New York paper, and boys that seem not over nineteen."²⁷ Few were outdoorsmen. "Buckskin Joe, our mountain man from the Black Hills," was the unique one, according to Adney.²⁸ A few months later, Samuel Dunham boarded a steamboat in Dawson, on his way outside to report to the U.S. Department of Labor. His companions included two doctors, three lawyers, a watchmaker, and six farmers from Iowa and Nebraska who had sought enough gold to pay the interest on their mortgages.²⁹ In United States, and in Canada, Scotland, England, and even Australia, men and women left jobs in banks, schools, corporate offices, and government posts. They mortgaged

²⁶Samuel C. Dunham, The Alaskan Gold Fields (1898; repr. Anchorage: Alaska Northwest Pub. Co., 1983), 9. This was originally published as "The Alaskan Gold Fields and the Opportunities They Offer for Capital and Labor," Bulletin of the Department of Labor, No. 16 (May 1898), 297-425.

²⁷Tappan Adney, The Klondike Stampede (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 28.

²⁸Adney, Klondike Stampede, 30.

²⁹Dunham, Alaskan Gold Fields, 43. Dunham wrote further of gold fever that "The contagion spread to all classes--laborers, clerks, merchants, bankers, lawyers, physicians, ministers of the gospel--and even Federal and State officials were so charmed by the alluring picture drawn by the press...." Dunham, 9.

farms and homes to purchase train tickets, food, clothing, and supplies.³⁰ Even the former mayor of Seattle, W.D. Wood, fled his post to find gold; his boat ended up trapped in ice for the winter, half-way up the Yukon.

The ideas of cutting loose, making a mark, and escaping dwindling opportunities at home run through the letters and diaries of these gold miners. They wanted and needed money and paying jobs, but they sought something else from gold that they did not find at home. Miners looked to gold mining for the things that they believed to be absent from industrial life: simplicity, freedom, satisfaction, a connection between work and wealth, and even a physical engagement with the world. Alaska gold promised everything that industrial work seemed to deny them. Along the Yukon, hard, physical work would lead to economic advancement or even independence.

The fact that middle-class miners looked to gold mining for escape sheds a certain amount of light on their lives in industrial America. Labor historians and cultural historians of the late 19th century have established that industrialization transformed American life, creating a "new world of work."³¹ Workers of all types and classes found various modes of resistance and escape, which included anti-modern critiques of industrial society, and, in the late 1890s, enthusiasm for Klondike gold. In the decades after the Civil War, workers' lives were revolutionized by corporate organization, standardization, mechanization, and also by the abundance of goods they produced, which

³⁰Adney, *Klondike Stampede*, 6.

³¹Daniel T. Rodgers, *The Work Ethic in Industrial America, 1850-1920* (Chicago: University of Chicago Press, 1974), xii.

re-made them into consumers as well as producers. According to one historian, this period saw, literally, the "Incorporation of America," the shift in the basic organization of economic and social activity from the individual and family to the corporate body.³² The decades following 1850 brought increasing numbers of factories and mills, expanding economic production and transportation networks. Clocks, industrial plants, and factory gates soon followed, along with centralized management, production gluts, and the paradox of increasing abundance accompanied by increasingly visible poverty.³³ Industrial culture created a whole new meaning for time, as managers used clocks to "keep" time and to regulate and discipline both work and workers.³⁴ Time became an entity saved and spent like money.

This new world of work brought clear gains. By 1894 the United States was by far the leading producer of manufactured goods in the world, nearly matching the combined output of Great Britain, France, and Germany.³⁵ Those gains were accompanied by social and cultural losses, however, as industrialization replaced older modes of work with wage work that was measured by time and controlled by bosses. That kind of work subjected modern Americans to the "gathering restrictions of a highly

³²Alan Trachtenberg, The Incorporation of America: Culture and Society in the Gilded Age (New York: Hill & Wang, 1982).

³³Rodgers, Work Ethic, 24-27; 125-126.

³⁴Lears, No Place of Grace, 11. On time, see Stephen Kern, The Culture of Time and Space, 1880-1918 (Cambridge, MA: Harvard University Press, 1986).

³⁵Herbert Gutman, Work, Culture, and Society in Industrializing America: Essays in American Working-Class and Social History (New York: Vintage Books, 1976), 33.

industrialized society."³⁶ It also called into question the individual's power to insure that his or her work would be productive. "Industrialization," writes historian Daniel Rodgers, "upset the certainty that hard work would bring economic success." It made it clear that "no amount of sheer hard work would open the way to self-employment or wealth."³⁷ Marxist labor historians such as Harry Braverman explain that the crucial loss with industrial capitalism was the alienation of production from the worker to the capitalist, and thus the worker's loss of control over the "inalienable property" of his own labor.³⁸

Cultural historians such as Rodgers and T.J. Jackson Lears have tracked these economic shifts and their cultural effects among the late 19th-century middle and upper classes. At the center of these bourgeois losses, Lears writes, was the disappearance of any sense of autonomous individuality. City life, the dependence on others for food and shelter, the bureaucratization of white-collar work, the secularization of intellectual life, all of these reduced middle- and upper- class life to "a vapid, anonymous existence." Lears described this loss of selfhood as "a sense that individual causal potency had diminished, a growing doubt that one could decisively influence one's personal destiny."³⁹ Work, especially, seemed a source of loss, as office jobs proved "strangely insubstantial"

³⁶Higham, "The Reorientation of American Culture in the 1890s," 27.

³⁷Rodgers, Work Ethic, 28-29.

³⁸Harry Braverman, Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century (New York: Monthly Review Press, 1974), 54-58.

³⁹Lears, No Place of Grace, 34.

and isolated from "the hard substantial reality of things."⁴⁰

Many working-class Americans responded to industrial transformations with direct resistance, fueling the fervor and violence of the 19th-century labor movement. Not all chose this path. People from all classes sought escape, often in ways linked to work. Some turned to activities like bicycling, which was physical recreation that mimicked work.⁴¹ Some turned to the work of consumption, rather than production, as a source of economic identity. According to Jackson Lears, the nation's elite, intellectual, and bourgeois classes yearned for older, more authentic work.⁴² They sought renewal in the Arts and Crafts movement which idealized demanding, physical labor, a return to the work ethic, and the simple, "virtuous and productive life", close to the soil.⁴³

Middle- and upper-class gold miners, in heading for the Yukon, also sought escape through work, but they looked to work they believed to be outside the industrial economy. In September 1898, Bill Ballou settled in for the winter in Rampart City, Alaska. A letter home explained that he could not start mining until later in the season, but that he enjoyed Alaska life so far. He was working hard, he wrote, but he felt "a sense of freedom not to be had working for a corporation."⁴⁴ A year later, after spending the

⁴⁰Lears, No Place of Grace, 60-61.

⁴¹On play that mimicks work, see Richard White, "'Are You An Environmentalist or Do You Work for a Living?': Work and Nature," in William Cronon, ed., Uncommon Ground: Toward Reinventing Nature (New York: W.W. Norton, 1995), 171-185.

⁴²Lears, No Place of Grace, xix, xx, 4-8.

⁴³Lears, No Place of Grace, 75.

⁴⁴Ballou letter, Sept. 18, 1898.

summer (off-season for mining) fishing, hunting, and boating, Ballou reported that "we have enjoyed the pleasant knowledge that we were our own masters and could do as we pleased--no corporation looking for a chance to jump on us at any minute."⁴⁵ Ballou was so taken with life in Alaska, that, unlike most of his compatriots, he remained for several years. In 1902 he spent a few days working for a local official on some account books, work that reminded him of his old railroad job, but not favorably. "[T]his is such a free and independent life," he wrote to his mother, "it spoils one for such a grind."⁴⁶ Hunter Fitzhugh, who also mined in the Rampart District, wrote home to Lexington, Kentucky in stalwart praise of his freedom. "To be sure I long for home and civilization with a longing that 'is me doom' at times, but on the other hand if I was in the States i would be under the eye and hand of a boss, or out of a job, either of which....I have cut loose and learned a new life, and I must stay with it at least another year."⁴⁷

Gold miners proved particularly restless with conventional work, at least at the start. Lynn Smith was a watchmaker from Indiana who hoped to find gold, but brought along tools to fix watches as well.⁴⁸ While his mining success waxed and waned, he survived as a watchmaker and store manager in Rampart City. During periodic gold

⁴⁵Ballou letter, Sept. 20, 1899.

⁴⁶Ballou letter, June 15, 1902.

⁴⁷Fitzhugh letter, Summer 1899. Paula Mitchell Marks notes in her history of Western gold rushes that many miners reveled in and celebrated "the freedom of mining," and thus implicitly criticized the "noise and artificiality of civilization" that they left behind. Marks, Precious Dust, 372-373.

⁴⁸Smith Correspondence.

strikes, not even that dependable employment could keep him still. In the summer of 1901 he took a break from the store to prospect new ground along Glenn Gulch. "But am after the real stuff now and wont be tied down to 100 [a] month," he explained.⁴⁹ A year later he wrote home, "Am crazy to see you all, but have not made up my mind that would be satisfied in the states to stay."⁵⁰ Harrison Kepner was a well-connected young man in Chicago. Through ties with the Weare family, owners of the North American Trade & Transportation Company, he secured a clerical job at one of the company's trading posts on the Yukon. The summer after the Klondike gold strike, however, he penned his resignation to Mr. Weare in Chicago, citing low wages and a desire to move beyond bookkeeping. "I am going to make a mark up here yet and it wont be at bookkeeping. If I cannot make anything in the mines I will take to the bush."⁵¹

For Smith and Kepner and their contemporaries, gold mining promised an opportunity to put anti-modern ideas and yearnings into action, to bridge the gap between a vicarious life of adventure and a real adventure. Fictional heroes of the period (including, a few years later, Jack London's heroes) took physical, even violent action. This search for "preindustrial vigor" had all sorts of racial and gendered meanings that took real and oppressive form as it shored up the power of the white, Protestant male bourgeoisie. But it all culminated, according to Lears, in a cult of experience that led

⁴⁹Smith letter, August 21, 1901.

⁵⁰Smith letter, June 24, 1902.

⁵¹Harrison Kepner letter, August 26, 1897, Kepner-Crane Collection, Microfiche, UAF Archive.

men in search of a way "to endow weightless modern experience with gravity and purpose." Gold mining offered one such way.

Some of these gold miners found what they were looking for, or at least some of what they were looking for. They praised the outdoor work and adventure of the Klondike and Alaska. They felt that gold mining gave them a better, broader sense of themselves and their capabilities. It gave them the chance to try many different kinds of work, to test their skills, to discover what they could do: build boats, cabins, and sluices; cook, clean, chop wood, repair machines, fish, and hunt. The former small-businessman-turned-miner from Detroit, Mac McMichael, mused proudly about his efforts at boat building on Lake Bennett. "I am quite proud of my handywork," he declared in a letter to friends at home. "You know, I never had any instructions in handling tools in any way. I never built a boat or saw one built and yet we have one here which is all my own planning....I like boat building; it gives both the head and hands a chance."⁵² Though always expecting to hear in letters that his business at home had finally gone under, McMichael found in his new labor a hopeful alternative to that failure.

Bill Ballou struck a similar theme of usefulness, fulfillment, and freedom when he wrote home in 1902 listing all the different types of work he did. He fired and ran a boiler which powered the steam thawing machine; he ran the engine for the hoist, saw, and water pump; he cut ice and sawed wood; he did the blacksmithing, sharpened the tools, refit the pipe lines, repaired all of the machinery, and did, as he put it, "a thousand and one other jobs." He especially enjoyed running the steam machines. It suited him "as

⁵²McMichael letter, May 19, 1898.

well as any job." "I like to 'see the wheels turn'[.] you know, they wouldn't let me run this job out in the states--have to have a license etc."⁵³ Walter Curtin spent the winter of 1898-99 on the lower Yukon, his steamer frozen in place by the ice. He cut wood, snowshoed, and hunted. "There is nothing I miss here," he wrote, "and I do not feel far away. It seems that the people on the Outside are far away. Think of a man sitting in a cage in a bank," Curtin continued, evoking white collar work at home, "and thinking he is an important citizen instead of a slave." Not only did this winter life seem more free and real to Curtin, it fulfilled his cultural vision of a "wild" or "natural" life, as defined by 19th-century icons such as Wild Bill Hickock. "Ever since I was a small boy I have wanted to live in the backwoods like Wild Bill...and this is the first chance I have had."⁵⁴

Middle-class discontent and anti-modernism were of course not the only forces that drove Americans north to the creeks along the Yukon. Those yearnings for escape existed alongside, and intertwined with, an equally potent search for hard, productive work. As Mac McMichael saw clearly after just a few weeks on the trail, "It is no disgrace to labor because all have to do it....This is especially true of the trail and the lakes and rivers. In no country or place I have ever seen is there so much dignity in labor."⁵⁵ Many middle- and working-class Americans reacted to the dislocations of industrialization not by trying to escape, but by bolstering the ideals of an older Protestant

⁵³Ballou letter, January 29, 1902.

⁵⁴Walter R. Curtin, Unofficial Log of the Steamer Yukoner (Caldwell, ID: Caxton Printers, 1938), 141, 147.

⁵⁵McMichael letter, 22 June 1898.

work ethic. Daniel Rodgers defined this as the belief that work was both social duty and calling. While facing evidence to the contrary, industrial workers clung to the idea that work kept the evils of idleness at bay, and also provided the individual with the means to dignity, independence, advancement, self-sufficiency, and self-expression.⁵⁶ This turning to and celebration of hard work formed another important strand in the writings of Yukon miners. While it was in part literate miners who spoke glowingly of the good effects of hard work in the outdoors, those feelings had broader class appeal. "I am in here for work, and will get gold if it is to be found....," wrote Lynn Smith in 1898.⁵⁷ Jonas Houck agreed that hard work was an honorable and godly way in which to pursue wealth. He wrote home from the White Pass Trail, far from the goldfields, that "I shall commence prospecting right here for there seems to be gold everywhere...but it also seems that the creator intended us to work hard to get it."⁵⁸

The miners' may have penned these earnest statements in letters home to assure their parents and wives that they were interested in work. Their epistolary embrace of hard labor included worries about an absence of work at certain stages of the venture. Bill Ballou took a steamer up the Yukon river in 1898. Of the two-week delay at the mouth of the river he complained that "this idleness is worse than climbing Chilcoot Pass." The long steamer trip made him keenly aware of his own laziness. He called

⁵⁶Rodgers, Work Ethic, 6-8; 11-12; 125.

⁵⁷Smith letter, 29 April 1898.

⁵⁸Houck diary/letter, 20 March 1898.

shipboard travel "a lazy, indolent life."⁵⁹ Mac McMichael was eager for work as well, when he arrived in Dawson City that same year. "I did not come to Alaska to loaf around," he declared to friends at home. "Do not worry about any danger," he added, "for there is no more here than in Detroit except what comes with hard work....Plenty of that will be at hand....I fully expected hard work and lots of it and I shall not be disappointed...."⁶⁰

This praise of work constituted more than a front for the relatives waiting at home. The quest for gold may have looked--to hometown folks, and to the nation at large--like a desire for escape from work through instant wealth. But at a deeper level it was a desire for escape through work. Miners like Bill Ballou and Mac McMichael lamented the restrictions of the industrial world, and praised gold mining as escape, but that escape came through free, independent work. These idealistic hopes for freedom and hard work contained a central paradox, however. Some miners found gold, and some found fleeting freedom, but most faced a more ironic outcome. Whether adventurers or transients, miners recreated the industrial work they thought they had left behind. On one hand, they reproduced a system of spectacularly hard labor, usually wage labor, that rarely guaranteed an industrial wage, let alone real wealth. On the other hand, the industrial grind of placer mining revealed an economic world governed by chance--the slim chance of striking gold. Gold mining forced miners to question the worth of their own labor and time, and also the very substance at the root of it all: gold. For in gold--the material

⁵⁹Ballou letter, 19 August 1898.

⁶⁰McMichael letters, 22 June 1898; 1 July 1898.

which in their culture was value itself--they found neither logic nor any direct connection between labor and success. Instead, they found a gamble. Hard work, wage labor, and the ruling power of chance and luck made the work of gold mining an exaggeration of the worst aspects of the industrial world, rather than an escape from it.

"It would seem strange if it was all in one place...": Random Gold

Most Yukon miners, regardless of class, nationality, or race, did the same kinds of work in the same ways because they encountered the same natural environment, and wanted the same thing from that environment: gold. They faced a common problem. The gold was there, but nature had distributed it in a random and unpredictable way. Whether miners expected to pick gold off the ground or earn it through productive labor, they believed at the start that the gold itself was abundant. These expectations collided head-on with the natural world. The most common experience along the Yukon was NOT finding gold, or at least not finding very much of it. As they poured their labor into the northern creeks, miners realized that gold was abundant only in certain places, usually unspecified. There was no abundant gold spread evenly through the Yukon. There was not even a small amount of gold spread evenly through the tributary creeks of the region. There were tiny amounts of gold in some places, and great pockets of it in others, with every degree in between. As miners realized that gold was unsystematically scarce at best, they realized that their hard work in most cases produced very little gold. This meant that no amount of hard work guaranteed a proportionate payoff. A small amount of work might produce riches; years of work might produce nothing. There was no direct

cause-and-effect relationship between work and gold.⁶¹ If, as Daniel Rodgers states, industrialization broke the cultural certainty that "hard work would bring economic success," then gold mining in 1898 represented an exaggerated metaphor for industrialization. It offered the chance for hard work to bring success and wealth, and then delivered the reality that no amount of work, no matter how diligently pursued, guaranteed success in the gold fields. Mac McMichael put it succinctly when he wrote that "men, on arrival here, have suddenly found out that the unlimited opportunities for getting suddenly rich are not realized no matter how great their capacity for enduring work and hardships."⁶²

The initial reports from the Klondike promised a river of gold. Reading newspapers at home, miners expected, as one reporter put it, "to get into the country and

⁶¹This of course was not unique to the Yukon/Alaska gold rush, but applied to gold mining in general. David Goodman's study of California and Australia in the 1850s notes that "On the goldfields the quantity of labour bore no necessary relation to the magnitude of the reward--months of diligent labour might bring no reward, a lucky swing of the pick might bring comfort for life." In the Victorian era, this threatened the idea that labor was "the necessary and controlling mediator between the individual and wealth..." David Goodman, Gold Seeking: Victoria and California in the 1850s (Stanford: Stanford University Press, 1994), 53. The same themes cropped up in the 1890s, but in the later stages of industrialization world, the belief that labor was the individual's route to wealth was already in the process of being severely undermined.

Susan Johnson also discusses the relation of the California Gold Rush to ideas of labor and wealth, and gold mining as a reaction to economic changes brought by industrialization. As she argues, the free labor ideology stressed upward mobility away from wage labor, as wage labor became acceptable as a stage in a man's life, rather than a lifelong condition. Gold miners embraced California as a way out of lifelong wage work. See Susan Johnson, "'The gold she gathered': Difference, Domination, and California's Southern Miners, 1848-1853," (Ph.D. diss., Yale University, 1993), 294, 333.

⁶²McMichael letter, July 13, 1898.

find the gold in buckets full."⁶³ Nora Crane, whose husband kept the store at Circle City, Alaska, wrote to a friend in 1898 that new arrivals expected to find gold without work. "[E]veryone who comes here has that same strained staring eyeball look as if they expected to find it in the trees or on top of a shack or some little old place where they only had to lift a leaf or a clod to be worth millions!!!! whereas ordinarily it means work of the hardest kind the like of which most of them never dreamed of doing."⁶⁴ Hard work was the first lesson of gold mining, but the realization of the utter futility of much of that work followed close behind.

Gold miners learned quickly that hard work governed their lives in the Yukon, but that chance governed their access to gold. Many noted the sheer inconsistency of gold in their diaries and letters. J.C. McCook, who served as U.S. Consul in Dawson City in 1899, understood gold's nature. Of five thousand placer claims staked in the Klondike by August 1898, he reported, only two hundred had paid to work. "[T]here is no doubt of the great riches of this country wherever gold is found. but its in pockets and there are a great many blanks."⁶⁵ The blanks often showed up in maddening proximity to the riches. Lynn Smith reported the gold "as spotted as can be" and "very spotted" along Miwook [Manook] creek in 1899. Claims six through ten proved rich, but claims two, three and

⁶³"St. Michael, July 1898," Vertical File MS, UAF Archive.

⁶⁴Nora Crane letter, July 11, 1898, Kepner-Crane Papers. Nora Crane was Harrison Kepner's sister. Crane's husband also got his job at the NAT&T through connections to the Weare family of Chicago.

⁶⁵U.S. Consul letter, August 2, 1898; June 8, 1899, "Despatches from U.S. Consuls in Dawson City, Canada, 1898-1906," Microfilm no. 199, UAF Archive.

four had been worked three winters with no result.⁶⁶ Hunter Fitzhugh suffered similar pangs, mining near the rich claims on Little Manook, Jr. "And then the work on this claim seems to be a blank anyhow. The reports from Little Manook Jr. make me desperate. Why does the gold come so near me, and not near enough for me to get it. I dunno. Maybe tis Kismet."⁶⁷ A year later, he bemoaned the same situation. "I picked up over \$7.00 on another fellow's dump yesterday in less than half an hour."⁶⁸

Other miners struggled to accept that expertise and experience played no role in miners' ability to locate rich claims. Old timers thought they knew how to locate gold, but then, as Jonas Houck noted, "some green horn will dig where a person who knows anything about mining in other places would never think of looking and strike it rich...."⁶⁹ Geologists, writers, miners, and hangers-on worked their way towards theories of the gold's distribution in the hopes of plumbing the secrets of placer deposits and the ever elusive "mother lodes." One miner mused to relatives at home about the theory behind his mining efforts at Circle City. "There is supposed to be a gold belt running from Birch Creek (the mines back of here) up through Seventy Mile, Charlie River...Forty Mile River to the Klondike district....Outside this line there has been little gold found. 4th of July and these other creeks are within or very close to this line. So much for indications. Next

⁶⁶Smith letters, Jan. 29, 1899; April 30, 1899.

⁶⁷Fitzhugh letter, Dec. 21, 1899.

⁶⁸Fitzhugh letter, Rampart District, January 1900.

⁶⁹Houck diary, June 30, 1898.

spring we shall know more about the reality."⁷⁰

Even when faced with constant reminders of the failures of these theories, miners continued to wonder that gold was not more evenly, or fairly, distributed along and amongst creeks. All of them seemed plagued by the presence of others' rich claims next to their poor ones. Consul McCook, in Dawson, observed that "one may find a hundred thousand dollars in a claim the next one to him...merely worthless."⁷¹ Bill Ballou and his partner dug two shafts twenty feet down to an old stream bed without a "color" or sign of gold. Their neighbors, meanwhile, took out thousands of dollars, with the help of their hired hands.⁷² One of Lynn Smith's claims "was supposed to clean up \$3000...but has been so at each piece of ground...good money below but I get shucko."⁷³ Hunter Fitzhugh put it quite succinctly in a letter from Hoosier Creek, Alaska, in 1899. "GOLD IS WHERE YOU FIND IT and nowhere else."⁷⁴ This natural unevenness drove miners to the far edge of frustration, but also kept them at work. If a neighbor on a nearby creek or claim could find a rich pocket, then anyone could. The \$200,000 of gold taken from one claim, number 8 on Little Miwook, near Rampart City, bothered Lynn Smith, but kept him going. "Still I believe there is bound to be more found than in Little Miwook," he

⁷⁰McMichael letter, Circle City, Alaska, Sept. 11, 1898.

⁷¹U.S. Consul letter, Aug. 2, 1898.

⁷²Ballou letter, Nov. 10, 1898.

⁷³Smith letter, Jan 6, 1905.

⁷⁴Fitzhugh letter, Hoosier Creek, Alaska, Nov. 12, 1899.

puzzled. "It would seem strange if it was all in one place."⁷⁵

Dynamiting Fish: From Randomness to Gambling

Gold's scattered distribution did not mean that there were no predictable patterns of economic life along the creeks. Miners knew that claim owners had the greatest chance of success, and that the likelihood of gaining real wealth decreased down the scale, from owners to lay workers to hired hands. This was the case much of the time; those with rich ground succeeded far beyond anyone else. This frustrating inequality was part of the strangeness of gold's distribution. Sometimes it was all in one place. But any systematic predictions of who would succeed or fail proved problematic. The randomness of gold insured that. Any clear tendencies or patterns could be overturned in a moment by an individual's sudden stumble on a rich pocket of yellow metal. This changed the gold miners' ways of thinking about their work. Gold mining slipped quickly from escape and freedom into the realm of chance, where it seemed wholly akin to gambling.⁷⁶ Miners faced the disillusioning truth that success was not a matter of work, but a matter of chance.

The miners' adoption of the language and attitude of gamblers was one sign of

⁷⁵Smith letter, Nov. 29, 1898.

⁷⁶There are hints in journals and letters that middle- and upper-class miners sensed the moral dangers of mining because it seemed to them so much like gambling. They did not seem overly anxious, however. In Gold Seeking, David Goodman analyzed Victorian anxieties about gold mining in the 1850s, in Australia and California. Reactions to those gold rushes revealed the belief that gold digging was an illegitimate form of work, because luck (fortune) rewarded the miner, rather than the miner's own virtue or diligence.

this realization. Metaphors of gambling, bets, luck, and fortune permeated their musings. These words indicated that miners saw that their success was governed by chance and luck, rather than by their social status in the gold mining hierarchy, or by their own labors. "I'm getting a little tired of waiting for Fortune to point her finger at me and say 'N-e-x-t'," wrote one.⁷⁷ Bill Ballou admitted his situation forthrightly in 1899. "[W]e are all taking the rather desperate chance of running into something better...this mining business is a big gamble."⁷⁸ The whole thing was indeed a gamble, according to U.S. Consul McCook, and the odds were not good. You "go to work on a claim for three months and its 20 to one you have drawn a blank," he explained.⁷⁹ McMichael observed of his lay claims near Dawson, "it is all chance, and there may not be much in any of them."⁸⁰ Hunter Fitzhugh found a useful metaphor to explain the staking of new claims to his family at home. Though he chose language that had nothing to do with gambling, the picture was quite clear.

I was out with a fellow about a week ago and I staked a claim on a new creek. But we stake in this country as we dynamite fish in the States; throw in the dynamite and if any fish are in range you get them. If not, you lose your dynamite.⁸¹

Gold mining held more than a passing connection to dynamiting fish, and to

⁷⁷Fitzhugh letter, July 5, 1900.

⁷⁸Ballou letter, Sept. 20, 1899.

⁷⁹U.S. Consul letter, winter 1898-99.

⁸⁰McMichael letter, June 22, 1898.

⁸¹Fitzhugh letter, Hoosier Creek, Alaska, Nov. 12, 1899.

gambling. The lure of the mines worked in ways similar to the lure of actual gambling. For that reason, it was no surprise that so many miners proved regular customers in the actual gaming halls that sprung up around them wherever they went. Miners found themselves in an economic world in which the expected ties between wealth and hard work weakened and disappeared. As Ann Fabian writes in her history of 19th-century American gambling, actual gambling was about exactly that, the absence of any connection between work and value on one hand and monetary gain on the other. At the same time, no amount of reality, experience, or loss of time and labor could completely erase the fascination with gold or the hope that a miner could, with luck, strike it rich at any moment against any odds. Gold miners live the tension that Fabian places at the heart of 19th-century writings on gambling, the tension over the role of luck in worldly success, and the role of hard work and "willful, responsible action."⁸² "This thing of placer mining is fascinating after all," admitted Hunter Fitzhugh, "for a man never knows when he is going to pick up the rarest nugget in the world. I MAY find it tomorrow, and I probably will not find more than a few cents. And I am likely to find our shaft full of water."⁸³ The ever-present possibility of finding gold fought a battle with the randomness

⁸²Ann Vincent Fabian, "Rascals and Gentlemen: The Meaning of American Gambling" (Ph.D. diss., Yale University, 1982), 10, 22. Fabian, too, points out that in the gold camps of California and the West, "gambling bore a close relation to the economic and cultural life of men in mining camps." Writers in California during the gold rush made it clear that gambling was a metaphor for gold mining as a whole. Fabian quotes Dame Shirley's observation that mining was "'nature's great lottery scheme....'" See Fabian, 54-56. On western gambling and American culture see also John M. Findlay, People of Chance: Gambling in American Society from Jamestown to Las Vegas (New York: Oxford University Press, 1986).

⁸³Fitzhugh letter fragment, Jan. 1900.

of mining itself. The hope and possibility, fed by others' success and the presence of gold on other claims, kept many men going for long periods of time. The possibility of wealth seemed too close to walk away from. "You can't imagine a persons feelings when at this kind of work," wrote Lynn Smith. "Take a pan of dirt, wash it down to about a handful of dirt then it gets exciting and you are afraid to make a miss dip of water and lose part. Than as colors begin to show up your heart commences to go quicker and quicker until it is finished. Then a big sigh, dry the pan and weigh it out."⁸⁴

Each rumor, each new nugget, and each individual success held out all of the hope and excitement again. Bill Ballou wrote in December 1898 that one nugget found at the mouth of Ruby Creek, a tributary of the Manook, brought a stampede of men who staked the whole creek. A few days later the same thing happened on another creek.⁸⁵ The constant possibility of a claim proving rich kept miners at work, willing to try one more time. Ballou ended up with only \$100 from a claim after clean up in 1899, "poor pay," he wrote to his brother, "and that is worse than none at all for by getting a little gold right along a man will stick to them for a life time...."⁸⁶

The truly disillusioning lesson of placer gold mining was that it seemed very much like the industrial world in general. No amount of diligent effort guaranteed success, when miners defined success as real wealth, enough gold to significantly improve their lives. One hundred miners could do exactly the same work, up and down a

⁸⁴Smith letter, Glenn Gulch, Alaska, 29 October 1901.

⁸⁵Ballou letter, Dec. 7, 1898.

⁸⁶Ballou letter, June 12, 1899.

creek, at the same time. One of them might reap hundreds or even thousands of dollars; some might break even on the money spent on food and supplies; others would get nothing. As a result, miners revised their hopes and expectations. They looked on gold mining not as a source of great riches, but, at best, as an uncertain source of wage labor. In April 1899 Lynn Smith described the 1500 or 2000 men working on the creeks around the rich claim at Little Miwook. "[N]ot 25 of them will go out even and those will all be men who worked for wages on #8 or cut wood on the river."⁸⁷

This shift in miners' attitudes toward their labor and toward mining was somewhat inevitable. In its similarity to gambling, gold mining not only replicated industrial work, it delieved the final truth about all work, a truth the larger society obscured. Success, defined as "striking it rich," was a matter of chance, not work. Miners worked hard, but few went home millionaires. Given this reality, Yukon miners again sought escape, but this time to return to the less adventurous path of paid work. As noted above, Lynn Smith once quit his job as a store clerk in Rampart City to follow the latest gold strike because he was restless with the work and the low monthly pay. Miners who started out eager for adventure changed their minds. "I surely will not go after gold again," swore Mac McMichael. "There is too much uncertainty about it to suit me as a 'steady business'."⁸⁸ Thomas Kearney thought along similar lines, while working at a Dawson City bakery. "I do not intend to go prospecting," he wrote, "while I have steady work."⁸⁹

⁸⁷Smith letter, April 30, 1899.

⁸⁸McMichael letter, July 29, 1898.

⁸⁹Kearney letter, August 4, 1898.

The predictability of regular wage work in regular jobs grew more attractive with the realities of extended bouts of gold mining.

Does it pay to work?: From Gambling to Wages

The randomness of gold and the frequency of failure made gold mining one of the most unproductive, unpredictable, and generally unpleasant occupations anyone could have chosen. James McRae ended his diary on just such sentiments. "I will now roll down the curtain on two years and four months of what has been the most miserable part of my life. I hope I will never again have to go through anything like what I have gone through during that period."⁹⁰ In a remarkably telling comment, at his lowest point, Lynn Smith wrote that "This is no country, and mining in Alaska is no white mans work."⁹¹ The best route of escape, this time, was simply to go home, where conventional work now offered the better alternative. At his own particularly discouraging moment, Bill Ballou wrote that as soon he got \$500, he would head back East, perhaps to the family orchard in Vermont. There "is more money in the cider business than this," he declared to his brother.⁹²

The miners who did not go home right away, who stayed in Alaska and the Yukon for at least a season, found another response to the role of chance in gold mining. They shaped the work of gold mining into industrial wage work. The scarcity and random

⁹⁰McRae diary, June 1900.

⁹¹Smith letter, January 1, 1899.

⁹²Ballou letter, March 11, 1901.

distribution of gold, combined with the arduousness of the work, created a direct relation between workers and the natural world. But that combination also put humans in competitive relation with each other, which created a hierarchy of work similar to the industrial stratifications some of them sought to escape. Within that hierarchy there were owners of rich mines, owners of poor mines, and owners of barren mines. There were also "lay," or share workers, and hourly wage workers. Because of these different levels of work and workers, the overwhelming majority of Yukon/Alaska miners quickly saw their work as wage work, rather than free, independent, or productive work. Whatever gold mining was supposed to be, it quickly turned into a familiar round of hirings and firings and bosses, and always too many men for too few jobs. In this structure of wage work, gold became wages, and often disappointing wages at that. In the Yukon, gold led to hard work at hard wages.

There was plenty of gold in places, but as many disappointed seekers found out, few had direct access to it. Miners already in Alaska and the Yukon claimed much of the gold-bearing ground during the first few months of the initial strike in August 1896. By September 1897, miners had staked Bonanza Creek for 20 miles, and Eldorado for over 8 miles.⁹³ For the three to four thousand that arrived the following spring and summer, and especially for the crowds that followed in May and June of 1898, there was no ground left to claim on the world-renowned creeks.⁹⁴ Hundreds and hundreds of potential miners, on discovering that Bonanza, Eldorado, Hunker, and Dominion Creeks were staked, simply

⁹³Dunham, Alaskan Gold Fields, 25.

⁹⁴Dunham, Alaskan Gold Fields, 39, on arrivals in summer 1897.

boarded steamboats down the Yukon and returned home. For them, the fact that they could not easily find claims and be assured gold, combined with the crowds and chaos, was enough to end the adventure at its start. "As I told you in recent letters," reported Thomas Kearney to his family in Ontario, Canada in August, 1898, "there are many disgusted people, many who wish they had never heard of Klondike....There is no doubt the country is over done and people are leaving by the hundreds and still there are plenty left...."⁹⁵ Lynn Smith noted as well that "Every boat is loaded with disgusted people getting out."⁹⁶ That level of disgust did not hold across the board, however, as hundreds took their chances at the labor of mining. "Just think of the thousands who are going out without even sticking a pick in the ground," wrote Mac McMichael. "Not that this is much of a pleasure in itself, I tried it a few days and found it hard work but that is what I came expecting."⁹⁷

For those who stayed, a few options remained. Many headed for distant creeks in hopes of staking claims on new and equally rich ground. Some Americans trekked down river into Alaska. Lynn Smith left Dawson almost immediately for Rampart City. He went to the nearest creek, and followed it up the length of 112 claims, at 500 feet each. He then climbed up a tributary creek or "pup" to a divide, then up another creek, where he found three or four unclaimed sites.⁹⁸ Others contracted with claim owners for "lays."

⁹⁵Kearney letter, August 4, 1898.

⁹⁶Smith letter, June 1898.

⁹⁷McMichael letter, Aug. 6, 1898.

⁹⁸Smith letter, July 9, 1898.

Lay agreements allowed miners to work another's claim on shares in exchange for a certain percentage of the gold produced. The proportions shifted over time, and from agreement to agreement, sometimes fifty-fifty, sometimes calculated according to the relative richness of the ground.⁹⁹ This made it possible for claim owners to avoid the labor of mining their ground, but also gave miners without access to claims the chance to strike it rich. Mac McMichael, full of hope, could not find a claim on the Klondike creeks, so quickly took two lays which he proposed to work at fifty percent of the output. Frank Purdy and his partners arrived in Dawson in August 1898, found no good claims, dug a lot of holes that produced only water, and eventually took a lay on a claim, "giving us the first two thousand that was taken out and 1/2 the rest." Another member of the group took a lay in Chief Gulch for 75% of the gold taken out.¹⁰⁰

Lay agreements made conditions even more uncertain than it was for those with claims. Even on the richest of creeks, some lay claims proved barren. "Many Bonanza lays are being abandoned," noted James Cooper's diary on Dec. 13, 1897.¹⁰¹ A New Zealander named Hiscock reported his misgivings about the people involved as well as the ground. "We went to see about taking a claim on, but didn't like the terms as there is seldom any pay till the washup in spring. One has to be careful with anything in work by

⁹⁹Untitled Klondike TS., "Ch. 10," Vertical File MS, UAF Archive; R.W. Cautley, "Highlights of Memory. Incidents in the life of a Canadian Surveyor," MSS 005, Acc. 82/97, Yukon Archive. In 1897 Sam Dunham described lays as "ground worked on shares" with the usual terms an equal division of the output, the lessors paying all expenses of operation. Dunham, Alaskan Gold Fields, 25.

¹⁰⁰Frank Purdy diary, Aug. 30, Sept. 2, 1898, Vertical File MS, UAF Archive.

¹⁰¹Cooper diary, Dec. 13, 1897.

percentage or contract here. Unless it is somebody you have known it is just as well to have nothing to do with many of them as there are men of every type...."¹⁰²

When miners could not secure lays, or when the claims they worked produced nothing, they looked for work elsewhere, with other miners, or cutting wood. Most miners did wage labor at one time or another. Frank Purdy and his partner spent most of the late winter and spring of 1899 scrounging for lays or jobs on the Klondike creeks.¹⁰³ In May they found a lay on Bonanza Creek. Interrupted at times by sporadic stints of day labor for wages, they started stripping the ground and sinking shafts. The dirt they tested had "not a dollar in it." In June they began the wash up, rocking dirt. On the worst day, they produced only \$2.80. They soon gave up and moved to town to live in a tent on the Klondike river and attempt to fish.¹⁰⁴ Hunter Fitzhugh looked to wage labor as a last resort when his claims failed to produce. After sinking several mine shafts that continually filled with water, he began to consider other options. "I really think we will lose our work," he wrote, "as only one hour is necessary to fill our pay shaft with water and then we'll have all our work to do over again, in which event I'll pack my sled with all my worldly goods and drag my slow length along to town, and look for another job with wages."¹⁰⁵

¹⁰²F. Wm. Hiscock, Diary TS., "The Youkon Trail of Year 1898," Jan. 23, 1899, File Collection, Diaries File, Dawson City Museum.

¹⁰³Purdy diary, February-April 1899.

¹⁰⁴Purdy diary, May 12, 17, 28-29, 1899; July 1899.

¹⁰⁵Fitzhugh letter fragment, Rampart City District, Alaska, January 19, 1900.

There were never enough wage jobs, however, especially during the off-season months in summer and fall. As miners poured into Dawson City in 1898 and then rushed to each successive creek rumored to be rich, they found good jobs scarce. As one miner from the Maritime provinces wrote in April 1899, "There is a great many men here out of employment and they keep running around from one creek to another trying to get something to do but there are more men here than there is work for them to do...."¹⁰⁶ James McRae agreed: "There are 10 men for every job...there are men camped along the Creek waiting for work. there is very little work going on," he wrote while looking for work in Dawson and on Bonanza in 1899.¹⁰⁷

For the large proportion of Yukon and Alaska miners who became dependent on wage labor to survive, jobs and wages were a crucial topic of concern. From the very start of the trail, they latched on to possibilities and rumors of jobs and pay, hungering for cash. Jonas Houck wanted to find gold, but more than that he wanted to send money home to his family. It did not matter where the money came from, and he was excited to hear news of Klondike jobs "at \$10 to \$15 a day" while he was still at Lake Bennett.¹⁰⁸ Lynn Smith heard similar rumors. Of course, once Houck, Smith, and hundreds of others descended from Bennett to Dawson City, wages dropped precipitously to as low as \$5 per day. Thomas Kearney wrote from Dawson in August that "It is not likely that wages will

¹⁰⁶John H. Lindsay letter, Fox Gulch, Yukon Territory, April 3, 1899, Lindsay Family Papers, MSS 12, Acc. 82/173, Yukon Archive.

¹⁰⁷McRae diary, June 14, July 14, 1899.

¹⁰⁸Houck letter, May 15, 1898.

be near as high from now on...."¹⁰⁹ The U.S. Department of Labor sent Samuel Dunham in the fall of 1897 to investigate work opportunities in the Klondike, in order to make information public on the chances of finding jobs at good wages.¹¹⁰ Dunham reported that the rumors of \$15-a-day wages were misleading. Wages were \$1.50 an hour, he wrote, and jobs uncertain at best. Consul McCook reported wages at \$1 an hour in August, but also "hundreds who cannot obtain labor at any price."¹¹¹

Wage labor was thus central to gold mining, which made that mining a lot like every other kind of industrial work available in the late 19th century. Yukon miners worked for wages, by the hour, month, season, for other miners or claim owners. Even when they worked independently, however, gold seekers viewed their work as work performed in exchange for pay. The miners' primary criterion for all labor in the gold fields was simply whether it would pay, whether it was worth doing for the money gained. This focus on the exchange of labor and time for gold--for money--made mining even more like industrial work, with the exception that gold made for even more uncertain pay. The random scarcity of gold made miners constantly ask themselves whether their labor would pay, whether they were likely to find enough gold to make their work and time worthwhile.

What miners looked for in the ground, then, was not so much gold as money. Miners naturalized gold as money as easily and powerfully as any gold standard

¹⁰⁹Kearney letter, August 4, 1898.

¹¹⁰Dunham, The Alaskan Gold Fields.

¹¹¹Smith letter, June 1898.U.S. Consul letter, August 2, 1898.

economist. Gold took the form of dollars and cents before they even got it out of the ground. Miners discussed and reported creeks, mine shafts, and piles, buckets, and pans of dirt according to the amount of money they promised or produced. That money was not only money, it was their pay, money they earned in the labor of unearthing it. Yukon miners' diaries and letters were filled with the language of pay. Miners naturalized gold not only as money but also as wages: a particular form of money earned in exchange for labor. They thought about gold, measured gold, anticipated finding gold, used gold as dollars and cents, and wrote about those dollars and cents as pay for their work. "Pay dirt" was their term for dirt with enough gold in it to justify a miner's work, dirt that would pay wages at an acceptable rate for the work needed to get it.¹¹² Sometimes, pay dirt was simply dirt with any gold in it. "Wally has had four six foot fires going every night," reported Lynn Smith of his partner's work at thawing through the permafrost on an Alaskan creek, "and they thaw about 200 10 pan buckets a night...about 150 of them pay dirt." The term for gold-bearing gravel was the "pay streak" or simply the "pay." Smith continued, "Everybody estimates it at about \$400 a foot[.] our pay is now 19 feet wide and about 1 1/2 feet deep...and pans run from 10 cents to \$4.60 each."¹¹³ The pay streak was, according to Harper's correspondent Tappan Adney, "the part of the gold bearing gravel that is rich enough to pay to work."¹¹⁴

Nature was an employer who paid in gold, but nature was a fickle employer.

¹¹²Adney, Klondike Stampede, 230-231.

¹¹³Smith letter, Oct. 29, 1901.

¹¹⁴Adney, Klondike Stampede, 235.

Good wages were never guaranteed, and it was up to miners to determine, when evaluating a claim, whether they could make wages from the job, that is, whether they could make as much working the natural world as they could working for another employer. The important thing was enough gold to make wages. As Fred Kimball wrote from Nome in 1903, "there is gold in all of it but whether there is pay remains to be seen."¹¹⁵ Miners thus developed a strong sense of whether they were making any money. The Rampart Miner hotly debated whether the goldfields around Rampart, Alaska were worth miners' interest and labor, given that most of the ground contained between 2 cents and 4 cents of gold per pan. "There is a vast difference of opinion," the paper explained, "as to what constituted pay dirt." The article then set the community straight: "Few men will admit their inability to hoist from a 20 ft. hole, an average of from 50 to 75 ten-pan buckets a day. On that basis note the following: Fifty loads, 1 cent dirt, \$5; 2 cent dirt, \$10; 3 cent dirt, \$15; 4 cent dirt, \$20, per day. Seventy-five loads 1 cent dirt, \$7.50; 2 cent dirt, \$15; 3 cent dirt, \$22.50; 4 cent dirt, \$30 per day." According to the newspaper, only the lazy miner, unwilling "to expend his only capital, (muscle)" could overlook these mines as not worth working. "A certain class of miners must be shown the pay streak or they will not mine. They are well supplied with excuses...."¹¹⁶

Miners clearly differed over what ground constituted "wages," what ground paid

¹¹⁵Fred G. Kimball letter, Oct 12, 1903, Fred G. Kimball Letters, 1899-1909, UAF Archive.

¹¹⁶Rampart (Alaska) Miner, Sept. 17, 1901.

to work.¹¹⁷ On one creek Frank Purdy found gold, but only in fine dust. "[T]he fine Gold was so hard to catch that it wouldn't pay to work."¹¹⁸ "Gus and Wally stopped on #8 and are in town," wrote Lynn Smith. "They will just about make wages."¹¹⁹ Bill Ballou hired fourteen men to work a claim on Little Manook Jr. He knew the claim would not "pay anywhere near day wages" but kept that a secret, telling the men that their pay would be in the spring cleanup, the washing of the mined dirt to separate the gold.¹²⁰ "Cleaned up last night," wrote Frank Purdy, "it wasn't very good only wages at \$10.00 per day...."¹²¹

By far the most commonplace example of this equation of gold with money was miners' careful noting of how much gold they found in each pan as they panned new creeks or tested their "dumps," the piles of frozen dirt they accumulated in the winter. Daily panning provided a reading of the ground they worked, and miners judged the pans in terms of their labor and prospective wages. They knew how much gold per pan, and per cubic yard of dirt, was required to make \$1 an hour, or \$10 a day.¹²² To strike "50 cent dirt" was a sign of rich ground.¹²³ Hunter Fitzhugh learned that 15 cents to the pan

¹¹⁷Smith wrote Jan. 4, 1902 that "We are on good ground and hope to make good wages at least."

¹¹⁸Purdy diary, July 2, 1898.

¹¹⁹Smith letter, June 18, 1902.

¹²⁰Ballou letter, April 15, 1902.

¹²¹Purdy diary, July 15, 1900.

¹²²John A. Gould and Richard C. Stuart, "Permafrost Gold: A Treatise on Early Klondike Mining History, Methods and Technology," Microfiche Report Series No. 11 (Ottawa: Parks Canada, 1980), Dawson City Museum Microfiche, 81.

¹²³Cooper diary, Dec. 13, 1897.

was "splendid prospects," and later sent a 28-cent piece of gold home. "If every pan had one of these I would be a millionaire.....most claims in this country don't give more than a cent a pan....."¹²⁴ Frank Purdy gladdened at the good news from upper Eldorado creek, "\$1.40 to \$6.00 a pan."¹²⁵ James McCrae noted a neighbor's prospects as "they are getting good pay on #10 two dollar pans are common."¹²⁶ Lesser amounts were much more common, and caused much more doubt. Lynn Smith worked a claim on Esther Creek in 1905 and reported the situation in typical language. "[G]ot to bedrock and are on the edge of the Pay streak...have 3 ft. of 2 and 3 cents dirt and it won't pay to work....so we are drifting toward the creek....we think we are getting into the old channel...three pans of dirt--five cents first, then 78 cents...and then 40 cents...we are over on the pay Streak...."¹²⁷ Many Yukon miners' diaries consist of a daily record of the results of panning samples of dirt from their claims. Charles Mosier's diary entry for March 15, 1899 read typically: "Cleaned hole[.] 32 buckets pay[.] 25 cents, 32 cents, & 37 cents to pan."¹²⁸

Yukon miners had good reason to keep close track of how much gold they produced. As they realized the profound disjunction between their labor and the likely

¹²⁴Fitzhugh letters, Rampart District Creeks, Oct. 5, 1898, Jan. 1900.

¹²⁵Purdy diary, Jan 22, 1899.

¹²⁶McCrae diary, Sept. 17, 1899.

¹²⁷Smith letters, Nov. 25, 1905; Thanksgiving Eve, 1905.

¹²⁸Charles P. Mosier Diary, March 15, 1899, MSS 012, Acc. 82/168, Yukon Archive.

return in gold, they focused on just how much work they did and just how much gold they could expect in the end. The seasonal nature of the work contributed to their frustration with the gap between work invested and wages earned. In most cases, Yukon miners dug for gold in the winter, when their holes and drifts were somewhat less likely to flood or cave in. In the spring, when the creeks opened up, they washed the accumulated dirt and gravel in sluices and rockers in one long marathon. Miners thus had to do the cold and grueling winter work without any clear sense of how much gold they would get at the wash up. James Lynn Anderson worked through the "terrible long lasting" winter of 1896-96 on American Creek, but as early as January, with "no good news along this creek" he was "afraid we will have our winters work for nothing."¹²⁹ Lynn Smith spent the winter of 1902 watching his dump pile up, all 9500 buckets of it. "It is a dirty shame here our dirt all out and have to wait until June to wash it up."¹³⁰

The long, patient wait for spring often ended with the realization that months of work would go unpaid. James McRae and his partners finished digging and drifting in mid-March 1899, built rockers with which to wash their dumps, and began the wash up on April 27. McRae kept daily records of how much gold/money they produced each day, amounts that ranged from a low of \$15.20 one day to \$80 or \$90 a day. "[A]ltogether," noted McRae on a low day, "it will have to come faster than that." On May 24 they finished rocking on his partner Tucker's claim, with a total of \$579.80. His own claim

¹²⁹James Lynn Anderson Diaries, vol. 1, Jan. 8, 1896; Jan 17, 1896, James Lynn Anderson Diaries, 1895-1899, Vertical File MS, UAF Archive.

¹³⁰Smith letter, Feb. 4, 1902.

produced about the same amount, \$615.60. Their first act was to pay off a hired worker for the season's labors, with depressing results. "We paid Tucker's man off tonight. There was \$29.00 left for Tucker's winter work." A year later, the same group, still at it, faced even more dismal results. After splitting up their small amount of spring gold, they went in search of another claim. As McRae explained, "Went up again this morning put down another hole but could not find anything that would pay us to work so we decided to try and sell it and get to work at something else where we can make something. We are pretty near tired of working for nothing."¹³¹

The lack of work and jobs and gold, the unproductivity of hard labor, and the preoccupation with wages and money revealed the affinities between the work of gold mining and work in the rest of the world. There were other indications of these ties as well. Some miners may have sought gold as an escape from regimented work lives, but they brought their watches and clocks with them. In diaries and letters, they reported their activities not only in terms of wages, dollars and cents, but also in terms of time. They paid close attention to hours worked, hours invested, and hours wasted. On trails and rivers en route to the goldfields, they recorded what times they left one camp and arrived at the next, sometimes to the minute.¹³² Miners noted the amount of time required to pack, cook, prepare meals, make camp, and build boats, as they got used to the work and time involved in these aspects of their daily lives. Even doing the boat-

¹³¹McRae diary, May 27, 1899, May 2, 1899, May 29, 1900.

¹³²Diary of Joseph H. Cavanagh, "Journey to Alaska-Yukon 1898-1900," Vertical File MS, UAF Archive; Diary of Stewart L. Campbell, MSS 122, Acc. 81/129, Yukon Archive; McMichael letters.

building work he enjoyed so, McMichael had his eye on his watch. "Up at 5:15...At 7:00 was working on the boat....Worked until 9 p.m...Though working 16 hours a day, the time does not seem long for I am working at something I like."¹³³

Wage work thus meant hourly work with hourly pay, familiar to men and women of the industrial age. Bert Nelson worked for wages on a claim in the spring and summer of 1901. His diary consisted of only terse entries recording the number of hours he worked each day and the type of work, usually "Time 10 hours" in the hole or at a windlass.¹³⁴ One week he managed 79 hours; for the month of August the total was 279 hours before the bosses stopped work and laid the extra hands off.¹³⁵ C.O. Steiner worked his way through 1899 in a series of jobs, sluicing on one claim on Dominion Creek, running an engine on another. The wages were \$1 an hour and he usually worked 12, 16, or 18 hours a day.¹³⁶ Miners reported their daily schedules in exact terms. F. William Hiscock, a New Zealand miner, recorded his routine in 1898. "We work from about 9 a.m. till 3:20 p.m. It is just daylight at 12 noon, we stop work for lunch for 1 hour, and when we start at 1 oclock in the afternoon it gradually gets dark again, although it never gets very dark...."¹³⁷ James McRae recorded the temperature and time several

¹³³McMichael letter, 17 May 1898.

¹³⁴Bert Nelson diary, April-July 1901, vol. 2, Albert Nelson Jr. Diaries, UW MS and Archive.

¹³⁵Bert Nelson diary, August 1901.

¹³⁶C.O. Steiner Diary, "A Journey to Dawson in 1898," Vertical File MS, UAF Archive.

¹³⁷Hiscock diary, Dec. 23, 1898.

times a day, often at 7 a.m., noon, and when he finished work. His diary entries could be as specific as "It was 1 p.m. when we got the first fire cleaned. I then put in a small fire we began at 7:40 p.m. to clean it out and got through at 9:40."¹³⁸ By 1901, the atmosphere along Glenn Gulch, in Alaska, had reached a familiar state, with whistles to regulate work. As the winter season got underway, Lynn Smith wrote, two hundred men readied themselves and "Within the next two weeks there will be outfits, steam engines, thawers, and whistles will be blowing three times a day[,] all the same [as] big factories."¹³⁹

Gold mining posed a severe challenge to the modern equation that time equalled money. Huge amounts of time, like huge amounts of work, failed to produce much, if any, money. Miners nonetheless kept written track of when and for how long they worked, perhaps in an effort to figure out whether time and money, in this new world of work, were ever going to equal out. Miners who worked on their own claims, or on lay claims, did not always work set or regulated hours. They were well aware, however, of the hours they worked in relation to the more conventional schedules they might have followed at home. In a letter home, Mac McMichael explained that in his Alaska cabin he was always busy, occupied in the evening with writing, mending, cooking. He explained as well that "During 'business hours' I am never out of a job. The pay streak is ever waiting to be found."¹⁴⁰

¹³⁸McRae diary, Jan. 9, 1899.

¹³⁹Smith letter, Oct. 29, 1901.

¹⁴⁰McMichael letter, Jan 3, 1899.

One sidelong indication of the miners' time-regulated work was the presence of watchmakers. Miners owned watches, and when those watches broke, they spent money to get them repaired. Canadian miner James McRae lived and worked with a partner named Tucker, who in addition to mining spent long evenings fixing watches for pay. McRae made note of his steady business, mostly in complaint that Tucker kept the cabin heated at night in order to work, thus depriving his roommates of comfortable sleep. Lynn Smith was a watchmaker by profession, and used that work to support himself in Rampart City. He, too, did a steady business, and wrote consistently that with more tools and watches, he could be doing even better business. For Smith, as for wage laborers in industrial society as a whole, time was literally money. He charged customers for his time. At one point he reported buying a \$5 creek claim after news of a gold strike, but doubted that it was money well spent. "[B]ut I think I burned up \$5 and 13 1/2 minutes work on a watch for nothing," he commented in a letter home.¹⁴¹

Other factors, in addition to industrial work habits, shaped the sense of work time in the Yukon and Alaska. Nature played a crucial role. The extremes of light and dark that came with sub-Arctic seasons messed up nearly everyone's clocks, disrupting the miners' accustomed, industrial, working rhythms, while at the same time exacerbating those rhythms. Industrial workers at home worked night shifts, but those kinds of schedules took on new meanings along the Yukon. In winter the constant darkness made it difficult to tell night from day. James Lynn Anderson of Seattle headed north before the rush, in 1895. In November he and his party began prospecting on American Creek in

¹⁴¹Smith letter, Rampart City, Alaska, Oct. 18, 1898.

Alaska. By late November the darkness overwhelmed their sense of time. "[M]istook 1:30 a.m. for 6 a.m. and had breakfast at 3:30 a.m....started burning prospect hole today."¹⁴² Miners checked their watches against the amount of winter light, to see if either made much sense. "Shortest day in the year but for some reason quite light at 9 AM," noted James Cooper on the winter solstice, 1897. The same confusion held in summer, when miners worked night and day in the light and were rarely able, without a watch, to figure out what time it was or when they should stop. In the summer, miners found it too hot to work during the day, so they worked all night instead, further disrupting any sense of normal work times or schedules. "We didn't get up until 9:30 this morning," Hunter Fitzhugh wrote of a December morning, "because it is so dark at that hour that we can't tell what time it is. Our alarm clock went back on us a day or two ago, and we are helpless."¹⁴³ The work of gold mining mirrored the work patterns of the larger industrial world, but sometimes in its own peculiar ways, as the natural world stepped in to both distort and confirm those patterns.

In the Yukon and Alaska, culture and nature came together in the work of gold mining. Miners wanted and expected productive labor. They sought work that would pay, a connection between hard work and wages for that work. They did not find that connection. Instead, they found a scattered, random supply of gold. As a result, many miners came to understand that mining along the Yukon had a lot in common with gambling, and even more in common with industrial work. In response they worked

¹⁴²Anderson diary, vol. 1, Nov. 23, 1895.

¹⁴³Fitzhugh letter, Dec. 19, 1899.

even harder, at tasks that in the end were unlikely to pay. If gold promised escape at the start, it delivered only hard work. Even when miners praised this work as better or more free than work at home, they brought to the work the language, organization, and character of industrial labor. Their labor was wage labor, structured and measured according to time and money.

It is impossible to understand the work of gold mining without its industrial context. Men and women who chose to try their luck in the goldfields made those choices freely; their actions were not determined by laws of nature, either laws that dictated that humans desire gold above all else, or laws that dictated that an economy needing gold would naturally produce workers willing to produce gold. But 1890s gold miners made their choices in a specific context of rapid industrialization and nation wide depression. Many of them faced a narrow spectrum of choices. Once in Alaska, they realized that gold mining was exactly that, one choice among many similar choices: another form of industrial labor governed by hard work and chance. Given this new vantage on their options, they concluded that the odds were simply better at home. In the end, gold offered not the chance to escape life at home, but instead to return to it on slightly better terms. But that was all it offered--the chance. In recognizing that reality, miners with anti-modern sentiments turned quickly into modernists. By the time they realized they were gamblers, they also knew that the gamble of industrial life made more sense at home than in Alaska or the Yukon, especially as the placer gold disappeared and the odds grew worse and worse. Home became a better bet. In 1903, O.G. Herning, a mine manager in the Willow Creek Mining District on Knik Arm in Alaska, wrote that

"mining is a business that one can make lots of money at, but one don't want to be a lifetime at it, for living in the mountains, on miners grub, and depriving oneself of most of the good things one can get when down in the states, is not all sunshine and...clover, so a miner deserves all that he can get, and if he gets it quickly, he can then live on easy street, in Union City, or any other old place, and then enjoy life."¹⁴⁴

For anti-modernists seeking physical testing, danger, discomfort, fear, and grave purpose in their lives, gold mining could and did serve as a viable escape from, and critique of, the modern world. But unlike many of the anti-modernists that Jackson Lears described, gold miners actually experienced real physical challenges, danger, fear, and profound discomfort. Some of them thrived on it, but still did not find much gold. In the absence of rich strikes and instant wealth, danger and discomfort and hard work could not last long as attractive alternatives to modern life. And finally, gold miners sought escape by seeking wealth, the very core and substance of industrial culture. They sought it in the form of gold, which Americans celebrated as the natural foundation of their supposedly thriving, world-dominating economy. To seek escape through the very substance that defined modern civilization--in its naturalized value and power, and in its randomness--guaranteed an ironic result.

¹⁴⁴Diary of O.G. Herning, Willow Creek Mining District, Knik Arm, Alaska, March 2, 1903, O.G. Herning Collection, UAF Archive.

Chapter 3: Work and Nature: Disassembling the Creeks

The vast labor of placer mining, whether understood as gambling or as wage labor, constituted more than a distilled example of an industrial culture of wages, time-clocks, and yearnings for escape. Alaska/Yukon miners drew from industrial culture in the ways in which they organized their work, their claims, and their relations with each other. But miners also drew from nature, using wood, water, heat, cold, and gravity as tools in their labor. In wood and water, especially, miners harnessed the energy of major natural systems in order to harvest gold. Gold mining, like much work, was a set of relations between human beings and the natural world. In their efforts to find gold, miners immersed themselves in the physical world, and organized their work and their lives--as all humans do--within the natural systems they encountered. That work, which ranged from digging in the earth to transporting supplies to hunting moose, connected them to the natural environment while at the same time re-shaping that environment. Gold mining put human beings in conversation with the earth that contained gold. That conversation ranged from the practical matters of digging into frozen earth, to social and intellectual understandings of the geography and importance of the northern goldfields, mountains, rivers, and towns in which the work unfolded. Gold mining changed those mountains and creeks and in doing so defined them in new ways.

The history of these connections to the environment is inherently a history of work and nature in constant, dynamic interaction. All human work is connected in some way to the physical world, and all human work has consequences within that world. In digging for gold, miners did what all human beings do: they mixed their labor with the energy and resources of the earth to extract or create products that had value within the

larger social and economic system of which they were part. The miners, through their physical engagement with the earth itself, produced gold, but also a focused knowledge of the natural world of the creeks.¹ Yukon gold miners directed this new-found expertise toward specific ends. They cared overwhelmingly about gold, and the ability of land to yield it. As a result, they channeled the abundance and productivity of the earth toward gold.

Gold mining was a specific kind of work, and it had consequences specific to the "nature" of placer mines. It produced a "miners' knowledge" of the natural world, a particular expertise created in a certain place and time, encompassing permafrost and the midnight sun. In the course of digging into the earth to extract one small piece of it, miners took apart the creeks and rivers and forests that contained gold. Their disassembly of the gold creeks demonstrated some larger truths about human work and nature. It showed that all work, no matter how short-term or technologically limited, has physical consequences in the broader world. Early gold miners in Alaska were limited in the changes they wrought, yet their work was capable of transforming the land. In choosing to work for gold, miners made it difficult, at least temporarily, for humans in that place to do any other kind of work.

Gold mining was of course not the only kind of work that human beings did during the gold rush. The mining itself was supported by and intermixed with the work

¹On work as engagement with nature, see Richard White, The Organic Machine: The Remaking of the Columbia River (New York: Hill & Wang, 1995), and "Are You An Environmentalist or Do You Work for a Living?: Work and Nature," in William Cronon, ed., Uncommon Ground: Toward Reinventing Nature (New York: W.W. Norton, 1995), 171-185.

of transportation and the work of supply, both of which will be discussed in detail in subsequent chapters, and both of which engaged miners with nature, and with culture, in complicated ways. Each of these three types of work, mining, transportation, and supply, consisted of a distinct set of relations between human beings and their environment, and each produced its own focused knowledge of the physical world. All three shared an overarching characteristic, however. Each kind of work connected the local places of gold mining to far distant places in the "outside" world. Each was inherently involved in the process of getting gold out of the ground and sending it elsewhere, into urban markets, and the larger world economy. That made each of these kinds of work distinct from the comparatively local subsistence and trade economies that had defined the human relation to the environment before the advent of both Euro-American fur trading and gold mining in the Yukon watershed.

This connection to distant places meant that the work of gold mining, in the broadest sense, was also the work of connecting local gold-bearing creeks to the rest of the world. The linkages forged by industrial capitalism became part of the chain drawing the American West and other regions into a new web of economic relations, a new geography of capital. Industrial capitalism and gold mining were together part of that larger web.² Capitalism can seem an inexorable force reaching out as far as the Yukon to transform people, land, and resources through its monumental, naturalized power. But human work grounds the relation between the local and the non-local in the small-scale,

²As described in William Cronon, Nature's Metropolis: Chicago and the Great West (New York: W.W. Norton, 1991), especially chapters 3-5.

quotidian details of the labor itself. The broader workings of capitalism had everything to do with Alaska/Yukon mining, but the actual physical linkages between specific geographical places in the North and the outside world were forged by human work. A larger force called capital often made that work possible, but human beings still performed the work itself in specific places, and in a specific natural world.

In Alaska and the Klondike at the turn of the century, the specific natural world that placer miners worked was an ecological system of northern rivers and creeks tributary to the Yukon on either side of the U.S./Canadian border. Gold was literally embedded within larger physical systems that contained stuff besides gold: soil, decayed vegetative matter, rock, gravel, permafrost, ice, water, vegetation, trees, fish, animals, and other living organisms. Northern ecosystems grew living things quite oblivious to the presence of gold, including forests and salmon and moose and caribou. Placer gold, the resource that mattered, lay in, under, and along creeks and rivers. Miners wanted this one small part of the diverse organic and inorganic physical world that comprised a northern creek. In order to get it they had to take the whole system apart, piece by piece. In doing so they transformed local ecosystems.

When gold miners arrived first in small numbers and then en masse to extract the world's most precious metal, they learned a lot about these other living things. They harnessed them to the work of mining, the work of moving through the landscape, and the work of staying alive. They mentally and physically re-made the elements of these local systems into resources to be used for the extraction of gold. They turned the energy stored and released in annual cycles of climate and growth to a new end. As William

Cronon writes about copper mining at Kennecott, Alaska, they "inserted themselves into the local ecosystem, built a community, transformed the local economy, and extracted the only resource that mattered to them on behalf of urban markets thousands of miles away."³

Many miners thought their work would be simple, or that nature had performed it for them, leaving the nuggets to be gathered from the ground. They soon discovered that separating gold from the earth, and the disassembly it required, required grueling labor. Dirt, muck, gravel, wood, water, and gold were not so easily divided from each other. They were components of riparian systems, for one thing, and as such intertwined with each other in ways miners recognized in their mining practices if not explicitly in their writing and thinking. When miners altered one element of the system, flowing water, that water often reappeared in frustrating ways, or else disappeared just when it was needed. The very interconnectedness of the parts made disassembly a challenge.

Their ability to meet that challenge varied with technology. At first, armed with shovels, pans, sluices, and fire, they picked away at the riparian systems. Within months of the initial rush, however, their need and ability to harness water moved them down an inexorable path toward full-scale hydraulic mining and stripping, which was followed after 1900 by dredging. Each step along this journey increased gold miners' ability to disassemble placer streams and rivers. Although the effects on the stream systems also increased dramatically with hydraulics and dredging, the principle was the same from the

³William Cronon, "Kennecott Journey: The Paths out of Town," in Under an Open Sky: Rethinking America's Western Past, ed. William Cronon, George Miles, and Jay Gitlin (New York: W.W. Norton, 1992), 50.

start. Even low-technology, low-capital digging, drifting, and sluicing required taking creeks apart. It was through that work of taking nature apart that gold miners came to know nature so well.

This work of disassembling creeks and the knowledge it created echoed far beyond the creeks themselves. Through that work, distant economic forces transformed local northern places into a part of the industrial world. Like many other western places, Alaska and the Yukon were defined by the presence of the one resource deemed most valuable by the outside world--whether gold, or timber, copper, wheat, or cabbages. Gold, or rather the value given to gold by the outside world, gave Alaska and the Yukon its new identity. That outside definition transformed the place, not only in people's minds, but literally, as well, by changing the landscape and the relations between these local places and the rest of the world.

Seasons of Gold

When they labored, miners were not looking for knowledge of the natural world, in and of itself. They were looking for gold. As Mac McMichael noted in a letter in 1899, miners tended to keep their heads down, for quite specific reasons. "I don't think it is a prayerful mood either. Instead of looking heavenward their gaze is mostly earthward. I have come to the conclusion that they looketh for the paystreak!"⁴ Though journalists,

⁴Alfred "Mac" McMichael letter, Jan. 3, 1899, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the materials in the Reinicker Collection in the

government officials, and tourists offered useful observations, much of what we know of the natural world of the gold fields we know through the miners' earthward gaze and labor.⁵

The first step in disassembling local ecosystems to find gold was deciphering the seasonal cycles of the place, and fitting human work into those cycles. Like most types of human labor, gold mining followed an annual cycle shaped in part by natural seasons and in part by human adaptations to seasonal change. The way northern miners labored reflected the creativity that humans brought to the limits the rotating earth imposed. Mining revealed one way in which human beings organized their lives within those limits, and how they created new cycles of production and consumption that harnessed natural cycles.

In the sub-Arctic environment of the Yukon basin, all life was adapted to a climate of extremes. The particular alignment of the top of the planet with the sun meant long, dark, extremely cold winters and short summers of intense light and heat. True daylight on the summer solstice lasted just over 22 hours.⁶ Northern ecosystems cycled in ways that matched these conditions. Plants and animals concentrated their consumption of the sun's energy into a few short weeks of all-out production and

Yukon Archive.

⁵On bodily knowledge of nature, through labor, see White, Organic Machine, and "'Are You an Environmentalist?'"

⁶National Park Service, U.S. Department of the Interior, Final Environmental Impact Statement, Mining in Yukon-Charley Rivers National Preserve, Alaska, Vol. 1 (Washington, D.C.: GPO, 1990), 32.

reproduction. Plants, animals, and of course mosquitoes grew as fast as possible in the summer, in a frenzy of energy. Streams and rivers melted for a few brief months, cycling rain and snow quickly through watersheds. In summer, every organic element of the world sprang into action with bursts of energy; human beings harnessed the abundance of the short summers as well, storing berries, other plants, fish and wildlife as sustenance for the long winters.

Along the Yukon, placer miners had to fit their labor into these seasonal extremes. They faced two basic tasks. First, they had to find and gather gold-bearing gravels. For centuries, yearly rounds of freezing, thawing, and erosion had worked gold free from quartz or granite and washed it as dust and fragments into creeks. Because gold was substantially heavier than anything else it sank into the gravels that formed the beds of the streams, and came to rest when it hit something dense enough to stop it--sometimes heavy gravel, sometimes clay, sometimes solid rock. Miners called this bedrock. Prospectors searched creeks and panned gravels, looking for pockets of gold that indicated rich stream beds below. Once they found substantial signs of gold, miners used running water to wash the gravels, to rinse away everything but the gold. Like the creeks themselves, miners brought running water to bear on earth that contained gold. In the washing and sluicing, miners mimicked and intensified nature's own summer work. As Tappan Adney described it, "nature, operating with water and air, has already done the work of the crusher, and to a certain extent of the separator also."⁷

⁷Tappan Adney, *The Klondike Stampede* (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 226.

At the start, in the 1880s and early 1890s, Yukon placer miners accomplished both these tasks during the brief northern summer. Then, mining had only one season: summer. Miners waited out the long frozen winters for the summer sun's thawing heat, and the creeks' free-flowing water. Working long days and nights, they gathered what surface gravels the sun--and muscles--could loosen, and washed them before the streams dried and froze in the fall. When miners introduced fire-thawing of the permafrost, however, they created a more complicated, two-season pattern of work. They harnessed the duality of the northern climate, in which the world was either frozen or unfrozen. Miners divided their work accordingly.

The work of placer mining divided into two seasons. Each season, and each type of work, revolved around a key resource. The fall/winter was the season of wood. In the fall/winter season--the frozen season--they thawed the permafrost with fires. This allowed them access to potentially rich subterranean gravels. Working underground in permafrost, miners depended on a frozen world. Spring and summer made up the unfrozen season, when miners depended on flowing, unfrozen water. Spring and summer required another key resource: water. To fit their work into these seasons, miners had to limit fire thawing to its proper season, winter. And they had to make sure that running water stayed in its proper seasonal place, as part of spring and summer work.

Seasons of Wood

Gold miners in search of productive labor had initially chafed at the limits imposed by waiting 10 frozen months every year for 2 unfrozen months of mining.

Winter--frozen water and frozen earth--dominated life in the Yukon basin, and gold miners soon figured out a way to harness that frozenness to the task of mining, and to extend the seasons of their own work. Harnessing the solar energy stored in wood, miners began to use small fires to thaw through the permafrost alongside and even underneath creeks, in order to gain access to deeply buried gravels that proved far richer than surface deposits.⁸ By lighting fires underground, miners extended the sun's stored heat into winter and created a whole new relationship with winter itself. In extending mining work into the frozen season miners also found themselves facing year-round work, just like industrial workers at home in the "outside" world. "It's as bad now inside as outside--work winter and summer," the old-timers grumbled, according to Tappan Adney.⁹ Winter mining drastically expanded the seasonal range and the productivity of northern placer mining.

⁸Accounts of the introduction of wood-thawing vary. Michael Gates, Gold at Fortymile Creek: Early Days in the Yukon (Vancouver: University of British Columbia Press, 1994), reports that the first recorded use of fire-thawing was in 1882 along the Sixtymile river (Gates, 18; 62-63). In 1887, according to another version of the tale, a miner at Franklin gulch in the Fortymile district decided to try his hand at winter mining on a creek bed. After the creek surface froze, he chipped slowly downward through the ice, allowing the exposed water to freeze at each step. Eventually he reached the creek bed, through his vertical shaft of ice that kept the running water at bay. He then built a fire to thaw his way into the stream bed, initiating fire thawing, and thus winter mining, along the Yukon. Another version of the story was that Canadian government explorer and official William Ogilvie, sent to the Yukon to survey conditions, suggested building fires on frozen ground, thawing a layer, then building another fire deeper down, to slowly burn a mining shaft into the permafrost. Ogilvie had seen this used to expose burst water pipes in the winter streets of Ottawa. See Thomas Stone, Miners Justice: Migration, Law, and Order on the Alaska-Yukon Frontier, 1873-1902 (New York: Peter Lang, 1988), 140, citing Ogilvie.

⁹Adney, Klondike Stampede, 243.

Winter work took miners down into the layers of the earth, but before they could go into the earth they had to go into the forest. Wood was a key resource for winter mining, and for all aspects of survival in the north, winter and summer. In the Yukon Territory, each goldseeker purchased a license, or Free Miner's Certificate, which granted rights to cut wood for boats, cabins, and mining.¹⁰ Miners harvested large quantities of wood all the time, for multiple purposes, but the cordwood they took for thawing connected their winter work, in particular, to the northern forests. As a Rampart newspaper put it in 1901, "The timber on a mining claim is as much a part and parcel of the claim, as is the gold contained therein."¹¹ In order to disassemble the creeks, to get at the paystreak, they had to disassemble the forests as well. In order to harvest dry wood for thawing fires, they set larger fires in the forest, quite carelessly, to dry and blacken the trees before cutting. Those fires often spread, consuming massive swaths of brush and timber along the rivers. Whatever wood miners actually harvested from these burns came from the riparian forest, from the valleys and nearby hillsides, from the narrow fringe along the waterways. They started close along water courses, and worked up every nearby hill, gulch, and stream. Tappan Adney hiked up Bonanza creek early one winter morning to witness the work of gold mining. As he reached claim 60 below discovery, he found men cutting wood for the day, sawing away on "the slender blackened poles of spruce, cottonwood, and birch...." "A heavy bank of smoke from the night's fires hung over the valley, and the air was laden with the smell of burned wood," Adney wrote later

¹⁰James E. Beatty Papers, MSS 122, Acc. 82/390, Yukon Archive.

¹¹Alaska (Rampart) Forum, Sept. 28, 1901.

for Harper's, and "[o]ther men on the hill-sides were dragging down small poles for the fires, streaking the white snow with black."¹²

Fire thawing was a primitive technology that consumed prodigious amounts of wood. Klondike king Alex McDonald told Tappan Adney that it took a half a cord of wood to thaw five cubic yards, or ten wheel barrows, of gravel, and that wood cost \$25 a cord, cut and delivered to the mining site. Two men working holes through the winter could burn thirty cords of spruce, pine, and birch each season.¹³ They often burned more. Bill Ballou reported in October 1901 that he was ready for winter work, having chopped "about sixty cords of nice dry logs." The forest had been swept by fire, so he found himself each night covered with soot, "Comming in as black as niggers." But the wood was dry due to the fire, and dry wood was always hard to come by.¹⁴

When miners switched from fire-thawing to steam thawing, they simply shifted wood consumption from underground shafts to boilers on the surface. Steam-powered operations excavated more ground with less wood, but the combinations of steam-driven thawers, pumps, and hoists managed to burn plenty of wood nonetheless. "I saw the wood myself," wrote Bill Ballou of his steam machines, "I keep the hoist running all the

¹²Adney, Klondike Stampede, 257.

¹³Adney, Klondike Stampede, 251. John A. Gould and Richard C. Stuart, "Permafrost Gold: A Treatise on Early Klondike Mining History, Methods and Technology," Microfiche Report Series No. 11 (Ottawa: Parks Canada, 1980), Dawson City Museum Microfiche, 69, citing Adney. See also Northern Design Consultants, "A History of Logging in the Yukon, 1896-1970," Vol. 1 (Whitehorse, Y.T.: Northern Design Consultants, 1993), 11-12, copy in Dawson City Museum.

¹⁴William B. Ballou letter, Oct. 19, 1901, William B. Ballou Papers, 1889-1918, UAF Archive.

time...and the pump whenever it is needed...and at the same time I have to be constantly firing that old boiler which eats up a lot of wood in the twenty four hours...."¹⁵

Wood was sometimes dry and sometimes green, but it usually came from fairly nearby. Alaska/Yukon miners, like all rushing treasure seekers, cut the closest wood first. Because both humans and forests clustered along rivers and streams, most timber harvesting occurred along watercourses, within or very close to riparian ecosystems. Miners took wood from the riparian zone because that was where the forest grew. Most 19th-century Euro-American explorers, observers, and miners were largely unimpressed with the boreal and sub-arctic forests of the arid Yukon interior. The trees did not seem a merchantable commodity. When Hudson's Bay agent Alexander Murray established a trading post on the upper Yukon in 1847, he had trouble finding large timber to construct his buildings. "The dry land....," he wrote, "is mostly open, or having a small birch and willows, the only wood of importance is along the banks of the river or on the islands."¹⁶ Like Murray, observers consistently noted that the only worthwhile timber, dominated by white spruce, tended to hug the banks and islands of the great river itself, and its tributaries.¹⁷ In 1868 and 1869 William Dall explored downstream from Fort Yukon, and noted that the white spruce was the "the largest and most valuable tree," spread over

¹⁵Ballou letter, Jan 29, 1902.

¹⁶Harold John Lutz, Early Forest Conditions in the Alaska Interior: An Historical Account with Original Sources (Juneau, AK: U.S. Forest Service, Northern Forest Experiment Station, 1963), 26.

¹⁷National Park Service, Yukon-Charley Rivers Final EIS, 32-33; J. Lewis Robinson, "Agriculture and Forests of Yukon Territory," (ca. 1946), Govt. #2078, vol. 8A, File 20, 5-7, Yukon Archive Government Records.

the "whole country a short distance inland," but "largest and most vigorous in the vicinity of running water."¹⁸ William Haskell found the interior forest sorely disappointing in 1898: "...a scrubby growth of trees...extending up the mountain side to an altitude of from one thousand to one thousand five hundred feet above the river. It is this which appears to those passing down the river in boats to be a continuation of the good timber seen along the banks. Timber that is fit for anything is scarce...."¹⁹

John C. Cantwell offered further observations on forest conditions near the Dall River on the American side of the border in 1900. "[The] heaviest growth of timber is found along the small tributary streams draining the lateral valleys of the Yukon system and on some of the sloughs of the main river. It is probably that the mean annual temperature is higher in these localities than it is directly on the shores of the main stream, and it is certain that the valleys are more sheltered from the wind."²⁰ Tappan Adney observed similar variations in the environment that seemed to underlay patterns of forest growth. He noted the willows and alders in "the moist places," but in general described the vegetation as consisting of moss, "which covers the ground" and spruce, white birch, and cottonwood. These trees were abundant, he wrote, "from the lowest valleys to the tops of the mountains," but down lower, in the "flat valleys of the

¹⁸Lutz, Early Forest Conditions, 27.

¹⁹Lutz, Early Forest Conditions, 30, citing William B. Haskell, Two Years in the Klondike and Alaskan Gold Fields (1898).

²⁰Lutz, Early Forest Conditions, 32, citing John C. Cantwell, Report of the Operations of the U.S. Revenue Steamer "Nunivak" on the Yukon River Station, Alaska, 1899-1901 (Washington, D.C.: GPO, 1904).

streams...spruce grow as thickly as anywhere in the world, some attaining a diameter of two feet." Higher up, on open hills, he explained further, the trees "become suddenly stunted in appearance," only a few inches in thickness.²¹ Thick peat moss and shallow permafrost in many areas limited drainage, creating bogs, marshes, and muskeg tundra, which supported black spruce forest, along with diverse species with shallow root systems: mosses, caribou-moss lichen, labrador, and blueberry.²² Permafrost wetlands limited forest growth in some areas, as did low rainfall, high elevation, and short seasons. Larger spruce, birch, aspen, alder and poplar grew best in the river and creek valleys, where deep permafrost and running water created conditions with well-drained, and well-watered soils.

The thousands of gold miners that descended on the Klondike valley, and the scores that spread out to other valleys and the smaller creeks, cut, burned, and consumed this scarce wood at an unprecedented rate. In addition to the wood for winter thawing, miners cut and purchased wood to heat their cabins and run the steamboats. Those who could afford to buy cordwood did so in a lively local market in which wood traders hauled "considerable quantities" from great distance to sell in Dawson and at the creeks. Those without cash, however, shifted for themselves, hauling wood on sleds. A local government report in 1898 stated that there was plenty of firewood in Dawson, "yet the extent to which the timber has been cut in the vicinity obliges the man who cannot afford

²¹Adney, Klondike Stampede, 442-443.

²²National Park Service, Yukon-Charley River Final EIS, 53-54.

to buy wood to travel further in quest of same."²³ When Maud Case visited her father's claim in June 1903 she walked up Eldorado to Eureka Creek. "[N]ot much timber on the mountainsides," she wrote, "for it had all been cut off for wood for these mines."²⁴

Further down the Yukon, Captain Cantwell observed from the U.S. Revenue Cutter Nunivak that "[g]reat inroads have been made in the spruce forests along the immediate banks of the Yukon to supply fuel for the steamboats plying on the river, and in certain localities the shores have been almost entirely denuded of timber." He added that "at the present time nearly all of the available timber of merchantable size has been cut off along the banks of the Yukon and its tributary streams in this vicinity."²⁵

When miners went into the forest to harvest fuel--wood to thaw the earth, run their boats, warm their cabins, they performed "dead work," necessary preparation for the work that mattered, the mining itself. Wood was simply a tool, a source of energy, a means to greater ends. But taking wood and burning wood were not such simple, separate, throw-away acts. Miners took wood from natural systems, and burned it within natural systems. Fires set in a frozen earth, for instance, affected that frozenness in unpredictable ways. And running water could appear out of season, when it was supposed to be frozen, to foil winter work. The creeks remained riparian systems, and in those systems, wood and water could not be so thoroughly divided. They were connected

²³"Report on Wood, 1898," Govt. no. 2078, vol. 8A, File 3, Yukon Archive Government Records.

²⁴Maud Case letter, June 29, 1903, George E. Case and Family Letters, MSS 172, Acc. 81/91, Yukon Archive.

²⁵Lutz, Early Forest Conditions, 32, citing Cantwell, Nunivak.

across seasons, and within systems, in ways that belied the miners attempts to use them separately. When the lines between the frozen and unfrozen seasons blurred, the earth proved far more complicated than miners expected.

The First Season: Winter Work

Winter work brought miners into contact with winter itself--with frozenness--and with dirt, muck, wood, fire, and water in complicated ways that produced new knowledge. Bill Hiscock described winter work along Bonanza creek in November 1898.

...We got some miles up Bonanza before we came to any claims being worked. Then we began to see a windlass with a heap of dirt[;]and gravel [,]being frozen to all depths has to be thawed out, with wood fires, usually put in in the evening and left to burn during night time, in the morning the thawed earth[,]from 4 to 5 inches to 8 or 9 inches, is hoisted by windlass in a wooden bucket, tipped out and in 20 minutes it is frozen solid again and remains there until the spring comes...²⁶

In most cases, miners had to wait until at least November to lay fires and begin thawing through the permafrost to find sub-surface gravels. Only in late November or December could they trust the frozen walls of their shafts and tunnels to hold firm, and trust running water to stay frozen. As Alfred McMichael explained in a letter home, "Many men start out in December to prospect their claims. In many places the ground does not freeze solid enough until about this time." Bill Ballou had to explain his summer laziness as well in September 1898, "we can't work our claims until ground is

²⁶F. Wm. Hiscock, Diary TS., "The Youkon Trail of Year 1898," November 1898, Diaries File, File Collection, Dawson City Museum.

well frozen...."²⁷ Lynn Smith knew enough to wait for true winter, but in November 1901 he and his partner were "too anxious and tried to hurry nature. Put in five six foot fires and the weather is not cold enough so we started the water from above...and has been running ever since."²⁸

Miners like Smith learned the boundaries of these seasons just this way, by trial-and-error. Many arrived at the creeks in summer, and began at once to sink holes, only to find the holes filling with underground water. Purdy arrived on Eldorado Creek in August, 1898, and started in at mining: "started and dug a hole down six feet till we struck frost. The water bothered so we had to give it up."²⁹ Jonas Houck made it to Dawson in June 1898, and wrote home that no one was thawing the ground, digging shafts, or mining, "on account of surface water running in and putting out the fires."³⁰ Stewart Campbell tried fire-thawing in June 1899, with troubling results he recorded in a typically terse diary entry: "Hole badly caved in from last fire. Took 3 hrs. to remove debris. Have to burn with hot rocks after this. Down 18 ft."³¹

²⁷Alfred "Mac" McMichael letter, Dec. 10, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive; Ballou letter, Sept. 18, 1898.

²⁸Lynn Smith letter, Glenn Gulch, Nov. 10, 1901, Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, UAF Archive.

²⁹Frank Purdy diary, 1898, Vertical File MS, UAF Archive.

³⁰Jonas B. Houck letter, June 30, 1898, Jonas B. Houck Papers, UAF Archive.

³¹Stewart L. Campbell diary, June 1899, MSS 122, Acc. 81/129, Yukon Archive.

James McCrae and his partners, a group of hard-working and patient Canadians, learned the difference between summer and winter work the hard way as well. After an unproductive winter of 1897-98, they found themselves in August with a new claim. They set to work right away, using the winter methods they had learned earlier in the year. They dug four feet down with picks, hit frozen ground, and began to thaw with fires on August 22. Two days later McCrae wrote "We are down to the Creek level[.] it is the water from the Creek that is coming into the shaft. We cannot get down any deeper in that Shaft." They kept trying, setting fires to thaw "muck and Rock mixed," timbering their shafts to support them as they thawed. "We worked out three fires today and drove the timbers down. It is slow work sinking here in Summer time there is so much water to contend with." Loosened earth proved just as bothersome: "We tried to clean out the shaft but the Hill keeps sliding in all the time. So we decided to quit it and start [building] at the Cabin."³²

Wood thawing required a frozen earth, but it required other environmental conditions as well. In the cold winter air, the deep shafts acted like chimneys, drawing hot air and smoke up out the holes into the stillness. When the temperature rose in the spring, however, carbon monoxide and smoke did not clear as well. It hung in the holes, hurt miners' eyes and lungs, and even knocked them out or suffocated them.³³ This happened occasionally in the winter as well. Twice in December and January, Charles Mosier started in the morning to clear debris from his mine, but had to wait until later in

³²James A. McCrae Diary, Aug. 21, 24, Sept. 2, 15, 1898, Yukon Archive.

³³On the dangers of drift mining, see Gates, Gold At Fortymile, 62.

the day to work, due to underground smoke.³⁴ Preston Goodale's neighbor's drift filled with smoke and "came near killing one man," leaving him unconscious for an hour.³⁵ In the mining shafts, miners created a double bodily relation to nature. Their bodies altered nature, digging deep, but the changes wrought in turn threatened their bodies with death.

In spring, such threats proved a harbinger of the thaw. By mid-March, with temperatures rising, smoke and gas proved even greater obstacles. Charles Mosier and his father suffered badly from smoke and gas in the holes, and had to cease work and rest in their cabin, blindfolded. On March 20 he wrote, "Went down in the hole but it was too gassy to work."³⁶ On the Rampart Creeks, by the first of May, 1899, all the men working for or near Bill Ballou were "driven out of the holes by water or gas." Gas and smoke signaled the effects of warming air, the change of seasons, and thus the change in work. On April 14 Mosier "quit the hole" and began preparations for sluicing. In mid-March, Frank Purdy himself stopped work due to sore eyes from gas. The next day he turned to whipsawing wood for rockers and mud boxes, that is, to spring work.³⁷

Once they learned the proper seasonal limits to wood thawing--or drift mining, as they called it, for the lateral tunnels they "drifted" underground--miners turned to the task of finding and unearthing buried gravels. It was not difficult to get started. As

³⁴Charles P. Mosier Diary, Dec. 30, 1898; Jan. 5, 1899, MSS 012, Acc. 82/168, Yukon Archive.

³⁵Purdy diary, Dec. 23, 1899.

³⁶Mosier diary, March 20, 1899.

³⁷Ballou letter, June 10, 1899; Mosier diary, April 14, 1899; Purdy diary, March 15-16, 1900.

McMichael noted, the "only science required is knowing how to build a fire..."³⁸ They began along the surface creeks, in spots with promising gold-spotted gravels. In December or January, once the world froze sufficiently, a miner picked a spot to sink a shaft six or eight feet square and cleared the ground of trees, brush, moss, and soil.³⁹ "The top earth or muck can be done faster with a pick than by fire, but when the frozen gravel is struck," explained McMichael, "it must be burned to make headway at all."⁴⁰ The distance to frozenness varied. Young Charles Mosier started work on a Meadow Creek claim in the Klondike, just after his arrival from upstate New York. "Started a hole near the line 9 & 10; dug about 3 ft.; frozen ground just under the moss."⁴¹

They thawed their shafts downward through the winter months, laying fires by night and cleaning out the holes during the day. As they sank into the earth, they depended on the earth around their shafts to stay frozen in place, without timber or cribbing. As the holes got deeper, and the surface dumps higher, the miners mounted windlasses on log cribbing to haul buckets of dirt out of the holes to the top of the dumps. As the fires burned deeper through the winter, the cribbing climbed higher and higher. A Canadian surveyor, R. Cautley, described the eerie scene. "The deep narrow valleys were covered by a solid pall of smoke," he wrote, "from the underside of which was reflected

³⁸McMichael letter, Fourth of July Creek, Oct. 27, 1898.

³⁹Gould and Stuart, "Permafrost Gold," 18.

⁴⁰McMichael letter, Fourth of July Creek, Oct 27, 1898.

⁴¹Mosier diary, June 30, 1898.

the flickering flames of the underground fires."⁴²

Picking and thawing through gravels meant matching the energy of wood fires and human muscles against the frozenness of permafrost. "We only worked out one fire today," wrote McCrae wearily on December, "as the gravel we are working now is very hard."⁴³ Some strata of muck, dirt, and gravel yielded quickly to picks; others thawed readily for fires; still others wouldn't budge. In November 1898 Frank Purdy struggled to dig through two feet a day by picking, and reported that he was "getting into stratas of gravel with quite large pieces of quartz in it....only about one inch thick, but make the picking hard."⁴⁴ On another day, he found that deep in one hole, "gravel is getting coarser and thaws more rapidly than before."⁴⁵ "Am working the hard graft," Bill Ballou reported to his brother Walt, "ten hours each day with pick and shovel."⁴⁶ "We worked out three fires today hard stuff to thaw muck and Rock mixed," James McCrae scribbled in his diary, "This is what some people would call misery." Tom Boldrick captured the drudgery succinctly in his record of July 4, 1898, spent prospecting on the Stewart River:

We dig about 18 inches when we strike frozen ground[.] we gather wood build a fire in the hole which has thawed about 4 inches eagerly pan a pan of dirt & get lots of glittering stuff in the pan but alas it is mica[.] we repeat the same thing for

⁴² R. W. Cautley, "Highlights of Memory. Incidents in the life of a Canadian Surveyor," MSS 005, Acc. 82/97, Yukon Archive.

⁴³ McCrae diary, Dec. 16, 1898.

⁴⁴ Purdy diary, November 26, 1898.

⁴⁵ Purdy diary, Chief Gulch, Nov. 2-3, 7, 1898.

⁴⁶ Ballou letter, Dec. 10, 1901.

the whole day with the same results[.] there is gold here someplace[.]⁴⁷

The miners' first goal in sinking holes was to reach bedrock, the solid bottom of an old, buried stream, which had long ago caught and held the downward sinking gold washed by flowing water. This layer, and the gravels just above, were most likely to contain placer gold. Sinking to bedrock could be a long journey, accompanied by a constant, anxious guesswork about where a miner sat in relation to bedrock. Frank Purdy wrote in October 1898 that the "men next door on claim no. 6 are down 30 feet and are not to bedrock yet...." A month later Purdy himself was down 45 feet, "still going and in muck....But it seems solider underneath than it did before which might be gravel....We are still digging with great hopes."⁴⁸

This precarious task of locating bedrock began with a more-or-less informed reading of the present day surface creeks, which offered clues to the location of the older, buried creeks that coursed along invisibly underground. Miners had simply to get down there and have a look around for stream-bed gravels. Rodman Paul described a similar task faced in California a few decades earlier: "the miner had to gamble his intelligence against the unpredictable whims of the lost river."⁴⁹ Trial-and-error, again, was the chief method as Yukon miners punched multiple holes downward like needles in an attempt to

⁴⁷Tom Boldrick Diary, July 4, 1898, Vertical File MS, Klondike Miners, UAF Archive.

⁴⁸Purdy diary, Oct 25, 1898; Nov. 29-30, 1898.

⁴⁹Rodman Paul, California Gold: The Beginning of Mining in the Far West (Lincoln: University of Nebraska Press, 1947), 148.

prick the right spot, tap the right gravels. It was like fishing in a dark sea. Jonas Houck heard a story about a man digging down 22 times over a year and a half before he struck gold. "I think about 5 holes to bedrock would satisfy me," he wrote.⁵⁰

Getting down there and looking around meant thawing to bedrock, and then thawing lateral drifts to expose the old stream bed. This required patience and difficult underground work. James McCrae and his group started at least four different sets of holes in November, December, and January, in the winter of 1898-99. A younger miner working nearby proved more anxious to start new shafts than to follow through underground to widen the exposed area. McCrae responded to this partner on January 12, 1898. "I told him that they had better drift a little in that one first. I could not see any sense in sinking holes all over claim if they did not intend to do any drifting."⁵¹

Thawing through permafrost required a certain skill with wood and with fire. As the Klondike Nugget explained, a good fire required specific knowledge of different kinds of wood and certain configurations. Miners started with kindling and shavings on the face of a drift, added small dry wood, and then covered that with green wood, stood on end, to direct the heat against the drift. This "blanketing" hopefully insured that only one part of the miner's underground space would thaw.⁵² Once they reached bedrock, miners also tried to thaw "upstream." Any threatening water would collect on the

⁵⁰Jonas B. Houck letter, Dawson City, June 30, 1898, Jonas B. Houck Papers, UAF Archive.

⁵¹McCrae diary, Jan. 12, 7, 1899.

⁵²Gould and Stuart, "Permafrost Gold," 19.

downhill side of the drift, in a "lower chamber," away from the fires.⁵³ As the shafts got thirty feet down into the earth, and the drifts spread out to become underground tunnels, miners set two or three fires at a time, and the fires themselves got pretty big--sometimes 10, 12, or 15 feet of low banked flames. "[O]nly twelve feet of fire burned" Charles Mosier noted on Feb. 17, 1899, indicating plans for a bigger fire.

Finding ancient creek beds under twenty to sixty feet of decaying muck, and frozen dirt and gravel, was nothing if not an education in how to read the patterns that streams had, through centuries, cut through the Yukon plateau. The repetitive, grueling labor of thawing foot after foot of frozen muck and dirt, brought miners into an intense physical and mental engagement with the earth. They learned the frozenness of the earth through their muscles, as they dug and thawed and hauled with picks and windlasses. They learned the earth's layers and signs through close observation. Frank Purdy, who left a job cutting lawns outside Boston to search for gold, proved particularly attentive. He recorded the kind of ground he dug through as he sunk a hole 45 feet down toward an old stream bed: sand, black sand, gravel, ash, fine rock, coarse rock; coarse gravel; gravel with quartz; muck with tree roots. All the while he tried to read the relationship of all of these strata to the presence of gold.⁵⁴

Purdy later took to the unclaimed hillside between Independence Creek and Gold Bottom to try summer mining above the creeks. He kept a close eye on the basic geology of the place, partly out of interest, and partly because the nature of the ground determined

⁵³Gould and Stuart, "Permafrost Gold," 19, 85.

⁵⁴Purdy diary, 1898 entries.

how hard it was to work through. At the start he wrote of the hills, "They are of slaty formation so easy work." Still, he found them unfamiliar compared to previous digs, "neither sand or gravel," but something more like ashes. By October he was sinking a shaft "through muck with some stratas of fine rock," and then "a kind of gravel which makes it hard working" and required him to sharpen his pick. On November 14 he found tree roots and drift wood embedded in the muck. They looked like birch, but he puzzled over the earth's layering. "There probably was an interval of some years between the first flow of gravel and the next," he wrote, "therefore allowing this strata of muck to form." He could not quite decide whether the decomposing trees had formed in place or been washed down off the hills by water.⁵⁵ Because they were always seeking bedrock, gold-bearing gravels, other miners were equally attuned to the earth in which they were digging. One wrote that "We are now working in a light blue clay and broken rock which I think is bed Rock. I got 8 small colours this morning but none to night."⁵⁶

Once down to this bedrock, which was often rough and broken, miners searched for the paystreak, the bands of gravel and rock that had captured and held loose gold, freezing it in place. The paystreak was a specific geologic formation, a place in nature but also in culture, defined by the amount of gold it contained. For miners, it was a specific geographic place in the earth, on which they focused much careful attention. "Our pay is now 19 feet wide and about 1 1/2 feet deep...and pans run from 10 cents to

⁵⁵Purdy diary, Aug. 28, 31; Oct 12-17, 20; Nov. 13-14, 1898.

⁵⁶McCrae diary, Dec. 2, 1898.

\$4.60 each," wrote Lynn Smith in 1901.⁵⁷

To find the paystreak underground, miners exposed larger and larger areas of bedrock in the attempt to trace the route of the creek itself and locate the pay within it. They read this ground by panning, washing small amounts of gravel in pans for signs and traces of gold. These carefully noted amounts gave the miners some idea of what kind of pay they were earning with these daily labors. Their samplings in the pans also guided those labors, providing a map of the earth, indicating where to burn and dig underground-where the richest ground was to be found. On February 2, 1899 Charles Mosier summed up the day with his usual reticence: "Cleaned hole; 14 buckets pay; 56 cents in 2 pans on west end; 76 cents on east end." This was not just an economic report. It was a guide to the soil and gravel, an indication of where to go underground. That information was a product of work and observation that gave Mosier a particular knowledge of that underground world. He mapped the creek gravels in dollars and cents. Lynn Smith wrote home on Thanksgiving eve that his work had exposed 14 feet of bedrock. He used rising and falling yields from pans to detect the richest ground, the paystreak. "We...struck a different formation of gravel and we think we are getting into the old channel...three pans of dirt...five cents first, then 78 cents, then 40 cents...."⁵⁸

Old streambeds were not always buried. While some toiled downward to find gold, other miners thought to look up. The Klondike river and its tributary creeks had over centuries cut gulches and valleys down through the Yukon plateau. As the flowing

⁵⁷Smith, letter, Glenn Gulch, Alaska, Oct. 29, 1901.

⁵⁸Smith letter, Esther Creek, Alaska, Nov. 1905.

water worked downward, it washed and concentrated gold as each level, leaving gold-bearing gravels at each stage, in its older beds, like a snake shedding and leaving behind a valuable skin.⁵⁹ A few miners figured out that many of their current creeks and gulches were the product of water cutting downward through the hills, and thus that other older creeks must have flowed above them, and must have left deposits of gold at those old, higher points.

As the story goes, a former California miner named Albert Lancaster risked the scorn of the Eldorado Creek community in July 1897 when he climbed up the hillside by a rich claim and began digging. He struck gold four feet down, and the stampede to the hills began.⁶⁰ For underground miners, and for hillside miners, learning where and how to sink into the frozen earth meant learning how to read the history of streams, to track their former paths from the clues provided by current paths, to read the history of erosion in the landscape. A Rampart City newspaper proclaimed its theory on the source of the area's gold on the front page in December, 1900. "...[I]nstead of the gold having been deposited in the creeks as they now exist," the article explained, "it is fed from the ancient channels running...at angles to the streams." This knowledge came, the writer noted "[a]t the expense of four years of incessant prospecting, involving the labor and thought of hundreds of miners and...almost as many theories, as to the source or the sources of the gold...." According to the Rampart miners' mapping of the underground channels, one old channel had strung gold out underneath three different sets of rich claims, on three

⁵⁹Gould and Stuart, "Permafrost Gold," 7-10.

⁶⁰Adney, Klondike Stampede, 398-400.

different surface creeks. "The famous No. 8 above, Little Minook, appears to be above the center of the deposit along with 23 L[ittle] M[inook] jr. and 20 Hoosier, which seem to mark the crossing of the channel on these creeks below which all of them have given good returns...."⁶¹ Seattle photographer Asahel Curtis worked Sulphur Creek in the Klondike the winter of 1899, and was one of the miners puzzling over just such a theory. "The bench on west side of Sulp. must have discharged gold on the surface," he wrote, "and perhaps there is still a deposit on the hillside. This may be small but rich. Two small streams flow down the bank, each seeming to carry gold and at the foot gold is found. This is not in bed-rock but on muck which also carries a little gold."⁶² However skillfully miners learned to read the earth for bedrock and gold, and to trace underground channels, winter work remained guesswork. Miners would not know the true yield of their labors until the season turned, and the creeks ran.

The Second Season: Spring and Summer Work

Water defined the seasonality of mining, and its thaw signaled the season's turn. Miners climbed out of their subterranean tunnels, left their shafts and took up spring and summer work. They built dams to store spring run-off, and cut lumber for sluice boxes,

⁶¹Alaska(Rampart) Forum, Dec. 27, 1900. Another example comes from the Alaska Forum, July 11, 1901: "A large number of men ar over the divide staking and, from reports just to hand, the gold-bearing channel has been followed into Kentucky creek, where prospectors are working hard to find the place where the old channel crosses the creek."

⁶²Asahel Curtis diary, Jan 2, 1899, Asahel Curtis Collection, UW MS and Archives.

rockers, and flumes. They prepared for the great burst of concentrated, night-and day work that would finally (hopefully) produce real wealth.⁶³ Miners switched from thawing and drifting to sluicing very quickly, spurred by the sudden arrival of running water. On March 16th, Frank Purdy and his partner quit drifting and began building rockers. By the 24th, after a week of preparations, they found "water running on the hillsides and in the creek [...] rockers are going everywhere."⁶⁴ In this second season of placer work, miners directly mimicked natural processes. To separate the gold from dirt, Adney wrote, "the same general principle is employed as by nature--namely, water in motion."⁶⁵ This was the wash-up, the washing of accumulated diggings with running water to separate out the gold. This was the work that streams did, but miners took it over, redirected the water, and speeded it up.

To harness the spring flow miners built sluices about twelve feet long and slanted one inch for every foot, wider at the top than at the bottom. They often linked several together to create long wooden chains that could accommodate larger loads of paydirt. When the water flowed, a man designated to "shovel-in" threw thawed-out paydirt in the sluice. Another released water down the sluice, which fell with gravity, washing over the loosened earth. Wooden slots and barriers in the bottom of the sluices--called "riffles"--caught the heavy gold as it fell out of the paydirt, just as ice and rocks had stopped its

⁶³Ballou letter describing spring work, June 10, 1899.

⁶⁴Purdy diary, March 1900.

⁶⁵Adney, *Klondike Stampede*, 228.

motion in the ancient stream beds.⁶⁶ The water, coursing through, washed the lighter dirt and gravel down the sluice. One or two miners tended the sluices to remove the larger rocks; others would stir the fine dirt and black sand with brushes to assist in the washing away of smaller bits, until the nuggets and fine gold emerged in yellowish bands from the residue.⁶⁷ The U.S. Consul at Dawson described the clean up on the Klondike creeks in May, 1899. A "full head of water is now running on all the creeks and every moment is put in shoveling the winters diggings into the sluice boxes. A majority of claim owners are putting on extra men so as to keep up the work continuously during the twenty four hours, as they are afraid the water may not last until they finish the washup."⁶⁸

For the water had to last. Winter ice and snow melted in a brief spring run-off of two to six weeks. This gave miners a narrow and unpredictable window in which to do the most productive work of the year. Spring sluicing required needed a steady water supply, but miners worked in the rain shadow of the coast ranges, in a semi-arid zone with a fast, energetic, spring thaw. In just a few weeks water went from ice, to sudden abundance, and back to scarcity as creeks dried. On May 2d Frank Purdy rocked half a day because of cold weather that slowed the water flow. By May 16th, the water was shut off for part of the day, and was getting low in the ditch. By May 19th, the water was

⁶⁶Gould and Stuart, "Permafrost Gold," 82.

⁶⁷Adney, Klondike Stampede, 233-235.

⁶⁸U.S. Consul letter, May 1899, "Despatches from U.S. Consuls in Dawson City, Canada, 1898-1906," Microfilm no. 199, UAF Archive.

"nearly played out," and the rocking was done.⁶⁹ In 1902, Bill Ballou wrote home from the Rampart creeks that the "creeks are dry with only about half of the dumps shoveled in and now Little Manook is the same." Such a drought had never happened before, and the financial threat loomed large.⁷⁰ Similar droughts stopped mining at Nome. Fred Kimball reported in July 1902 that mining had slowed as there was no water in the creeks for sluicing.⁷¹ In other years, there was abundant water. "The streams are all running gaily," the Alaska Forum recorded at Rampart in May 1901, "and the enormous quantities of snow still lying in the foothills assures us that they will continue to pour a steady stream into the Yukon long after the period when in times past they were almost dry."⁷²

To manage this fickle flow of water miners built flumes that diverted water from creeks to their dumps and sluices. They dug ditches to channel water, built small dams and reservoirs, created complex networks of flumes that criss-crossed the creek valleys and gulches, carrying water from sluice to sluice. They in effect elevated creeks into above-ground wooden networks, supported by trestles, which made up a mine-to-mine crazy-quilt circulatory system.⁷³ The work of sluicing changed the whole topography of the creeks, taking water from one path and diverting it into another. "Thus will the problem of getting water on Glen be solved," declared the Alaska Forum in Rampart.

⁶⁹Purdy diary, May 1900.

⁷⁰Ballou letter, June 16, 1902.

⁷¹Kimball letter, July 17, 1902.

⁷²Alaska (Rampart) Forum, May 23, 1901.

⁷³Gould and Stuart, "Permafrost Gold," 48.

"The Rhode Island water will be taken from 11 above and carried about 8000 feet to the west benches of Glen."⁷⁴

Charles Mosier's party began hauling dirt and logs for a dam on a Klondike creek in late April 1899, and continued that work throughout the spring season, as their dam constantly sprung leaks, tested as it was by spring rains. The group had several dumps at several points around Sulphur creek, so the challenge was to move the water to each dump, or the dirt to each water source. They built a tram with wheeled cars to move the dirt from some dumps to the sluices at the dam. On April 21 and 22 Mosier recorded, "Went to work on tram road and fixing places for dumping dirt" and "Working on bank of creek preparing a shoot for dirt."⁷⁵ With cars and chutes in place, they could haul dirt to the sluice, or they could move the water itself, from the dam to the dumps. Once the dumps close at hand were sluiced, they built a trestle across the creek to the "Batavia Boys" dam in order to funnel water to two other dumps. Once the infrastructure was in place to move dirt to water or water to dirt, the sluicing began in earnest, with everyone working, in early June, deep into the well-lit nights, to avoid rainstorms and maximize use of the water supply. On June 15, Mosier reported, "Ross & I dumped the last car of dirt at 4:25 p.m."⁷⁶

Miners on hillsides, like Cheechako Hill and Gold Hill, had no direct access to flowing water. Most used wooden cradles called rockers, washing the dirt with buckets

⁷⁴Alaska (Rampart) Forum, Sept. 28, 1901.

⁷⁵Mosier diary, April 21-22, 1899.

⁷⁶Mosier diary, June 15, 1899.

of water hauled or pumped from the creeks below. They shovelled dirt onto slotted metal covers--hoppers--and rocked vigorously while ladling water into the mixture. The heavier gold and sand washed through the slots and holes to be caught on a blanket below. For sluicing on the hillsides, miners depended on, and often paid for, collective dams, flumes, and pumps, which carried water up to the hillsides and allotted a certain amount to them for their work. Frank Purdy explained in April 1900 that "Water is being pumped up on this hill from Bonanza a height of 305 ft. the stream is nine inches enough for 3...sluice heads."⁷⁷ Many miners used pumping systems, but the steam engines that ran the pumps required enormous amounts of wood to maintain adequate water pressure. Some investors ended up building pumping stations, but charged customers for water, which often proved too expensive for individual miners.⁷⁸ They measured water by the amount needed for sluicing, and paid by the sluice head. A sluice head of water could cost between \$4 and \$8 an hour during the placer mining rush.⁷⁹ Frank Purdy dug a ditch from his dump to a common water supply, and would open the ditch for certain periods when the water was running. Sometimes the water froze, and would not run during the day. For Purdy, busy with his rocking in late March, this meant that "[t]he water begins to run about 11 a.m. and runs till late in the afternoon." Shared water systems proved less than dependable, when others controlled the stream. On April 13, Purdy noted, the "water didn't run very long today." But three days later he "rocked all day today the water

⁷⁷Purdy diary, Cheechaco Hill, April 26, 1900.

⁷⁸Gould and Stuart, "Permafrost Gold," 53.

⁷⁹Gould and Stuart, "Permafrost Gold," 24-25, 82.

was running a good sized stream."⁸⁰

If the run-off came early or late, miners waited to sluice, to work, to get paid, and to pay workers. Thomas Moore arrived at the Klondike fields with hundreds of others in June, 1898. Finding thousands of men idle in the streets, he headed up Bonanza creek and found the miners idle as well. They were waiting for more water to continue the wash-up.⁸¹ In April 1901 the thaw came late. John Lindsay wrote that the "season is so backward that we cannot get at it untill the snow goes off some more....this time last year they were sluicing a week before this time and I think it will be a couple of weeks before we can start...." A week later, he reported, "we are all ready for sluicing but there is water enough and the dumps are not thawing out."⁸² Similar problems plagued Lynn Smith one June: "everyone has stopped work on account of the dry season..no rain for three weeks now...."⁸³ The same held true for John Lindsay in June 1900 on Monte Cristo Hill above the Klondike creeks. He was limited to only 11 days of wage work "on account of not getting any water to wash with only for that I would have got my pay long ago."⁸⁴

⁸⁰Purdy diary, March 31, 1900, April 16, 1898.

⁸¹Thomas W. Moore Account, June 12, 1898, MSS 007, Acc. 82/121, Yukon Archive.

⁸²John H. Lindsay letter, Eldorado Creek, April 17, 25, 1901, Lindsay Family Papers, MSS 12, Acc. 82/173, Yukon Archive.

⁸³Smith letter, June 18, 1902.

⁸⁴Lindsay letter, June 10, 1900.

Blurring Seasons: Water out of Place

Like wood in winter, water in spring was a necessary tool. Without it, miners were left idle. It was annoyingly crucial to the larger projects of separating gold from the earth, and of getting paid. In spring and summer work, water was everything, and with water, as so many miners testified, timing was everything. Harnessing the fast and fickle spring water supply proved difficult. The water supply was part of a larger set of natural cycles, into which miners entered and within which they worked. Gold miners' summer work, through running water, sluicing, and rocking, connected them to creeks and rivers, just as their winter work, through fire thawing and wood, connected them to forests.

But what appeared so clear in nature blurred with the addition of human labor. Wood and water rarely stayed in their seasons, or in their places. Labor revealed that natural linkages blurred the clear boundaries between the frozen and unfrozen seasons. And labor created its own links that further erased the boundaries. Winter work, it turned out, affected summer work, and vice versa. Water appeared in winter, when it was supposed to be frozen. The strict separation between frozen and unfrozen rarely held.

The frozenness of water and of the earth supposedly ensured that miners could burrow deep underground without caving in the walls of their tunnels, or filling their drifts with creek water. That was why they worked in winter, to harness this frozen world to human ends. But in placer mining no guarantees ever held. When miners moved underground, their fires challenged the frozenness of the winter season, and the neat boundaries they tried to draw between winter work and summer work. Miners depended on the winter's cold underground, but they introduced fire into that cold. They lit fires in

places where they wanted most of the dirt and all of the water to remain frozen. Fire thawing, even in season, had its problems.

Miners waited for creeks to freeze before they burrowed under them, but this did not guarantee that their holes and drifts stayed dry or safe. Thawing earth meant introducing intense heat into a place where the walls held up because they were frozen. As the fires warmed and loosened the permafrost, walls and roofs lost their structure and fell into shafts, leaving debris and threatening miners' safety with falling dirt.⁸⁵ Miners lessened the danger by staying out of the holes during thawing. They lit the fires at night, and remained safely in their cabins through the most unstable part of the process. Miners put in fires after dinner, retired for the night, and returned the next day to clean out the thawed material. "Put in evening fire but do not light until 9 p.m.," wrote Asahel Curtis in his diary for January 3, 1899. Some tried alternate thawing methods that applied more localized heat, including heated rocks and hot water. Frank Purdy heated rocks to put in the water that accumulated at the bottom of a shaft, finding them "better for firing for it dont thaw the muck."⁸⁶ Hot rocks rarely accomplished much, however, and hot water made for an even more difficult mess.⁸⁷ Miners timbered some shafts in winter as well as summer, to keep the walls from crumbling. They left earth pillars in drifts for structural support, and even used moss to insulate the walls, keep them cool and prevent the steam

⁸⁵Gould and Stuart, "Permafrost Gold," 19.

⁸⁶Purdy diary, Dec. 8, 1898.

⁸⁷Gould and Stuart, "Permafrost Gold," 67-68.

from bringing them down.⁸⁸ They were learning from nature. After months or years of stripping thick, wet moss from the ground in order to warm the underlying muck, miners knew all too well its cooling, insulating ability.

The threat of caving worsened with the advent of steam thawers. Miners rigged steam engines to boilers, which forced steam into long steel points. They drove the points into the permafrost and steamed the earth loose. This localized heat made it possible to produce far greater volumes of paydirt, at far lower cost, and it turned the seasons again, making it possible to mine permafrost in the summer.⁸⁹ Maud Case, a young woman from Minnesota, visited her father on his claim at Eureka Creek in 1903, and described the work. "They work all day under ground by candle light and in the steam and mud....With the steam points they thaw the earth then they pick it to pieces and shovel the earth and rocks into wheelbarrows and out to the bucket to be hoisted into the sluice box. The disagreeable part is that the ground is thawing constantly and the mud falling down on them."⁹⁰

Whatever the dangers of melting permafrost to miners' bodies, the greatest threat to the mining work itself came from water. The permafrost itself contained water, and as it thawed, that water seeped into the drifts and put out the fires. Asahel Curtis explained that "When Charley goes to light he finds water dripping from Northwest cor[ner] and so did not dare to light the fire." "[W]ater still dripping so we cannot fire at night," he added

⁸⁸Gould and Stuart, "Permafrost Gold," 89-90.

⁸⁹Gould and Stuart, "Permafrost Gold," 74.

⁹⁰Maud Case letter, July 26, 1903.

a few weeks later.⁹¹ The melt-water accumulated in the shafts and as one miner stated matter-of-factly, "water in the muck puts out the fire."⁹² Underground stream water, rather than ice-melt, posed the greatest threat to winter mining, however, and nearly every miner who dug more than a few feet into frozen gravel learned that no matter how frozen the world seemed, hidden waters had seasons of their own. Once miners exposed underground water, it of course froze, leaving them to face ice as well as permafrost. A group of Iowa miners working on Clear Creek in Alaska reported their progress to their home town paper, the Alton Democrat. It was slow work, they explained, the "ground is only frozen two feet deep, and as soon as you get through that you strike water, then you have to lay off for three or four days, and let the ground freeze again, and so on....So you see we really have to freeze a hole down as well as thaw it."⁹³ Hunter Fitzhugh reported similar troubles in 1899: "I put my shaft down 6 ft. a few days ago, and was rejoicing at my good luck at not striking water as the rest have done, when lo! I hit one last blow with my pick and up gushed a stream of water....I have four feet of solid ice to pick through when it freezes, if it ever does."⁹⁴

Mac McMichael, James McRae, Lynn Smith, Frank Purdy, and all of their neighbors on multiple creeks had hard-won work destroyed when water filled holes up.

⁹¹Curtis diary, Jan. 3, 17, January 17, 1899.

⁹²Purdy diary, Dec. 8, 1898.

⁹³Iowa miners' letter, Nov. 21, 1898, reprinted in Alton (Iowa) Democrat, May 13, 1899, William Michaels Collection, UAF Archive.

⁹⁴Hunter Fitzhugh letter, Nov. 20, 1899, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

"[E]veryone has had to quit on account of water," Smith reported in Rampart City, Alaska, in January 1899.⁹⁵ "[S]ome poor devil will get down nearly to bedrock and the water will run in and fill the hole up, and all his work has gone for naught," lamented McMichael.⁹⁶ Fitzhugh continued in the same vein, so to speak: "the boys next door have five holes to bed rock, and all are filled with water, making the work of six men for two months as nothing....[O]nly one hour is necessary to fill our pay shaft with water, and then we'll have all our work to do over again, in which event I'll pack my sled...and look for another job with wages."⁹⁷

Asahel Curtis and his partner Charlie Ainsworth built a dirt dam to try to keep their mining shafts free of water, but it was a losing battle. The deeper they managed to dig, nine feet, twelve feet, fifteen feet, the faster water rose in the holes, requiring bailing. Then it froze, and they had to melt the ice in order to continue bailing. On January 25, 1899 Curtis noted that each fire, if it stayed lit, thawed about 8-9 inches of soil in a night. But even when they managed to get to 15 or 18 feet in depth, they often returned to find the holes full of water.⁹⁸ Running water was enough of a problem when the weather stayed cold. Sudden winter thaws proved equally difficult for work which depended on the frozenness of water and earth. "Had a thaw of six days with rain," wrote Bill Ballou one February, as the temperature caromed from 61 degrees below zero Fahrenheit to a

⁹⁵Smith letter, Jan. 11, 1899.

⁹⁶McMichael letter, Jan. 3, 1899.

⁹⁷Fitzhugh letter, Jan. 1900.

⁹⁸Curtis diary, Jan. 1899.

striking 38 above: "[W]ater running everywhere." ⁹⁹

The Effects of Disassembly: Forests and Creeks

When miners dug into the frozen earth, they tapped underground water that tested their patience. This work had other effects on the natural world, particularly along the streams and creeks whose water so frustrated winter mining. Because placer mining took place in or directly adjacent to riparian ecosystems, the miners' harvest of wood along the waterways affected more than the work itself.¹⁰⁰ Placer miners stripped wood from the riparian corridor and surrounding hills. The facts that the trees grew best along the rivers and the creeks, and that miners took them from those banks, were of course connected through the crucial shared element--the water. The water sheltered and fed the trees, carved the valleys, and drained the soil. The water eroded the rock and freed and dispersed the gold. The humans, the trees, and the gold ended up in close proximity for reasons both natural and cultural, and the effects of that proximity would, in return, have both natural and cultural effects.

These riparian forests were not static ecosystems when the miners arrived to wreak havoc. Native peoples hunted in the forests, harvested wood, and set fires to control mosquitoes and create cover. In 1883, along the Yukon upstream from the Klondike, Frederick Schwatka found that "evidences of conflagration in the dense coniferous forests were everywhere frequent, the fires arising from the carelessness of

⁹⁹Ballou letter, Hoosier Creek, Alaska, Feb. 17, 1901.

¹⁰⁰National Park Service, Yukon-Charley Rivers Final EIS, 77.

Indian campers, and from the making of signal smokes, and even it is said, from design...."¹⁰¹ Schwatka and his men continued to see heavily burned timber as they rafted downstream, and even "dense clouds of black smoke" that proved that "the devastation" continued. The explorers found the post-fire succession useful, as they cut new poles for their raft from "a grove of sapling spruce through which the fire had swept a year or two before...black burned bark peeling...freely...leaving light and tough poles with which we renewed our two decks...." Bernard Fernow cited Henry Allen's reports from the 1880s which mentioned Indian -set fires that produced "heavy smoke caused by the extensive timber fires which obscured the sun the entire day."¹⁰²

Indian burning had already shaped the forest, but burning and cutting along the streams and nearby hillsides by the miners changed the composition of the forests and the forest floor even more dramatically. Miners took much of the larger-sized white spruce accessible by waterways, and burned more extensive areas, leaving younger spruce forests, and, according to a 20th-century forester's estimation, "increased paper birch and quaking aspen at the expense of the white spruce."¹⁰³ A 1980 report on forest resources in Alaska noted that upland timber consisted of a mixture of white spruce, paper birch and

¹⁰¹Lt. Frederick Schwatka, Along Alaska's Great River, Together with the Latest Information on the Klondike Country (Chicago: G.M. Hill Co., 1898), 168.

¹⁰²Schwatka, Along Alaska's Great River, 185, 168; Bernard E. Fernow, "Forests of Alaska," in Alaska, Volume II: History, Geography, Resources, ed. William H. Dall et al. (New York: Harriman Alaska Expedition and Doubleday, Page, & Co., 1902), 243, citing Henry Allen.

¹⁰³Lutz, Early Forest Conditions, 57; Richard C. Smith, Potential Economic Development of Forest Resources in Interior Alaska, (Portland: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, November, 1980), 14.

aspen, with large areas of birch and aspen "of sapling and pole size, resulting from the past fire history and extensive cutting of timber for mining and fuel."¹⁰⁴ Photographs of the Dawson region and the Klondike creeks from the turn of the century show deforested hillsides in every direction. An observer named Riggs reported in 1910 around Fairbanks that after ten years of mining "the wood available for fuel has been destroyed within the economic limits of wagon and sled haul and the mining industry is appreciably slacking."¹⁰⁵

Miners also cleared and burned moss to expose mining sites, and harvested moss for the roofs of their cabins. When James McRae and his partners built their cabin in Klondike City, across from Dawson, they repeatedly took a boat up to Bonanza Creek, to the mines, and filled the boat with moss to insulate their winter quarters. Miners and townspeople also recognized the connections between forests--especially moss and wetland trees--and mosquitoes, and they burned, drained, and cleared ground to eradicate the bugs. Tappan Adney noted that the mosquitoes menaced the islands in the creeks that had yet to be cleared, but that in Dawson and on Bonanza Creek, land which was "cleared partially," they were no worse than at home in upstate New York.¹⁰⁶ In the spring of 1899, Bill Ballou noted that the clearing of timber and burning of moss near Rampart City mitigated the mosquitoes in town, allowing him to sit comfortably "on our piazza

¹⁰⁴Smith, "Forest Resources in Interior Alaska," 14.

¹⁰⁵Cited in Lutz, Early Forest Conditions, 21.

¹⁰⁶Adney, Klondike Stampede, 450.

receiving callers and watching the steamers as they arrive and depart."¹⁰⁷

This forest vegetation was crucial to both native resource use and gold mining, but it was also central to riparian ecosystems as well. When miners took the forest, they altered the productivity of those ecosystems. The environment of stream banks and valleys constituted a transition zone between the aquatic environment of the water itself and the various surrounding uplands. Such transition zones, according to one Alaskan environmental study, had "distinct vegetation and soil characteristics" that support high biological production, species diversity, and constant interactions and exchanges between different ecosystems. A range of wildlife sought streams and their banks for food, water, cover, and space. Birds and animals used them as travel and migration corridors, as nesting, roosting, and watering spots. In Alaska, riparian systems were (and are) crucial to moose habitat, especially the floodplains of rivers and streams and the tall shrub species that cluster along banks, providing cover close to water.¹⁰⁸

Because forests, wetlands, soil, wildlife, and creeks came together in riparian zones--and were connected--the miners' labors affected all of them. In cutting the forest, stripping the moss, and digging up the soil, placer mining unleashed changes that rippled through the whole ecosystem. Deforestation and extensive forest fires removed the tree roots and other vegetation that absorbed water, held it in the soil, and released it slowly through evaporation and runoff. As a result, snowmelt and rainwater ran more quickly into creeks in the spring and after storms, causing sudden floods, which foiled the miners'

¹⁰⁷Ballou letter, June 10, 1899.

¹⁰⁸National Park Service, Yukon-Charley Rivers Final EIS, 77-80.

attempts to harness run-off and to direct water through sluices and chutes to separate the gold.¹⁰⁹ Large-scale deforestation can increase stream flow five or six times, and vegetation along river banks plays a particularly important role in regulating stream flow. This loss of vegetation and flooding together increased erosion, as water carried soil and debris into creeks and rivers.¹¹⁰ Mining on hillsides and benches loosened vegetation and dirt and caused additional problems when spring floods rushed downhill quickly, bringing debris and sediment which wiped out earthworks and flumes, swamped trails and roads with mud.

If miners were not plagued by floods they suffered from drying creeks. After early-season torrents, the streams dried too early in the spring, preventing a full clean up of winter diggings. Later in the summer rain showers and sudden floods caused more concern and more damage than they might have without extensive clearing. Increasing numbers of fires affected the riparian environment as well. Fires cleared forests, thawed permafrost, and loosened soil. An adventurous miner named C. O. Steiner went two hundred miles up the Stewart River, hunting and prospecting. At one point he noticed that a small tributary had suddenly turned muddy, and, assuming that there were men upstream mining, he went to look for them. Instead he found that a fire "had stripped [the] hillside for a mile." The trees, rooted only a foot deep due to permafrost, collapsed. The earth thawed out, and the whole hillside slid into the stream, causing

¹⁰⁹Gould and Stuart, "Permafrost Gold," 45-46.

¹¹⁰Andrew Goudie, The Human Impact: Man's Role in Environmental Change (Cambridge, MA: MIT Press, 1981), 127.

sedimentation.¹¹¹ Big fires were a common spectacle. Lynn Smith looked across the Yukon from Rampart City in the summer of 1901 to note a large fire on the "Government farm." It had been burning for a week, he wrote, "and there is over 200 cords of wood piled on the bank." "We saved the wood and cabin," he wrote, "but the fire is burning both ways along the river."¹¹² When Bob Marshall investigated gold mining around Wiseman, Alaska in the late 1920s he found that the flow of creeks in the Koyukuk region had been decreased by "forest devastation." Speaking of more recent cutting and burning in the local forest, an older miner explained that these careless activities affected sluicing. "Oh, yes," he told Marshall, "there's no doubt that since the timber's been cut and burned we don't keep our water the way we used to."¹¹³

The ground stripping that accompanied mining had other effects on seasonal water cycles as well. When miners removed the moss near gold creeks for mining, cabin roofs, and to get rid of mosquitoes, they added to the ways in which deforestation changed water absorption and water flow. Shallow permafrost prevented surface water from draining down into soils, or running off immediately to the creeks. This ground instead held much of the spring water at the surface, in heavy layers of moss which created soggy wetlands and bogs. Klondike miners were all too aware of the predominance of such wetlands, in mining towns and along rivers and creeks. When Iowa clerk Thomas W. Moore first saw

¹¹¹C.O. Steiner Diary, "A Journey to Dawson in 1898," Vertical File MS, UAF Archive.

¹¹²Smith letter, July 27, 1901.

¹¹³Robert Marshall, Arctic Village: A 1930s Portrait of Wiseman, Alaska (1933; repr. Fairbanks: University of Alaska Press, 1991), 162, 174.

Bonanza Creek in 1898, he described it as "low marshy country, lying between the mountains that rose on either side...country covered by moss soaked with water....Far from an inviting place, and the last place one would expect of find gold."¹¹⁴ Lynn Smith despaired over the land at the Rampart creeks, with its moss "18 inches thick and wet and soggy."¹¹⁵ Bill Ballou took note of the some of these characteristics from his steamship, coming up the Yukon to Rampart City. "It would seem as though the land itself...were a sponge, into which all rain and moisture from the heavens and melting snow are absorbed...."¹¹⁶

As miners removed that sponge, riparian lands had progressively less vegetation in place to absorb and hold water, so the water ended up in the creeks. Permafrost and soggy moss made miners' lives equally soggy, but they also held moisture in place at the surface layer of litter and soil. This worked both for and against the miners. On the one hand, moss and bogs held water at the surface, and thus prevented it from flowing into the creeks. On the other hand, that surface water slowly fed the creeks throughout the summer, through cycles of evaporation, rain, and runoff. As a 1990 study of one Alaska placer region noted, the moss insulated the soil below, keeping it cool and damp. In the heat of long summer days, water held in moss and bogs evaporated slowly, then cooled and condensed in low cumulus clouds. In the afternoon, these produced showers or even thunderstorms from June through early August. Though rainfall was comparatively low

¹¹⁴Moore account, 1897-1898.

¹¹⁵Smith letter, July 9, 1898.

¹¹⁶Ballou letter, Aug. 19, 1898.

in the Yukon interior, what did fall usually came in the summer, when sudden storms could increase stream flow in just a few hours.¹¹⁷ Many miners certainly noticed that the intense, night-and-day, outdoor work of the cleanup coincided with the wettest season. Charles Mosier and his party were at the peak of their sluicing work in late May 1899 when his diary mentions whole days of rain, and even snow. On the high ridges it was snowing, but down along the creeks, rain.¹¹⁸ The rain often fell as mist. Bill Ballou declared in May 1900 that "it can rain all day and not wet your hat."¹¹⁹ The moss and other surface plants thus served to keep rainfall in circulation in ways that could benefit humans in search of even and dependable seasonal water flows.

Questions of Scale: Water and Earth

Dig-and-sluice placer mining had other environmental effects, beyond altering seasonal streamflow patterns. Miners filled the creeks with muddy water and piles of rocks and gravel, and also changed the topography of the valleys and gulches. This tearing up of the earth not only denuded the streambanks, it changed the topography of the valleys and gulches and degraded the quality of the water and water-borne life itself. Miners diverted the creeks into flumes and exposed the beds for summer mining; they set streams on new courses in order to send water over new ground, or get at rich ground. They dug ditches, created mounds of tailings, and left huge holes. Tappan Adney

¹¹⁷National Park Service, Yukon-Charley Rivers Final EIS, 33, 57.

¹¹⁸Mosier diary, May 26-27, June 3, 1899.

¹¹⁹Ballou letter, May 31, 1900.

described the very real mess of summer on Bonanza Creek in the summer of 1898.

Summer had changed beyond recognition the winter's trail. Dams of crib-work filled with stones, flumes, and sluice boxes lay across our path; heaps of "tailings" glistened in the sunlight beside yawning holes with windlasses tumbled in; cabins were deserted--the whole creek, wherever work had been done, was ripped and gutted. Nothing but flood and fire is so ruthless as the miner.¹²⁰

An observer named E.C. Adams ventured up the same creek two summers later, in August 1900. "[Y]ou see great holes in the earth all over some very rich....," he wrote. On Eldorado, he noted, "[R]ocks are piled up all over....It is quite a sight to come up the Creeks and see how people are tearing up the earth" ¹²¹

This tearing up of the earth dramatically increased the flow of mud and sediment into rivers and creeks. When miners sluiced their dumps, waste water ran off either into ditches or reservoirs to be recycled for more sluicing, or back into the creek. To conserve water, miners took what they needed from the flumes, washed their dirt, and let the water flow back into the system. The by-laws of the Jack Wade Creek mining district in Alaska required miners to put used water back into the creek, in order to maximize the flow for other miners.¹²² Frantic spring days of sluicing dumps, however, left the water drastically muddied, more solid than liquid. Some miners dug sump holes to capture used water

¹²⁰Adney, Klondike Stampede, 404.

¹²¹Edward C. Adams, "Dairy [sic] of the Tripp from Seattle to Dawson City and also for the whole year of 1900, "Aug. 15, 1900, Vertical File MS, UAF Archive. In Precious Dust, Paul Mitchell Marks discusses the effects of gold mining in western rushes in general. Gold miners, she writes, left the earth "attacked, rearranged, washed, and dumped." Paula Mitchell Marks, Precious Dust: The American Gold Rush Era, 1848-1900 (New York: William Morrow, 1994), 151.

¹²²By-laws amended and adopted by Miners Meeting, June 15, 1899, Jack Wade Creek Mining District, Box 5, Herbert Heller Papers, UAF Archive.

from sluices and re-use it, but again, the water ended up quite "thick."¹²³ Purdy wrote while rocking dirt in December 1899 that "the water is pretty thick for rocking...."¹²⁴ Miners so clouded the waters of the northern creeks that they themselves had to look elsewhere for clear water. Bill Ballou described using his steamer to thaw ice from the creek for the steam boiler, "the water we pump up from the drift being too muddy for that...."¹²⁵

The accumulated debris in the placer creeks did not reach the volume of earth that hydraulickers and dredgers would later process. Even though fire thawing was a primitive method, it could produce plenty of earth and sediment, enough to impair water quality and biological productivity in streams. In a deep mining shaft, a big fire could burn up to 45 buckets worth of gravel and muck in a night. A few men working together with even more equipment could haul up over 100 buckets a day.¹²⁶ More fires loosened more earth. "Wally has four six foot fires going every night and they thaw about 200 10 pan buckets a night...about 150 of them pay dirt....," reported one miner of a partner in 1901.¹²⁷ A larger crew with boilers and steam-pumps could build an even larger pile. In January 1900, Frank Purdy and his partners took out fifty wheelbarrows of pay dirt a day,

¹²³Gould and Stuart, "Permafrost Gold," 46.

¹²⁴Purdy diary, Dec. 9, 1899.

¹²⁵Ballou letter, Jan 29, 1902.

¹²⁶Smith letter, Dec. 2, 1901.

¹²⁷Smith letter, Oct. 29, 1901.

despite problems with water and waste in their tunnels.¹²⁸

Miners unearthed and dumped these volumes of earth in fairly concentrated areas, which exacerbated the environmental effects. On Glenn Gulch in 1901, a boomlet of sorts drew a sizable crowd. Lynn Smith wrote that there were 24 cabins on the gulch, "within a mile and a quarter." Over two hundred men worked this stretch of the creek, "every body busy and taking out gold" with "steam engines, thawers, and whistles [blowing]...three times a day all the same [as] big factories."¹²⁹ The mining itself was accompanied by streamside clearing, wood-cutting, and stripping for cabins and work areas. Bill Ballou hired twelve men to do the "dead work" of cabin building before mining began in 1899. They cleared brush and moss, and put up two big cabins. In October he had them at work again, clearing more moss and brush for the dumping ground, building cabins, and cutting wood.¹³⁰

Given the intensity of this work and the amount of dirt removed and washed, it seems likely that intensive placer mining and harvests of riparian vegetation seriously affected biological life in the streams as well as streamflow and topography. A National Park Service Environmental Impact Statement on placer mining in the Yukon-Charley River Reserve noted that healthy fish habitat "is directly related to and is highly dependent on the vegetation of the surrounding watershed," mentioning the alder, willow,

¹²⁸Purdy diary, Jan. 19, 1900.

¹²⁹Smith letters, Oct. 22, 29, 1901.

¹³⁰Ballou letters, August 31, Oct 5, 1899.

birch, and spruce whose roots stabilized stream banks.¹³¹ Another study of Yukon placer mines divided the streams into categories: narrow stream valleys, wide valleys, and bench operations. "[I]n the short term," the study concluded, "the environmental impact on the narrow valleys is total, i.e. in order to mine these valleys economically, the stream must be totally disrupted for a period of years...."¹³²

Whether 1890s miners had a total environmental impact or not, those miners substantially altered the quality of water in the gold creeks. One of the most important effects that humans have on water quality in rivers--in general--is increased turbidity, or muddiness. Turbidity measures the amount of sediment mixed into the water itself.¹³³ It is difficult to estimate how increased turbidity in the Yukon gold creeks might have affected organisms that lived in those creeks. Though the Klondike system was known for its rich salmon runs, and other northern rivers and creeks for both salmon and arctic grayling, the vast literature of the Alaska/Yukon gold rush hardly mentions the relationship between placer mining and fish populations in the creeks. The question of whether deforestation, increased erosion, and water turbidity affected fish or other living things is in some ways an ahistorical question. At the time, no one even thought of it.

At different places and times, along different streams, scientists have asked questions about the effects of mining, and muddy water, on fish and fish reproduction.

¹³¹National Park Service, Yukon Charley-Rivers Final EIS, 65-67.

¹³²R.J. Madison, "Effects of Placer Mining on Hydrologic Systems in Alaska--Status of Knowledge," USGS Open-File Report 81-217 (Anchorage, Alaska: U.S. Geological Survey, 1981), 11.

¹³³Goudie, Human Impact, 3, 129, 156-158, 186.

Californians, for instance, asked the question in the 1850s, when massive waves of debris from hydraulic gold mining in the Sierra Nevadas wiped out the salmon runs in the Sacramento and Klamath-Trinity river systems and flooded agricultural fields with sand. The farmers and fishers eventually banned hydraulic mining as a danger to the region's economy.¹³⁴ In the early and mid-20th century, in California and Oregon, fish biologists investigated the connections between placer mining, stream sediment, and fish.¹³⁵ And in the 1980s, spurred by legislation designed to gauge the environmental impact of extractive industries like placer mining, scientists in Alaska and the Yukon asked the question of some of the same gold creeks that miners had worked a century earlier.¹³⁶

Most of these studies focused on water quality itself, or on the effect of increased

¹³⁴Arthur F. McEvoy, The Fisherman's Problem: Ecology and Law in the California Fisheries, 1850-1980 (New York: Cambridge University Press, 1986), 47, 83-84; Robert L. Kelley, Gold vs. Grain: The Hydraulic Mining Controversy in California's Sacramento Valley (Glendale, CA: A.H. Clark Co., 1959). Francis H. Sumner and Osgood R. Smith, "Hydraulic Mining and debris Dams in Relation to Fish Life in the American and Yuba Rivers of California," California Fish and Game 26 (January 1940), 2-22.

¹³⁵Henry Baldwin Ward, "Placer Mining on the Rogue River, Oregon, in Its Relation to the Fish and Fishing in that Stream," (Portland: Oregon Dept. of Geology and Mineral Industries, 1938), 4-31; Almo J. Cordone and Don W. Kelley, "The Influences of Inorganic Sediment on the Aquatic Life of Streams," California Fish and Game 47:2 (1961), 189-228.

¹³⁶James E. Morrow, "The Effects of Extreme Floods and Placer Mining on the Basic Productivity of Sub Arctic Streams," Report No. IWR-14, (Fairbanks: University of Alaska Institute of Water Resources, 1971); David M. Bjerklie and Jacqueline D. LaPerriere, "Gold-Mining Effects on Stream Hydrology and Water Quality, Circle Quadrangle, Alaska," Water Resources Bulletin 21:2 (April 1995), 235-243. Stephen M. Wagener and Jacqueline D. LaPerriere, "Effects of Placer Mining on the Invertebrate Communities of Interior Alaska Streams," Freshwater Invertebrate Biology 4:4 (November 1985), 208-214.

sediment in streams on adult fish, young fish or eggs. All of them considered the effects of placer mining operations that used modern technology, especially bulldozers. The scientific studies of the effects of these mining techniques focused on measuring the rivers' turbidity, or measuring how much light could penetrate the muddied water, to what depth, and at what angle.¹³⁷ Biologists focused on turbidity because it was easy to measure, and because it directly reflected the amount of sediment suspended in the water. And of all the effects of mining on streams, the increased sediment most directly affected fish.

These measurements of turbidity in mined streams revealed that as the water grew muddier--i.e. as it got harder and harder for light to penetrate the water--three other changes followed: the amount of sediment in the water increased, the amount of dissolved oxygen in the water decreased, and the stream's biological productivity dropped. Measurements of biological productivity reflected the combined presence of microorganisms, plants, insects, and fish. In other words, placer mining caused muddy water, and muddy water reduced the amount of biological life and growth in the streams. In the amounts measured, turbidity and sedimentation from placer mining in clear-water streams decreased light penetration. This in turn reduced or even eliminated photosynthesis, and thus primary, or algae and plant, production.¹³⁸

¹³⁷Denby S. Lloyd, "Turbidity in Freshwater Habitats of Alaska: A Review of Published and Unpublished Literature Relevant to the Use of Turbidity as a Water Quality Standard," (Juneau: Alaska Dept. of Fish and Game, Habitat Division, January 1985), 10.

¹³⁸Lloyd, "Turbidity in Freshwater Habitats of Alaska."

For instance, in very murky water, in a shallow stream, only a small fraction of surface sunlight could penetrate to the bottom to fuel photosynthesis in plants and microorganisms.¹³⁹ An increase of stream turbidity by a factor of only 5 or 10 decreased primary production in shallow streams by up to fifty percent. A 1983 study concluded that solar energy was the greatest factor controlling the productivity of a stream and that "increased turbidity is the single most important disruption of that productivity."¹⁴⁰

Moving up the food chain, the loss of primary production lowered the abundance of bugs, and thus the supply of fish food, which stressed or reduced numbers of arctic grayling or salmonid fish and limited their ability to reproduce.¹⁴¹ Sediments made it difficult for fish to see what bugs were there and therefore to eat them. This did not kill fish, but it had number of "sublethal" physiological effects. These included "reduced growth rates, downstream displacement, decreased scope for activity and decreased resistance to other environmental stressors."¹⁴²

Multiple studies of Alaskan streams in the 1980s indicated that (modern) placer

¹³⁹Lloyd, "Turbidity in Freshwater Habitats of Alaska," 30-33.

¹⁴⁰Lloyd, "Turbidity in Freshwater Habitats of Alaska," 36; Erwin E. Van Nieuwenhuyse and Jacqueline D. LaPerriere, "Effects of Placer Gold Mining on Primary Production in Subarctic Streams of Alaska," Water Resources Bulletin 22: 1 (February 1986), 91-99.

¹⁴¹Lloyd, "Turbidity in Freshwater Habitats of Alaska," 2-3; National Park Service, Yukon-Charley Rivers Final EIS, 58, 65-66.

¹⁴²D.J. McLeay, G.L. Ennis, I.K. Birtwell, and G.F. Hartman, "Effects on Arctic Grayling of Prolonged Exposure to Yukon Placer Mining Sediment: A Laboratory Study," Canadian Technical Report of Fisheries and Aquatic Sciences (No. 1241, January 1984), xi.

mining increased sediment and turbidity up to ten times over the levels found in rivers and streams that were naturally muddy anyway. Placer mining also increased turbidity up to 1000 times over naturally clear stream water.¹⁴³ The same set of studies also concluded that it did not take a ten-fold increase in turbidity, or a thousand-fold increase, to affect stream life. "[I]ntroductions of even small amounts of sediment and turbidity in freshwater habitats," one set of studies indicated, "can adversely affect fish and other aquatic life...."¹⁴⁴ Beyond the increased water turbidity, placer mining spread layers of debris and sediment over the streambed, filling in the interstices in the gravels. This destroyed spawning grounds and reduced the oxygen available to bugs and other invertebrates, who are particularly sensitive to even low levels of suspended sediments in water.¹⁴⁵ Tests done below mining sites revealed turbid, silt-laden streams with marked absences of plants, bugs, and fish, and with reduced oxygen levels.¹⁴⁶

However, scholars studying stream turbidity consistently observed that many Alaskan streams, including the Yukon, were naturally muddy, full of glacial sediment and

¹⁴³Lloyd, "Turbidity in Freshwater Habitats of Alaska," 51.

¹⁴⁴Lloyd, "Turbidity in Freshwater Habitats of Alaska," 63. See also Denby S. Lloyd, "Turbidity as a Water Quality Standard for Salmonid Habitats in Alaska," North American Journal of Fisheries Management 7 (1987), 34-45; McLeay, "Effects on Arctic Grayling."

¹⁴⁵I.K. Soroka and G. Mackenzie-Grieve, "A Biological and Water Quality Assessment at A Placer Mine on Barlow Creek, Yukon Territory," Environmental Protection Service, Pacific Region, Yukon Branch, Regional Program Report 84-16 (Whitehorse, Y.T.: Environment Canada), 46.

¹⁴⁶U.S. Dept. of Interior, Federal Water Pollution Administration, Northwest Region, Alaska Water Laboratory, "Effects of Placer Mining on Water Quality in Alaska," (College, AK: Alaska Water Laboratory, 1969), 4, 18.

erosion from mud flow, either year-round or just during high water. Yet these rivers contained famous and healthy runs of salmon and arctic grayling. These studies argued in response that while healthy adult fish migrated through muddy water without deleterious effects, the fish nevertheless return to clear-water streams to spawn. They required clear water to reproduce. Smith and Osgood suggested in their 1940 Sierra rivers study that "natural" sediment was not a barrier to salmon reproduction because it was itself seasonal--occurring only at high water. Salmon spawned at times and in places that coincided with clear water. If miners produced sediments in spawning areas during spawning season, then the muddy water could impair reproduction, without necessarily harming or killing adult fish.¹⁴⁷ Those effects extended to other species as well. An environmental impact study on the relation between placer mining and the arctic grayling population in the Yukon-Charley River reserve concluded that "high turbidity and sediment load during major flows and low average seasonal temperatures are the natural physical factors that are most limiting to arctic grayling populations."¹⁴⁸

These conclusions cannot be backdated to apply to the Yukon and Alaska creeks mined by hand at the turn of century. Those who studied the California and Oregon mining regions both admitted that early hand-mining in the Sierra and on the Rogue probably muddied the waters enough that they "seriously interfered with salmon

¹⁴⁷Sumner and Smith, "Hydraulic Mining and Debris Dams in Relation to Fish Life," 2-22.

¹⁴⁸National Park Service, Yukon Charley-Rivers Final EIS, 65-67.

spawning migrations."¹⁴⁹ A 1969 study by the Alaska Water Lab asserted that debris discharge in early placer mining was "insignificant."¹⁵⁰ Significance is a relative term. As revealed in their own writings, hundreds of miners on the major creeks such as Eldorado, Bonanza, Hunker, and Minook, unearthed thousands of buckets and pans of dirt, much of which ended up washed into streams, one way or another.

Work and Nature

In the 1890s, gold miners reveled in the hope that their labor on the creeks, and the creeks themselves, would be productive, that both together would yield gold. This was a particular cultural definition of productivity, however. Yukon creeks were part of riparian ecosystems, and thus had a productivity of their own. Creeks produced bugs and fish and plants as well as gold. The two types of productivity could not easily coexist. Ultimately, modern studies of placer mining, turbidity, and stream biology can speak only to process and to scale. The process of placer mining, at whatever time or scale, consisted of the same basic activities and had the same basic effects. In 1990 the U.S. National Park Service listed the activities "most associated" with placer mining in a flow chart that traced their effects on wildlife resources in the Yukon-Charley Rivers National Reserve. They included stripping overburden, digging ditches, thawing permafrost, and diverting streams with dams. These led, the list indicated, to removal of vegetation and

¹⁴⁹Sumner and Smith, "Hydraulic Mining and Debris Dams in Relation to Fish Life," 6; Ward, "Placer Mining on the Rogue River," 6.

¹⁵⁰Alaska Water Laboratory, "Effects of Placer Mining on Water Quality in Alaska," 8.

topsoil, and thus loss of organic material, loss of soil development, erosion, and change in vegetation.¹⁵¹ In the 1890s, miners pursued all of these activities, by hand, and with great energy. The work transformed creeks like Bonanza and Eldorado to the degree that they could never have supported the same kind of biological life--fish-related or otherwise--that had existed before. Those transformations are difficult to judge today, because the dredges and bulldozers that followed the hand miners up those creeks have transformed them even further. In the late 1970s, most of the creeks around Dawson City were classified as "historically degraded" due to mining.¹⁵² The effects of the gold rushers' handiwork did not reach the scale achieved by big-technology placer operations, but their work had clear and meaningful effects on their own mining, and on the world around them.¹⁵³

¹⁵¹National Park Service, Yukon Charley-Rivers Final EIS, 119.

¹⁵²Whitehorse Star, Sept. 5, 1979, File Collection, File: "Mining--Water Restrictions," Dawson City Museum.

¹⁵³In the late 1980s and early 1990s, with the rise in gold prices and the revival of gold mining, placer miners, fishers, and government agencies in the Yukon were embroiled in the "goldfish" debate, the fight over whether placer mining harmed Yukon salmon stocks and should be more heavily regulated to protect fish and wildlife (also called the "moose vs. nuggets" debate). Miners argued for the historical and economic importance of placer mining--how mining creates wealth, how five generations of miners had "farmed the ground," and created money, rather than just moved it around, as in service industries. At that the time, the Yukon government classified streams on a scale from "A" to "D", where "A" was a salmon-spawning stream or river and "D" was a stream with no significant fish value. Most of the creeks around Dawson City were classified as "C" streams, which meant historically degraded, historically mined (Whitehorse Star, Sept. 5, 1979). Regulations on the books required placer miners to reduce their output of sediment below certain levels--set differently for class A,B,C, and D streams--and to restore fish habitat. A 1986 newspaper article argued that only two operators in the entire Yukon Territory operated on salmon streams, and that all others operated on "historically mined streams" or "non-salmon" streams, and met the sediment standards for

The work that miners did transformed the northern creeks and deforested the hillsides and gulches. The new creeks and new landscape were their creation, a new place, connected to the rest of the world in new ways. These new places were goldfields, gold mines, defined by the kinds of work that humans did there. Even their names reflected this change. "Eldorado" and "Bonanza" spoke to a different kind of productivity than older names like Rabbit Creek or Deer Creek. The name Klondike, of course, as the story goes, was the anglicization of a Han name for the river, spelled in English "Tron-diuck" according to some sources. The Han gave the river this name because it was full of salmon each summer, when they camped at its mouth and set up wiers and fish traps. Their word meant "hammer waters" after the stones they used to drive the stakes which held the fish traps.¹⁵⁴ "On account of the large number of salmon who turn aside to enter the stream here," Josiah Spurr wrote, "the Indians called it Thron-duc or fish-water; this is now corrupted by the miners into Klondike...."¹⁵⁵ Traders called it Deer River, as did Frederick Schwatka when he came through in the 1880s, for the abundance of caribou and moose in the region. The Han word became Klondike as the news of the gold strikes

those streams.

Miners argued that they were being scapegoated for declining salmon stocks; that the fish returned to creeks when the sediment cleared; that the fish were accustomed to high levels of natural sediment; that the slopes revegetated with willow (Dawson City Museum Files, "Mining-Placer-1989," and "Mining-Placer-1984-86," Whitehorse Star, May 16, 1986; June 2, 1989; August 26, 1992; August 31, 1992; Sept. 2, 1992; Sept. 11, 1992).

¹⁵⁴Terrence Cole, "Klondike Visions: Dreams of a Promised Land," Alaska Journal (1986), 82-93.

¹⁵⁵Josiah Edward Spurr, Through the Yukon Gold Diggings: A Narrative of Personal Travel (Boston: Eastern Publishing Co., 1900), 106.

reached Seattle and San Francisco, and then spread across the globe. It came to stand, above else, for gold and everything associated with gold.

Human beings create and transform places through their work. Through gold mining, culture and nature came together to determine what kind of wealth the creeks produced. The various words Tron-diuck, Deer River, Klondike, Eldorado, and Bonanza named both the place and the human work done there--fishing, hunting, gold mining. Each type of work was a relation between humans and the places themselves. But of those different kinds of labor, gold mining, because of its environmental effects, and because of the inherent connections to the outside world that it entailed, was a particularly powerful relation with place. Rivers and creeks named for the presence of gold, and mined for gold, were so transformed by that kind of human work, as to make them places where fishing and hunting and other more local kinds of work became, at the very least, more difficult, and less successful. Human beings defined these places through the work done there. But new definitions, new names, and new work were not merely changes in vocabulary. They materially changed the range of work possible, and thus the human meanings and understandings of the place itself. Human beings had learned how to work in this place for gold. They knew when and where and how to disassemble its pieces and remove the piece they most valued. That was productive knowledge, hard won by the labor of hundreds of men and women who came to know the natural world in new ways. Their labor constituted a cultural choice, however, that this was the best--the most productive--work to be done in this place, and in others like it.

Chapter 4: Journeys North: The Nature of Movement

Placer mining proved unproductive labor for most gold seekers, but if nothing else it gave them an intense and exhausting experience of the natural world. For many of the 100,000 who began journeys to the gold fields, the work of transporting themselves and their supplies was their first, their most grueling, and their most intense battle with nature.¹ The Alaska/Yukon gold rush attracted thousands because it offered the chance for men and women to gain wealth using only what they had: a few basic tools and the hard labor of their bodies. But in order to throw their bodies into the task of disassembling the new Eldorado, miners had to move those bodies, and those tools (and food for the bodies, for that matter), into the Yukon basin. This became a daunting task in and of itself. Over half of the Klondike miners made that journey on the trails over the Chilkoot and White Passes at the head of the Lynn Canal. Like "poor man's" placer mining, these routes made an explicit linkage between poverty and physical labor. On these trails, miners moved their own bodies, slogging by foot up near-vertical slopes, toting 50- or 75-pound packs.

Miners and transportation agents made a clear distinction between the overland trails and the "rich men's" option, by which gold seekers with more ready cash took river steamers up the Yukon, and spared themselves the physical exertion of moving their own bodies to the gold. The difference between the two routes was clear: rich men could buy their way to the Klondike; poor men had to do the work themselves. The rich moved as consumers of movement, buying tickets and the labor and investment of others. The poor

¹Pierre Berton, Klondike: The Last Great Gold Rush, 1896-1899 (Toronto: McLelland & Stewart, 1958; rev. ed., 1972), 116.

moved as independent producers, producing the movement of their own bodies, rather than gold.

The relatively rich had an easier journey, but the poor men (and women) dominate the historical record. The most common and oft-cited images of the gold rush are the photographs of the long chain of bundled figures trudging in lockstep up the precipitous slope of Chilkoot Pass, heads bowed into the blowing snow. This image has become an icon of the Klondike/Alaska gold rush. It contains a narrative beyond the events depicted; it contains a set of meanings for the event as a whole. Like Jack London's Call of the Wild, it tells of a journey into nature. It shows the sheer determination of men and women as they hardened themselves in battle with the bitter forces and laws of the natural world. It is an image of pure bodily engagement with nature--the exact pre-modern engagement so many miners sought as an antidote to modern life. This image also tells of the cultural power of gold to set human masses in motion against unforeseen natural odds, to send them out of civilization (culture) and into battle with nature.

The iconic picture of miners at the Chilkoot Pass holds other meanings as well. The image is a fleeting one. The miners who crossed by foot in 1898 and 1899 were the last to do so. After that, anyone traveling to Dawson boarded the White Pass & Yukon Railroad at Skagway, and disembarked a few hours later on the Yukon river, where they boarded downriver steamers. The "conquest of nature," achieved when the railroad crossed the White Pass, was an overcoming not just of the difficult terrain but of the bodily labor required to travel that terrain. This conquest of work ensured that no one--rich or poor--would ever make a journey this grueling, this natural, ever again. They

simply took the train. This image of the Chilkoot, and the journey to the Klondike it represents, thus speaks of a human descent into primitive nature, a battle with that nature, and a victory through the extension of civilization, in the form of a railroad. The poor man's route became a rich man's route, and producers became consumers of the work of transportation. The train freed them from the physical labor and vicious dangers of the trail. The point of the Chilkoot image was ultimately its transcendence.

This journey into nature and subsequent conquest of nature followed a mythic American trajectory from East to West, from culture to nature and back to culture. Miners came West by train to the far boundary of civilization; they struggled against nature; they (literally) paved the way for the civilization that followed them. Civilization, in the form of the train, arrived in just a few years. As the accounts of the Chilkoot and White Pass crossings revealed, this journey into nature was also a journey into physical labor, a physical engagement with a very real, muddy, difficult environment. The spectrum of possible journeys to the Klondike, then, ran from foot trails over the mountains at one end, to steamers, and then on to railroads. That spectrum constituted a narrative of progress: from work to comfort, from nature to culture. The images of the Chilkoot crossing captured only the far end of the spectrum, the brief and dramatic moment when movement into the Yukon interior required that miners perform an almost unimaginable amount of physical labor, both on these specific trails, and elsewhere in the interior. The Chilkoot also stood in opposition to the "rich man's" journey by steamer up the Yukon to the Klondike. The Chilkoot journey required immense amounts of work, and was a journey into nature; the steamer journey required far less labor and discomfort,

and thus less engagement with the natural world. It was a civilized trip. In the end, the train journey over the White Pass united the two journeys in a mutual triumph over nature. They were journeys that seemed to require no labor at all. They connected the Yukon basin firmly to the rest of the world.

The journey into the Yukon has become part of a familiar American story of the rapid conquest of fierce natural obstacles. For the story to work, the miners' initial journeys must stand as a movement into pure nature, fearful and primitive, just as Jack London described them. In order for the story to end well, those journeys must be transformed into an equally pure experience of the progressive forces of civilization, which granted freedom from a wet and muddy nature, from the iconic struggle over Chilkoot Pass. The story hinges on a victory not only over nature, but over work as well, the work of moving through nature. In eliminating the physical effort of crossing passes and running rivers, humans conquered nature, or at least the need for work that immersed them in nature.

A closer examination of this conquest-of-nature story, however, reveals something else. Like the Chilkoot image, which stands too easily for the entire northern gold rush, the broader conquest story stands too easily for a more complex set of journeys, and a different set of transformations. Chilkoot Pass (and White Pass) represented moments of pure bodily engagement with nature. But a closer look at that pure nature and that pure engagement reveals a whole realm of human culture. This was a cultural journey as well a natural one. And, as it turns out, the modern culture of transportation that conquered the Yukon interior--the steamboats and railroads--contained

as much nature as culture. In that civilized, technological transportation, there was a whole world of nature, and of labor, and of complex social negotiations over both. In culture, on Yukon steamers and trains and boats, there was nature; and in nature, on the Chilkoot trail, in small boats on the upper Yukon, on dog sleds, culture reigned.

Throughout the gold rush, nature and culture came together in an ecology of transportation, which connected all kinds of human movement to the natural world through energy, work, and fuel, as well as cultural meaning and purpose. Journeys into nature did not disappear through conquest; rather, all modes of transportation, and thus all journeys, linked humans to their environment.

For the construction of the White Pass railroad and the extension of sternwheeler service to the upper river did not eliminate labor in the Yukon interior; it shifted that labor, and that experience of nature, to different humans. Nature and the labor remained, they simply could not be as visible, nor appear as pure, as at the Chilkoot summit. The conquest of nature appeared as a successful attempt to eliminate work, but in reality it was a successful bid to shift work to other workers and to technologies which harnessed both human and natural energy in new ways. The broader story of transportation in the gold rush was not a story of triumph over nature, and over bodily labor in nature, but rather the story of the shifting of that labor from some bodies to others. In the end, it was not a journey into nature that resulted in conquest, but a set of journeys within nature, in which all travellers, whether as consumers or producers, on trains, boat, or foot, were connected to their environment.

Modern Journeys

Miners' experiences of the "rich man's" routes and "poor man's" routes to the Klondike were so diverse that they seemed to take place in different worlds. The Chilkoot and White Passes constituted a different universe, compared to the ease of a train or steamer trip. These disjunctions were exacerbated by the sheer modernity of the gold rush itself. As part of their headlong plummet into industrial modernity, Americans by the 1890s were far more often consumers of the work of transportation than producers of that work. They tended less and less to work their bodies as a means of getting somewhere. An ever-expanding network of railroads, ship lines, and roads meant that transportation itself was an industry, with its own market; movement itself was a commodity, an item bought and sold. In the thirty years since the completion of the first American trans-continental line, rail lines had filled in the map to the point that miners could, with remarkable ease and very little cash, hop a series of trains that would within hours or days deposit them on the Seattle waterfront. When Bill Ballou, Mac McMichael, Hunter Fitzhugh, and thousands of other miners left Boston, Detroit, and Kentucky for the Yukon, they did what they always did. They bought tickets, first on train to the west coast, and then on steamers to Alaskan ports of entry: Wrangell, Skagway, or Dyea, on the Inside Passage, or St. Michael at the mouth of the Yukon.² With the boom brought by the frenzy for Klondike gold, Canadian and American lines started a rate war, and the

²Some miners attempted to travel overland from the Canadian interior. This discussion will focus on three major routes of river transportation, used by the majority of American miners (and the majority of all miners): the ascent of the Yukon from its mouth at St. Michael; the ascent of the Stikine River to Telegraph Creek, B.C., and the descent of the Yukon from its headwaters beyond the Chilkoot and White Passes.

cost of the journey plummeted. When Bill Ballou hopped off the Boston train in St. Paul in March 1898 he found Great Northern tickets to Seattle selling for ten dollars. "It seems that every one who was able to beg, borrow, or steal ten dollars was on the way to the coast...." Ballou noticed.³

In other words, miners traveled as thoroughgoing consumers. They purchased an exact amount of transportation for a fixed price, to arrive at a precisely scheduled time, determined by national time zones implemented by the railroads themselves. In purchasing their tickets, what mattered to these modern travellers was how much it cost and how long it would take to get there. The distance of the journey and the topography of land itself proved far less important than the abstractions of time and money. When gold seekers consulted fresh-minted Klondike guide books, they found all the crucial information about possible routes by which to travel to the gold. The books described travel by distance, time, and cost. In 1897, according to the Chicago Record Guide Book, the first-class fare to Seattle from Boston and New York was about \$80, the trip lasting about 100 hours; from Chicago, about \$60 for a trip of 85 hours.⁴ Steamer passage from Seattle to Dyce, a distance of about 1000 miles, ran about \$40 for a cabin, or \$25 for steerage, with an added \$10 per ton of supplies. The all-water route up the Yukon, according to the Chicago Record, required at least \$500 for transportation of self and

³William B. Ballou letter, March 24, 1898, William B. Ballou Papers, 1889-1918, UAF Archive. Pierre Berton also reports a fare drop for tickets from Chicago to the coast to \$10 in Klondike, 95.

⁴Chicago Record, Klondike: The Chicago Record's Book for Gold Seekers (Chicago, 1897), 100-104.

outfit, but sometimes as much as \$1000.⁵ A New York pamphlet, put out just days after the Klondike news in August 1897, advertised 36 days of travel from New York to the Klondike via the Chilkoot trail, and a mere 51 by the Yukon route.⁶

These rapid schedules reflected the ease and speed with which gold miners found themselves at Skagway, Dyea, and St. Michael, facing the final stages of their journey to the Klondike. Thousands of miles from home, they had yet to do any physical work. For Yukon gold miners lived in a relatively new world in which steam engines, and the trains and boats they powered, had transformed the meanings of distance, time, and space. Seattle was no longer a three-thousand-mile journey by foot or ox-drawn wagon; it was 4 days by train, a forty-dollar ticket, or even just \$10. Historian Stephen Kern has studied changing notions of time and space between 1880 and 1918, and notes a growing cultural conflation of time and money, and the growing ascendance of both time and money over the importance of space and distance in modern life.⁷ Railroads and telegraphs made distance, and the nature that constituted that distance, far less important than time or money--moving fast and cheaply--in the movement of people, goods, and information.⁸

⁵Chicago Record, Klondike, 96-97.

⁶Ho! for Alaska: How to Go, What to take, What it Costs, What You Find (New York: Republic Press, 1897), University of Washington Microfiche Collection, M-2501, no. 14011.

⁷Stephen Kern, The Culture of Time and Space, 1880-1918 (Cambridge, MA: Harvard University Press, 1986), 15.

⁸As William Cronon writes of the railroad, "No earlier invention had so fundamentally altered people's expectations of how long it took to travel between two distant points on the continent, for no earlier form of transportation had ever moved people so quickly." Cronon, Nature's Metropolis: Chicago and the Great West (New York: W.W. Norton,

Speed conquered distance and made time ever more crucial. People paid closer and closer attention to shorter periods of time, and worried more and more about how fast they moved and worked.⁹

By eliminating physical labor from transportation, railroads and steamships profoundly changed the ways in which humans interacted with the natural world as they moved through it. Previous generations of Americans crossed to the West coast by foot and wagon, following river valleys and mountain passes, according to the natural dictates of topography, animal feed, water, season, and weather. The railroads freed gold miners from the work of such a journey, and from all of those natural constraints and connections. The timing of the gold rush was such that anyone with enough money could travel all the way to the Klondike, in the words of Pierre Berton, "without lifting a finger."¹⁰ As Cronon writes, "Train passengers had less and less need to interact physically with the landscapes through which they were passing. They became spectators who could enjoy watching the world go by instead of working their way across it on foot or horseback."¹¹

Nora Crane of Chicago travelled to Circle City, Alaska in June 1897 with her

1991), 76.

⁹Kern, Culture of Time and Space, 110-111, 125. As Kern points out, Jules Verne wrote of going around the world in eighty days. Cronon continues that railroad and telegraph systems "together...shrank the whole perceptual universe of North America." Cronon, Nature's Metropolis, 76.

¹⁰Berton, Klondike, 95.

¹¹Cronon, Nature's Metropolis, 78.

husband Edward, who was to serve there as U.S. Commissioner--a judge and general keeper of the peace. Crane expressed her awe at the train journey through the Cascade mountains in words that emphasized exactly this lack of connection between the wild beauty of nature and the sordid world of human labor. Her presence in a railcar at the summit of the Cascades bore little relation, in her mind, to the work that brought her there. "Such stupendous heights," she exclaimed in a letter to her brother, "such bulk and so many many of them. Such beauty of color and contour, whose beautiful mountain torrents and vales and not the least of all the variety and beauty of the wild flowers just kept me in one throb of ecstatic bliss." The train stopped north of Seattle to allow passengers to view Mt. Baker, and Crane wrote, "as I gazed on that scene--the mightyness--the grandeur, the solitude as compared with human effort appealed to me so strongly. I had to shed a few tears."¹²

Crane found the mountain heights a world away from the sordid reality of human effort. She saw them literally as separate worlds, embracing separate and very different understandings of nature itself. But the railroads transporting thousands of gold miners to Seattle and other ports in 1897 and 1898 had everything to do with human effort, with work. As a passenger, Crane and the thousands that followed her path across the Cascades, north to the Bering Sea, and up the Yukon River purchased a certain distance from that work, and distance from the less blissful aspects of moving through such environments. Crane, for instance, stood oblivious to the labor of the hundreds of

¹²Nora Crane letter, June 5, 1897, Kepner-Crane Collection, Microfiche, UAF Archive.

immigrant workers who cut the railroad's way through the Washington Cascades, to the coal burned in the engine's boilers, to the porters loading and unloading her luggage. The further Crane got from Seattle, however, the more of that labor she tended to see, and the more nature intruded, not as scenery, but as a pervasive environment. This gap between worlds narrowed, the gap between the miners consuming others' work and producing transportation themselves.

Still, travellers like Crane remained consumers all the way to the gold fields. At West coast ports they boarded ocean streamers to travel 2,700 miles north to St. Michael, and then transferred to river sternwheelers for 1700 more miles up the Yukon to Dawson City. They paid between \$300 and \$500 to transport themselves and their supplies to the gold fields; they bought their movement into the interior, rather than produce it themselves.¹³ A Tacoma steamer company's promotional pamphlet for the Stikine River route, which took miners part way to the interior by steamer, compared it to the arduous mountain trails over the Chilkoot and White Passes: "Along this line the travel is THROUGH instead of OVER the mountains, and SITTING instead of WALKING--resting comfortably in chair and bed instead of toiling up steep acclivities...."¹⁴

For many the Yukon ascent was indeed a lazy trip, given over to music and letter-writing and parlor games. The major transportation companies built 200-foot state-of-the-art luxury sternwheelers, replete with mahogany-trimmed dining rooms and

¹³Berton, Klondike, 90.

¹⁴Tacoma-Port Orchard Navigation Co., "Stikine River Route to the Klondike: Shortest, Safest, Quickest, and Best" (Tacoma, WA, 1898). UW Microfiche, M-2501, no. 15918.

upholstered furniture in fancy carpeted observation lounges. Cosseted passengers had little to do but socialize and observe the natural world as it swept by.¹⁵ Nora Crane found her shipboard accommodations less than comfortable on a less ornate company steamer in 1897, as she freely expressed in a letter to her mother. She was surrounded by dirt and the "darndest rabble of kids and mosquitoes... impossible for you to imagine." The "floors and bedding," she wrote "are blacker than any Dago den in Chicago," but "After the second day out it is the most beautiful scenery I ever saw along a river...big tree covered mountains, bald tops very often snow yet on them and they come down to the waters edge in a precipice 500 feet high....and the river is simply immense--sometimes 30 miles wide--and so crooked that the effect of land almost in every direction is that of an inland sea...."¹⁶ Nora Crane saw plenty of the natural world, but, like railroad cars, river steamers provided such passengers a fairly limited physical experience of nature.

But even while sparing the passengers direct labor in nature, Yukon steamboats followed the iconic narrative of a journey into nature, though to a lesser degree than on the Chilkoot and other overland routes. Unlike train journeys, steamer transport was highly seasonal. Because the river froze solid at its mouth in early October, Yukon sternwheelers had to obey strict environmental limits. The boats traveled safely only from the time the ice "went out" each spring until the mush and cake ice formed in the fall, a period of about four months starting in late May. Eager miners pushed these

¹⁵Barry C. Anderson, Lifeline to the Yukon: A History of Yukon River Navigation (Seattle: Superior Publishing, 1983), 48.

¹⁶Nora Crane letter, NAT&T Steamer, July 1897.

seasonal limits, but without success. According to Tappan Adney, nearly two thousand people attempted to ascend the river by steamer in the fall of 1897. Only forty-three made it to Dawson. The rest--estimated by another historian at 2500--got stranded, their boats locked in Yukon ice. They spent a long, restless winter in camps and cabins and villages like Rampart City, fighting the cold and each other.¹⁷

Even at the height of the summer season, nature asserted itself. Steamer pilots cautiously maneuvered the Yukon's ever-shifting channels, but the shallow-draft, flat-bottomed steamers still ran aground on sand bars and shoals, stranding miners and tons of supplies. Late in the season, as tributaries froze, the river's level dropped significantly, and even further limited the steamers' movement.¹⁸ The Yukon's tricky but powerful nature made transportation slower, and far more frustrating, than the typically efficient train or boat voyage at home. A storekeeper on the upper river explained the difference between Yukon transport and the outside world in 1897. "People outside talk as if steamers on this river run on a schedule; whereas they are liable to be stuck on a bar and not get off at all and be destroyed by the ice in the spring."¹⁹

¹⁷Tappan Adney, The Klondike Stampede (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 190-92; Paula Mitchell Marks, Precious Dust: The American Gold Rush Era, 1848-1900 (New York: William Morrow, 1994), 130.

¹⁸Capt. W.P. Richardson, Eighth Infantry, U.S.A., "The Mighty Yukon as Seen and Explored," in U.S. Congress, Senate, Committee on Military Affairs, Compilation of Narratives of Explorations in Alaska, 1869-1900 (Washington: GPO, 1900), 745.

¹⁹Adney, Klondike Stampede, 163.

"It is a terrible country to get in": Work and Movement

The majority of gold miners, however, left the relative comfort of steamers and sternwheelers long before they reached the gold fields, either at the foot of the passes at Skagway and Dyea, or up the Stikine at Telegraph Creek. And as soon as they disembarked their modern world, with its network of tickets and schedules, collided head-on with an extreme natural world that lacked all semblance of a transportation infrastructure. Here, it seemed, was real nature: few steamships and no railroads. The immediate result was that many miners ceased to be modern consumers of movement, and turned instead to the bodily labor of moving themselves over land and water. They moved into a difficult relation with nature, and into a new world of movement, time, and distance.

Though the mythic images of the Chilkoot oversimplify these journeys, there is little question that miners did suffer a profound immersion in and struggle with the natural world. They pitched their bodies against the pure elements of nature, and came away both humbled and transformed. Many faced this great struggle on the Chilkoot Pass, but no one experienced the intensity of this land and water travel more than Hunter Fitzhugh, who in the spring of 1898 took the 197-mile Teslin Trail from Telegraph Creek on the Stikine River, to the shores of Lake Teslin. The journey, described in a lengthy letter to his father in Kentucky, captured an ordeal far removed from the modern consumption of transportation.

Fitzhugh's Teslin trail journey took 57 days. He and his partner, one Otterson, hauled 1400 pounds of food and 400 pounds of other supplies, all on sleds and in packs,

with the help of one dog. Each man took 200–400 pounds at a time on their sled, with the dog pulling a third sled of 300 pounds. Each day they would double back with empty sleds for the next load, usually triple-tripping each day to move the gear to the next camp. Much of the trail was covered with snow, which made hauling easier, and they followed frozen rivers and streams, and crossed lakes, wherever they could. But streams took them out of their way, and they used overland cutoffs to shorten the distance. These were "man-killers," Fitzhugh explained, "bare of snow, and nothing but swamp, the very hardest sort of country through which to pull a sled."²⁰

By April, however, the ice became dangerously rotten and the snow melted, leaving the trails bare. One day they faced seven miles of dry land: "[W]e pulled and jerked and swore and sweat over that 1,800 lbs. until sometimes I thought I would go actually crazy with weariness and aggravation." "You see," he explained to his father, "we were too late in the season, and the Spring being warmer than usual, the trail was perfectly bare in spots from a few feet to several miles in length. Nothing that a man could write or say could give you the faintest idea of the awful work that we had to do on that long, long trail."²¹ He called it "pulling my life out."

As the ice melted, both men and sleds fell through into icy water, again and again, nearly 50 times. Fitzhugh had to dive in more than once to fish both dog and sled out of

²⁰Hunter Fitzhugh letter, Lake Teslin, May 5, 1898, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

²¹Fitzhugh letter, May 5, 1898.

the freezing slush.²² All ended up in the water by the end, wading down a stream, struggling to keep the gear dry. "The strain on our minds and bodies during the five days it took to get through that water was maddening. Our lives and possessions were both in the greatest danger, and the work was fearful...." They were saved in another spot by a turn in the weather. "Next night a merciful providence sent us a pretty good freeze," he explained, "and we took our entire outfit to the last portage over ice as hard and smooth as glass."

That final portage challenged Fitzhugh's powers of description. For his father he painted the picture of hardship in terms of familiar landscapes, at home in Kentucky: "Just think of pulling 400 pounds from Lexington to Castleton, up a hill steeper than the South Broadway Hill. Think of that hill being crossed in every direction by thousands of burnt logs and the space between the logs soft and boggy, with from a few inches to a foot or more of ice water standing on it. Than add a mile of winding, pitching, snowless down-hill trail crossed here and there with torrents of water, and you have the tail of the Teslin Trail."²³

In closing his letter, Fitzhugh provided further insight into his mental state. "A man is so utterly, absolutely prostrated with weariness on the trail that his mind is almost effected by it, and then the displays of temper are something terrible. My temper was never very sweet, but now it is fiendish. I have had to use every bit of self-possession I could raise time and again to keep me from killing the poor dog when he had pitched

²²Fitzhugh letter, May 8, 1898.

²³Fitzhugh letter, May 5, 1898.

head over heels down a hill with the sled." Shifting back into Victorian rectitude, Fitzhugh concluded, "Oh, it is no use to write about these things....I am...safe, and in splendid shape, so let it drop."²⁴

This one miner's letters captured the essence of overland travel to the gold fields: slow, grueling, and dangerous, especially in spring when the ice and snow thawed; and even worse for the dogs than for the humans. For the typical miner such journeys began not on the Stikine River, but at the head of the Lynn Canal. Steamers disgorged thousands of miners at Dyea and Skagway which led up the Chilkoot and Skagway trails to the two passes. From the cluttered beaches, miners, packers (Tlingit and white), horses, dogs, and oxen hauled tons of goods up precipitous trails, fighting mud and streams in spring and summer, ice and snow in winter. Through this work, miners achieved what historian Richard White calls a "bodily knowledge" of this natural world.²⁵ For many, Chilkoot became the place, as James Hamil wrote, "where men make horses and mules out of themselves."²⁶

Through this physical engagement, the journey to the Klondike took miners into a new world of transportation. The slowness and excruciating labor required to move did away with accustomed, modern meanings of distance and time. For miners on the trail with 2000 lbs. of supplies, Lindeman and Bennett might as well have been thousands of

²⁴Fitzhugh letter, May 5, 1898.

²⁵Richard White, The Organic Machine: The Remaking of the Columbia River (New York: Hill & Wang, 1995), 9.

²⁶James H. Hamil Letter, October 8, 1897, Vertical File MS, UAF Archive.

miles away, not thirty miles via Chilkoot, or fifty miles via White Pass. Many of the miners could cross the distance on foot, one-way, in a day, but with outfits to be hauled the familiar rules of movement did not apply. Nowhere in their lives had thirty miles presented an obstacle such as this. The average miner spent three months crossing the Chilkoot, double- or triple-tripping: traipsing back and forth between two camps 8 or 10 times a day with small loads before advancing to the next stage. It could take days to move the whole lot just a few miles.²⁷ That slowness struck such modern train-travelling men and women as nothing less than an appalling lack of movement. For Jonas Houck, who took "about 50 lbs. at a load over the same ground 60 times before we get our goods moved from one place to another...", it took just over a month to go fifty miles over White Pass. It was simply the "hardest work I ever did or ever see anyone else do," he wrote.²⁸

As in mining, part of their knowledge of these muscle-straining trails had to do with seasons. Packing and hauling required far less human and animal labor in winter, when frozen mud and ice provided a hard surface for sleds, wheels, snowshoes, and for the humans and animals that did the pushing and pulling. That seasonality extended to the trails at the gold camps as well, where freighting made little sense in summer, due to mud, moss, bogs, and nasty, root-filled trails. Like drift mining, land transport proved to be winter work, or at least late-winter work. Miners caught on the trails in the waning

²⁷Berton, Klondike, 243-44.

²⁸Jonas B. Houck letters, March 29, 1898; April 28, 1898, Jonas B. Houck Papers, UAF Archive.

days of winter, in March and April, raced to get up over the pass before the snow and ice melted. In winter the frozen Dyea River constituted the first several miles of the Chilkoot trail. Mac McMichael, one of at least five or six thousand people on that trail in late March, 1898, noted the hurry to get up the river quickly, and over the pass. "Every day is precious now for they are expecting the ice to break up at the canyon eight miles up. Then it will be much more difficult to pack and more expensive."²⁹

Once the snow and ice melted, the Chilkoot and Skagway Trails turned "fearfully muddy," according to Harold Petersen. Petersen described the Chilkoot route in the summer of 1897 as "one of the many impressive places which my eyes have behold," where one "sees and hears the groaning of women, children, and horses alike...as they are passing by sinking now and again in muck to their knees...."³⁰ Spring and summer on the trails so overwhelmed many of the miners that they wrote home in disbelief, struggling for words to convey the experience. "The hill coming up to the summit is beyond description," Jonas Houck wrote of White Pass in 1898. Rebecca Schuldenfrei, a wife and mother from the New York garment district, struggled for words as well, after crossing the Chilkoot the same summer. "It certainly was never made for human beings," she wrote of the Chilkoot summit, "as any one who once went over it is either more or

²⁹ Alfred "Mac" McMichael letter, March 31, 1898; April 3, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive. On numbers on the trails in spring 1898, see Adney, Klondike Stampede, 360.

³⁰"Diary of Mr. Harold Petersen," August 28, 1897, Vertical File MS, UAF Archive.

maybe less human, and no living being, who has not gone over it, can actually imagine or anticipate what it really is...."³¹ "The thick black mud runs down the trail on the mountain," Jonas Houck continued from the Skagway Trail, "I tell you this is more than I bargained for....If any person had told me I could stand this I would certainly have thought they were crazy...." Houck packed between 50 and 125 pounds on his back, walking in rubber boots that reached to his hips. He tried to get his wife to imagine this, writing, "...go through a canyon for two miles and with mud up to your ankles and then up a mountain 1600 feet high and so steep that you would fall backwards if you did not hang on and with slush and mud running against you." "I would not go through it again," he concluded, "for all the gold in Alaska."³² Others turned for description to more familiar images from home. On the White Pass summit, Frank Purdy found the crowd as "thick as it is on Tremont St. Boston the busy part of the day."³³

In the fall of 1897, hundreds of rushing miners descended from the passes to the headwater lakes--Lindeman, Bennett, and Tagish. Here they decimated the local scrub forest to build a flotilla of small boats. By the following spring, when further hordes poured over the trails, the timber at Lindeman was already gone.³⁴ By June of 1898, the spring travelers built over 7000 new boats. For wood, miners traveled further and further

³¹Rebecca Schuldenfrei letter, Sept. 25, 1897, Schuldenfrei Family Papers, MSS 166, Acc. 84/47, Yukon Archive.

³²Houck letters, 29 March 1898; 28 April 1898.

³³Frank Purdy diary, 28 March 1898, Vertical File MS, UAF Archive.

³⁴Margaret Carter, "A History of the Use of Wood in the Yukon to 1903," (Ottawa: National Historic Sites Service, 1973), Dawson City Museum, 102.

upstream from the lakes, searching out the last patches of spruce, poplar, birch, and balsam for what seemed to all of them an "astonishing" number of small craft.³⁵ All along the trails, McMichael wrote, "Men are continually asking ... 'Do you know where there is any good timber?'" "A few men will camp in a cove where there is a grove of passable timber," he lamented, "and within a week, from twenty to forty tents will go up until the timber is gone."³⁶

Searching for timber posed a challenge, but it was nothing compared to what came next. "[T]he next work was to whip Saw Lumber so we built a pit which is simply a large scaffold made so one man can stand below and the other on top," James Hamil explained.³⁷ The two men pushed and pulled a long cross-cut saw between them, cutting the length of the log to produce a thick, rough board. The work proved horrendous, a retreat back to intense bodily labor. Sawing timber had for these men always been the work of sawmills, mechanized industrial plants. Now it fell back on their arms and

³⁵Samuel Dunham confirmed in 1897 that there were sawmills operating at the lakes, but no wood left to buy. Frank Purdy found the number of boats lined up "astonishing," in June 1898, in a line two or three deep for over a mile below the landing, Purdy diary; June 1, 1898; James Hamil reported going up a river 4 1/2 miles in 1897 to cut timber near Lindeman, Hamil letter, October 8, 1897; Jonas Houck walked seven miles back into the mountains from the lakes to find boat timber in 1898, as did Mac McMichael.

³⁶McMichael letter/diary, April 28, 1898. In the spring of 1898, Thomas Moore reported forests of heavy timber, including poplar, birch, and spruce 100 ft. high on the shores of Lake Labarge, the northernmost of the big lakes. A year later the Yukon Territory timber agent sent Corporal Evans of the Mounties to inspect on timber berths along the lakes in 1899. On berth #7 on Lake Laberge, Evans found "four miles of timber more or less cut through." See Thomas Moore account, 1898, MSS 007, Acc. 82/121, Yukon Archive; and "Timber Agent Reports, 1899-1900," Govt no. 1683, File 43 1(2), Yukon Archive Government Records.

³⁷Hamil letter, October 8, 1897.

backs, another source of physical immersion in nature, this time in the tough fibers of stringy northern spruce. "It is trying," Hunter Fitzhugh wrote later, "this thing of making a saw mill of yourself." The man on top risked falling from the scaffold; the one on the bottom endured a constant shower of sawdust in his eyes. "We tried whipsawing, Boyd and I," wrote McMichael. "A trial is sufficient for me. I shall buy my lumber for the boat, if possible." Instead, he bargained with his two partners; they did the whipsawing, and he cooked.³⁸ "The Yukoners say," Fitzhugh wrote later, spinning a yarn, "that when one of us who has not been as good as he should dies, the devil puts him to whipsawing; but if he is faithful and doesn't complain under the trial, he is then simply burned through eternity like an ordinary goat...."³⁹

On the first part of their journey, over the passes, ice had proved a friend, hardening and smoothing the trails, easing movement. For some, that friendship continued at the lakes. In the winter of 1897-98, and even well into the spring, miners fixed masts to their sleds, and hoisted canvas to catch the wind and sail down the ice. This way, they could hop further down the lakes to find well-wooded camps, or get ahead of the crowd in the race to be the first to launch boats once the ice melted. "But the nicest way of all to move the goods," McMichael explained to a young friend at home, "is to load them on sleds with a sail. They often put 1,000 pounds on a sled and go sailing down the lakes like a sailboat....I have seen hundreds of them going that way and, even

³⁸McMichael letter/diary, April 29, 1898, Yukon Archive.

³⁹Fitzhugh letter, October 29, 1900. He was actually cutting wood for a cabin, not a boat, at the time.

now, at any time, I can look out from our tent and see them going by...."⁴⁰ Frank Purdy and Preston Goodale took a cutoff trail from the White Pass summit to go directly overland to Windy Arm on Lake Tagish, where they loaded a thousand pounds of gear on sleds and hoisted sails. With those loads, Purdy admitted, the "sail did not help but very little."⁴¹

For most of the horde crowding along the lakeshore at Bennett, however, ice became the enemy. In the fall of 1897, they raced the winter and the ice to build boats and row 400 miles through tricky channels and rough rapids before the Yukon froze. Lindeman and Bennett remained open into October, but the Dawson-bound miners were headed north. They knew that the ice was forming ahead of them on the river, and they knew they had to beat it. For James Cooper, James Hamil, and Tappan Adney, three of the scores of men trying to get down river in September and October of 1897, the ice became an object of close observation and fierce debate. They became sudden experts on how slow-forming ice affected small-boat navigation on lakes at rivers. Cooper despaired at the headwinds on Lake Labarge which kept 100 men pinned down at "Camp Detention" at the end of September. As they paced the shore, the ice gathered at their feet. "Are trying hard to get by Lake LaBarge before it freezes over as that means either hauling our grub about 400 miles on sleds that we would have to build...or stopping here

⁴⁰McMichael letter, Lake Lindeman, April 14, 1898.

⁴¹Purdy diary, April 22, 1898.

for 8 months and do nothing but devour our provisions...."⁴² "[W]e were then in zero weather," wrote James Hamil below Labarge, "and the floating ice was running all around us but we had about six days more at least."⁴³ Tappan Adney and his partner found themselves just moving through Tagish Lake on October 12, knowing full well that the river would close soon. The shore ice had begun to form, reaching out from shore toward the central channel of the river. The ice, Adney wrote, "creaks and cries...and it is indeed a dismal sound that bodes us no good."⁴⁴ By the time they got to the Hootalinqua, the water crystallized into fine crystals, and then slushy "mush ice."⁴⁵ At the junction with the Pelly on October 23, they struggled to avoid the ice as it poured out of the smaller river, filling the Yukon. With temperatures below zero, they had to knock ice off the oars with an axe. The ice made an "ominous sound" rubbing against the boat threatening to crush it or throw them into the bank.⁴⁶

The following spring ice continued to menace eager goldseekers. Through March, April, and May, the frozen lakes and rivers held them back, preventing forward movement. When not swearing at each other over saws, or pitching and caulking boat seams, or carving oars of spruce (not balsam, which broke under pressure), the impatient

⁴²Diary of James S. Cooper and Associates, Sept. 28, 1897; Oct 1-4, 1897, Diaries File, File Collection, Dawson City Museum.

⁴³Hamil letter, October 8, 1897.

⁴⁴Adney, Klondike Stampede, 136-138.

⁴⁵Adney, Klondike Stampede, 151.

⁴⁶Adney, Klondike Stampede, 165-166.

crowds paced the ice, awaiting the thaw.⁴⁷ Ice, again, became an obsession, but this time they focused on the break-up, not the freeze. "Of course, the lake and ice are standard themes that are discussed continually," McMichael observed, "how soon, how late, is it open above or below; how thick or how thin the ice is; how much or how little it thawed to-day or will it freeze tonight. These are all a part of an interesting subject to us all for upon the movement of the ice depends our departure from these shores."⁴⁸

Many acted with sheer foolishness, rushing the thaw, and setting off in small, heavily laden vessels before the ice cleared the lakes. They possessed neither knowledge nor common sense when it came to navigating amidst the ice, and they suffered the consequences. "The ice is breaking up fast now and we here [sic] of many drownings and boats wrecked....," Bill Hiscock observed from safety on shore. "The Mounties have had a busy time. Going out in 3 or 4 boats in a line to rescue people in boats caught in the ice.....many boats have been crushed in the ice, swamped, outfits lost and people drowned. This is all due to going on the ice too soon or when it is breaking and leaving for Dawson when there is a small space clear of ice."⁴⁹

Gold proved a powerful draw, no matter what the conditions. Two years later, in the spring of 1900, miners heard news of the strikes at Nome and headed down the Yukon in boats before the ice cleared. Joseph Cavanagh kept a running, moment-to-

⁴⁷F. Wm. Hiscock, Diary TS., June 5, 1898, "The Youkon Trail of Year 1898," Diaries File, File Collection, Dawson City Museum. Hiscock learned that balsam would not do for oars from a helpful "Yank."

⁴⁸McMichael letter, May 19, 1898.

⁴⁹Hiscock Diary, May 25, 28, 1898.

moment account of the peril of this journey. His boat crept down the river with ice piled twelve feet high on shore, shifting and breaking with cracks that sounded like the firing of a gun. They traveled "three days behind the ice," as it receded noisily downriver to the North. At its worst, the ice jammed and piled up for miles. Tensions ran high. On May 15, Cavanagh noted at 8:50 a.m. that "The boys are pulling hard to avoid icebergs. No one is saying a word."⁵⁰

The Klondike and Nome rushes drew hot-headed boaters into the ice-choked Yukon in 1898 and 1900, but in both cases most goldseekers waited for the full thaw. In May 1898, the milling crowds at Lindeman and Bennett burst their seasonal gates when the ice finally seized and cracked. They hoisted sails and sped down the windy lakes into the upper river. Open water meant high winds, dangerous swells, and, of course, mosquitoes. But it also meant movement, as the wind, water, and current came together to sweep the boats forward. The miners, after months of slow, burdensome packing and then an endless wait for the thaw, rejoiced at the sheer movement. "It feels good to be on the move again," McMichael confessed from his boat on Lake Tagish. "We were a little over two months in making sixty miles of our journey. Pretty slow traveling is it not?" "Tremendous excitement in the crowd, to get away, and it is a great sight to see miles of boats mast[s] with flags up, tied along the shore, some places 3, 4, or deep," wrote Hiscock.⁵¹ The sheer numbers amazed them. "The boats are thick going down the lake

⁵⁰Diary of Joseph H. Cavanagh, May 14-May 24, 1900, "Account of Trip to Nome," Vertical File MS, UAF Archive.

⁵¹Hiscock diary, May 31, 1898.

today," wrote McMichael on May 25, 1898, "all rowing as there is very little wind."

Fitzhugh and his partner christened their 21-foot boat the good ship "Evelyn Lee" and set her afloat with grand ceremony: "So we broke a can of condensed milk over her (but saved the milk) and launched her."⁵²

At Tagish Lake the Mounted Police lined the boats and rafts up for inspection and issued registration papers. By mid-June 1898, the police counted 7,200 boats passing the post, most with four or five people aboard.⁵³ The crowd waiting for papers stretched for a mile along the lakeshore, boats two or three deep. That meant a half a day or more of waiting, torture for impatient miners finally set free from the land and ice.⁵⁴ Charles Mosier's party sat out the wait on June 3, about 300 boats back from the head of the line of between 700 and 1000 boats. "[L]ooks like New York harbor," Mosier wrote.⁵⁵ Tom Boldrick bided his time in the same line, and made a telling comparison between the miners' boats and the flocks of passenger pigeons that had darkened midwestern skies earlier in the century: "[I]t is astonishing the amount of them[.] as thick as pigeons in the old days."⁵⁶

With the ice out of the rivers, the miners faced new obstacles in vicious mountain

⁵²Fitzhugh letter, May 24, 1898.

⁵³Adney, Klondike Stampede, 386.

⁵⁴Purdy diary, June 1, 1898.

⁵⁵Mosier diary, June 3, 1898.

⁵⁶Tom Boldrick diary, June 2, 1898, Vertical File MS, Klondike Miners, UAF Archive.

headwinds and crosswinds, and in the canyons and rapids where rocks and swift water smashed scores of hastily-built scows. A short, turbulent canyon connected Lindeman and Bennett. Most miners portaged an easy two-thirds of a mile around it. In the "tremendous excitement" of May 1898, however, a reckless contingent shot the rapids in loaded boats, creating a spectacle for those on shore. "Today there are dozens of boats and scows coming through the canyon and getting smashed to pieces," Bill Hiscock wrote, "not more than one in ten coming through safe, there were five outfits lost one after the other." Hiscock and his fellow New Zealanders camped only a few yards from the canyon. He recorded in wonder and annoyance that "we...could not get through a meal without rushing to the bank when we heard the crowd yelling on the opposite bank, at the pleasure of seeing another wreck." Two days later he added that "[t]he fun still continues only some smash ups and more outfits lost...excitement goes on from 3 a.m. in the morning till half past ten at night." One big scow "turned broad side on... the whole force of the current filled her entire length and she snapped in half like a rotten carrot."⁵⁷

By the time they reached Miles Canyon, most of the daredevils had come to their senses, or had been eliminated. Here the river narrowed from 300 feet to about 40, tumbling with concentrated energy through high rocky walls. Just below, it struck a stretch of threatening rocks at White Horse rapids, named for the frothy crests of waves that resembled horses' manes. Scores of splintered craft, and the "acres of groceries and provisions spread out on canvas and blankets drying with scows turned up for repairs...", convinced about three quarters of the miners to hire experienced pilots (Indian and white)

⁵⁷Hiscock diary, May 31, 1898.

to take their empty boats through while they portaged freight around by pack and on tramways.⁵⁸ The fee, usually between twenty and forty dollars, was well worth it, because, as Tom Boldrick explained, "Loosing ones outfit is about equal to loosing ones life in this country."⁵⁹

Though grateful for the river's six mile-per-hour current which speeded them on their way, miners nonetheless threw their bodies into rowing and steering, to control their movement downriver. This was true especially at spots like the Thirty Mile River, the treacherous section of the upper Yukon between Lake Labarge and the junction with the Hootalinqua. The Thirty Mile had a twelve mile current and "rocks and boulders whizzing past like ties under a moving train," as McMichael put it, using a more familiar image of transportation.⁶⁰ "[We] bent our whole energy to the oars and by a close shave missed a large rock nearly in the middle where some poor fellow boat was lodged torn too atoms & dashed to pieces," Tom Boldrick wrote of this cauldron of "rocks & bars."⁶¹

⁵⁸McMichael letter, June 10, 1898. When James McCrae arrived at Five Finger Rapids, further down the river, he found some friends working as pilots: "[F]ound the boys there running boats through the Rapids. they had turned Pilots. Their experience down the River on a raft had given them courage" (James A. McCrae diary, June 14, 1898, MSS 104, Acc. 80/1, Yukon Archive). Lynn Smith had a pilot take his boat through Whitehorse rapids, and used a tramway for freight, as described in a letter, Smith letter, June 2, 1898, UAF Archive. Various sources mention the hiring of Indian pilots on the upper river. See also Charlene Porsild, "Culture, Class, and Community: New Perspectives on the Klondike Gold Rush, 1896-1905," (Ph.D. diss., Carleton University, Ottawa, 1994), 93.

⁵⁹Boldrick diary, June 4, 1898.

⁶⁰McMichael letter, July 13, 1898.

⁶¹Boldrick diary, June 7, 1898.

"[W]e were exhausted," agreed Hiscock in describing the Thirty Mile, "as during the whole distance, we barely had a minute without having to pull to avert wrecking and drowning."⁶² "It is a terrible country to get in," Boldrick wrote ominously, "& it may be a terrible country to get out of...."⁶³

Most of those who did survive without wrecking or drowning swept on to Dawson and the fabled Klondike. "[W]e were happy to know," admitted James Hamil as his boat approached the promised land, 'that the past two months of the hardest work we had ever done was over so we laid back to rest."⁶⁴ A sizable crowd chose not to rest on the Yukon current, and turned instead to tributaries above the Klondike in search of new gold strikes: the White, Indian, and Stewart Rivers. At least 3000 went up the Stewart in the spring and summer of 1898.⁶⁵ They built small poling boats, cached supplies, and pushed and hauled against the spring currents of these smaller rivers, often stumbling alongside the boats for miles, waist deep in freezing water. Slogging through mossy bogs and over fallen trees, besieged by mosquitoes and bereft of any sign of gold, miners experienced bodily and spiritual exhaustion they, again, had no words to express. Immersed in water and bugs, fighting against the current, rather than moving with it, they had only the strength of their backs, arms and legs to move loaded boats. Unable to row or paddle against the current in shallow, rocky water, they ran ropes to shore, and crashed along

⁶²Hiscock diary, June 11, 1898.

⁶³Boldrick diary, June 3, 1898.

⁶⁴Hamil letter, October 8, 1897.

⁶⁵Boldrick diary, July 13, 1898.

through tangled willow stands. For most, this level of engagement with nature proved too much. Some lasted several weeks, others only days. Tom Boldrick's crew went first to the White, and then up the Stewart. The White, a swift and silty river named for its color which looked like chalk or paint, proved so strong that after a few days two parties combined their gear into one boat in order to have greater pulling power. "[T]here is now eleven in our party & when they get all strung out on a rope they are a sight to see...we have not made over 10 miles in the two days pulling & dragging the boat...."⁶⁶ Mac McMichael's crew moved only eight miles a day up the Fortymile, hauling with bloody hands on hundred foot lines, sinking into quicksand in heavy boots. "Sometimes to get through the riffles we would have to stand in water nearly to our hips and pull until we could almost see stars and that way get the boat through inch by inch."⁶⁷ He experienced "a weariness that is almost beyond describing."⁶⁸

As at the summit of the passes, these were journeys against the forces of the natural world. The work of dragging upstream measured the rivers themselves, whose energy miners read in their tired muscles, and in the jumbled chaos of driftwood they hacked through each day.⁶⁹ "[T]his river must be...terrible when full of water [...] it is now literally filled with drift wood & torn up trees by the thousands showing the tremendous force of the rapid waters [...] it is terrifying to look it over & see the force that it has taken

⁶⁶Boldrick diary, June 14-21, 1898.

⁶⁷McMichael letters, July 1, 9, 1898.

⁶⁸McMichael letter, July 1, 1898.

⁶⁹White, Organic Machine, 7.

to do this...." Miners measured that power even more clearly when they gave up and turned around, or saw others do so. After a miserable day pulling up the Stewart, Boldrick's party watched other defeated boatloads zoom back downstream at breakneck speed. "[T]hey came down in 5 1/2 hours on a boat and it will take us 3 days to go up to it which shows how swift the river is...."⁷⁰ That disparity proved the greatest example of the slowness of northern transport, and of nature's power to bring some human movement to a maddening, heart-wrenching standstill. At one point on the Stewart it got very bad, with "rocks straight up and down and with now and then one jutting out and as the current was very rapid we had to pull along close and hang on with our hands[.] we were over 2 hours making a few hundred feet."⁷¹ Boldrick's party lasted over a week before turning back down the Stewart for the Yukon, "which is pretty tough after wading 10 days in ice cold water [.] but such is life in the gold diggings."⁷²

"Making Travel a Joy"

No matter how intractable going upstream or turbulent going downstream, the rivers provided the only feasible corridors for movement in the summer. Overland transport meant only mud and moss and thus even slower movement, if that were possible. Mac McMichael made his overland trip up Fourth of July Creek in the summer, to prospect the river bed. An old Indian trail was not too bad, but when they left the trail

⁷⁰Boldrick diary, June 29, 1898; White, Organic Machine, 7.

⁷¹Boldrick diary, July 2, 1898.

⁷²Boldrick diary, June 16, 23, 1898.

for the banks of the creek, he wrote, "Then we would have great patches of deep moss, as hard to walk over as deep snow, or the tangled undergrowth of trees along the bank. But worst of all were the great bogs of a kind of bunch grass...from six inches to a foot and a half high....If you can imagine yourself walking on inverted beer bottles and each one you step on falling in a different direction, then you can form some idea of walking a mile or two over such a bog. Below the grass is soft muck and often water."⁷³

With winter, everything changed. Once the rivers closed with ice, and the muddy trails froze solid, both became feasible roadways for dogsleds, snowshoers, and even bicyclists, who took to the Yukon as if to a paved street at home. Though dogs were crucial to hauling supplies and wood, men without the cash to procure a team could get along pretty well in the winter, with a sled, good boots, and plenty of muscle. As Lynn Smith wrote his first winter in the north, "Dogs are beyond my means, so I must play 'dog' myself."⁷⁴

Rather than play dog, most miners imported a transportation work force in the form of malamutes, Newfoundlands, and retrievers, and used dog sleds to move food, equipment, mail, wood, and even gold over frozen creeks and rivers as well as frozen land. Once experienced mail carriers broke trails over the safest areas of the ice and snow, dogsleds could move up and down the Yukon relatively safely. In November, 1899 Fitzhugh wrote of the closed-up Yukon that "now its frozen corpse is marked all over

⁷³McMichael letter, July 13, 1898.

⁷⁴Lynn Smith letter, Dec. 1, 1898, Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, UAF Archive.

with sled trails and the tracks of dogs and men."⁷⁵ This became most apparent in the winter of 1900, when thousands abandoned Yukon mines to rush to the new goldfields at Nome. Between January and April, miners poured down the frozen river, some with dog sleds, others on foot, moving from wood-camp to mining town and from roadhouse to roadhouse. In early March, twenty parties a day passed Hunter Fitzhugh's camp.⁷⁶ Some even went by on bicycles, the tires fitted with canvas. In April Bill Ballou, watching the Nome parade as it passed Rampart, estimated 5000 headed to Nome, with up to 100 teams passing one day.⁷⁷ The constant passing of sleds wore the trail down "as level as a table," according to Revenue Cutter Capt. Cantwell. They looked "like a procession of black ants crawling slowly over the white surface of the river."⁷⁸

Dogsledding, like crossing the passes, proved an intense engagement with nature, especially nature in the form of the dogs themselves. Ever fond of adventure, Hunter Fitzhugh, made several trips up and down the Stikine River by dog sled his first winter in the north, hauling heavy loads of supplies. He learned much about dogs and snow. "Another thing they are fond of doing is to sit on your snow shoes, as they are drier than the snow, and many a time I have started off after fixing their harness, or putting their feet over the traces, only to go head first into six feet of snow, owing to a sixty pound dog

⁷⁵Fitzhugh letter, Nov. 12, 1899.

⁷⁶Fitzhugh letter, March 2, 1900.

⁷⁷Ballou letter, April 12, 1900.

⁷⁸ John C. Cantwell, Report of the Operations of the U.S. Revenue Steamer "Nunivak" on the Yukon River Station, Alaska, 1899-1901 (Washington, D.C.: GPO, 1904), 146.

being perched on the heel of each of my shoes." He learned to feed dogs only once a day, to tie them with chains, as they chewed through ropes, and to keep his shoes from being eaten, as "any sort of dressed hides delight their souls."⁷⁹ On the return trip up the Stikine in February, four dogs pulled 800 pounds on two sleds, leaving Fitzhugh and his partner to haul 400 pounds on their own. On the lower river, in bad coastal weather, "we floundered along at an average rate of 2 1/2 miles a day. Some days the wind was so terrific that we had to stay in camp all day and have our eyes put out by smoke." The men had not yet learned to pack the sleds, which proved too heavy anyway. "[T]he loads did nothing but turn over in the snow about twice a minute, and monkeying around a dog sled in seven feet of snow, with snowshoes on, trying to 'right' a 400 lb. load is one of the great trials of life...."⁸⁰

Sleds ran best over hard snow or smooth ice, and the exact consistency of the frozen surface of the earth profoundly shaped how much work it took from dogs and humans to move across that surface. Dog-sledders thus tended to take careful note of the condition of the surface over which they moved. On open, smooth ice, a man or a few dogs could quickly pull a fairly heavy load for miles in a day. Hunter Fitzhugh worked a claim 12 miles up Big Manook creek, and moved his supplies up that far. "But," he explained, "that is nothing in the winter over 12 miles of smooth creek trail...."⁸¹ In March and April, movement shut down for a few weeks between the time that the hard-

⁷⁹Fitzhugh letter, January 7, 1898.

⁸⁰Fitzhugh letter, Feb. 24, 1898.

⁸¹Fitzhugh letter, October 29, 1900.

packed ice and snow turned to mush, and the point at which the rivers cleared for boats. In the fall, loose ice shut down the boats, and forced dog-sledders to wait until the trails froze and the ice in the creeks and rivers became strong enough to support a loaded sled--usually about the middle of October.⁸²

In the transition period, when the Yukon would support neither boats nor sleds safely, people stayed put for a period of two or three weeks. Cantwell noted that "all travel is practically suspended."⁸³ This was most evident to miners as the time of year when the mail ceased, between steamer mail deliveries and sled-dog mail. "There may be quite a break between these letters going out now," explained McMichael in a letter home in late September, 1898, "for navigation is nearly closed and it may be some time before the river will be ready for dog teams on the ice."⁸⁴ Native Yukoners by long experience ceased activity during this awkward time of transportation limbo, and miners learned to do the same. The Nunivak crew observed that local Indians near the Dall River took the month of October as a holiday season. After completing their summer fishing, they remained in villages along the river until the advent of ice and snow allowed movement into the woods in search of moose and caribou.⁸⁵ Miners, with no rituals in place, just waited impatiently for the freeze-up, so that they could sled supplies out to the creeks--a task quickly recognized as winter work.⁸⁶ "It is a joy to be alive now," Fitzhugh wrote

⁸²Cantwell, Nunivak, 155.

⁸³Cantwell, Nunivak, 155.

⁸⁴McMichael letter, Sept. 26, 1898.

⁸⁵Cantwell, Nunivak, 80.

with bounding enthusiasm of the first snow in October 1898. They were having "the most beautiful weather" which froze the trails, "making travel a joy." Just a few days earlier his trip out to the gulches led through "a bottomless swamp, covered with this everlasting arctic moss," and over fallen logs, a nine-mile trek that took six hours. Once frozen, the trail proved a breeze, and the return trip took only two hours.⁸⁷

The transition period was far less joyful in spring, when the solid, compact snow and ice started to soften and disappear, turning the low-friction earth into an immense, sopping bog. Yukon ice remained a solid surface well into April, but that did not make it dry. From March on, and even earlier during thaws, miners found water flowing over ice, often up to their knees, making dog sledding and human sledding wet and dangerous work.⁸⁸ Miners pushed the margins of winter--and often suffered from falling through ice. Partly frozen, partly flooded, the Yukon made it difficult to go anywhere. Glad for his mail, in April 1902, Bill Ballou nonetheless took note that there was "a great deal of water on the ice...in some places two feet deep through which the poor dogs have to swim."⁸⁹

Water also ran beneath the snow-pack, threatening miners who broke through soft

⁸⁶McMichael letter, August 26, 1898; James Lynn Anderson Diaries, vol. 1, October 6, 1895, Vertical File MS, UAF Archive; Smith letters, Nov. 10, 22, 1898; Ballou letter, Sept. 18, 1898.

⁸⁷Fitzhugh letter, Oct. 5, 1898.

⁸⁸Diary of Stewart L. Campbell, March 21, 28, 1899, MSS 122, Acc. 81/129, Yukon Archive.

⁸⁹Ballou letter, April 25, 1902.

snow. In April, the sun warmed the snow and ice, making slush and covering the hard surface of the ice in water. "Even now the trails were impassable," Cantwell wrote, "...rushing rivulets of water which cut miniature gorges in the hard, thin, packed snow and formed little lakes on the surface of the ice where hollows were."⁹⁰ For a few weeks, dogsledders and miners extended the winter by traveling at night, when colder temperatures re-froze softening trails, or at least formed hard crusts over the slush below. The lengthening light made it fairly easy to shift the work of movement deep into the night. People had to get up out of bed at night to greet arriving mail when the dog-sleds came in.⁹¹ When summer arrived, freighters slept through the heat of day, and then packed from Dawson to the mining creeks at night, when it was cooler. "In this way they do not need to carry blankets, you see," McMichael explained. "Great country!!"⁹²

"A Continuous Picnic"

For miners caught up in these seasonal details of transportation, nature governed their lives and their work. But then, in the space of a few years, the relation between nature and movement appeared to change. From the moment these journeys into nature

⁹⁰Cantwell, *Nunivak*, 95. Adney wrote "At night, however, enough winter returned to freeze the trails for the dog-teams hurrying supplies and lumber to the mines before the final break-up." (Adney, *Klondike Stampede*, 359). At the end of March, Bill Ballou wrote that "about a week more will end our darkness, then all the "mushing" will be done at night when it is cool..." (Ballou letter, March 31, 1902). O.G. Herning hauled wood to Willow Creek at night in April 1903, "working in the middle of the night to sled on the crust" (O.G. Herning diary, March-April, 1903, UAF Archive).

⁹¹Ballou letter, April 25, 1898.

⁹²McMichael letter, Dawson City, June 22, 1898.

began, both the "rich men" who traveled by steamers and the "poor men" who struggled with packs, boats, and sleds combined their efforts to improve transportation over all routes to Dawson. Entrepreneurs, investors, transport companies, and construction workers combined labor and nature to make it far easier to get to the gold fields. In the space of two or three years, these once daunting distances shrank to a few hours of time and the cost of the tickets, the same abstractions of time and money that governed train travel at home and steamer travel on the lower Yukon.

The journey into nature thus seemed to end with the conquest of that nature. Railroads and steamers eliminated much of the intense, messy physical labor it took for miners to move through the environment. Steamers moved onto the upper river in the spring and summer of 1898, and by the following year completely replaced the miners' small, hand-made boats. They ran in two legs, one boat down to the White Horse rapids, and a second from there to Dawson. The four hundred miles down the lakes and rivers from Lindeman to Dawson turned into a distance to be consumed at a precise schedule, and a commodity purchased at a standard price. In August 1899, a Seattle paper reported that the Steamer Flora made the trip from the White Horse Rapids to Dawson in just 31 hours and 25 minutes. Of course not everyone could afford such a journey. "The fare is \$300 either way," McMichael wrote, on hearing of the steamers running on the rivers and lakes. "This is a big sum for the poor devils who are in here, broke and want to get out. There are many of them."⁹³ With the increase in river traffic, however, prices dropped. When Angelo Heilprin came over the Chilkoot to a "deserted" Lake Bennett on August

⁹³McMichael letter, June 23, 1898.

1, 1898, the fare on the Nora to Dawson was only \$75.⁹⁴

In 1898, a conglomerate of British capitalists, American engineers, and laborers from everywhere began construction in earnest of the White Pass and Yukon Railroad. By the middle of the winter of 1898-1899, the rails extended to the summit, and carried passengers and their tons of freight quickly to the heights that it had, the year before, taken miners weeks or months to gain.⁹⁵ Passengers took the train to the top for \$5. At 25 cents a mile, Adney observed, this was "probably the most expensive railroad travel in the world."⁹⁶ But the journey over the passes was at last an item to be bought and sold. On July 6, 1899 the rails reached Bennett, and the following season the railroad company announced a new rate of 2 1/4 cents a pound for freight from Skagway over to the lakes. By May 1900 workers were laying rail at a rate of two miles per day, and on July 29 they drove the final spike at Whitehorse, bypassing Lake Bennett, Tagish, and Marsh Lakes, where fleets of boats had battled the high winds of Windy Arm.⁹⁷

These developments changed the journey. When Mac McMichael fell ill in January 1899, he traveled upriver from Dawson to Lake Bennett by sled dog and sleigh. On March 23, this man who had crossed the Chilkoot on foot, built his boat, and rowed to Dawson, boarded the train at White Pass, reached Skagway by dinner, and soon after took

⁹⁴Angelo Heilprin, Alaska and the Klondike: A Journey to the New Eldorado with Hints to the Traveler (London: C. Arthur Pearson, 1899), 25.

⁹⁵Trade Register (Seattle), Feb. 25, 1899, 10.

⁹⁶Adney, Klondike Stampede, 385.

⁹⁷Roy Minter, The White Pass: Gateway to the Klondike (Fairbanks: University of Alaska Press, 1987), 347; Trade Register (Seattle), April 7, 1900, 17; May 5, 1900, 7.

a steamer to Seattle.⁹⁸ His purchase of these tickets--the talisman of civilization and speed--marked the transition from movement as bodily labor, to movement as consumption of a commodity. It also marked the further compression of distance and nature into mere time, as Dawson moved closer to the rest of the world. The Seattle Trade Register noted that the journey from Seattle to Dawson "will now occupy only six to seven days."⁹⁹ Edward C. Adams took the train from Skagway to Lake Bennett in 1900. The thirty-mile trip took about five hours, complete with revealing views of the bones of dead horses that two years earlier had packed supplies on far slower journeys.¹⁰⁰

When Bill Ballou travelled out to Seattle in 1901, down the Yukon to St. Michael and out through the Bering Sea, he returned through Skagway, and took the train over the pass to Whitehorse. "[S]o after sleeping on the Pacific one night," he wrote, "we were steaming down the Yukon the next traveling all the time." It took a total of six days and 16 hours for him to reach Dawson from Seattle. Of Dawson he remarked, "all business for this place now done by railroad," and by steamers on the upper river from Whitehorse.¹⁰¹

What began as a harrowing journey into nature had become a passage through nature. Part of connecting the gold fields to rest of the world, after all, consisted of

⁹⁸McMichael letter/diary, March-April 1899.

⁹⁹Trade Register (Seattle), August 11, 1900, 22.

¹⁰⁰Edward C. Adams, "Dairy [sic] of the Tripp from Seattle to Dawson City and also for the whole year of 1900, " 1900, Vertical File MS, UAF Archive.

¹⁰¹Ballou letter, Sept. 12, 1901.

making it easier to get there, get the gold, and bring the gold home. And making it easier to get there meant making the journey a viable commercial entity, a purchasable commodity, and an object of trade. When Arnold F. George, the Secretary of the Yukon Miners and Merchants Association, spoke in Seattle at the Alaska-Yukon-Pacific Exposition in 1909 he declared the days of struggle over. "Today," he explained, "the journey to these gold fields is a continuous picnic." Now, he continued, travellers stepped off the train at Whitehorse, and boarded a stage on the government road to Dawson, or took a modern steamer down the Yukon, made "as safe as the Erie Canal" by the removal of rocks in Five Finger Rapids.¹⁰²

But this transformation of a difficult passage into a "picnic" proved far too simple a story. The dichotomy between the miners's grueling journeys into nature, and the sudden arrival of civilized transportation implied that labor and nature had both disappeared. Neither disappeared, and whether on the "rich men's" steamers or the "poor men's" trails, both labor and nature had been there all along. The "rich men" or consumers had all along masked the presence of the laborers who did the work of moving them. And the "poor men," while very much engaged with nature, were forever turning themselves into consumers by hiring others to do their work of transportation for them. From the start, wherever there were "rich men"--consumers--on the trains to Seattle and on the steamers up the Yukon, there were also hired men (and women) who labored in nature. And wherever there were "poor men"--on the trails, mushing on dog sleds, in

¹⁰²Arnold F. George, Address at Alaska-Yukon-Pacific Exposition, Govt. no. 1641, File 16721, Yukon Archive Government Records.

small boats--there were other hired laborers as well, turning labor in nature into a commodity sold to the highest bidder. On every route, whether by foot, steamer, or railroad, whether poor or rich, gold miners depended on the labor of producers, and on the energy of the natural world itself. What appeared as a conquest of nature--the elimination of the work necessary to move to the interior-- was from the start simply a shift in the human relation to nature, and to labor. That conquest was instead the creation of the whole journey as a rich man's route, in itself a object of consumption, a new relation to nature, and a new set of connections between the Yukon interior and the outside world.

Chapter 5: Journeys Within Nature: The Culture of Movement

The images of miners on the Chilkoot and White Passes look for all the world like humans struggling with and ultimately triumphing over nature. But these images of elemental battles against mud and snow masked the presence of culture and history, and the presence of hired workers. There was a world of culture in those journeys over the passes, and those journeys were far more like railroad journeys and steamboat journeys than they first appeared. The overwhelming environment and the intensity of the bodily work masked those similarities, but not entirely. The miners themselves revealed other aspects of the journey. From the start they thought and acted as consumers, applying modern calculations of time and money to their project. They may not have bought tickets, but they hired the labor and energy of human workers and pack animals. They created a market in transportation, and through that market a social and economic system that both reflected and shaped the pure nature they encountered.

The trails, lakes, and rivers were places where, as the miners so eloquently put it, men and women made mules and dogs and sawmills of themselves. But their need to use their muscles to do this work should not be allowed to mask the presence of actual mules and dogs and sawmills, and for that matter of other humans whom they hired to do much of this work for them. Most of the time miners looked for a dog, a mule, a sawmill or a willing worker, in the hopes of hiring some help. From the start, they shifted the labor of movement from their own shoulders to those of hired workers. Miners on the trails and upper rivers were at times as much consumers as producers. They did a lot of work. but hired packers and pack animals did even more. The miners' journey over the passes were thus far more than direct, elemental contests with nature.

In Nature, Culture: Passes and Trails

The passes were certainly natural places, low-elevation breaks in a forbidding mountain chain. But long before the gold rush, they were also historical places, and crossing the passes had social and political meaning. The Chilkoot Pass was both subject to political and economic battles and embedded in such contests, in the meanings and values that people give to geographically crucial places, and to their movement through those places. And in the 1890s they were sites of rapid cultural and economic change. Coastal natives, particularly the Chilkoot band of the Tlingit-speaking peoples, had long used the Chilkoot Pass for trade and travel into the upper Yukon interior. Aboriginally, they traded fish oil, clams, and other ocean products with the interior Athapaskan Tagish for goat wool, caribou, and moose hides. When Russian fur traders arrived in search of rich pelts that trade expanded. By the end of the 18th century, massive overhunting depleted the sea otter population to the point that Russian traders increased their demand for land furs from the arid Yukon interior. Tlingits procured European goods from the Russians, and exchanged them with interior Tagish and Tutchone Athapaskans for furs. Tagish and Tutchone then traded European metal goods, blankets, and food further inland to the Pelly River region.¹

¹Catharine McClellan, "Tagish," in Handbook of North American Indians. Subarctic, ed. June Helm, gen.ed. William Sturtevant, vol. 6 (Washington, D.C.: Smithsonian Institution, 1981), 489; Julie Cruikshank, Life Lived Like a Story: Life Stories of Three Yukon Native Elders (Lincoln: University of Nebraska Press, 1990), 8. On the social and political aspects of movement, Richard White, The Organic Machine: The Remaking of the Columbia River (New York: Hill & Wang, 1995) 14.

With this intensified post-contact trade between coast and interior came a high degree of cultural and linguistic melding between the coastal Tlingit and the interior Tagish. The two groups solidified trade ties through intermarriage. Coastal Tlingit traders arranged marriages between their sisters and Athapaskan trade partners; sometimes they chose Tagish wives to cement trade relations and insure profitable trade. Tlingit families even came into the interior to spend winters trapping with the Tagish. By the nineteenth century, Tagish had adopted the coastal language, as well as many cultural practices and forms. The Tagish were "effectively Tlingitized."² Skookum Jim, the man who, with his sister and white brother-in-law, George Carmack, first unearthed Klondike gold on Bonanza Creek, was the son of a Tagish mother and Tlingit father.³ Despite these strengthened kin and trade ties between Tagish and Tlingit families, tensions remained, which sometimes erupted in fights when coastal Tlingit men took or mistreated Tagish women, or when Tagish moved out of their interior home region across the Chilkoot pass to the coast. The Tagish and inland Tlingit, who lived on the high plateau of the lakes and upper Yukon, were key trade partners, but the coastal Tlingits held the upper hand.⁴

²Catharine McClellan and Glenda Denniston, "Environment and Culture in the Cordillera," Subarctic, 372; and McClellan, "Tagish," 481, 489-490; Cruikshank, Life Lived Like a Story, 8.

³Julie Cruikshank, "Discovery of Gold on the Klondike: Perspectives from Oral Tradition," in Reading Beyond Words: Contexts for Native History, ed. Jennifer S.H. Brown and Elizabeth Vibert (Peterborough, Ontario, Canada: Broadview Press, 1996), 442.

⁴McClellan, "Tagish;" Julie Cruikshank, "Images of Society in Klondike Gold Rush Narratives: Skookum Jim and the Discovery of Gold," Ethnohistory 39 (Winter 1992),

Until 1880, the Chilkoot Tlingits controlled all human movement over the pass, and concealed their knowledge of the alternate route at what would become White Pass. Only Tlingits could cross the pass to meet trade partners on the interior. In order to maintain their profitable position as fur-trade middlemen and increase their share of the wealth resulting from trade in furs and European goods, the Tlingits prevented interior trappers, including the Tagish, from coming down to the coast to trade.⁵ As a result, few interior peoples ever saw the coast or had contact with Europeans. The Chilkoots did all of the trading and transporting themselves, moving furs over the pass from the lakes to the coast, and European goods from their village at Dyea back over to the lakes. Chilkoots by and large prevented whites from crossing; only a handful of white prospectors managed to sneak through before 1880.⁶

The Chilkoot Pass was thus a contested social and cultural pathway, as well as a natural corridor. The contest broadened in 1880 when U.S. Navy Capt. Lester Beardslee, stationed at Sitka, intervened in the interest of a few miners and soldiers seeking access to the pass for gold prospecting and exploration. Beardslee sent Navy officers ashore at Dyea to negotiate with the Chilkoot leaders, assuring the natives that whites crossing the

22-25.

⁵Catharine McClellan, "Tagish," 481-482; Frederica De Laguna, "Tlingit," in Handbook of North American Indians, Northwest Coast, ed. Wayne Suttles, gen. ed. William C. Sturtevant, vol. 7 (Washington, D.C.: Smithsonian Institution, 1990), 150.

⁶In the mid-1870s a miner named George W. Holt crossed the pass, found some gold, and returned to Juneau. A few Juneau miners then followed his lead across the pass. Michael Gates, Gold at Fortymile Creek: Early Days in the Yukon (Vancouver: University of British Columbia Press, 1994), 8.

pass would not interfere with the fur trade. The Navy delegation arrived, however, in a warship armed with a gatling gun, and was accompanied by five boatloads of armed gold prospectors seeking to cross the pass. Beardslee's representative, according to one source, "opened negotiations by first explaining how the gatling gun worked."⁷ U.S. Geological Survey agent Josiah Spurr, writing in 1896, described the proceedings as ending with "a sort of unwritten treaty or agreement with the thoroughly frightened natives, by which the prospectors, and all others who came after, were allowed to proceed unmolested."⁸ From then on both whites and non-Tlingit natives crossed the pass under the eyes of disapproving Chilkoots. Fifty white men went over the pass in 1882 to prospect on the Sixtymile river; another fifty followed in 1883, and seventy-five made the trek in 1884. By 1890, after the strike at Fortymile, nearly three hundred white gold miners had crossed into the Yukon basin.⁹

As their control of movement over the Pass dwindled, Chilkoots shifted to

⁷De Laguna, "Tlingit," 150. See also Morgan Sherwood, Exploration of Alaska, 1865-1900 (New Haven 1965; Fairbanks, 1988), 123, 146.

⁸Josiah Edward Spurr, Through the Yukon Gold Diggings: A Narrative of Personal Travel (Boston: Eastern Publishing Co., 1900), 37. Spurr dated the Navy-Chilkoot negotiation at 1878, however. Henry Davis remembered another story from 1886. He arrived at Dyea to find a crowd of Indians, mostly Hoonahs and Chilkoots, milling around. The Chilkoots were blocking all forward movement over the Chilkoot because they did not want the Hoonahs to pack for white men. Stalemated, the miners sent for Healy, who got some soldiers to come up to Dyea from Haines Mission, just south on the Lynn Canal. Negotiations ensued between two officers, Healy, and the "head man" of the Hoonahs and Chilkoots. Two hours later, they came out, having made peace, "saying they were all ready to pack." See Henry Davis, "Recollections," in Sourdough Sagas ed. Herbert L. Heller (Cleveland: World Publishing, 1967), 38-39.

⁹Gates, Gold at Fortymile, 20, 55-58.

packing miners' supplies up the trails. As packers they commanded good profits, and they therefore tried to limit the work of hauling goods to their own people. Various factions, white and native, challenged their attempts to monopolize the packing business. In 1886 John J. Healy built a trading post at Dyea to serve miners crossing the mountains to new gold camps along the Fortymile river. Healy contracted with coastal Tlingits to carry miners' supplies, but also became embroiled in the social and territorial conflicts that resulted. When the Chilkoots demanded high prices, the whites, including Healy, tried to open up the packing market by hiring Tagish packers at lower rates. Once gold miners broke through the Tlingit blockade in 1880, Tagish people had also crossed the pass to visit the coast, "especially if they had established kin ties there."¹⁰ Gold-discoverer Skookum Jim (or Keish) and his brother both married coastal Tlingit women and worked as packers on the Chilkoot Trail after in the 1880s and early 1890s, and Tagish men, women, and children all packed goods during the gold rush.¹¹ This competition for packing exacerbated existing tensions between Tlingits and Tagish, and throughout the gold rush years the Chilkoots disdained and shunned "Stick" or Tagish packers. In 1883 Schwatka noticed that Tlingits resented the presence of the Tagish, whom the Tlingits regarded as inferior. In 1896 Josiah Spurr wrote of one Stick Indian, "He was barely tolerated and was somewhat badgered by the Chilkoots, hence he fled much to the society

¹⁰McClellan, "Tagish," 481.

¹¹McClellan, "Tagish," 485.

of the whites...."¹²

Healy further threatened Chilkoot attempts at controlling the pass when he started a corduroy toll road as a way to glean profits from miners. A Tlingit leader, Klanot, objected, asserting his people's property rights to the trail: "We fixed the road good," he declared, "so that the miners would not get hurt, and Mr. Haley is putting sticks or logs or it, so he can get pay for people going in over our trail, and we do not want to see that....I always treat the miners kindly and when they do their own packing, so the miners will not hurt themselves on the trail, and some of the miners tell me it is not my business, which hurts my feelings. When the miners treat me right I will and do treat them as my children."¹³

Movement through the pass remained culturally complicated in other ways, and created racial tensions between other groups. In 1894 a party of Japanese and Chinese prospectors arrived at Dyea, intending to cross the pass. The white miners called a meeting, voted to refuse them admission to the interior, and physically stopped them on the trail.¹⁴

When the trickle of miners grew to hundreds in 1896, and to tens of thousands in 1897 and 1898, any remaining Tlingit control over the pass Pass dwindled. But native

¹²Lt. Frederick Schwatka, Along Alaska's Great River. Together with the Latest Information on the Klondike Country (Chicago: G.M. Hill Co., 1898), 61-62; Spurr, Through the Yukon Gold Diggings, 51.

¹³William R. Hunt, Whiskey Peddler: Johnny Healy, North Frontier Trader (Missoula, MT: Mountain Press Pub. Co., 1993), 124.

¹⁴Allen A. Wright, Prelude to Bonanza: The Discovery and Exploration of the Yukon (Sidney, B.C.: Gray's Publishing, 1976), 260-261.

peoples remained crucial to such movement, as Tlingits and Tagish carried the packs and charged handsomely for their labors.¹⁵ As Harold Petersen observed along the Chilkoot Pass, the "greatest feats of packing" were done by horses, mules, and dogs, and also by "a great many Natives."¹⁶ When miners arrived at Dyea, they applied for native packers at the cabin of the Chilkoot chiefs. In 1897, the sign over the door read, "Isaac, Chief of Chilkoot. Packing a Specialty."¹⁷ When Lt. Schwatka crossed the pass in 1883, he hired Tagish and Tlingit packers at an "ample" rate of \$10 to \$12 per pack of 100 pounds.¹⁸ By 1896, according to Josiah Spurr, "the natives had settled down into the habit of helping the white man, for a substantial remuneration."¹⁹ In August 1897 Dunham counted 250 Indians and 150 white packers at work using a combination of horses, boats, and packs to move freight the 14 miles to Sheep Camp.²⁰ Over time, the natives suffered increased competition from pack trains, white packers, and tramways, but in the first two seasons of the Klondike, natives exerted significant control over the finances of transportation at

¹⁵Kenneth S. Coates, Best Left as Indians: Native-White Relations in the Yukon Territory, 1840-1973 (Montreal: McGill-Queen's University Press, 1991), 35.

¹⁶"Diary of Mr. Harold Petersen," fall 1897, Vertical File MS, UAF Archive.

¹⁷As visible in a photograph printed in Henry Davis, "Recollections," in Sourdough Sagas, 31.

¹⁸McClellan, "Tagish," 482; Cruikshank, "Discovery of Gold on the Klondike," 436; Schwatka, Along Alaska's Great River, 61-62.

¹⁹Spurr, Through the Yukon Gold Diggings, 39.

²⁰Samuel C. Dunham, The Alaskan Gold Fields (1898; repr. Anchorage: Alaska Northwest Pub. Co., 1983), 11-12. This was originally published as "The Alaskan Gold Fields and the Opportunities They Offer for Capital and Labor," Bulletin of the Department of Labor, No. 16 (May 1898), 297-425.

Dyea and the Summit.

Most miners who hired native packers observed two things: the packers' shrewd sense of the economic value of their work, and their sheer physical strength. Solomon and Rebecca Schuldenfrei came through a few months after Adney and hired 18 Indian packers to take 1500 pounds of freight all the way to the lakes, paying a total of \$700, or just over 50 cents a pound--a hefty price. The team of Chilkoot packers pulled Rebecca up the Dyea River in a canoe. She explained to friends at home that "they charge like the furies and a person is utterly powerless without them, as the white people cannot pack and climb as they do; they take 150 lbs. on their backs easier than Solomon can carry a basket of fruit."²¹ Tappan Adney did not trust Chilkoot packers at all. He found them "wholly unscrupulous" and unaware of what he saw as their inferior economic status. "They make no distinction between themselves and whites even for the same service," he wrote with some dismay. "If one engages them at a certain price and some one offers them more, they lay down their packs and take up the new ones; or if on the trail they hear of a rise in the scale, they stop and strike for the higher wages."²² Josiah Spurr had a similar experience the previous year, when he ascended the Dyea trail with several other white groups. The native packers got the freight as far as Sheep Camp, and then called a rate strike. They demanded a three cent raise, from six to nine cents per pound. The whites refused, and all movement ceased for several days. Finally, one group of miners

²¹Schuldenfrei letters, Sept. 16, 20, 1897, Schuldenfrei Family Papers, MSS 166, Acc. 84/47, Yukon Archive.

²²Tappan Adney, The Klondike Stampede (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 95.

caved in and agreed to pay nine cents; Spurr and the rest had no choice but to follow their lead and pay up.²³

Tappan Adney described Tlingit packers as "shrewd, hard traders, who are making money fast and saving it."²⁴ In precontact Tlingit culture, the accumulation of material wealth increased an individual's status through the ritualized giveaway of the potlatch. By the 1890s, that acquisitiveness blended well with the opportunities presented by Euro-American fishing and trading, and Tlingit bands readily took part in both subsistence and market-oriented activities. They valued and sought U.S. currency, but also incorporated it into their potlatch ceremonies.²⁵ To white observers, who often described Tlingits as industrious, thrifty, and hard-working, this economic readiness looked like acculturation to European economic culture. Often, it represented as much cultural continuity as change.²⁶ After all, Chilkoots had been moving trade goods across the pass for decades. They knew that labor well. Their social power over movement stemmed from both their ability to read and exploit the whites' demand for their services, and long-term physical conditioning that allowed them to carry 200 lb. packs. James Hamil had planned to pay only 12.5 cents a pound to Indian packers in October 1897 to take 2400 pounds across;

²³Spurr, Through the Yukon Gold Diggings, 47.

²⁴Adney, Klondike Stampede, 96.

²⁵David Arnold, "Work, Culture, and Environment: Tlingit Fishing and Economic Change, 1890s-1940s" (Paper delivered at the Western History Association Annual Conference, Lincoln, Nebraska, October 5, 1996), 3-4.

²⁶David Arnold, "Culture and Commercialization: Native Alaskan Fishermen and Their Communities," (Ph.D. diss. in progress, University of California, Los Angeles, 1997), ch. 3, 34-35.

like many others he could not afford the going rate of 25 cents. Hamil and his partner set out to do the work themselves: "so we started in to pack the first day. we did not attempt to pack but 50 lbs at a load but the next we raised it to 75 but in four or five days we commenced to pack 100 lbs. The Indians pack 200 & 250 lbs. but 100 is all I can [manage] to pack."²⁷ Even the native boys and women, long part of an economy based on moving trade goods, climbed to the summit with 75 pound packs.²⁸

Miners hired both native and white packers, and bought horses, dogs, and mules to share the work of reaching the lakes. In doing so, they entered a marketplace for the sale of distance, labor, and time. This was a new world of money as well as a new world of work. Men who had just paid \$50 to travel a few thousand miles could not move more than a few miles up the trails for that amount. Everything seemed to take cash--lightering goods to shore, moving them above the tide, guarding them. As Adney observed at Dyea, "it takes a dollar to do what ten cents would do at home."²⁹ These exchanges of money for labor got complicated at times. James McCrae arrived at Skagway to find the longshoremen who unloaded the ocean steamers on strike. "They were getting 50 cents an hour, and they struck for 75 cents. none of our stuff was discharged during the night....The Longshoremen started a row on the warf [sic], but it was soon stopped. they were a tuff looking lot." McCrae and other passengers pitched in to unload their own supplies.³⁰

²⁷James H. Hamil Letter, October 8, 1897, Vertical File MS, UAF Archive.

²⁸Adney, Klondike Stampede, 92.

²⁹Adney, Klondike Stampede, 98.

³⁰James A. McCrae Diary, Feb. 26, 1898, MSS 104, Acc. 80/1, Yukon Archive.

Though miners paid close attention to the natural world, they read and understood it in terms of how much money it cost to move through it. Transportation--off of the steamers, up the trails, and over the passes--turned out to be as much about money as about nature, though the two were intimately intertwined. The Tlingits knew this well, and miners learned it quickly. Money mattered so much because it could purchase the energy to move through space. Those with enough cash could purchase faster transportation over the pass. Those without had to do the work themselves, at great costs of time and effort. James Hamil wrote from the Chilkoot in the fall of 1897, "I have passed strong men on the trail sitting down worn out and crying they did not have money enough to [have] it done and could not possibly get their stuff over before the Lakes and rivers froze over."³¹

Packing rates reflected the nature of this developing market as the trail itself, the distance, became a commodity bought and sold. The amount of work required to cross the trail, and thus the amount of money, varied with the seasons, as mud made for harder packing and hauling than snow. Sam Dunham, representing the U.S. Department of Labor, hired four Indian packers in 1897 to transport his supplies at a rate of 38 cents a pound. His investigations revealed that in the spring, when snow was still on the ground, packing cost as little as 14 cents a pound due to the ease of using sleds on snow and ice. In summer, when bare ground made the work far more challenging, rates soared as high as 47 cents a pound. These monetary differences reflected physical nature, certainly, but filtered through a market economy which controlled the production and consumption of

³¹Hamil letter, Oct 8, 1897.

transportation. "Warm and pleasant in the afternoon," wrote McMichael on April 8. "Softened trail up badly and rates for packing have gone up. We contracted for ours at three and a half cents to the summit."³² When the snow melted at Sheep camp, the rate jumped as much as fifteen cents per pound, by one report, because "this makes it more difficult for the horses."³³ Crossing the same distance with the same weight thus took vastly different amounts of work depending on ground conditions. Hiring that work similarly cost different amounts at different times. The same held true in Dawson and at the gold creeks. Sam Dunham found the rate for winter hauling was just one quarter of the summer rate. Costs fell from 35 cents a pound at Dawson to only 8 cents a pound, once snow covered the trail of muck and roots and water that led to Bonanza and Eldorado.³⁴ Those differences reflected both the power of the natural world to shape transportation and the economy that people built based on transportation.

The transport market proved quite innovative. At every step along the way, entrepreneurs found services to sell, whether hotels or horses or food. This was especially true at the places that required the most drastic work, like the Chilkoot Summit itself, where the trail turned nearly vertical. In the winter, workers hacked a staircase a

³² Alfred "Mac" McMichael letter, April 8, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive.

³³ McMichael letter, April 8-10, 1898.

³⁴ Dunham, Alaskan Gold Fields, 27-28.

thousand feet high into the snow--but they charged a toll to ascend it.³⁵ Thus the iconic image of miners on the golden staircase represented not only nature's forces, but those of the market as well, which sold the final ascent to miners, step by step. By December of 1897 an entrepreneur named Archie Burns built the first of several tramways that used non-human power sources to carry freight by aerial trams up the trail to the summit. Burns's tramway operated first by horsepower; horses turned a capstan that ran a rope around a wheel. Within six months there were five trams pulling freight up the pass.³⁶ In April 1898, as several thousand miners scrambled up the trail, the Dyea-Klondike Transportation Company, advertising itself as "the only successful tramway over Dyea Pass," promised transport "to any point between Dyea and Lake Linderman [sic]."³⁷ By March of 1899, however, the Chilkoot tramways faced competition from the White Pass railway, which had reached the summit and lowered freight rates to attract miners' business. One mode of commercial transportation quickly outstripped another.³⁸

The trams saved the labor of packers and miners, but they simultaneously created new work as part of the broader service economy that grew well beyond packing itself. Herman Miller Ferree worked unloading sleds at the foot of the Chilkoot tramway in February 1898. He made \$5 a day and board, but with overtime and tips could make as

³⁵Pierre Berton, Klondike: The Last Great Gold Rush, 1896-1899 (Toronto: McLelland & Stewart, 1958; rev. ed., 1972), 244.

³⁶Berton, Klondike, 247.

³⁷Trade Register (Seattle), April 23, 1898, 25.

³⁸Trade Register (Seattle), March 4, 1899, 9.

much as \$15 on a good day. "I never got ahold of money as easy in my life," he wrote to his sister from Sheep Camp. "It is booming and more here. If there is anyone out there wants to come, I will guarantee them a job as soon as they get here...but there is bad storms and hard life."³⁹

The hard life came from the intersection of the culture of profit and the nature of the place. On April 3, 1898, with hundreds in tents at Sheep Camp and many further up the trail, the heavy, wet snow gave way, and a chain of avalanches swept down, killing between 50 and 100, including about 20 white men who had been working at the tramway at the foot of the summit.⁴⁰ Rumors spread that the tramway bosses had not allowed them to leave, despite the storm, even when Indian packers descended to safety. Mac McMichael wrote on April 5, "It is said they forced the men out in the storm by saying they might work or call for their time at the office. Two refused to go....The rest were lost and most of their bodies are yet to be found."⁴¹ Hundreds ran up the trail to try to dig out survivors; others worked at digging out hundreds of pounds of buried provisions. The slides scared some travellers enough to turn them back; many sold their outfits and headed home. Mac McMichael lost all desire to hang around at Sheep Camp packing his own goods. Perhaps due to the scare and a sudden loss of business, he reported that freight rates dropped to under 5 cents from Dyea to the Summit. "I find that freighting is

³⁹Herman Miller Ferree letter, "Dyea and the Dyea Trail," Vertical File MS, UAF Archive.

⁴⁰Charles P. Mosier Diary, April 4, 1898, MSS 012, Acc. 82/168, Yukon Archive. Mosier reported that it was heavy snow that caused the slide.

⁴¹McMichael letter, Sheep Camp, April 5, 1898.

so much cheaper than I thought, I am going to have mine all done and get out of this place as soon as possible....letting those who are used to it do the hard work."⁴²

On the Chilkoot miners shifted the burden of their freight primarily to other humans. On the nearby White Pass trail they shifted it to animals. Due the lower elevation of the pass and the lower grade of the more rolling trail, horses, mules, and every other imaginable pack animal trekked all the way to the summit. Entrepreneurs in Skagway promoted and crudely improved the White Pass, or Skagway, trail to open up the transportation market to the interior, and to boom the town. It worked. Skagway became a wide open pack-train town, from which white businessmen competed with the native packers over at Dyea by running hundreds of horses, mules, and dogs up the trail with miners' gear. Stewart Campbell called the Skagway Trail "the liveliest gold trail in the world," populated by "Horses, mules, jacks, bulls, oxen, cows, goats, dogs, men, women, and children, with sleds, packs, and every conceivable mode of conveyance zigzagging along a narrow trail...."⁴³ The travellers paid from 5 cents to 35 cents a pound, and the packers made good money, up to \$20 a day.⁴⁴

On the White Pass Trail, humans and horses floundered in mud and water, and thousands of horses died from falls, starvation, and mistreatment. But the infamous toll

⁴²Mosier diary, April 3, 1898.

⁴³Diary of Stewart L. Campbell, Feb. 21, 1898, MSS 122, Acc. 81/129, Yukon Archive.

⁴⁴William Hiscock's party arrived in Skagway in April 1898 and paid 5 and a half cents a pound to a firm that packed their 2600 pounds on horses and mules to the top of the pass. F. Wm. Hiscock, Diary TS., April 16, 1898, "The Youkon Trail of Year 1898," Diaries File, File Collection, Dawson City Museum; Adney, *Klondike Stampede*, 46, 56.

on the animals reflected more than extreme natural conditions, human ineptitude, and cruelty. As on the Chilkoot, the White Pass transport economy transformed nature--the distance across the trail, and the lives of the horses themselves--into commodities to be bought and sold, and ultimately to be consumed. This was not strictly a market in animals themselves. As with the Tlingit packers at Dyea, it was a market in energy, in the animals' capacity to do work. On the White Pass trail, miners traded in the horses' and mules' capacity to pack supplies, a natural energy source that was quickly depleted and easily wasted.⁴⁵

The horses, and the horses' energy, remained valuable only when and where they were cost-effective, where the animals could do enough packing to pay the exorbitant cost of feeding them. Hay and grain were imported from Seattle and cost between \$300 and \$500 a ton, while alpine terrain afforded no fodder. In Victoria Tappan Adney saw decrepit "ambulating boneyards" rounded up for shipment to Skagway. "Till now they have been without value or price," he noted. Suddenly in demand for packing over White Pass, they sold for \$125 or \$200 at Skagway. In the winter of 1897 the tidal flats at the foot of the trail were "black with a thousand horses."⁴⁶ On both the Chilkoot and Skagway trails, miners bought horses for over \$100 at the bottom of the passes, and then abandoned them on the other side or sold them for a pittance. They had no value at the lakes, because they could no longer be fed or provide useful transportation. Those who tried to load them on boats and move them down the lakes and rivers found the effort

⁴⁵On energy and work, White, Organic Machine, 6-7.

⁴⁶Berton, Klondike, 143-45; Adney, Klondike Stampede, 18-19.

hardly worthwhile. Horses did the work of reaching the lakes, but once there, they were "not worth 20 cents," Adney wrote.⁴⁷

Because the horses' usefulness extended only as far as the far side of the passes, miners had little economic incentive to care for them in the long term, or even to feed them. At Skagway, Bill Hiscock observed "dead horses and mules and sick ones everywhere....[W]hen the poor brutes can not work anymore, they are just turned out to die or get better[,] starved in the meantime."⁴⁸ The trade in horses thus capitalized on whatever life--or energy--the animals had in them. On the Chilkoot, the miners needed the animals to last long enough to reach Sheep Camp; on White Pass, they needed them to last all the way to the lakes, but no further. In the fall of 1897, miners abandoned used horses and mules at Sheep Camp, to ascend the pass on foot.⁴⁹ Cold weather and lack of feed brought disaster, as the animals slowly starved, stumbling around camp and breaking into caches.⁵⁰ In mid-September, according to Tappan Adney, the men at Sheep Camp finally realized the situation and began killing the animals, leaving carcasses "lying on all sides."⁵¹ Miners also sold horses to packers, who took them back down to Dyea for another run. Adney sold his horse for \$25, but noted that it paid its new owner back in one day of packing. A man with a horse could make \$40 a day packing before the animal

⁴⁷Adney, Klondike Stampede, 46-47.

⁴⁸Hiscock diary, April 26, 1898.

⁴⁹Berton, Klondike, 242.

⁵⁰Adney, Klondike Stampede, 109.

⁵¹Adney, Klondike Stampede, 109.

gave out.⁵² Even packers who used the animals for more than one trip worked them to death, and then replaced them. There was money to be made over the course of their dying.⁵³

The toll in animal life at Sheep Camp was nothing compared to the Skagway Trail in 1897, where market logic combined with a narrow, muddy, disastrous trail to cause widespread slaughter. Some horses starved, others slipped and fell over precipitous cliffs; others broke legs and were shot. Slick rocks afforded horses no good footing, and they slid and scraped, their shoes gouging the rocks like chisels. Others went down in the mud. Creeks crossed the trail, creating bogs thirty feet wide where, Adney wrote, "there is simply no bottom." The horses sank up to their tails. Such bogs and fallen logs created roadblocks and bottlenecks, so that loaded horses (and people) had to stand for hours with bone-crushing loads, waiting for any sign of movement. At one drop off hundreds lost their footing and fell. "We are told that fifty horses a day fall here," wrote Adney. "No one thinks anything about it." The stench of rotting horse flesh grew unbearable.⁵⁴

Few miners knew how to pack a horse or mule, so boxes and bags slipped and rubbed and fell, leaving animals with backs rubbed raw. They used blankets to hide the open sores from Mounties at the summit, so the police would not just shoot the animals. "Men who have never before handled a horse are trying to put pack-saddles on them."

⁵²Berton, Klondike, 238-39.

⁵³Adney, Klondike Stampede, 109.

⁵⁴Adney, Klondike Stampede, 80, 62-63; Berton, Klondike, 142.

Adney lamented. He continued, "They come from desks and counters; they have never packed, and they are not even accustomed to hard labor." When frustration mounted, some of them exploded and shot their horses.⁵⁵ The first weeks of September 1897, as recorded in James Cooper's diary, provided a close glimpse at the progress of events. On September 3 he wrote, "We cannot stand much more of such hardship, many horses dead." A week later: "Three horses about ended. Rain and snow, bad night. Killed one horse."⁵⁶ It could take two weeks to go a few miles. Hundreds simply gave up and went home. The following spring Hiscock noticed "Dead horses and mules and sick ones everywhere....There were dead horses most of the distance, in one place there were 3, one could almost step from one on to the other."⁵⁷ When Jonas Houck crossed back over the trail from the lakes to get his mail in May 1898, he counted two thousand dead horses and mules, and did walk on their bodies to get down the trail. He could smell their rotting carcasses eight miles away.⁵⁸

Similar market principles--though without the carnage--governed the use of sled dogs, who replaced horses and mules as the chief source of animal transportation in the interior. Dogs made the journey inland over the passes as well, some of them, like Jack London's Buck, stolen from more comfortable homes in Seattle or San Francisco. Dogs

⁵⁵Berton, Klondike, 142; Adney, Klondike Stampede, 49, 45.

⁵⁶Diary of James S. Cooper and Associates, 1897, Diaries File, File Collection, Dawson City Museum.

⁵⁷Hiscock diary, April 26, 1898.

⁵⁸Jonas B. Houck diary, May 15, 1898, Jonas B. Houck Papers, UAF Archive.

fared much better than the horses on the White Pass trail, where William Hiscock saw "every breed except poodles and greyhounds....There were collies, retrievers, spaniels, Grt. Danes, Mastiffs, New Foundlands. many mongrels...and Malamutes and huskeys, the latter, a wolf strain in them."⁵⁹ Working with dogs was certainly a direct relation with nature, with ice and snow, and with the dogs themselves. Culture mixed with nature, however, in the ways in which humans used and valued the dogs. On the rivers and in the gold camps and towns, dogs had economic value seasonally. They could pull heavy sleds only in the winter, over ice and snow. Each dog in a team hauled 100 lbs. up to forty miles per day, when fed well and cared for.⁶⁰ John Callbreath, who ran mule pack trains at the head of the Stikine River, captured the comparative value of mules and dogs for winter transport when he noted in January 1885, "killed the Pete mule today and dressed him for dog feed."⁶¹

The dogs made it possible for humans to move in winter, on frozen rivers and snowy trails. When that movement became possible and necessary, the dogs' market value shot up. As with the horses, miners bought and sold their ability to pull sleds in winter, for that is what had value. Their price varied accordingly. In the off season, spring and summer, they sold for \$20 or \$30 apiece, but by Christmas, the prices rose to \$50 or \$75 if there were plenty of dogs, more if they proved scarce. In October, at

⁵⁹Hiscock diary, April 29, 1898.

⁶⁰John C. Cantwell, Report of the Operations of the U.S. Revenue Steamer "Nunivak" on the Yukon River Station, Alaska, 1899-1901 (Washington, D.C.: GPO, 1904), 158.

⁶¹John C. Callbreath Diary, Jan. 8, 1885, Callbreath, Grant, & Cook Papers, Charles Hubbell Collection, UW MS and Archives.

Rampart, a group of dogs unloaded by a steamer sold for \$150 each.⁶² For a prospector in Alaska for a year, purchasing five dogs could cost \$200, feeding them for the winter \$400—a budget that worked only if the dogs were sold at the end of the season so as not to require year-round feeding.⁶³ Tappan Adney described the feed packed by a team of dogsledders. For the dogs alone they carried 175 lbs. of rice, 235 lbs. of bacon, 150 lbs. of salmon, with an additional 100 lbs. of dried slamon, 100 lbs. of bacon, and 100 lbs. of rice cached ahead along the trail.⁶⁴ McMichael captured the truth when he wrote, "Still, there is a lot of capital invested in these same dogs. Some could not be bought for \$300. Many are worth \$200 in this country, while a scrub is worth \$50 or \$75....They will soon be invaluable to the men who have freighting out to the mines to do or want to start in haste on a stampede."⁶⁵ "To get food and supplies to some of the mines near Dawson...in the summer time costs \$1.00 or \$1.10 per pound," he explained further, but, "[i]n the winter a man with two or three dogs can get along very nicely."⁶⁶

The real question was whether to keep and feed them through the summer, as dogs worked only in the winter, but, like the miners themselves, ate year-round. March and April brought melting snow, rotten ice, and the observation from one Dawson official that

⁶²Lynn Smith letter, Sept. 19, 1898, Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, UAF Archive.

⁶³Cantwell, Nunivak, 157, 173.

⁶⁴Adney, Klondike Stampede, 221.

⁶⁵McMichael letter, August 26, 1898.

⁶⁶McMichael letters, July 22, July 9, 1898.

"the season of the dogs usefulness is about closing."⁶⁷ After the thaw miners abandoned scores of dogs to fend for themselves, and they became "worthless," Schwatka wrote in 1883, "except as scavengers for the refuse of decaying salmon," and a threat to humans' food supply.⁶⁸ Tom Boldrick remarked on the night's quiet, camped above White Horse rapids, the stillness broken only by "now & then the dismal howl of some poor dog left by some one on the shore to starve to death."⁶⁹ Mac McMichael hung around Circle City in the summer of 1898, and noted the howling and fighting, day and night. "When we cook," he wrote of cabin life, "there are always from one to three standing patiently with their heads in the door....They are great at foraging too. They can get into a boat down on the river, tear open a bacon sack and rustle a side of bacon with neatness and dispatch."⁷⁰ Nora Crane did not think much of these ubiquitous citizens of Circle City, either, as evident in a rather exaggerated claim with regard to her environmental preferences. "I can now understand the disgust of strangers for the dogs in Cairo & Constantinople, for really I would rather have the mosquitoes four times as thick as to have to sit in the center and have 22 dogs circling around one & Imagine my horror...."⁷¹

⁶⁷U. S. Consul letter, March 1898, , "Despatches from U.S. Consuls in Dawson City, Canada, 1898-1906," Microfilm no. 199, UAF Archive.

⁶⁸Schwatka, Along Alaska's Great River, 220.

⁶⁹Tom Boldrick diary, June 2, 1898, Vertical File MS, Klondike Miners, UAF Archive.

⁷⁰McMichael letter, August 26, 1898.

⁷¹Nora Crane letter, July 11, 1898, Kepner-Crane Collection, Microfiche, UAF Archive.

Many dogs died, whether of starvation, mistreatment, or poorly cleaned fish. Hunter Fitzhugh wrote that when the Yukon broke in spring, the moving ice floes carried away heaps of trash and junk dumped on the ice, including "dead dogs of all nations and tongues" who died from eating dried salmon whose bones punctured their stomachs.⁷²

Dogs, like horses, lived and died at the border between culture and nature. The dogs were seasonal capital whose value rose and fell with their usefulness, but they were living creatures as well, natural, and connected to natural systems. They needed food. Dogs proved much cheaper to maintain than horses and mules because their main source of protein--salmon--came from the Yukon, rather than from outside. Native peoples fed dried salmon to their dogs. Frederick Schwatka saw 40-50 dogs at a native village on the lower Yukon and reported that they ate a salmon a day through the winter.⁷³

Dogsledding had spread from coastal Eskimos and European fur traders to interior Athapaskans in the early 19th century. Dogs and sled increased the Indians' speed and efficiency in hunting and trapping, but the need for fish to feed the dogs increased the amount of time hunters and trappers spent in summer fishing camps. It intensified their salmon harvest.⁷⁴ That harvest increased even more when Yukon peoples began selling salmon to whites to feed the influx of dogs that came with the gold rush. Miners,

⁷²Huner Fitzhugh letter, May 18, 1899, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

⁷³Schwatka, Along Alaska's Great River, 313.

⁷⁴Edward H. Hosley, "Intercultural Relations and Cultural Change in the Alaska Plateau," Subarctic, 549; McClellan, "Intercultural Relations and Cultural Change in the Cordillera," Subarctic, 390.

merchants, and transport workers adopted salmon as dog feed, and created a small boom in salmon to feed the thousands of new dogs that soon populated the interior. According to Sam Dunham, dogs ate at least two pounds of salmon a day, and could pull 200 lbs. at least 20 or 30 miles in a day. If the mushers ran out of salmon, they fed the dogs a combination of bacon, lard, and rice which cost about \$1 a day.⁷⁵ According to Cantwell, the best feed was a mixture of dried salmon, lard, and corn meal, mixed into a thick soup.⁷⁶ When Clara Hickman Rust went up the Yukon to Fairbanks in 1908, the steamer stopped at native villages along the way to load dry salmon for Fairbanks and Dawson--winter feed for a large dog population.⁷⁷

In Culture, Nature: Steamboats

The struggle over Chilkoot Pass and the Teslin Trail looked for all the world like a pure experience of nature, but it contained a range of cultural meanings, many of them mediated through markets. On the other hand, the miners' civilized journeys on steamboats and railroads looked for all the world like culture. On the White Pass & Yukon Railroad, and on river steamers, miners travelled as ticket-buying consumers, free from bodily labor and from the messy engagement with and knowledge of nature that

⁷⁵Dunham, The Alaskan Gold Fields, 63.

⁷⁶Cantwell, Nunivak, 159.

⁷⁷Clara Hickman Rust, "To Fairbanks by Steamboat," Alaska Journal 1 (Winter 1971), 20-26.

went with such labor. Machines replaced bodies in the epic struggle to conquer nature, to cross the passes and traverse the rivers.⁷⁸ The machines were owned and controlled by corporations, the rates set by trusts. In 1898, the principal transportation companies operating on the West Coast organized the Alaska Traffic Association to control shipping and passenger rates from their ports to the Yukon river. They settled on a first class-fare from Seattle to Dawson of \$300, with \$250 for second class. This journey carried a modern air.

This course of events seemed quite natural within the 19th-century ideology of progress. Like the extension of railroads into the American West as agents of civilization, steamboats on the Yukon and rail lines over White Pass were depicted as a right and proper--natural--step in the onward march of Euro-American civilization. Steamboats and railroads connected the upper and lower Yukon to the world economy, made them highways of the industrial world. The combination of the energy from cord wood and coal, the water's buoyancy, and the river's current (on downriver runs) made it possible for miners to create on the Yukon an entire economy to support gold mining. In 1898, 68 steamers and 11 barges carried 13,000 tons of freight to Dawson City. Mac McMichael, awaiting supplies in Circle City, Alaska, watched three boats arrive most days, going upriver and down, in August and September.⁷⁹ Merchants shipped herds of

⁷⁸White, Organic Machine, 30-35.

⁷⁹McMichael letters, Aug.-Sept.1898. Angelo Heilprin's account lists the steamers that arrived at Dawson, from downriver, between the break-up and Sept. 20, 1898. He listed 39 arrivals. Angelo Heilprin, Angelo Heilprin, Alaska and the Klondike: A Journey to the New Eldorado with Hints to the Traveler (London: C. Arthur Pearson, 1899), 153-154. Margaret Archibald reports 32 steamers running between St. Michael and Dawson in

livestock, crates of fresh food, heavy equipment, thousands of feet of timber, all from distant and exotic places, moving freight that pack trains and miners in small boats could never manage.⁸⁰ This was a natural step for any river, as U.S. Army Capt. W.P.

Richardson noted of the Yukon in 1899: "It would seem to have been especially designed by nature as a great highway for this otherwise inaccessible country, bisecting it very nearly for many hundreds of miles."⁸¹

Richardson naturalized the arrival of civilization via steamboat. The steam engine was part of nature's plan for this place, a finishing touch that would bring the Yukon to its full potential. Steamboats and railroads were natural, but in a very neat and contained way. It missed the larger, messier, frustrating nature that humans actually contended with in the work of moving boats up and down the rivers and railroad cars over passes. They may have been agents of civilization, a "natural" force bringing silks and fine foods to Dawson, but they were also embedded in a real, physical nature that required real, physical work. The miners' simple transaction of buying a ticket and boarding a boat for a labor-free passage masked this labor, and masked nature. In order to move up and down rivers through the world, the boats needed pilots and workers who knew the river, knew nature; and the boats needed nature itself, in wood and coal.

1899, and 20 steamers running on the upper river between Dawson and the upper lakes. Margaret Archibald, Grubstake to Grocery Store: The Klondike Emporium, 1897-1907 (Ottawa: Parks Canada, Dept. of Indian and Northern Affairs. rev. ed., 1973), 67.

⁸⁰White, Organic Machine, 31; Trade Register (Seattle), Dec. 31, 1898, 29.

⁸¹Capt. W.P. Richardson, Eighth Infantry, U.S.A., "The Mighty Yukon as Seen and Explored," in U.S. Congress, Senate, Committee on Military Affairs, Compilation of Narratives of Explorations in Alaska, 1869-1900 (Washington: GPO, 1900), 745.

Building and running steamboats and railroads took labor, knowledge, and a lot of energy. The machines had replaced bodies, certainly, but only one set of bodies. In shifting the labor to steamboat crews or railroad construction workers, passengers removed themselves from intimate contact with the nature through which they moved; they freed only themselves from that bodily engagement. Just as intense labor with nature on the Chilkoot Pass masked the commodification of that journey, so the ease of buying tickets on the White Pass train or the Yukon steamers masked intense labor with nature. With trains and boats, another set of bodies remained hard at work. These other bodies did not row boats or haul packs over muddy trails. They laid railroad tracks, piloted steamboats, loaded and unloaded freight from boats and trains, and cut wood.

The work required for steamboating alone provides the clearest example, for on the lower Yukon, as above at the White Horse Rapids, navigating a boat required really navigating. The river was more a tricky sea, "a terror to Steamboat navigation," according to one passenger.⁸² It provided no clear path or channel, but rather a seemingly endless sea of sloughs, islands, and channels, and thus countless opportunities to end up in a dead-end eddy or aground on a shallow bar. The mouth of the river, its first few miles, and the Yukon Flats below Circle City provided particular challenges. Jim Anderson provided more detail on his trip upriver in May 1898: "there is quite a current[;] you can see nothing but islands[;] if the water is high it is easy to get lost with a

⁸²Thomas W. Moore Account, Summer 1898, MSS 007, Acc. 82/121, Yukon Archive.

Steamboat and should the water fall quickly be left high and dry in some slough...."⁸³

"Many boats do not have competent river navigators in charge," Mac McMichael wrote on a very slow trip: "The great trouble is getting over the Yukon Flats which begin below Circle City and extend for fifty miles. Here the river is very wide, eight or ten miles in places, with lots of bars and separate channels....Of course, this makes the channel very shallow and difficult to follow. Many boats are hung up on the bars. One about twenty miles below here has been on a bar a fortnight."⁸⁴

From the earliest days of Yukon steamboating, captains relied on native pilots. Because they travelled and fished the Yukon, native peoples knew the river well, its deep channels and treacherous rocks and the tides at the mouth of the Yukon. Indians remained on the periphery of gold mining itself, but they were central to the work of moving gold miners to and from the creeks. Merchants, steamer captains, and miners recognized and valued native peoples' knowledge, and the knowledge itself became a commodity in a trade economy, bought and sold as part of the price of movement. A man on the Yukon river steamer Pingree wrote a letter in July 1898 explaining that the boat was not yet at the mouth of the river and already aground in three feet of water: "[T]hen an Indian pilot came aboard and brought us safely into the mouth of the river." As soon as the pilot left, they were again hard and fast aground.⁸⁵ On Jim Anderson's boat in

⁸³James Lynn Anderson Diaries, May 1898, vol. 2, James Lynn Anderson Diaries, 1895-1899, Vertical File MS, UAF Archive.

⁸⁴McMichael letters, 22 Sept. 1898; 11 August 1898.

⁸⁵Letter, July 18, 1898, Boston-Alaska Transportation Co., Vertical File MS, UAF Archive.

August 1897, the captain "thought he knew more than the Indian[;] he proved he knew where the damn bars were by ramming the boat or barge on every one."⁸⁶ Nora Crane took great pride in her NAT&T steamer's pilot, his sartorial taste aside. "We have the best pilot on the river," she explained in a letter to her mother in Chicago, "a good looking Indian with a pumpkin colored tie that gives me a bilious start every glimpse I get of it. No wonder they give them good money for piloting, sometimes the river will be 5 miles wide and the deepest spot about ten feet and crooked, winds in around the base of great mountains until one thinks it is a lake we are riding on."⁸⁷ Walter Curtin reported that Indian pilots charged \$100 to take a steamer through the Yukon Flats to Circle City. Their expertise seemed straightforward to Curtin. "The Indians travel over the ice when the water is low and study the channel. Who says the savages haven't any sense?"⁸⁸ Those white pilots who did work the river had lived on and known the river long enough to have strong ties to native communities, and perhaps to have gained knowledge from native canoeists and pilots. McMichael was travelling upriver above Circle City when the Victoria got hung up on a bar for five hours. "A cold, snowy day and bad," he wrote. "Took on a white pilot with an Indian wife and child."⁸⁹

Over time native pilots faced competition from white deckhands and crew who

⁸⁶Anderson diary, vol. 1, Sept. 29, 1897.

⁸⁷Nora Crane letter, July 9, 1897.

⁸⁸Walter R. Curtin, Unofficial Log of the Steamer Yukoner (Caldwell, ID: Caxton Printers, 1938), 226.

⁸⁹McMichael letter, Sept. 22, 1898.

watched and learned the river. A white pilot "cursed furiously" at the steamer Yukoner when Curtin's party hired an Indian. Young Harrison Kepner (Nora Crane's brother) took a job as crew on an NATT steamer in 1896, but, he wrote, "I am going to learn to steer the boat and learn the river then try and get a position as Pilot on the river[.] there isn't any white Pilots on the river yet they are all indians and I tell you what there is big money in Piloting."⁹⁰ Over time, a corps of experienced white pilots accumulated the knowledge necessary to navigate the river on their own. Between 1899 and 1901, the crew of the Revenue Cutter Nunivak took soundings and charted the "narrow and intricate channels" of the Aphoon entrance to the Yukon.⁹¹ But native pilots continued to work the river through those years.

Sternwheeler crews had much to learn about boating on the Yukon. At the borders of winter, when ice appeared and when it broke, steamboat men needed to read the river and the ice carefully in order to protect their boats. Nunivak Captain Cantwell chose a small tributary, the Dall River, as winter quarters for his boat and crew. Such streams froze earlier and thawed earlier. The crew found a level place for the boat to settle on the bottom, removed the rudders and lowered part of the stern wheel to protect them from the ice. They figured out how to use a steam pipe from the boiler to keep a constant supply of fresh running water at hand in case of fire.⁹² The first spring the

⁹⁰Harrison Kepner letter, 23 December 1896, Kepner-Crane Collection; Curtin, Unofficial Log, 226.

⁹¹Cantwell, Nunivak, 37.

⁹²Cantwell, Nunivak, 137-38.

Nunivak was in winter quarters, the crew learned just in time the perils of the break-up. Because smaller rivers like the Dall thawed first, the boats were floating and ready to go well before the Yukon broke. But when the ice on the main river did move, it jammed, throwing ice onto bars and banks "in the wildest confusion." It then backed up suddenly and violently into the Dall, rushing up on the boat. Luckily, a local native elder named Isaac, used sign language (because of deafness rather than lack of English), to explain the dangers. This allowed the crew to scuttle out of the way of the rampaging ice. As Cantwell described it, Isaac "with every evidence of great excitement finally gave me to understand that an ice jam in the Yukon was imminent, and if it did occur we would have to move upstream in the Dall."⁹³ The boat survived its buffeting by ice with minor damage. Nora Crane observed the same procedure the during her first break-up at Circle City in May 1898, as the river rose. "The boat Mare went up into what they call the slough last night so as to be safe from the ice when it goes out. I guess this new Captain Mariner that P.B. sent in is a cracker jack when it comes to knowing his business."⁹⁴

Knowing this steamboat business, then, for both native and white steamboat workers, meant knowing the rivers very well. Though John Callbreath ran boats on the Stikine rather than the Yukon, his knowledge of the smaller river demonstrated just how well a human could come to know a river when his economic life depended on it.⁹⁵ From

⁹³Cantwell, Nunivak, 56-57.

⁹⁴Nora Crane letter, Circle City, Alaska, May 1898.

⁹⁵Steamers began plying the Stikine in 1862, carrying supplies for fur traders and miners, but became firmly entrenched in 1874 with the Cassiar Gold Rush to Dease Lake in British Columbia, for which the river provided direct access and transport. At the

the 1870s through the Klondike rush, John Callbreath ran a steamboat up the Stikine from its mouth at Wrangell to the head of navigation at Telegraph Creek. From there he ran pack trains to a chain of trading posts and gold fields in the interior.⁹⁶ In over twenty years on the Stikine, Callbreath made countless trips from Wrangell to Telegraph Creek and back in both steamers and Indian canoes.⁹⁷ His detailed diaries provided an account of how steamboating on the river constituted a both a profound engagement with and knowledge of the river itself, and a profound amount of labor. He knew its seasons and stages of high and low water, its currents, rocks, riffles, and turns. With his crews, both Indian and white, he developed his own geography of camps, wood piles, bends, and rapids, names of places that marked movement up and down the river. Part of this knowledge lay in the names of difficult places, rapids and bars that required careful navigation, close observation, and intense work. His names marked the most challenging points in the journey, especially the upriver journey and they marked the woodpiles and wood camps that provided fuel for overcoming those obstacles: Grand Rapids, Devil's Elbow, Boulder Bend; the shoals below Clearwater; Barley Cache. His knowledge

height of the Klondike rush on the Stikine, fourteen steamers plied the 150-mile stretch of the river above Wrangell. Callbreath letter, 18 July 1898.

⁹⁶R. N. DeArmond, "Riverboating on the Stikine," Alaska Journal 9 (Autumn, 1979), 68-81.

⁹⁷William P. Blake, Geographical Notes Upon Russian America and the Stickeen River, being A Report Addressed to the Hon. W.H. Seward, Secretary of State, with a Map of the Skickeen River (Washington, D.C.: GPO, 1868), 5-6. An 1860s Canadian report on the river described it as navigable "with some difficulty" by small steamboats and noted that its most remarkable feature was the velocity and strength of the current, which ran 4-5 miles per hour and made it impossible to row against it.

extended beyond these named places, as well. He even knew individual rocks, writing in July 1880, "The river was at a good stage[;] rock at head of canyon [a] foot above water."⁹⁸ No matter how well he knew each rock and riffle, he also learned that they were subject to change. He took his steamer up river in July 1892 and reported trouble finding the right channels as he "couldn't take the same ones as last time."⁹⁹

Knowing the river was one form of work. Moving a grounded boat was another. On May 30, 1894, Callbreath's steamer ran aground. He and his crew unloaded it, got it floated, but then struck "below canyon on the big bar," high and dry with the river falling. "[C]an walk dry shod around the boat this morning," he remarked the next day. After 10 days of using sills, cordwood, and soapy skids to move the boat, they were "overjoyed" to get it into water on June 11.¹⁰⁰ Steamers ran aground so often that, as Callbreath demonstrated, crews developed specific methods and tools for moving them. Nothing was more awkward and difficult than moving a loaded steamboat without benefit of water. Cantwell described this gear on Yukon boats, a set of heavy spars and tackles which, with "skillful handling," made it possible to run a line to a short spar on the shoal in question and work that line to "crutch" the boat into deep water. This method, Cantwell explained, took "a lot of skill on the part of the man on shore." If undertaken by a novice, it was "liable to end in failure."¹⁰¹

⁹⁸Callbreath diary, 1880.

⁹⁹Callbreath diary, July 2, 1892.

¹⁰⁰Callbreath diary, May 30-June 11, 1894.

¹⁰¹Cantwell, Nunivak, 131-32.

As with miners in their scows on the upper Yukon, rapids and canyons proved the places of greatest danger, and greatest labor, moving both upriver and down. On upriver runs over the Stikine's rapids, Callbreath and his team often had to run lines from trees on shore to a steam capstan on the boat, and then haul the boat against the current, through shoals, or away from rocks—a practice known as "lining" the boat. "[T]rouble in slough all owing to our being overloaded...had to line about 6 miles above Bucks...at bend in river to keep off rocks."¹⁰² In May 1892, early in the season, Callbreath reported that the "[S]afety valve blew off as we were over Dutch Charlies riffle...had trouble getting pumped up at high bank wood pile...had to line at Boulder Bend when we should have steamed over...had to line Bucks Bar and South Fork...."¹⁰³

On the upper Yukon in 1898, Stewart Campbell described the equally difficult labor and timing involved in running a steamer down a rapid. He and his party built one of the first steamers on the upper river. After running aground the first day out, they sought some expert help. "Indians brought Tagish Jim, their chief, who we hired to go with us." Their perilous run through White Horse rapids, on June 8, 1898, proved just how much work, and how many workers, it took to navigate a steam-powered vessel through a trouble spot. "Started with steamer at 1 p.m," Campbell recorded, "with Schied firing, Pierson running engine, Longwell keeping water in tank, Doyle hanging on to mast, pilot's helper at bow oar and pilot and myself at rear sweep on upper deck." They

¹⁰²Callbreath diary, May 1892. Frederick Schwatka described lining in Along Alaska's Great River, 353-54.

¹⁰³Callbreath diary, May 27-29, 1892.

blew the whistle at the top, to cheers from a crowd of spectators above on the cliffs.¹⁰⁴ At the Thirty Mile River, they wrecked it on a rock.

The purchase of a steamboat ticket masked this work, along with the dangers of such rapids, the presence of Indian pilots, and the knowledge needed to deal with grounded boats and tricky shoals. What that basic act of consumption masked most readily, however, was that it involved consuming nature itself, in the form of fuel.¹⁰⁵ All movement required a source of energy, and that energy came from the natural world, whether as wind, or gravity, or the food that powered miners' muscles. In the steamers' boilers, that energy came from wood and coal. While these machines appeared to transcend or conquer nature, they moved within nature and consumed the forest along the way. In boarding steamboats or the White Pass railroad, miners switched from providing that energy with their own muscles to buying it in the form of wood, and buying the labor to cut and load that wood. The steam engines consumed far more energy than human bodies, in wood and coal, but they produced far more transportation.

Steamboats consumed as much as a cord an hour moving downstream, and two or three cords going upstream in swift current.¹⁰⁶ This meant a minimum of 10 cords a day in high summer for a small boat, but, according to Cantwell, 30 cords a day for average-sized boats, and up to 50 a day for the luxurious vessels and larger boats that towed

¹⁰⁴Campbell diary, May 31, June 4-5, 8, 1898.

¹⁰⁵White, Organic Machine, 37.

¹⁰⁶Hunt, Whiskey Peddler, 147.

barges at the height of the rush.¹⁰⁷ The nearly 2000-mile trip from St. Michael to Dawson ran anywhere from 12 to 25 days, which indicated anywhere from 150 to over one thousand cords for a one-way, upriver trip to Dawson. Such a quantity could cost \$15,000.¹⁰⁸ On the upper river, a round trip from Lake Bennett to Dawson and back required at least 125 cords, if not twice that. In 1901 the steamer Dawson made sixteen round trip voyages, for a total of about 2000 cords for the season.¹⁰⁹ And at the height of the sternwheeler era on the Yukon, as many as 250 boats and barges of all sizes ran on the upper and lower river.

This massive wood consumption indicated both the sheer energy needed to move boats along the Yukon, and the energy of the river itself. Miners in their small craft learned the current by pulling on oars and dragging boats with lines to shore. Steamboat men learned the Yukon's strength through the differential amounts of wood they burned. Moving against the current demanded far more energy, and thus far more wood. For the Dawson, running between Whitehorse and Dawson City, the ratio of cords taken on board running upstream to Whitehorse, to the cords taken on board running downstream, was about 2.7 to 1. The captain purchased over two and a half times as much wood to move

¹⁰⁷Melody Webb, The Last Frontier: A History of the Yukon Basin of Canada and Alaska (Albuquerque: University of New Mexico Press, 1985), 26; Cantwell, Nunivak, 133.

¹⁰⁸Cantwell, Nunivak, 134.

¹⁰⁹"Wood Reports, Steamer Dawson, 1901," British Yukon Navigation Company, Govt. no. 1684, File 65, Yukon Archive Government Records.

against the current, a measurement in cut trees of the nature of the river itself.¹¹⁰

As a result of steamboats, the forest disappeared. J. C. Cantwell wrote along the Yukon in 1900 and 1901 that "Great inroads have been made in the spruce forests along the immediate banks of the Yukon to supply fuel for the steamboats plying on the river, and in certain localities the shores have been almost entirely denuded of timber." Large timber had long since disappeared from areas in which people had settled and built cabins. Much small wood remained throughout the region, but the forests "along the margin of the steamboat channels" were greatly depleted, he wrote. He predicted an imminent need to build tramways further back from shore in order to bring cord wood to the riverbanks.¹¹¹ "[I]t will not be long before all the timber within easy reach of the steamers will be gone...."¹¹² Other observers came to similar conclusions. U.S. Consul McCook reported between fifty and sixty thousand cords cut on the American side of the border in the summer of 1899.¹¹³

As in gold mining itself, the steamer cord wood came from the riparian fringe. When the Canadian government at Dawson stepped in to regulate timber cutting, the office of the Crown Timber Agent granted parcels in the form of five-square-mile "timber

¹¹⁰On rivers and energy, White, *Organic Machine*, ch. 1-2, esp. 10-15 and 30-38. I calculated this ratio from the numbers provided. "Wood Reports, Steamer Dawson, 1901;" "Wood Reports, Steamer Dawson, 1902," Govt. no. 1683, File 47 1(2), Trips 1-18.

¹¹¹Cantwell, *Nunivak*, 118.

¹¹²Cantwell, *Nunivak*, 91.

¹¹³U.S. Consul letter, July 28, 1899.

berths" for cord wood, and for larger timber, in exchange for a nominal fee and a tax of fifty cents per cord. Because none of the land had been surveyed the Timber Agent recorded the location of timber berths the only possible way, by simply describing them, and the only way to find or designate land was in relation to rivers. The berths in question all consisted of huge swaths of riparian land, which indicated again how intensively woodcutting focused on the rivers, and how important it was to cut wood close to water in order to sell it to boats, and to transport it to Dawson and other town markets. One berth included all of the timber in an area, starting on the "East bank of Yukon 2 1/2 miles above Indian [River] running up 1 mile with a depth of one mile on the East bank." Others read, "Two 1/2 square miles west side of Yukon River five miles upstream from a point 1/2 mile above Sixty Mile River," and "Commencing 1/2 mile from mouth of Sixty Mile taking in islands and both sides of the Yukon a distance five miles downstream." These plots of land were big and all-encompassing: "Five square miles up Selwyn River, five miles from its mouth, both sides."¹¹⁴ Overall, wrote one historian, wood during the gold rush "was carelessly cut and functionally abused by inexperienced hands. It was consumed in unprecedented quantities in congested areas by a proportionately unprecedented increase of population."¹¹⁵

Wood was also part of a socially organized labor system and a broader set of economic exchanges, first between native peoples and steamers, and then in an emerging

¹¹⁴"Timber Berths, 1898," 19 August 1898, Govt. no. 1684, File 68, 1(2), Yukon Archive Government Records.

¹¹⁵Margaret Carter, "A History of the Use of Wood in the Yukon to 1903," (Ottawa: National Historic Sites Service, 1973), Dawson City Museum, 157.

cordwood market that controlled the costs of moving along the river. Starting in the 1870s and continuing through the 1890s gold boom, native peoples along the Yukon cut and sold drift wood and cord wood to steamers. Here again, people on the margins of mining itself were at the center of a crucial economic sector--transportation--that supported gold mining. Indians worked for wages in wood camps set up by steamer companies like the Alaska Commercial Company, but also traded wood for food and clothing when steamers stopped at their summer fishing villages. As early as 1883 Schwatka noticed that his steamer on the lower Yukon loaded "a considerable quantity of the wood it requires already cut at convenient points, the natives of course being paid for their labor."¹¹⁶ "We make quite a number of stops about every six hours or oftener we must stop and take on wood," wrote Nora Crane in 1897. "It is all drift wood that the Indians cut for them and pile up in cords. They pay \$4 a cord to the Indians and they take goods from the storehouse in payment they charge them \$6 for a pack of flour. The wood piles are generally at some little Indian village and it is a sight to see them come on board ship to trade wild ducks, Salmon, a sort of salmon berry, baskets and dried fish for food and clothes...."¹¹⁷ William John Park steamed down the Yukon the same summer, passing camps of native peoples. "We got a pretty good look at them as we have to stop to get fire wood pretty often and the Boat Co. generally trades with the Indians." Thomas Moore noted native peoples trading wood at the stores for supplies; "so they live," he

¹¹⁶Schwatka, Along Alaska's Great River, 334-35.

¹¹⁷Nora Crane letter, July 9, 1897.

wrote, "as well as the average white man in that country."¹¹⁸

With increased river traffic and demand for wood, native cutters raised their prices. Wood that had sold for \$4 or \$6 jumped to \$8 per cord. When the demand outstripped the supply, natives on the lower river raised prices to \$15, or even as high as \$45 a cord.¹¹⁹ Indians clearly integrated wood cutting with numerous other trade and subsistence activities. Cantwell stopped at Nulato on the lower river in mid-June of 1900, and noticed a large gathering of Indians preparing fish traps for the salmon run. They were cutting driftwood but were also "otherwise busily employed."¹²⁰ Native men also worked on steamers as deckhands, porters, and stevedores, serving meals and laboring on board as well as loading wood at the camps.¹²¹ In many ways the river in both its "natural" and "cultural" forms provided their living.

High prices for wood drew white wood cutters to the banks of the Yukon. Disillusioned miners, desperate for cash, turned to cord wood as a last resort. A disheartened Will Childs wrote home from Dawson City in June 1900 that "I have made a failure of the gold mining business." He was headed for Nome, he added, to cut wood for steamers, as it sold for \$10 a cord, though, he added "wood is hard to get off the

¹¹⁸William John Park Diary, Aug. 16, 1897, MSS 166, Acc. 84/55, Yukon Archive; Moore account.

¹¹⁹Webb, Last Frontier, 745; Northern Design Consultants, "A History of Logging in the Yukon, 1896-1970," Vol. 1 (Whitehorse, Y.T.: Northern Design Consultants, 1993), 11-12, copy in Dawson City Museum; Cantwell, Nunivak, 132.

¹²⁰Cantwell, Nunivak, 62.

¹²¹ Charlene Porsild, "Culture, Class, and Community: New Perspectives on the Klondike Gold Rush, 1896-1905," (Ph.D. diss., Carleton University, Ottawa, 1994), 114.

mountains."¹²² After a small taste of winter mining, Thomas Moore gave up sinking shafts up the Koyukuk River and headed downriver to chop wood until spring. He and his partners built a flume to shoot the logs down hillsides to the river bank, cutting mostly birch trees of 4-8 inches around.¹²³ This kind of work gave miners ready access to cash. When the supply ran low, a few cords of wood brought enough to buy a ticket home or an outfit for another season of mining.

White wood cutters and deck-hands displaced some natives, moving them even further, according to one historian, down to "the bottom rung of a service industry."¹²⁴ J. C. Cantwell sensed cultural differences in the ways and means of work amongst woodcutters, and concluded in 1901 that independent white cutters pushed most natives from the trade. "The more energetic white man has almost entirely driven the indolent and easy-going native from the field," he wrote. Cantwell misread both the natives' cycles of subsistence work and the whites' desperation. For most white men, wood cutting was the job of last resort, and those who ended up in camps along the rivers in the winter had a tough time. They suffered with the isolation and lack of food. In March 1899 Lynn Smith heard reports of scurvy in and around Rampart City, "especially along [the] river among woodchoppers who have poor outfits and don't cook properly."¹²⁵

While white miners and native peoples competed for the lower rungs of the wood

¹²²Will Childs Diary, MSS 166, Acc. 84/65, Yukon Archive.

¹²³Moore Account.

¹²⁴Carter, "A History of the Use of Wood in the Yukon to 1903."

¹²⁵Smith letter, March 2, 1899.

economy, the upper rungs of the industry were occupied by established wood camps, which often had direct ties to such major transport companies as the ACC, NAT&T, or Empire Transportation Company. The companies paid a fixed price per cord, and sent agents up and down river forming these contracts and insuring a constant supply of wood in order to make movement as fast and efficient as possible.¹²⁶ Wood agents tried to tie up all the available wood to prevent others from getting it, in order to bring the competition to a literal standstill. When the large companies bought all of the cut wood along the river for the season, they forced other boats to cut their own wood. Mac McMichael took a steamer from Circle City up to Fourth of July Creek and found progress agonizingly slow, as the boat stopped at night while the crew went ashore to cut wood. On September 24 he recorded the boat starting off at 5 a.m. They stopped at ten for wood. "Did not get through wooding up until 2...Only making ten or fifteen miles per day."¹²⁷ Lynn Smith was bored and impatient for news of the world in Rampart during August 1898, as the steamers worked their way upstream from below. "But the Boston and Alaska Co. and all other companys have to stop and chop wood for themselves which is the cause of the delay."¹²⁸

Both the predominance of Euro-American wood yards and the ad hoc scrambling of cash hungry miners disguised the ongoing presence of native Yukoners in the wood

¹²⁶Carter, "A History of the Use of Wood," 118; Webb, Last Frontier, 26; Cantwell, Nunivak, 133.

¹²⁷McMichael letter/diary, Sept. 24, 1898.

¹²⁸Smith letter, Aug. 21, 1898.

economy. Capt. Cantwell took note of an operation at Greyling, Alaska, on the lower river, 427 miles from St. Michael, where the river entered more forested land. Here a Mr. O'Shea maintained "one of the largest independent wood yards on the river," employing about half a dozen white wood choppers, but also about 75 local Indians who worked "from time to time" cutting wood "when hunting and fishing does not occupy them." The yard sold between 1200 and 1800 cords each year.¹²⁹

According to Pierre Berton the big companies' control of the wood supply pushed some boat operators to look for coal along the river banks as an alternative fuel. In 1897, sixty men stranded at St. Michael without a boat purchased a small steamer to get up river, but found all the cordwood along the river tied up by the transport company. By "incredible happenstance" they discovered a seam of coal and proceeded on their way. Due to overloading, two boiler explosions, and a fire, they did not make it far.¹³⁰ The expense of wood and its growing scarcity stimulated a search for coal, despite ongoing concerns about its quality.¹³¹ In 1898 the Alaska Commercial Company began mining coal on Nation Creek, and by 1900 there were three established coal mines along the Yukon, including one about twenty miles above Nulato, and the Pioneer Coal Mine, 25 miles above Rampart City, which had produced 600 tons.¹³² Capt. Cantwell found it of fair quality, comparable with most western coal, but with a tendency to "slack" after

¹²⁹Cantwell, Nunivak, 144.

¹³⁰Berton, Klondike, 193-94.

¹³¹Richardson, "Yukon River Exploring Expedition," 746.

¹³²Trade Register (Seattle), Nov. 26, 1898, 10; Cantwell, Nunivak, 41, 149.

exposure to air.¹³³ Cantwell felt that such coal could not yet replace wood, but he hoped it might in the near future, doing away with some of the more nagging questions of steamer transport, including frequent stops, long delays, and the space required to stow wood on board.¹³⁴

Labor and Nature

In June 1899, Stewart Campbell mushed with a dog from Miller Creek upriver to Dawson City. "Terrible trail," he wrote in his diary. "Follow long a strip of ice about two feet wide on edge of Creek to avoid brush. Dog falls into river with his pack and I have to lift him pack and all over the rocks onto the ice. Some times had to wade river from one side to other or around rocky points. Ice cold water....Very steep side, with trees growing straight out making difficult trail."¹³⁵ In July 1898, James McRae poled a small boat up the Stewart River. "[A]bout 1 P.M. a heavy thunder storm came on, but before we could get the tent pitched, the Heavens opened and sent forth hail and rain....Oh it was nice[.] [W]ho would not go to the Klondyke to look for gold[?]"¹³⁶ Such stories depict a miserable struggle between human beings and a harsh natural environment. The pictures accurately reflect the muscle-straining work of packing, rowing, hauling, and dog-sledding that many miners performed, but it cannot stand for the whole story of

¹³³Cantwell, Nunivak, 120.

¹³⁴Cantwell, Nunivak, 134.

¹³⁵Campbell diary, June 5, 1899.

¹³⁶McRae diary, July 12, 1898.

transportation in the Klondike/Alaska gold rush. Miners pulling up rivers and crossing the Chilkoot evoked this pure bodily engagement with nature, only then to tell of its transcendence, of the coming of technology that made such labor obsolete. But that labor with nature did not disappear. It simply changed hands. Miners made mules and dogs and sawmills of themselves, and threw their bodies into labor along the trails and rivers and in the sawpits. They also bought mules and dogs, and consumed the animals' energies and lives; they hired native packers; and they bought wood from sawmills and wood camps, run by other workers, who labored in the miners' place. When miners needed transportation they hired the expertise and labor of steamboat pilots and woodcutters, and consumed the forest to fire the boilers that moved the boats. All of these other workers, even the men who laid the track for the White Pass & Yukon railroad, remained intensely engaged with the natural environment as miners became consumers of others' labor, consumers of the work of transportation.

One alternative to the Chilkoot Pass image of grueling struggle is the far more whimsical picture of the men who rode bicycles down the frozen Yukon from Dawson to Nome in 1900.¹³⁷ The Klondike rush began in the midst of the bicycle craze in the United States. In the 1890s, the prevailing cultural desire for speed and physical challenge turned millions of young Americans to bicycling as a new outdoor recreation, made possible by the mass production of inexpensive metal frames and rubber tires.¹³⁸ On

¹³⁷Terrence Cole, "A History of the Nome Gold Rush: The Poor Man's Paradise" (Ph.D. diss., University of Washington, 1983), 105; Berton, *Klondike*, 117-118.

¹³⁸Stephen Kern notes that in 1897 a bicycle cost about \$80; by 1902 it was down to as low as \$3, as high as \$15.

bicycles, young people were liberated from the constraints of slowness. They could speed along four times faster than by foot, and experience, writes Stephen Kern, a new feeling of mastery over their environment, a new pleasure in movement, and a new sense that they could use this speed to conquer time and space.¹³⁹ As bicyclists, people exerted themselves in pursuit of fun and health, rather than solely for a clear economic goal. The physical effort of moving their bodies through space marked a crucial modern turn from work to play. In doing so, they expressed the cultural changes going on around them. As modern Americans became more and more consumers of transportation, their bodies, now more in stasis than ever, sought movement, but as play, rather than as work. And their movement through the landscape became part of a relation of consumption. From bicycle seats they saw and enjoyed their natural environment as they did from train windows, as consumers of the landscape, rather than as workers within it.

When bicycles appeared in Alaska, they confounded the boundaries between work and play, for gold miners turned them into transport tools for the purpose of productive work--getting to the gold fields. At the same time, bicycling, like railroad and steamboat travel, looked like play, or like tourism, rather than work. The presence of bicycles on the Yukon signaled the larger story of the shift in transportation from production to consumption, from a harrowing journey to a picnic, and from work to play. But the bicycles also captured the presence of other labor, in other natures. For bicycles came from factories and workers thousands of miles away, and perhaps above all else,

¹³⁹Stephen Kern, The Culture of Time and Space, 1880-1918 (Cambridge, MA: Harvard University Press, 1986), 111.

they announced a new set of connections between the Yukon and the outside world.

Chapter 6: **The Things They Carried: Food and Disease**

In one of Jack London's lesser-known tales, "The One Thousand Dozen," a hustler named David Rasmunsen tried to strike it rich by carrying 12,000 eggs from San Francisco--where eggs cost 15 cents a dozen--to "the Golden Metropolis," Dawson City, where they sold for an unimaginable \$5 a dozen.¹ Rasmunsen explained to his skeptical wife that even given the costs of transportation (\$50 shipping to Dyea; \$180 for Indian packers from Dyea to Lindeman; \$300 for a boat downriver to Dawson) he could easily turn a \$4000 profit. As this was a Jack London story, it unfolded as slow, bleak disaster. At the Chilkoot, the native packers charged 50 cents, not 12 cents per pound; Rasmunsen suffered frostbite at the summit; the Yukon closed with ice. Obsessed by the possibility of wealth, he starved himself and his sled dogs en route to Dawson, where hungry miners paid \$1.50 each for the eggs, a miraculous \$18 a dozen. But the eggs had spoiled, every single one. Rasmunsen turned the dogs loose, and hanged himself.²

¹Jack London, "The One Thousand Dozen," (1904) in Arthur Calder-Marshall, ed., The Bodley Head Jack London, Vol. IV: The Klondike Dream (London, 1963-66), 232-249.

²Lynn Smith recorded a real-life version of this story in two letters, Nov. 10, 1898, and Dec. 2, 1898, from Rampart City. "Last night a man who brought 1500 doz. eggs in packed in lard and opened a restaurant was found unconscious and first report was apoplexy, but it was an attempt at suicide. His eggs were too ancient for use and he could not sell them so he grew despondent." The second letter read that the "egg man succeeded in suicide." He "severed an artery and then hung himself to the cross log of his cabin." Robert Lynn Smith Correspondence and Diaries, Box 1, Herbert Heller Papers, UAF Archive. Another source, the short-lived newspaper Dyea Trail, mentioned two men with 500 dozen eggs, all of which ended up at the bottom of the Thirty Mile River. Dyea Trail, Jan. 12, 1898, "Dyea and the Dyea Trail," Vertical File MS, UAF Archive. Whether London based his story Smith's particular man or not, or on similar events elsewhere, is unclear. But he did base it on actual events. See Franklin Walker, Jack London & The Klondike: The Genesis of an American Writer (San Marino, CA: The Huntington Library, 1966), 234-235.

An actual gold rush entrepreneur's diary told a similar story. R.M. Courtney left Seattle in the fall of 1898 with a load of hogs, intending to meet his father in Dawson and sell the pork for a handsome profit of \$9000. He brought the animals as far as the Thirty Mile River before the scow disintegrated in heavy rapids, scattering dead hogs--and a few live ones--down the Yukon. "It seems almost beyond belief," Courtney wrote just a brief time later. "[W]ithin the last sixty minutes, we have lost \$10,000....Not five hours ago, we received a letter from Father saying that if we had our hogs in Dawson now, we could get a least 75 cents to a dollar a pound....Now it is all lost....Had we gotten through all right, we would have made enough to have given us a good start in life. Now we must begin all over again."³

Such stories certainly reiterated the basic truths of Yukon transportation. Journeys into nature could ruin plans and test souls. Nature played yet another role in such journeys. When miners and their provisioners crossed the passes and steamed up the Yukon, they carried nature in the eggs and pork, the flour, sugar, raisins, maple syrup, and the myriad other "outside" foods from home that fueled miners' bodies as they dug for gold.

The bodies that climbed the Chilkoot, chopped wood, and disassembled the creeks needed fuel in great quantities, and at a natural, chemical level, it did not matter where that fuel came from. Eggs, corned beef, and canned asparagus supplied calories, as did local foods like caribou meat and fresh blueberries. Eggs were certainly natural, but all

³Diary of R.M. Courtney, Sept. 23-27, 1898, Diaries File, File Collection, Dawson City Museum.

food--whether "outside" food or local "inside" food-- walked the tenuous line between nature and culture. Miners craved fresh eggs and porterhouse steak for reasons more cultural than biological.

Human food is always both nature and culture, containing cultural choices and meanings as well as calories and nutrients.⁴ "For supper last night I had something which reminded me of Sunday tea at home--sardines," wrote a homesick Mac McMichael, "the first I have tasted since leaving home. They were a French brand and delicious."⁵ Miners carried sardines, corned beef, dried apricots, and condensed milk--all natural in their own way--because such foods were part of late 19th-century American diets. They carried such foods because the industrial economy had achieved a revolutionary level of efficiency in mass-producing inexpensive processed foods. That technological and dietary revolution, itself a mixture of nature and culture, made it possible for miners and suppliers to create a rough approximation of the diets of "home." The amazing thing about Dawson City in July 1898, after all, was that it was pretty easy

⁴William Cronon, "Kennecott Journey: The Paths out of Town," in Under an Open Sky: Rethinking America's Western Past, ed. William Cronon, George Miles, and Jay Gitlin (New York: W.W. Norton, 1992), 34: "Energy and nutrition are what food is all about. But because people inhabit cultures as well as ecosystems, the choice of what to eat has as much to do with filling the soul as with filling the gut."

⁵Alfred "Mac" McMichael letter, August 6, 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker Collection in the Yukon Archive. According to Tappan Adney, two women had indeed set up an ice cream business in the summer of 1898, using ice and condensed cream. Tappan Adney, The Klondike Stampede (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 379.

to buy and eat an egg, a steak, canned peaches, macaroni and cheese, even cake and ice cream. The presence of these foods demonstrated the power of industrial economy to move these foods anywhere, regardless of the time and place in which they were actually produced.

Miners spent all of their time and energy digging for gold, and as many of them were quick to point out, they could not eat gold. They were inveterate consumers of the products of others' labor, and as such were valuable members of an industrial economy. As an article in the Alaska-Yukon Mining Journal put it in 1901, the gold miner "patronizes every other establishment and, producing nothing he can consume affords the best home market for the products of others...."⁶ Miners had at their service an industrial economy that, with its modern factory and transport technologies, could capture the energy of far richer ecosystems to the south. Legions of farmers, ranchers, food processors, laborers, merchants, and shippers transported that energy --in the form of 22,000 tons of flour, beans, bacon, and dried fruit--from the farms and factories of the American West to miners' northern camps.⁷ Those foods--canned, dried, and processed, but also fresh--made it possible for miners to mine for gold in an environment in which they could not have survived otherwise. That food constituted a massive input of human and natural energy that flowed into miners' bodies, and then into the creeks they worked,

⁶Alaska-Yukon Mining Journal, Sept. 1901, 15, Vertical File MS, UAF Archive.

⁷In 1898, 22,117 tons of freight were shipped up the Yukon from St. Michael. Not all of it was actually food, of course, large volumes came down the river from the lakes, as well. William R. Hunt, Golden Places: The History of Alaska-Yukon Mining (Anchorage: National Park Service, Alaska Region, 1990), 155.

energy exchanged for gold.

As William Cronon writes, "Living upon the country or importing from Outside: These are the two most basic human choices about how to live in a particular place."⁸ But "Outside" is itself a construction created by human actions. When gold miners entered the Yukon interior, their very presence created two new geographical categories by which they organized and understood their experience: the Yukon "inside," and the "outside" industrial world. The miners created and acknowledged this division, however, only to turn and suture the inside and outside together. Part of that suturing came with food, as miners carried outside food to the Yukon, and combined it with inside food. Goldseekers bought salmon, moose, and caribou from native hunters and fishers. They gathered berries, hunted waterfowl, and fished and hunted on their own. They planted gardens. The two sources of bodily fuel, local food and outside food, merged indistinguishably within the miners' bodies but their consumption constituted different sets of relations between miners and the natural environment. Outside food was produced thousands of miles away, and moved north at great expense. With local food, the separate processes of production and consumption--the earth's production and the miners' consumption--occurred fairly close together, in time and space.

Looking at what the miners ate is useful for their choices between inside and outside foods involved both nature and culture. The work of supplying miners embodied culture through straightforward market economics. The cultural demand for certain foods and the seasonality of transportation and supply along the Yukon created a volatile

⁸Cronon, "Kennecott Journey," 37.

commodity market in groceries. The fictional Rasmunsen and the actual Courtney speculated in that market. They understood the profit to be gained by moving fresh food from its point of production, where chickens and hogs thrived, to a far distant point of consumption sorely lacking in chickens and hogs. As suppliers, they did not produce food, but rather transported it, coordinated its purchase and sale. They defined their commodities as cultural containers of abstract monetary value. But they failed to anticipate the nature within such abstractions: eggs froze and hogs did not swim well.

Eggs and hogs connected miners to the outside world, to outside ecosystems and economies, and to the labor of outside people, but native foods connected them to the local creeks and rivers, forests and mountains, and to the local peoples who lived in and harvested from those places. In seeking and using these foods miners changed the nature and the people that produced them. The consequences of the supply economy were far more noticeable inside than outside. They were particularly drastic for native peoples. As gold miners merged the outside and inside worlds into one industrial realm, natives and whites ate more and more outside food. In their food, and in their bodies, all human beings along the Yukon became more tightly connected to the outside nature that produced that food, and to the outside culture that brought it North.

Setting the Table

Nature and culture, inside and outside, came together first and foremost at Yukon dinner tables. But to see the full complexity of miners' combinations, you need to visit the table often and from season to season. At first glance there might seem to be only

simplicity and monotony. When mining groups sat down to eat, according to Mac McMichael, the "regulation Alaskan dinner" was predictable: pork and beans, bread and rice. These were their "stand by's," [sic] or, as Bill Hiscock put it "the inevitable bacon and bread and treacle."⁹ These foods were inexpensive, easy to store and preserve for long periods, and for the most part very familiar. Pork and bread had constituted a great proportion of the American diet for longer than anyone could remember. "Bacon is a drug," McMichael explained, and one of Hiscock's companions enjoyed a daily fix. "K. appeases his appetite every day with a slice of raw bacon."¹⁰ Hiscock himself described preparations for a typical meal. First he boiled the beans, then added them to the bacon in the frying pan, and added evaporated potatoes. He made bread from flour, baking powder and salt, and assembled a pea soup from split peas cooked in boiling water, with salt and a teaspoon of Bovil or beef extract.¹¹ Tappan Adney quoted a miner admitting he had eaten so much bacon he was "ashamed to look at a hog in the face."¹² He might have

⁹McMichael letters, Jan. 1, 3, 1899, Yukon Archive. F. Wm. Hiscock Diary TS., June 6, 1898, "The Youkon Trail of Year 1898," Diaries File, File Collection, Dawson City Museum. A Department of Commerce and Labor report, Commercial Alaska, 1867-1903 (Washington, D.C.: GPO, 1903), reported that the principal food articles shipped from American Pacific Coast ports to Alaska between 1880 and 1890 were as follows: flour, sugar, butter, coffee, tea, potatoes, onions, fruits, pork, beef, salt, canned goods, canned vegetables. About half way through the decade, canned meats appeared on the list. In 1890, 2,137 cases of canned meats were shipped to Alaska (Commercial Alaska, 114). On staple diet, also Paula Mitchell Marks, Precious Dust: The American Gold Rush Era, 1848-1900 (New York: William Morrow, 1994), 175.

¹⁰McMichael letter, May 2, 1898; Hiscock diary, April 9, 1898.

¹¹Hiscock diary, March 1899.

¹²Adney, Klondike Stampede, 378.

been equally cowed by the amount of sugar he consumed, for miners ate a lot of sugar when they had it. "We miss the sugar though, grievously....Sugar does not seem to fill a very large space until one has none at all," McMichael mourned.¹³ "It is either feast or famine with these people," McCrae agreed while packing supplies up a creek on a prospecting trip with six or eight other men. "[W]e had 25 lbs. of sugar when we left the mouth of the Creek and the last of it was eaten on the evening of the 8th day."¹⁴ In a year, according to one study, an Alaska/Yukon miner consumed 500 lbs. of flour and grains, 150 lbs. of bacon, 100 lbs. of beans, and between 25 and 100 lbs. of sugar.¹⁵

These staples made up a basic, lower-tier menu. Poor miners ate these lower-tier foods much of the year, and even those with ready cash suffered through long winters of bacon and beans because there was little else to purchase. Outside nature provided their food, but inside nature determined their access to it. Like everything else in the Yukon, miners' diets varied seasonally. Once the river froze in the fall, the major supply companies could no longer fill orders from the outside. The Alaska Commercial Company's and North American Trade & Transportation Company's long metal warehouses at Fortymile and Dawson stood testament to the companies' need to store 8 or 9 months of food for the year, starting in June and July.¹⁶ Still, they ran out of goods.

¹³McMichael letters, May 18-19, 1898.

¹⁴James A. McCrae Diary, July 30, 1898, MSS 104, Acc. 80/1, Yukon Archive.

¹⁵Margaret Archibald, Grubstake to Grocery Store: The Klondike Emporium, 1897-1907 (Ottawa: Parks Canada, Dept. of Indian and Northern Affairs. rev. ed., 1973), 23.

¹⁶Adney, Klondike Stampede, 180.

The worst winter was the first, in 1897-98, when the sudden influx of Klondike-crazed miners overwhelmed the food supply at Dawson. When James Cooper arrived in October, all he could buy was a dozen cans of evaporated cabbage, some Coxes Gelatine, and a little sugar.¹⁷ "It seems so funny to run out of things and let that end it for a half a year or so," Nora Crane wrote. "I keep thinking there will be some way devised to fill it out again."¹⁸ Thomas Moore got through the 1898 winter on dried fruits and vegetables, Knorr's soup, and extract of beef.¹⁹

But having described a regulation diet, it must immediately be modified. The ACC and the NAT&T did have those big warehouses, after all, and even in the winter a surprising diversity of preserved foods appeared on miners' tables. These made up the middle-tier diet, in which miners supplemented bacon, beans, bread, and minimal dried vegetables with a broader selection of canned and evaporated goods. Of all the Klondike promotional literature, the most common was the "One Man--One Year" lists, which outfitters and chambers of commerce distributed to inform miners of the supplies needed for a year of northern mining. The key staples led the lists, but other foods appeared as well: rolled oats, evaporated fruits and potatoes, split peas, condensed milk, coffee and tea.²⁰ In June 1897 the Alaska Commercial Company listed pickles and sauerkraut, maple

¹⁷Diary of James S. Cooper and Associates, October 20, 1897, Diaries File, File Collection, Dawson City Museum.

¹⁸Nora Crane letter, October 31, 1897, Kepner-Crane Collection, Microfiche, UAF Archive.

¹⁹Thomas W. Moore Account, 1898, MSS 007, Acc. 82/121, Yukon Archive.

²⁰Adney, Klondike Stampede, 22.

syrup, chocolate, macaroni, and a sizable number of canned goods: cabbage, string beans, tomatoes, roast beef, corned beef, sausage, and turkey.²¹ McMichael's party of three had "a good supply of condensed beef" on hand, "plenty of evaporated fruits, apples, peaches, apricots, pears, prunes and raisins," as well as maple syrup and maple sugar, corn meal and rolled oats, canned butter and condensed milk.²² Dogsledding down the Stikine River, Hunter Fitzhugh traded with two white men for "12 pounds of prunes and apricots, and we nearly made ourselves sick eating them raw and stewed."²³ These more diverse diets, so heavy in preserved foods, still grew tiresome. "We have all eaten pickle, onion, and cauliflower until our very clothes are sour," Lynn Smith complained in a letter home.

²¹Adney, Klondike Stampede, 465. The Revenue Cutter Nunivak crew ate 5,082 ration the year ending June 30, 1901. Their food, as recorded by their captain, consisted of the following, except when fresh moose meat and fresh fish were substituted for salted meat: salt beef, salt pork, salt fish; canned mutton, corned beef, roast beef, sausage; ham, bacon, flour, apples, evaporated fruits, canned cranberries; raisins, beans, peas, evaporated potatoes, fresh potatoes, canned tomatoes, sauerkraut, rice, rolled oats, cornmeal, granulated sugar, coffee, tea, cocoa, butter, condensed milk, cheese, lard, baking powder, salt, pepper, mustard, pickles, vinegar, molasses, fresh onions, and tobacco. See John C. Cantwell, Report of the Operations of the U.S. Revenue Steamer "Nunivak" on the Yukon River Station, Alaska, 1899-1901 (Washington, D.C.: GPO, 1904), Appendix E, 285.

²²McMichael letters, Jan. 1, 3, 1899. Commercial Alaska, 1867-1903, 114, reported that the principal food articles shipped from American Pacific Coast ports to Alaska between 1880 and 1890 were as follows: flour, sugar, butter, coffee, tea, potatoes, onions, fruits, pork, beef, salt, canned goods, canned vegetables. About half way through the decade, canned meats appeared on the list. In 1890, 2,137 cases of canned meats were shipped to Alaska.

²³Hunter Fitzhugh letter, January 7, 1898, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

He added with irony, "I actually ate an apple Oct. 5th."²⁴

This second-tier diet was but an elaboration of the first, but a third, upper-tier diet differed in kind. It still depended on the outside, but now the food was fresh. In the summer, steamers unloaded crates of fresh food at the Dawson waterfront. In early June, 1898, and each June thereafter, the steamboats ascended the river loaded with fresh fruit, vegetables, cattle, and sheep--all only a few weeks out of Seattle and San Francisco. The first boats of summer instantly restocked Dawson's grocery shelves, replacing aging stocks of flour and canned goods with a cornucopia. The steamers effectively reproduced the markets of home, two thousand miles up the Yukon River. "In the brief space of a few days," Adney wrote at Dawson in 1898, "there seemed to be nothing that could not be purchased in Dawson, from fresh grapes to an opera-glass, from a safety-pin to an ice-cream freezer."²⁵ "Mostly anything can be bought here and pretty cheap to[o] even green cucumbers," marveled Frank Purdy.²⁶ In June 1899 the Dawson waterfront teemed with up to 17 steamers docked at a time, unloading fresh potatoes, fruit, sugar, and eggs, milk, hams, and butter, causing prices to suddenly and immediately fall by half.²⁷ "Fresh eggs,

²⁴Smith letters, October 13, September 19, October 9, 1898. It was hard to keep fruit through the winter. When Smith worked in the NAT&T store at Rampart in the winter of 1902-03, he had to keep fires stoked in the storage rooms, to try to keep the oranges, apples, and cider from freezing when temperatures reached between 30 and 60 degrees below zero.

²⁵Adney, Klondike Stampede, 378.

²⁶Frank Purdy Diary, July 27, 1898, Vertical File MS, UAF Archive.

²⁷U.S. Consul letter, June 8, 1899, "Despatches from U.S. Consuls in Dawson City, Canada, 1898-1906," Microfilm no. 199, UAF Archive. Thomas J. Kearney also described arrivals in Dawson in May 1899, with small boats and scows arriving "bringing

potatoes, oranges, apples, bananas, onions, creamery butter and other eatables have been coming in this past week," a Rampart newspaper reported in 1901, "and all find a ready sale at good prices."²⁸ Mac McMichael wrote, "I see that I can have ice cream and cake at 50 cents a dish so we need not pine for luxuries in this blessed country." And Stewart Campbell noted with relish in August 1899 that "[a] boat load of Anhuiser [sic] Busch beer just arrived today and it tasted finer than cream."²⁹

The big steamers were preceded by smaller vessels and rafts that came downriver from the lakes, just behind the breaking ice. These entrepreneurs or "scow men"—like Jack London's Rasmussen—wintered in Seattle or Vancouver, brought small lots of much-treasured foods (like eggs) over the passes and rushed to arrive at Dawson first in order to profit from winter shortages and high prices. "Most of the small boats coming down bring a surplus of provisions," Army captain Richardson reported in June 1898, "including fresh vegetables, eggs, and fruit, and it is to these small but numerous additions to the supply of the commercial companies that the people owe their comfort at the present time."³⁰ This kind of grocery speculation could reap great profits, and it

in principally butter, eggs, fruit, horses, and a few cows." Thomas J. Kearney letter, May 1899, Diaries File, File Collection, Dawson City Museum.

²⁸Alaska (Rampart) Forum, June 13, 1901.

²⁹McMichael letter, June 23, 1898; Diary of Stewart L. Campbell, August 5, 1899, MSS 122, Acc. 81/129, Yukon Archive.

³⁰W.P. Richardson, U.S. Army, "Report of an Expedition into Alaska," in U.S. Congress, Senate, Committee on Military Affairs, Compilation of Narratives of Explorations in Alaska, 1869-1900 (Washington: GPO, 1900), 506.

continued all summer.³¹ When Angelo Heilprin crossed the Chilkoot and took a steamer to Dawson in July 1898, his fellow passengers all carried specialty merchandise to Dawson--fruit and vegetables, tar paper for cabins, whiskey. Some sold their lots in just hours, and hopped on steamers back toward Skagway right away.³²

Where It Came From: Outside Food

For all its seasonal variants, the basis of the outside diet was the tin can. "We lived high," Bill Ballou bragged to his brother Walt in Vermont, "on canned chicken, turkey, mutton, roast beef, tomatoes, corn, sweet potatoes, peaches, and dried apples. prunes, apricots, peaches, and plums....fine butter and condensed milk...evaporated potatoes and onions...granulated eggs and prepared soup stocks."³³ "There is a layer of about one foot of tin cans over the whole place....," Nora Crane reported from Circle City."³⁴ "[M]ost everything is canned," she continued, "and makes one think of three picnics in a day...everything in fact one can think of can be sent here without spoiling."³⁵ As Hunter Fitzhugh remarked, the "five gallon evaporated potato can" was nothing less

³¹Archibald, Grubstake to Grocery, 118-120.

³²Angelo Heilprin, Alaska and the Klondike: A Journey to the New Eldorado with Hints to the Traveler (London: C. Arthur Pearson, 1899), 25-28.

³³William B. Ballou letter, June 12, 1899, William B. Ballou Papers, 1889-1918, UAF Archive.

³⁴Nora Crane letter, July 24, 1897.

³⁵Nora Crane letters, July 9, 24, 1897, UAF Microfiche.

than "the national wash tub of Alaska."³⁶

This overwhelming tide of tin cans demonstrated the importance of the modern food processing to the Alaska/Yukon gold rush, and proved that in one sense, it did not matter where outside foods came from. Canned and dried food partially escaped the natural limits of time, seasons, and geography. Factories and railroads made it possible for miners to eat deviled ham and apricots thousands of miles from the feedlots and orchards in which pigs and apricots actually grew. As far as gold miners were concerned, outside food came not from the earth or from a specific place, but from the store.

In the Yukon and Alaska, it could be quite a journey to the store, but it was largely fresh foods that tended to remind miners of how far the food had come.³⁷ "They have some bananas here," wrote Fred Kimball from St. Michael when the spring boats arrived in 1904, "but they don't look good to me. They are too far from home."³⁸

Canned foods clearly were not from Alaska but then it was never entirely clear where the food they contained came from. Hunter Fitzhugh voiced a theory on sources as he described the trash heaped on the Yukon ice to await the clean sweep of the thaw. "[T]here will be tin cans in all sizes, to suit all purses, from those small in stature and

³⁶Fitzhugh letter, Little Manook Creek, Summer 1899.

³⁷As William Cronon writes of the meat-packing industry, "The whole point of corporate meat-packing had been...to liberate it from nature and geography....Geography no longer mattered very much except as a problem in management: time had conspired with capital to annihilate space." Cronon, Nature's Metropolis: Chicago and the Great West (New York: W.W. Norton, 1991), 259.

³⁸Fred G. Kimball letter, June 27, 1904, Fred G. Kimball Letters, 1899-1909, UAF Archive.

large in price, sealed and said to contain extract of beef (said beef used to wear iron shoes and pulled a street car in Chicago) to the monsters built like a sky-scraper, which once held the fossilized remains of some pre-historic beast, whose invulnerable hide was cut into small pieces, bleached and labeled 'evaporated potatoes.' (Many miles of good concrete trail have been made of this indestructible material."³⁹ Pre-historic beasts aside, his tirade captured some truth. The canned meats, meat extracts, and bacon that miners ate may not have been street-car horse meat from Chicago, but a lot of it was nevertheless from Chicago, Indianapolis, Cincinnati, and Omaha, the meat-packing centers of the nation. It came from corporations like Swift, Armour, and Libby, McNeill & Libby in Chicago, Van Camp's in Indianapolis, and smaller operations like the Omaha Packing Company. These integrated corporations collected cattle, sheep, hogs, and poultry from across the West and Midwest and funneled them into processing operations that shipped canned, smoked, deviled, and pickled beef, bacon, ham, mutton, and turkey all over the world.⁴⁰ Some of the meat came from even further away. "Australian canned meat has always stood high in Cassiar where we deal," John Callbreath wrote from his Stikine River trading post, "and I doubt not it has a good standing in the Youcon country."⁴¹ The processing insured that the food could go anywhere, and meats were not the only Midwestern product to reach the Yukon. LaMont's crystallized eggs--a great Klondike

³⁹Fitzhugh letter, May 19, 1899.

⁴⁰Archibald, Grubstake to Grocery, 26.

⁴¹John C. Callbreath letter, March 28, 1898, Callbreath, Grant, & Cook Collection, Letterpress Books, vol. 6, UW MS and Archives.

novelty--came from a St. Louis factory, which collected up to 16,000 eggs per day from farms along the Tennessee, Ohio, Missouri, and Mississippi Rivers.⁴²

Miners trusted these products, if only because the brand names were familiar. Like other modern consumers, they preferred certain brand names and colorful labels, such as Swift and Armour, Eagle and Magnolia Condensed Milk (both from the New York Condensed Milk Co.), Baker's Chocolate, Royal Baking Powder, and Vermont Maple Syrup.⁴³ That cultural familiarity was as much a corporate product as the food itself. New processing technologies produced flour, sugar, and canned goods that were "absolutely uniform in appearance, quality, and taste," according to one historian. Companies used brand names, advertising, and creative packaging to distinguish their products from the crowd.⁴⁴ They also dispatched agents to promote these brand-name products to grocers, wholesalers, and consumers. In January 1898 Swift and Co. sent its Pacific Northwest agent, Harry L. Strong, to set up his sales headquarters in Seattle in order to oversee the sale of pork products to mining outfitters.⁴⁵ In May, Van Camp's dispatched Willard B. Cook to advertise its products, all "choice and ready sellers," to wholesalers on Puget Sound.⁴⁶ These promotion and sales agents often bypassed

⁴²Trade Register (Seattle), Jan. 22, 1898.

⁴³Archibald, Grubstake to Grocery, 28.

⁴⁴Harvey A. Levenstein, Revolution at the Table: The Transformation of the American Diet (New York: Oxford University Press, 1988), 34-36.

⁴⁵Trade Register, Jan. 22, 1898, 30.

⁴⁶Trade Register, May 21, 1898, 36; January 8, 1897.

wholesalers to sell directly to general store owners and other retailers. When trader John Callbreath came south from Wrangell to Victoria, B.C. in 1896 on a spring supply run, he "met Mr. R.J. Linden Commercial Trader for Farrell and Co. of Omaha dealers in Jams, Syrups, etc...." Two days later, he "ordered some Jams and Jellies today from Farrell and co. through R.J. Linden, agent...."⁴⁷ The energies of such agents were clearly not wasted. Processed-food companies recognized gold miners as a perfect market for their products. Nora Crane, her husband, and brothers were in Alaska because of their connection to the Cudahy meatpacking family of Chicago--purveyors of the canned "Cudahy roast," popular with miners. Michael Cudahy was president of, and a chief investor in, the NAT&T supply company.⁴⁸ In a letter home Nora Crane imagined the dividends she would earn on her family's Cudahy investments, given the situation at her own dinner table. "When I think of four years of canned corn beef & beans I think we will earn ten times more than I will ever get out of it."⁴⁹

In their inordinate reliance on these foods gold miners were unique, but their patterns of consumption reflected national and global trends toward mass-produced, processed, inexpensive foodstuffs. Starting in the 1870s, modern processing techniques

⁴⁷Callbreath diary, March 28-30, 1896.

⁴⁸When Lynn Smith worked at the NAT&T Co. store in Rampart City, he asked family members in Seattle to send him money through the Company, at the Rookery building, or through the offices in Seattle. Smith letter, Aug. 31, 1901. The Cudahy connection also took the form of the name of the 1893 NAT&T trading post across the Yukon from the mouth of the Forty Mile: Fort Cudahy. See Virginia S. Burlingame, "John J. Healy's Alaskan Adventure," *Alaska Journal* 8 (Winter 1978), 312-314.

⁴⁹Nora Crane letter, July 9, 1897.

brought a revolution to the American diet. When Hunter Fitzhugh and Nora Crane made the connection between trash piles of tin cans and Chicago meatpackers they hit on the key to this dietary revolution. Between the 1870s and 1910 canning technology grew into a global business dominated by industrial giants such as Swift and Armour in meats, Heinz in condiments, Campbell in soups, and the California Fruit Grower's Exchange in fruits and vegetables.⁵⁰ In the United States by 1910, 68,000 people produced over 3 billion cans of food a year, and provided milk, meat, fish, and vegetables year-round to working and poor classes--and gold miners--that until the 1870s had subsisted mainly on salt pork, cabbage, potatoes and fresh food only in season.⁵¹ By the 1890s, the canned and prepared foods that gold miners ate, foods like Van Camp's Pork and Beans (the "best known prepared food in America") and Macaroni and Cheese, were easy to prepare and, more importantly, "cheaper than the average housekeeper could buy the ingredients of the can uncooked."⁵²

This revolution extended well beyond meat products. Railroads moved into Minnesota, the Dakotas, and the Pacific Northwest, and opened up a wheat-producing empire. Under the auspices of corporate giants like Pillsbury and Gold Medal, automated factories produced refined white flour which sold at much lower prices, and became the key ingredient in the nation's baked goods. In 1872, one dollar bought 15 pounds of flour; by 1897 when the gold miners went north, that dollar bought 34 pounds

⁵⁰Levenstein, Revolution at the Table, 36-37, 41-42.

⁵¹Levenstein, Revolution at the Table, 37, 23-26.

⁵²Trade Register (Seattle), Sept. 11, 1897;

of flour at home, though far less at Yukon trading posts.⁵³ With the application of mass-production technologies, rice, beans, tea, coffee, and sugar all saw similar drops in price, as did milk. As grain production moved west, dairy production expanded in the northeast and Midwest, assisted by railroads that could move fresh milk quickly to market, and to factories that mass-produced condensed milk and made dairy products available to a far broader segment of the population, regardless of their proximity to actual cows. Between 1870 and 1900 American milk sales jumped from 2 billion to 18 billion pounds a year.⁵⁴

While the miners' processed meats came from Chicago's western hinterland, some of their other staples--beans, fruits, and vegetables--came from San Francisco's broad agricultural empire, the Central Valley of California. Although local growers in Washington state grew a few beans, wholesalers in Seattle bought the great bulk of beans of all varieties from California brokers and producers, along with walnuts, almonds, honey. Fontana and Company of San Francisco and Haight Fruit of Redlands and Riverside advertised their packed and canned fruits and vegetables to Seattle wholesalers, including peas, tomatoes, asparagus, peaches, and pears. California dominated the nation's production of fresh and dried fruit as well. The state shipped its first railroad car of fresh fruit in 1869, and by 1899 shipped over 16,000 cars a year. That level of production extended to processed fruits, and in July 1897 alone, California shipped over

⁵³Levenstein, Revolution at the Table, 22, 30, 32.

⁵⁴Levenstein, Revolution at the Table, 31, 34-35.

2.8 million pounds of dried fruit.⁵⁵ A few weeks later, California producers shipped ten tons of dried fruit from Santa Rosa directly to Dawson City.⁵⁶ By 1899, California was producing 121 million pounds of dried prunes, peaches, apricots, apples, pears, and plums, in addition to 30 million cases of canned fruit.⁵⁷

The miners' dinner table tapped a flow of industrial food from the western hinterlands of Chicago and San Francisco that would have been produced with or without gold in the Yukon, but some of their processed supplies, and much fresh food, came from Seattle's expanding hinterland in the Pacific Northwest. And these foods had more intimate connections with the Yukon. The Klondike did not just serve as a market for foods; it rearranged the outside economy, especially in the Northwest, with its demands. By the 1890s Washington and Oregon had developed fruit and vegetable industries of their own, growing pears, prunes, and apples in the rich valleys west of the mountains, and tomatoes, peaches, grapes, watermelons, and more apples, on the irrigated borders of the Columbia River and its tributaries.⁵⁸ The gold rushers further stimulated this

⁵⁵Archibald, Grubstake to Grocery, 153; Levenstein, Revolution at the Table, 31; Trade Register (Seattle), Sept. 11, 1897; Jan. 1, 1898; Jan. 8, 1898; Jan. 6, 1900, 29.

⁵⁶Trade Register (Seattle), Aug. 14, 1897, 17.

⁵⁷Trade Register (Seattle), Sept. 8, 1900.

⁵⁸Trade Register (Seattle), Sept. 4, 1897, 11, 15; Sept. 11, 1897, 9. In 1898 and 1899, Washington apple growers in Wenatchee and on Orcas Island shipped apples not only to Seattle, but also to Chicago by railroad, and from there to eastern markets. In 1898, the Seattle Commission Co., a fruit dealer, shipped over 15,000 boxes of apples to eastern cities; the state as a whole shipped 1000 railroad carloads east, at 200 bushels per car. Trade Register, Dec. 1898 trades summary; Dec. 10, 1898, 20. If so many apples reached national markets, plenty reached Seattle outfitters and wholesalers, and thus the Alaska/Yukon market as well.

agricultural development, and brought a sudden explosion in the production of dried and dehydrated produce. By 1898 at least four Seattle companies, including the Washington Evaporating and Preserving Company, produced evaporated potatoes, onions, and soup vegetables in tin cans for sale to miners.⁵⁹ In 1898 this company's Seattle and Yakima plants packed 311,000 pounds of dried fruits and vegetables, 200,000 of which were Hunter Fitzhugh's favorite--potatoes.⁶⁰ The potato craze spread across the state. Coupeville, Washington, on Whidbey Island, long known for its ample potatoes, set up a vegetable drier in 1897 and made heavy shipments to gold rush markets. By 1898 the drier at Coupeville was running day and night.⁶¹ Another drier at Whatcom produced 20,000 lbs. of dried spuds that winter, but still could not fill all incoming orders.⁶² Fresh and evaporated onions became huge items as well, alongside the potatoes. "A large number of Yakima farmers this year propose to grow onions extensively for the Klondike trade," a Seattle trade paper announced in the midst of the spring 1898 rush.⁶³ Fruit growers invested heavily in driers as well, building plants all over the state including six in Seattle by the end of 1898. Other producers dried apples, prunes, peaches, plums, and cherries in plants at Tacoma, Puyallup, Colfax, Wenatchee, Chelan, Yakima, Orting, Sumner, Monroe, and Vashon Island, with at least 25 in Clark County around Vancouver,

⁵⁹Trade Register (Seattle), Sept. 11, 1897, 24.

⁶⁰Trade Register, Dec. 31, 1898.

⁶¹Trade Register (Seattle), Aug. 14, 1897; August 28, 1897; April 16, 1898.

⁶²Trade Register (Seattle), Jan. 15, 1898, 11.

⁶³Trade Register (Seattle), April 9, 1898, 37.

Washington.⁶⁴

In 1897 and 1898 Washington state was well on its way to developing a wheat production empire that challenged older wheat regions in California and the northern Midwest. Between 1890 and 1900, Pacific Northwest wheat production grew from 20 million bushels a year to over 50 million bushels. When gold miners flocked to the west coast demanding tons of flour for their bread and pancakes, the Great Northern and Northern Pacific Railroads were already delivering shipments of Big Bend and Palouse wheat to Seattle and Portland for milling and export to England, South America, Hawaii, Alaska, and even to San Francisco. Almost 4000 carloads of wheat—or 1.6 million bushels—arrived by rail in Seattle in 1898.⁶⁵ In 1898 Seattle boasted five flour mills producing flour, oats, and cereals, one of which, the Centennial Mill, doubled its capacity to 2000 barrels of flour a day.⁶⁶ Much of this flour went into pasta and baked goods.

⁶⁴Trade Register (Seattle), August 14, 1897, 20; Jan. 8, 1898.

⁶⁵Dorothy O. Johansen, Empire of the Columbia: A History of the Pacific Northwest (New York: Harper & Row, 1967), 626. Seattle's Trade Register listed outbound cargo each week. In 1898, it listed regular shipments of wheat to the U.K. and San Francisco, and more sporadic shipments to Chile, Peru, and even Russia. In December 1898, 22 deep-water vessels were in port, preparing to take wheat around the world. Trade Register, Dec. 3, 1898.

According to Trade Register figures for Dec. 1898, both railroads delivered 1,777 carloads of wheat, of 400 bushels each, to Seattle in 1897. In 1898, the figure jumped to 3,679 carloads.

⁶⁶Trade Register (Seattle), Jan. 22, 98, 19. James J. Hill's Great Northern Railroad invested heavily in Seattle's grain and flour facilities in the 1890s. Hill in 1898 funded a million-dollar steel grain elevator, complete with docks and warehouses, at Smith Cove just north of the main harbor at Elliott Bay. With Hill's railroad in place, Northwest farmers could ship Big Bend wheat east to mills in Minneapolis. Likewise, Seattle's wholesalers and retailers could offer miners and other consumers the best of Midwestern grains. In July 1898, one of the city's leading grain and feed dealers, Lilly, Bogardus,

Whether Klondike miners outfitted in Seattle or San Francisco, they may well have bought cereals or flour made from Washington grains.

Not all of the miners' bacon came from the Midwest, either. Seattle's leading meatpacker, the Frye-Bruhn Co., packed its own brand of bacon, ham, and lard for the gold rush, building four new smokehouses for the Klondike trade in 1898. Early that year, Charles Bruhn won contracts to supply 75,000 pounds of bacon to the U.S. Government's relief expedition to the mines.⁶⁷ By 1898 Seattle butchers were killing 100 hogs a day to keep up with the 16,380 hogs that arrived on the Northern Pacific and Great Northern railroads in the 18 months from January 1897 through June 1898.⁶⁸ Seattle also served as a market for local perishable foods--milk, eggs, and butter--gathering, storing, preserving and shipping truck farmers' goods for consumption along the Yukon. Miners recognized and bought national brands of condensed milk, Borden's in the United States and Reindeer brand in Canada, but dairymen in Washington state recognized a local niche. In January 1898 the Washington Condensed Milk Company increased its capital and moved to Kent to be closer to supplies of fresh milk, citing large orders from Alaska and Japan. They ran advertisements in Seattle to compete with national brands like Borden's and Eagle--claiming that "Washington" and "Tillicum" milk were the favored

advertised stocks of Minnesota Buckwheat and Rye Flour, and Dakota and Minnesota Hard Wheat Flour. Trade Register (Seattle), Nov. 12, 1898, 21. Sept. 18, 1897, 24.; Aug 27, 1898: Trade Register, July 30, 1898, 13. In 1897 and 1898 trade reports regularly reported shipments of wheat by rail to Minneapolis, and by ship to Hawaii, the U.K., Chile, and Peru. Trade Register, Jan. 15, 1898; April 23, 1898, 31; Sept. 4, 1897.

⁶⁷Trade Register (Seattle), Jan. 1, 1898; Jan. 15, 1898; Oct. 2, 1897.

⁶⁸Trade Register (Seattle), 1898 Review, December 1898.

items at Dawson City.⁶⁹ Seattle wholesalers and buying agents also encouraged western Washington truck farmers to bring butter, eggs, cheese, fruits, and vegetables into the city. Winship Brothers, a Seattle wholesale house, advertised in early 1898 that "We also need large amounts of country produce--Fruits, Vegetables, Butter, Eggs, Cheese....GOLD NUGGETS or DUST cannot be obtained unless the miner has the proper food." Another local agent placed a trade advertisement saying "If you want cash, send your poultry, eggs, and butter to C.E. Robinson, Western Ave., Seattle....I pay cash."⁷⁰ J.B. Agens, of Seattle and Tacoma, held the monopoly on vacuum packed butter, a popular item among northern miners.⁷¹ Agens moved into the modern new Colman Building on Western Avenue in Seattle in September 1897, and installed a cold storage plant with the capacity for 5000 tubs of butter and 4000 cases of eggs.⁷² It seems likely that most miners' breakfast eggs came from Agens' cooler, rather than from crazed speculators seeking unlikely fortunes in dairy products.

Where It Came From: Inside Food

Although gold miners lived primarily on outside foods, they supplemented those diets with a broad range of plants and animals from the local ecosystems. Miners moved into those ecosystems and readily adopted the foods eaten by local native peoples as

⁶⁹Trade Register (Seattle), Aug. 21, 1897; Jan 1, 1898.

⁷⁰Trade Register (Seattle), Jan. 22, 1898; Jan. 1, 1898.

⁷¹Archibald, Grubstake to Grocery, 25.

⁷²Trade Register (Seattle), Sept. 11, 1897; Jan. 1, 1898.

supplement to outside diets. These local foods came from two sources. Miners purchased meat and fish from native peoples, who played a significant role in the mining-supply economy, and whites also hunted and gathered on their own. "We get huckle berries just like you used to get in Penn.," Nora Crane wrote to her mother from Circle City, "fresh moose meat fresh lettuce and salmon[,] lovely big fish steaks nicer fish than we ever get at home."⁷³ This merger was nowhere more evident than at Thanksgiving, Christmas, and New Year's dinners, when, in celebration, miners drew food from nearby to imitate the ritual meals of home with their abundance of fresh meat. The Mosier party served a moose roast on Thanksgiving Day, with plum pudding, cranberry sauce, and potatoes.⁷⁴ McMichael's crew, down the Yukon in Alaska, sat down that day to "moose stew with dumplings, bread, ginger cookies and apple pie. All luxuries with us."⁷⁵ At Christmas, McMichael banished the usual fare in favor of "Pea soup...boiled salmon with drawn butter sauce, moose stew with dumplings, Cudahy [canned] roast, beef brown gravey, mashed potatoes, scalloped tomatoes, green peas, bread and butter, ginger bread, peach short cake, Detroit fruit cake, apple pie, seedless raisins....," and so forth.⁷⁶ At Walker's Fork on Christmas Day 1899, another group sat down to "Roast Cariboo Au Jus," Roast Ptarmigan dressing, "baked cariboo pie," Boston baked beans, corn beef and

⁷³Nora Crane letter, Circle City, July 24, 1897.

⁷⁴Charles P. Mosier Diary, Nov. 24, 1898, MSS 012, Acc. 82/168, Yukon Archive.

⁷⁵McMichael letter, Nov. 24, 1898.

⁷⁶Michael letter, Jan. 1, 1899.

cabbage, scalloped tomatoes, English plum pudding, blueberry pie, blackberry pie, and apple pie.⁷⁷ But James McCrae's cabin table featured only rabbit pie.⁷⁸ James Cooper's diary for Thanksgiving 1897 best captured both the humor and the reality of Yukon holiday preparations, as well as the creative mixtures of local and outside foods that miners achieved.

We propose to have a feast on Thanksgiving, have invited Ochs and Walter to come (and bring their dinner); following is "Bill-A-Fare" (as proposed). Fish-goose stew a-la-Bonanza, "Beef-McGrowley" a-la-Bully, sour dough bread and weary Skagway butter. Potatoes, solid, a-la-evaporated, U.S. rice pudding. lemon jello Yukon basis, Boiled Cabbage a-la-tough, Apple-pie (if you can eat it), Mush Straight, Vegetable soup a-la-can, Citric acid on the side, Dawson Floats, lemon flavor, Klondyke Strawberries [beans] and Coleman's mustard, Stewed Peaches, Boiled Apricots, Liver and Bacon (minus liver), Eldorado Flapjacks and maple syrup (if Ochs brings it), hot chocolate (if Ochs brings it), coffee, tea or milk, two cigars, more floats, hot B.P. biscuits a-la-nuggets and tired butter. The foregoing may be modified or extended depending somewhat on our ability to rustle more tomato cans to complete our silver service.⁷⁹

Cooper's Thanksgiving did not proceed as planned, "owing to scarcity of grub." The men tried to maintain levity but, he wrote "we find it impossible to keep from being sober."⁸⁰

In bringing inside foods to their tables, either by purchase or by hunting, miners moved into an existing Indian food system. The Yukon Valley offered a seasonal abundance of foods that supported a native population of three to four thousand in the 1890s. Gold miners and other observers witnessed native hunting and fishing practices

⁷⁷Menu printed in Henry Davis, "Recollections," in Herbert Heller ed., Sourdough Sagas (Cleveland: World Publishing, 1967), 81.

⁷⁸McCrae diary, Dec. 25, 1899.

⁷⁹Cooper diary, Nov. 22, 1897.

⁸⁰Cooper diary, Nov. 25, 1897.

frequently, enough so to indicate the rough outline of local subsistence practices. Tappan Adney observed Indian methods of dividing a kill in the winter of 1897, when he hunted with Han people near Dawson. The group gave the hind quarters of the animal to the hunter, and the rest to the whole community; they used only surplus meat in trade for guns and blankets; they saved the fattier meat of cow moose for themselves, and traded the tougher bull meat to miners.⁸¹ Miners provided high demand for meat in the summer of 1898, but, as Adney pointed out, "[t]he Indians do not usually hunt in the summer....," and did not this time. Instead, "numbers of white men proceeded to the upper Klondike and hunted moose with considerable success."⁸²

Indians did not hunt in the summer because summer was fishing season, when bands all along the Yukon lived in fish camps, set weirs and traps, and used dip nets and gill nets to harvest salmon and grayling. The Han Indians at the mouth of the Klondike had particular skill in spearing salmon from birch bark canoes. One man in a canoe followed hand directions from another on shore, who watched the river for the movements of the fish, and directed the canoeist toward the fish.⁸³ They dried and cached the fish for consumption through the winter and then, in late summer, moved into the hills to hunt caribou before returning to winter camps along the river. In October

⁸¹Tappan Adney, "The Indian Hunter of the Far Northwest: On the Trail to the Klondike," Outside 39:6 (March 1902), 628.

⁸²Adney, "The Indian Hunter," 633.

⁸³Catharine McClellan, Part of the Land, Part of the Water: A History of the Yukon Indians (Vancouver/Toronto: Douglas & McIntyre, 1987), 131, 133. Schwatka described this process in detail, and was amazed at the skill of native fishers in tracking fish, maneuvering canoes, and netting or spearing them all at the same time.

1900, just days after the Yukon froze solid, Cantwell witnessed "a grand rabbit hunt," when an entire native village crossed to an island in the Yukon near the mouth of the Dall, and rounded up and killed much of rabbit population.⁸⁴ The early winter months before the spring hunt were the most difficult because their stored food ran out. Severe cold prevented hunting and fishing, and warming in late winter softened the snow and made it difficult to travel for food.⁸⁵ In February and March, when the days got long enough, entire bands left their winter villages for the spring hunt, but the caribou did not always materialize. For moose, they waited until the sun warmed and then re-froze the snow's surface. On February 13, 1901, Lynn Smith wrote that the weather "fixed the snow right for hunting and all the Indians are out." The crusty snow made it hard for moose to walk; they became stuck and easy to shoot.⁸⁶ Occasionally, Cantwell wrote, a few hunters would bring meat back to the rivers to sell to whites or to get supplies at trading posts.⁸⁷ Then in spring the rivers broke, and the bands returned to fish.

From initial contact with European fur traders in the 18th century, Yukon Indians had expanded their hunting and trapping in order to trade furs for guns, blankets, flour, sugar, alcohol, tobacco, and other European goods. They also traded small amounts of

⁸⁴Cantwell, Nunivak, 78, 82. Anthropologist Catharine McClellan describes such methods amongst the Tagish, Inland Tlingit, and southern Tutchone as well. McClellan, Part of the Land, 128.

⁸⁵McClellan, Part of the Land, 152, 153.

⁸⁶Smith letter, Feb. 13, 1901.

⁸⁷Cantwell, Nunivak, 52, 222.

meat and fish within the fur trade.⁸⁸ When gold miners trickled into the interior in the 1880s, Indian-white trade began to shift away from furs toward fresh food, as natives successfully introduced salmon, moose, and caribou to the miners' diets.⁸⁹ Henry Davis bought a moose for \$10 from Indians near Fortymile in 1893. It was "cheaper than hunting them."⁹⁰ On many occasions Indian hunters provided the meat that got starving miners through the long winters. In 1894 Canadian official Charles Constantine reported that the miners at Fortymile survived the winter, and a major shortage of bacon and beans, by buying moose, caribou, salmon, and grayling from local Indians.⁹¹

In these early stages of the gold rush, the work of supplying miners with meat and fish fit within native seasonal subsistence cycles, and some groups of Yukon natives created an economy that encompassed both. Supply work was short-term and seasonal, after all, and natives were already hunters and fishers. They could choose whether to sell or consume the products of their hunt. The miners who bought those products gave Indians direct access to cash and trade goods, and some hunters and fishers accumulated

⁸⁸Cornelius Osgood, The Han Indians: A Compilation of Ethnographic and Historical Data on the Alaska-Yukon Boundary Area, Yale University Publications in Anthropology No. 74 (New Haven: Yale University Department of Anthropology, 1971), 129. For the Han, such fur trading started relatively late, in the mid 19th century.

⁸⁹Gold miners at Fortymile and Circle City in the 1880s and early 1890s regularly purchased food from natives. In 1888-89 at Fortymile, a few hundred miners ate fresh meat hunted and sold by natives, mostly caribou at 10 cents a pound. Michael Gates, Gold at Fortymile Creek: Early Days in the Yukon (Vancouver: University of British Columbia Press, 1994), 43.

⁹⁰Davis, "Recollections," in Sourdough Sagas, 74.

⁹¹Gates, Gold at Fortymile, 70.

considerable wealth by combining hunting and fishing with wage work on steamers and in wood camps--also seasonal work.⁹² As historian Kenneth Coates writes, this "successful and remunerative" adaptation to gold mining meant that native peoples played a "significant economic role" in the gold mining economy without losing long-held means of subsistence, especially if they experienced little or no competition from white laborers.⁹³

Native Yukoners greatly expanded their niche in the supply economy with the Klondike boom of 1897-98, that brought over 30,000 hungry gold hunters to the interior. The great crowds provided a large steady market for native hunters and fishers.⁹⁴ When Adney hunted with the Han in 1897, the band killed 80 moose and 65 caribou over the winter, "the main part of which," Adney wrote, "was hauled by dogs to the starving miners at Dawson."⁹⁵ In addition, he wrote, "[m]uch game was killed by white hunters; but on the whole the best of them lacked the consummate skill of the Indian."⁹⁶ In November 1898, following the fall hunt, a group of Tanana Indians brought 17 sled loads of moose into Rampart City, "and it was all sold in short order," according to Lynn Smith,

⁹²Kenneth S. Coates, Best Left as Indians: Native-White Relations in the Yukon Territory, 1840-1973 (Montreal: McGill-Queen's University Press, 1991), 35-37; Charlene Porsild, "Culture, Class, and Community: New Perspectives on the Klondike Gold Rush, 1896-1905," (Ph.D. diss., Carleton University, Ottawa, 1994), 106, 108-109.

⁹³Coates, Best Left as Indians, 38.

⁹⁴Archibald, Grubstake to Grocery, 141-142.

⁹⁵Adney, "The Indian Hunter of the Far Northwest," 624.

⁹⁶Adney, "The Indian Hunter of the Far Northwest," 624.

for \$1 a pound. A new supply of moose and caribou arrived in spring, selling for four bits a pound, or 50 cents.⁹⁷ Those prices held through the fall of 1900, when there was "plenty of game meat around" at Rampart City.⁹⁸ Specific groups of natives established supply connections with companies like the NAT&T, delivering meat to trading posts seasonally. They built comfortable and customary economic relationships with mining towns. "Our Indians came in a few days ago," Lynn Smith wrote in 1901 from Rampart, where he worked for the NAT&T. The natives sold "lots" of meat for 20 or 30 cents a pound.⁹⁹ In March 1899, Stewart Campbell travelled by dogsled from Fortymile to Gold Creek. He shared a cabin with a couple of Indians. "They were headed for forty mile," Campbell wrote, "with some caribou meat on sleds." A few days later they had another guest, a Tanana River Indian headed home from Fortymile. Campbell explained that the Indians made the trip each spring to trade meat for flour.¹⁰⁰ Native hunters brought a load of meat to Rampart City in late September 1901, but, as Lynn Smith noted, "unless it turns cold will lose it all."¹⁰¹ Maud Case's father George, on the other hand, stored meat in an old mining shaft in the summer--because, as all miners knew--the "walls are all

⁹⁷Smith letters, Nov. 29, 1898; April 30, 1899.

⁹⁸Smith letter, Sept. 27, 1900.

⁹⁹Smith letter, Sept. 24, 1901.

¹⁰⁰Campbell diary, March 22, March 27, 1899.

¹⁰¹Smith letter, Sept. 24, 1901.

frost."¹⁰²

Indian supply work was not limited to gold creeks and towns. It extended all along the main routes of travel. From the moment they came ashore at Dyea, miners on the "poor man's" route bought fish and meat from native suppliers.¹⁰³ In 1896 Josiah Spurr frequently bought fish, ducks, moose, and berries from Indians along the upper Yukon, who came from shore in canoes in order to conduct trade.¹⁰⁴ Jim Cooper and others traded for jerked caribou, marten skins, and goat meat. "Have mt. sheep for supper," he wrote, "positively the finest meat I ever tasted, got it from the Indians on the Big Salmon River." "Indians very foxy on trade," he added.¹⁰⁵ Frank Purdy traded with Indians for moose meat near McQuesten Creek, up the Stewart River. "They are very sharp in trading," he wrote, "knowing the value of things surprisingly well."¹⁰⁶ At St. Michael at the mouth of the Yukon, Eskimos brought ptarmigan, fresh salmon and trout down the coast from the Unalakleet river to the north, to sell to miners and settlers.¹⁰⁷ All

¹⁰²Maud Case letter, July 16, 1903, George E. Case and Family Collection, MSS 172, Acc. 81/91, Yukon Archive.

¹⁰³Adney, Klondike Stampede, 99. Miners bought salmon and trout to eat along the Dyea Trail, Indians fished from Dyea River, took 12 lb. salmon, sold for 2 bits, or 25 cents

¹⁰⁴Josiah Edward Spurr, Through the Yukon Gold Diggings: A Narrative of Personal Travel (Boston: Eastern Publishing Co., 1900), 215.

¹⁰⁵Cooper diary, October 6-7, 1897. Cooper also traded at a village at the Little Salmon, exchanging tobacco for moose meat. "They are a miserable lot, they have a great quantity of furs, hides and bear grease."

¹⁰⁶Purdy diary, July 9, 1898.

¹⁰⁷Kimball letter, Feb. 8, 1900.

of the frustrated steamboat passengers frozen in on the lower Yukon in the winter of 1897-98 traded with local bands for fresh meat. Walter Curtin's boatload of grumpy shut-ins traded flour and food for fish with the "Siwashes" from nearby Russian Mission, as did the crews of at least two nearby steamers.¹⁰⁸ "Each man buys his own birds from the Siwashes," Walter Curtin explained when visiting a neighboring steamer camp, "and when he gets hungry...roasts it at the fire."¹⁰⁹ "[W]e were almost entirely dependent on native men for fresh moose meat" during the winter, "and on women for moccasins....," reported Capt. Cantwell, who wintered his Revenue Cutter on the Dall River.¹¹⁰ The Nunivak crew also bought fresh meat and fish throughout the year, at prices from 50 cents to a dollar per pound for meat, and 25 cents for a dried salmon and for grouse and ptarmigan. Cantwell's men also advanced flour and other supplies to local bands, to be paid for later with meat and fish.¹¹¹

Hunting and fishing for the gold rush market gradually changed Indian subsistence, but the change was not wholesale nor the same for the different groups of natives spread along the river from the lakes to the mouth. Yukon natives had already adapted their subsistence economy to the fur trade, and in some ways the addition of an

¹⁰⁸Walter R. Curtin, Unofficial Log of the Steamer Yukoner (Caldwell, ID: Caxton Printers, 1938), 55-57, 66, 102.

¹⁰⁹Curtin, Unofficial Log, 165.

¹¹⁰Cantwell, Nunivak, 80.

¹¹¹Cantwell, Nunivak, 224-225.

active trade in meat and fish constituted a broadening of adaptations already underway.¹¹² Many native bands already used rifles and dog sleds in hunting, and had already increased their salmon harvests to feed the dogs; many already considered flour, sugar, and alcohol to be a regular part of their diets.¹¹³ The arrival of repeating rifles, however, available at the Alaska Commercial Company in the 1890s, made it far easier to kill moose, who were difficult to stalk at close range with less effective arms. The rifles also made it possible to kill larger numbers of caribou. As a result Indians shifted away from cooperative, communal hunting techniques, such as the use of long caribou fences, into which whole bands, howling and running, drove the reindeer herds. Indians from the Fortymile and Dawson areas had gathered each winter at a long caribou fence in Alaska to catch the Fortymile herd as it came south. As such practices disappeared, fewer hunters took larger numbers of animals.¹¹⁴ The guns, and the miners' culinary preference for moose and caribou as opposed to fish, may have drawn some native bands away from fishing and

¹¹²Porsild, "Culture, Class, and Community," 106, 108-109. Catherine McClellan writes that it is difficult to distinguish precontact and postcontact native ideas and practices, but that the peoples of the southern Yukon had a large capacity for dealing with and adopting new ideas and ways of life. Catharine McClellan, My Old People Say: An Ethnographic Survey of Southern Yukon Territory, Part 1 (Ottawa: National Museum of Man, National Museums of Canada, 1975), 65.

¹¹³John R. Crow and Philip R. Obley, "Han," in Handbook of North American Indians, Subarctic, ed. June Helm, gen.ed. William Sturtevant, vol. 6 (Washington, D.C.: Smithsonian Institution, 1981), 509.

¹¹⁴McClellan, Part of the Land, 166; Osgood, Han Indians, 129. On caribou fences, see McClellan, Part of the Land, 116.

more toward bigger game.¹¹⁵ But caribou herds' migration patterns were unpredictable, and slight shifts left Indians without this major source of food. U.S. Army Captain P.H. Ray found native peoples starving near Fort Yukon in December 1897. "They report that the caribou migration did not come their way and that the fish catch last fall was almost an entire failure."¹¹⁶ When the southern Yukon caribou herds shifted migration patterns around 1900, this change, combined with overhunting along the upper Yukon, brought about a shift toward moose as the more important game species. It was a shift made both possible and necessary by better rifles.¹¹⁷

"My rifle is a Bacon saver...."

Though miners purchased much fish and game, some hunted for themselves in

¹¹⁵Osgood, Han Indians, 130. Hunter Fitzhugh wrote of the constant presence of salmon: "But I am sick of it. Fish don't do for a steady diet with me....I am drying them for dog feed next winter." Fitzhugh letter, August 1, 1900.

¹¹⁶Letter, Capt. P.H. Ray, Ft. Yukon, Alaska, Dec. 20, 1897, to Adjutant General, United States Army, in Compilation of Narratives of Explorations, 549-550.

¹¹⁷Adney, Klondike Stampede, 450-454. Edward H. Hosley, "Intercultural Relations and Cultural Change in the Alaska Plateau," Subarctic, 549. McClellan, My Old People Say, 96, writes that toward the end of the 19th century the caribou began to move north while moose increased. It is difficult to document such patterns, however. The caribou population declined after 1900, due both to shifting migrations as well as increased hunting pressure. See Hosley, "Environment and Culture in the Alaska Plateau," Subarctic, 545. The migration pattern was probably the more crucial factor--there were clearly major shifts in the caribou population of the southern Yukon after 1900, but the causes are unclear. Toward the end of the 19th century greater numbers of moose moved into the southern Yukon, which may have pushed caribou into other regions. Julie Cruikshank, Julie Cruikshank, Life Lived Like a Story: Life Stories of Three Yukon Native Elders (Lincoln: University of Nebraska Press, 1990), 277; and McClellan, My Old People Say, 108.

their spare time, to fill meager or monotonous larders with moose, caribou, ducks, grouse, ptarmigan, rabbits, and squirrels.¹¹⁸ They gathered other inside foods as well, rose hips and mushrooms, not to mention the profusion of berries that Bill Hiscock found growing wild along the Upper Yukon: strawberries, raspberries, gooseberries, blueberries, and cranberries.¹¹⁹ Tom Boldrick even found and ate goose eggs, an act far different from paying \$1.50 for an egg from Seattle or San Francisco.¹²⁰ Miners also fished for pike, grayling, trout, whitefish and salmon. And miners and merchants took advantage of the summer's long light on south-facing slopes to plant and harvest lettuce, turnips, radishes, onions, cauliflower, spinach, beets, and, with some success, potatoes. By 1899, there were 12 market gardens in the Dawson area.¹²¹ Long days meant such produce grew quickly, and to impressive size.¹²² "You can almost see the lettuce grow," Maud Case wrote in 1903; Hunter Fitzhugh explained further that "[t]en pound turnips

¹¹⁸Numerous references to small game occur in the diaries, ranging in place from the head lakes of the Yukon to the mining camps, to the trails to and from mining towns. In May 1898 at the lakes, McMichael reported that "Last night for supper we had the bird and squirrel that Knapp shot. They were stewed and very good." Alfred McMichael letter, May 16, 1898, Yukon Archive. Stewart Campbell's diary between April and August 1898 refers consistently to small game. At Tagish Lake in April, Campbell "shot 4 squirrels and had a feed of fresh meat."

¹¹⁹Hiscock diary, June 14, 1898. In early July 1898, poling up the Indian river, Stewart Campbell and his party gathered "a lot" of mushrooms to eat later. Charles Mosier "gathered some wild onions" along the Yukon. Mosier diary, June 9, 1898.

¹²⁰Tom Boldrick Diary, June 14, 1898, Vertical File MS, Klondike Miners, UAF Archive.

¹²¹Archibald, Grubstake to Grocery, 150.

¹²²Adney, Klondike Stampede, 443.

are not uncommon in Alaska."¹²³

Though miners lived off of local ecosystems in all of these ways, their hunting had the greatest impact, as white hunting contributed to wildlife shifts and declines. They hunted to spare their outside supplies, and to bring fresh meat to the dinner table. "My rifle is a bacon-saver," Hunter Fitzhugh wrote at Teslin Lake, where the swans, geese, and ducks were plentiful, "and each successful shot saves nearly a dollar."¹²⁴ Lynn Smith agreed. Taking fish, geese, and ducks on Tagish Lake, and trading at Ft. Yukon for fish and moose, he wrote that "[w]ith game as it is here we will not need near as big an outfit."¹²⁵ "If we stay here this winter," McMichael wrote on arrival at Fourth of July Creek, "there will be no lack of game to eat and that will help our grub out wonderfully. Moose, caribou and bear seem to be very plentiful. A number have been seen hereabouts, but none have been killed because all are busy prospecting and that does not go with hunting which is a speciality."¹²⁶ As McMichael indicated, miners did not always take the time to hunt. Some food literally fell across their paths. "We came to a blue berrie patch about lunch time," James McCrae wrote while prospecting up a creek "so we all set to work and picked about a quart full and stewed them they were alright...."¹²⁷ Enough of them carried guns to endanger any duck that crossed the Yukon. "One sees an

¹²³Fitzhugh letter, May 19, 1899; Case letter, July 3, 1903.

¹²⁴Fitzhugh letter, May 5, 1898.

¹²⁵Smith letter, May 25, 1898.

¹²⁶McMichael letter, July 29, 1898.

¹²⁷McCrae diary, August 9, 1898.

odd duck or Partridge," Bill Hiscock wrote coming downriver in the great flotilla of June 1898, "and if a duck should fly across the river a dozen shots are heard of it."¹²⁸

Such opportunistic harvests had a long tradition. Before the Klondike strike, gold prospectors had depended on wild game to supplement sporadic imports of poor-quality flour and bacon.¹²⁹ Caribou were a particularly good source of hunting windfalls. North of Big Salmon were barren ground caribou, who migrated in "immense bands"—up to 20,000 animals according to Adney—from high tundra to wooded lowlands each fall. In the late 19th century the Fortymile herd, which natives hunted at their caribou fence, crossed the Yukon close to Fortymile and Dawson City each fall.¹³⁰ Josiah Spurr wrote that the caribou herds provided miners much meat because "one can slaughter as many as he needs for the winter's supply of meat, without so much as hunting, for the animals select some trail and are not easily scared from it. One fall a herd marched up one of the busiest mining gulches of Birch Creek and the miners stood in their cabin doors and shot them."¹³¹ As Lynn Smith wrote later, the caribou herds meant "that we miners get good cheap meat delivered at our doors through a kind Providence."¹³² Tappan Adney cited over three hundred killed in a season near Forty Mile in the late 1880s or early 1890s.

¹²⁸Hiscock diary, June 14, 1898.

¹²⁹Gates, Gold at Fortymile, 44-45.

¹³⁰Adney, Klondike Stampede, 444-445. Robert G. McCandless, Yukon Wildlife: A Social History (Edmonton: University of Alberta Press, 1985), 31; McClellan, Part of the Land, 157.

¹³¹Spurr, Through the Yukon Gold Diggings, 111.

¹³²Smith letter, Sept. 30, 1905.

Frank Buteau remembered that his group of seven miners killed forty caribou to get through the summer of 1889. The following year 15 miners together built a fish trap and caught 1 1/2 tons of arctic grayling to get through the winter.¹³³ Henry Davis travelled on the Chena River that winter when a band of Caribou came close to camp. He shot fourteen of them.¹³⁴ In 1897, according to Adney, two white men killed 47 caribou on the upper Klondike.¹³⁵

The abundance continued through the early stages of the 1890s rush. Dogsledding up the Yukon from Fourth of July creek to Dawson, McMichael wrote, "150 reindeer passed us last night."¹³⁶ Near Rampart City in 1900, Fitzhugh wrote that "Seventy reindeer came through last week on their way to Tanana River."¹³⁷ In addition to the caribou herds, moose were abundant along the Klondike and other Yukon tributaries. In the summer they clustered along the waterways, seeking relief from bugs. In winter they sought sheltered valley bottoms.¹³⁸ "Bears are very plentiful now," Fitzhugh wrote one July, "Moose and Caribou are getting into low grounds now so as to stand in the lakes and rivers and fight mosquitoes all day long."¹³⁹ Frank Purdy saw moose and caribou tracks

¹³³Frank Buteau, "My Experiences in the World," in Sourdough Sagas, 105-106.

¹³⁴Davis, "Recollections," in Sourdough Sagas, 45, 59-60, 64.

¹³⁵Adney, Klondike Stampede, 444-445.

¹³⁶McMichael letter, Feb. 2, 1899.

¹³⁷Fitzhugh letter, January 1900.

¹³⁸McCandless, Yukon Wildlife, 31.

¹³⁹Fitzhugh letter, July 5, 1900.

"very thick" on the Stewart River, and shot four caribou near Dawson in August 1899.¹⁴⁰

C.O. Steiner hunted and fished for two months, far up the Stewart, living on bear and moose and salmon.¹⁴¹ Tom Boldrick saw many caribou and moose tracks on the White River in 1898, which impressed him with their size and impact. "[T]here are regular beaten paths up the creek made from wild animals," Boldrick observed. "[I]t looks like some farmers cattle had been turned loosed in the mountains but we never got sight of one we see also lots of bear & lion tracks & they must be large ones from the size of the tracks."¹⁴² "The boys saw three bears today but could not get a shot at them," Boldrick continued. Three days later another group killed a moose, and Boldrick found them "living high." "[T]hey divided it with us & it was a great treat to have fresh meat after living 4 months on salt meat."¹⁴³ White miners were not always successful on their hunting ventures. McCrae's partner Jack set off with three other for a two week hunt in November 1898. "All he got was a frozen nose," McCrae reported on their return.¹⁴⁴ As with native hunters, the caribou did not always come nearby, or come at all. In September 1906, Smith heard stories of hunters looking and not finding the herd, and wrote "afraid they are not coming this year...."¹⁴⁵

¹⁴⁰Purdy diary, Aug. 3, 1899; June 15, 1898.

¹⁴¹C.O. Steiner, "A Journey to Dawson in 1898," Vertical File MS, UAF Archive.

¹⁴²Boldrick diary, June 18, 1898.

¹⁴³Boldrick diary, White River, July 2, June 18, 21, 1898.

¹⁴⁴McCrae diary, Nov. 2, 16, 1898.

¹⁴⁵Smith letter, Sept. 26, 1906.

Wild game was abundant, albeit sporadically, and the fish proved even more abundant. "You would enjoy the beautiful long red steaks from the king salmon," Hunter Fitzhugh wrote to his mother, "sometimes 16 inches long and six inches wide and one inch thick, without skin or bone."¹⁴⁶ The annual migration of king salmon arrived at the mouth of the Klondike the second week of June, followed by silver and dog salmon later in the year. Miners harvested for their own larders, and for the emerging local market in fresh food. In 1896 one of James Anderson's companions fished for 2 1/2 hours one night in May, and brought back 1,040 grayling, which he sold at \$1 a dozen.¹⁴⁷ When the salmon arrived at Dawson in the summer of 1899, off-season miners choked the rivers with 150- or 250-foot drift nets.¹⁴⁸ James McCrae and his friends bought a net, and drifted briefly "without results." "The River is full of fishing boats," McCrae explained. "We put new sinkers on our net this afternoon and we went out again this evening, but no fish. There were 16 nets stretched across the River. All the Dagoes and Frenchmen from Hill are here fishing," he observed, referring to miners from the hill claims up the Klondike.¹⁴⁹ "There are a lot of Salmon being caught now," he finished.¹⁵⁰ Bill Ballou netted fish at Rampart that fall, getting three or four 15 lb. fish each morning that he sold

¹⁴⁶Fitzhugh letter, August 1, 1900.

¹⁴⁷James Lynn Anderson Diaries, May 24, 1896, vol. 1, James Lynn Anderson Diaries, 1895-1899, Vertical File MS, UAF Archive.

¹⁴⁸Adney, Klondike Stampede, 449.

¹⁴⁹McCrae diary, July 8, 11, 1899.

¹⁵⁰McCrae diary, July 12, 1899.

to local restaurants for a dollar apiece.¹⁵¹ They fished through the winter as well, catching brook trout through the ice on the creeks, and storing the fish frozen through the winter.

In 1899, in the face of this zealous fishing, the Canadian Minister of Marine and Fisheries in Ottawa authorized the Mounties in Dawson to issue licenses for domestic and commercial fishing, and to seize unlicensed nets. The Ottawa officials knew nothing about salmon, however. They requested information from Dawson, and left it up to the Dawson officers to determine which waters could support commercial fishing. They prohibited fishing on Sundays and Mondays, and ruled that a Canadian miner's certificate licensed miners to fish only while prospecting, and not while living in Dawson.¹⁵² Frank Purdy and his partner tried to fish from a small boat on the Yukon and Klondike in the summer of 1899, but found out they needed a \$10 license to fish for their own use, and \$30 to fish commercially. They gave up and went hunting.¹⁵³ James McCrae, himself Canadian, railed against such regulations. "Our generous government here has issued a Fisherman's License only \$20.00 to fish for the market and fish is only 10 cents per Lb....this Governour is very generous towards the Americans and Heathens but O God dont they sock it to the Canadians....Well I guess our fishing is knocked in the head."¹⁵⁴

The combination of increased harvests by both Indian suppliers and white miners

¹⁵¹Ballou letter, Sept. 18, 1898.

¹⁵²Inspector of Fisheries, Monthly Reports, 1899, Govt. no. 1888, Series 3, File 2019, Yukon Archive Government Records.

¹⁵³Purdy diary, July 10, 14, 1899. The fee for domestic fishing dropped to \$2 by 1901. Govt. #1888, 3, File 2019, Yukon Archive Government Records.

¹⁵⁴McCrae diary, July 12, 17, 1899.

took their toll on both caribou and moose populations after the turn of the century. Game became scarce in densely occupied areas. The moose population first increased as the caribou shifted elsewhere, but then the moose came under greater hunting pressure and declined.¹⁵⁵ Adney estimated about 150 moose killed in the winter of 1897-98 by both natives and whites, the meat selling for between \$1 and \$3 for a ham.¹⁵⁶ Historian Robert McCandless estimates that with a 1904 population of 9000 people, Dawson City consumed about 600 moose and 2,300 caribou in a year. In 1899 and 1900, with a population of over 15,000, the gold miners would have consumed far greater numbers.¹⁵⁷ After J.C. Cantwell sent men out to hunt moose in February 1900 or 1901, he wrote that the "persistent hunting of the animal in the vicinity of Dall River has no doubt driven it into less accessible localities, and the few killed hereabouts are probably stragglers...."¹⁵⁸ Hunting was not the only factor in decreasing wildlife populations. Forest cutting and massive forest fires "devastated" the Yukon valley, destroying habitat and driving game further from the mines. Native hunters complained of having to travel further and further to find meat.¹⁵⁹ McCandless's history of Yukon wildlife notes "a general widespread

¹⁵⁵Osgood, Han Indians, 156. Thomas Moore, for example, found "game of any sort scarce" around Lake Labarge in the spring of 1898. He saw "only squirrels." Moore account, 1898.

¹⁵⁶Adney, Klondike Stampede, 444.

¹⁵⁷McCandless, Yukon Wildlife, 47.

¹⁵⁸Cantwell, Nunivak, 90.

¹⁵⁹McCandless, Yukon Wildlife, 32. See also Porsild, "Culture, Class, and Community," 117-118.

decline in game and fur bearers," with the Klondike rush.¹⁶⁰ One Mounted Police inspector wrote in 1899 that "A great many moose were brought to town during the past summer and sold....The Game Ordinance was not enforced here last summer. This I think was a mistake as if the quantity of moose that was brought in last summer is brought in every year very few will shortly exist in the country...."¹⁶¹

Inside Consequences

As native peoples and gold miners mixed inside and outside foods in their diets and participated in the supply economy, the melding of inside and outside they created was far from perfect. Its failures affected both miners and Indians, but native peoples and local ecosystems suffered far greater consequences than whites--give or take the odd suicide among egg speculators. Depleted wildlife resources disrupted native subsistence patterns, and white hunters and fishers competed with natives for those resources that

¹⁶⁰McCandless, Yukon Wildlife, 32.

¹⁶¹McCandless, Yukon Wildlife, 32. The Yukon territory set up game ordinances, which included bag limits and seasons, but they were not always enforced. The 1901 game ordinance limited hunters to six caribou, two moose, two sheep and two goats in a year, with no hunting of female game. Such prohibitions made no sense to native hunters, and was widely ignored by both natives and whites. In Alaska, the 1902 game law regulated only market and recreational hunting. There were no restrictions on Indian hunting for food or clothing, or for miners' hunting for food or clothing, or on travelers on a journey. The law set up a 2-month fall season for caribou and moose, and limited all hunting to two moose, four caribou, sheep and goats, and 8 deer, with no killing of female moose, caribou, deer, or sheep. Robert McCandless, Yukon Wildlife, 33-34; 1902 Alaska Game Law, as reported in Rampart Miner, July 22, 1902.

remained, for specific fishing sites, and for the right to sell food to miners.¹⁶² As long as the white population's demand for fresh local food remained high and local wildlife abundant, the natives' niche in the supply economy was flexible and profitable. But the gold mining economy was too unstable to sustain that niche, and native hunters and fishers were easily marginalized when the miners left for other regions or for the outside. Yukon miners disoriented much of native life, especially for bands directly in the miners' path: the Tagish and Inland Tlingit at the upper lakes and along the Upper Yukon, and the Han around Dawson City and Fortymile. The Han, after all, experienced what anthropologist Cornelius Osgood describes as "one of the more concentrated invasions of white men into the north that history has recorded...."¹⁶³ Within a very brief time, Indians gained and then lost a large and profitable market for their meat and fish, and with it a key source of cash and trade goods. At the same time, native access to caribou, moose, fish, and the miners' market all decreased. In 1902 a Mounted Police Officer notified the Dawson Fish Inspector that two "Frenchmen" with licenses were shipping fish to Dawson

¹⁶²McCandless, Yukon Wildlife, 32; Coates, Best Left as Indians, 42; and Kenneth Coates, "Furs Along the Yukon: Hudson's Bay Company-Native Trade in the Yukon River Basin, 1890-1893," BC Studies 55 (Autumn 1982), 78. Hunter Fitzhugh was a prime, and thus perhaps unique example of a miner who hunted for his own food supply. In July 1899 Fitzhugh wrote his grandmother that he had just returned from a ten day hunt. "We killed about 50 squirrels, and caught 100 mountain trout and grayling....And we always had a string of squirrels, grouse and trout hanging up in plain view." Good hunters clearly had little trouble taking great amounts of game. "I killed a great many Ptarmigan this Fall...27 birds with my 22 calibre rifle." Fitzhugh letter, Oct. 29, 1900.

¹⁶³Osgood, Han Indians, 1. Osgood uses the term "disoriented": The net result, according to Osgood, when 30,000 newcomers descended on 3000 total native peoples in the upper Yukon basin, was that the miners "almost completely disoriented the normal activities of the Han." Osgood, Han Indians, 13, 138, 157.

from Little Salmon Lake, a lake "much resorted to by Indians" as one of their summer camps. The Indians complained that it was "not right for these white men to come there as the lake belongs to them, and that if they continue fishing they--the Indians--will not be able to catch enough to keep them from starving."¹⁶⁴

At certain key harvest sites, most notably the Klondike, white fishers did more than compete with natives; they virtually displaced them. When Josiah Spurr floated past the Klondike in 1896, before the Klondike strike, he noted a Han fishing camp of about 200. "At the time we were there most of the male Indians were stationed along the river, eagerly watching for the first salmon to leap out of the water..."¹⁶⁵ Fish sold for as much as \$2 a pound early in the season, but the price dropped to 25 cents in mid-summer.¹⁶⁶ Two years later, James McRae railed at the nets of "Dagoes and Frenchmen" stretched across every available spot. McRae revealed more than his keen sense of ethnicity; he revealed the absence of native fishers, a particular problem for the Han, who depended more on fish than on caribou and moose.¹⁶⁷ The Canadian police removed the Han from the Dawson site and placed them on a government reserve down the river at Moosehide.

¹⁶⁴Letter, Comm. Z.T. Wood, NWMP to T. Stewart, Fish Inspector, Dawson, July 2, 1902, Fisheries, Govt. no. 1888, Series 3, File 2019, Yukon Archive Government Records.

¹⁶⁵Spurr, Through the Yukon Gold Diggings, 105.

¹⁶⁶Adney, Klondike Stampede, 449.

¹⁶⁷Crow and Obley, "Han," 507; Osgood, Han Indians, 115, 154.

From there, the Han actively traded and worked in Dawson, but they lived separately.¹⁶⁸ The displacement had clear effects. As Charlene Porsild points out, Spurr observed 200 Indians at the mouth of the Klondike in 1897, but in 1901 there were only 81 people living at Moosehide.¹⁶⁹ Even where natives continued to fish and hunt in accustomed places, they did so alongside whites. "An Indian has just left me...as he had a salmon camp a few hundred feet from my cabin," Hunter Fitzhugh wrote from near Rampart City in July 1900. "I like to be near the Indians. They are good neighbors and are always finding something queer in the way of fish or animals--I mean flesh. The salmon are running now, and I saw an Indian woman catch two yesterday, one weighing 45 pounds and the other 25. I will set a net too, and catch a lot this summer."¹⁷⁰ A month later he reported catching "a great many salmon," up the river. "Every day I go up to my nets and take out from three to ten salmon weighing between 12 and 30 pounds."¹⁷¹

Indians not only found themselves squeezed out of fishing sites, they also faced competition when they went to sell their fish. White suppliers sold meat and fish as well, and thus sought to exclude native sellers in order to maximize their own gains. As a

¹⁶⁸Coates, Best Kept as Indians, 84-85. The Moosehide band often came in to the ACC store to exchange furs, firewood, and meat for goods or vouchers for goods. See Margaret Archibald, A Substantial Expression of Confidence: The Northern Commercial Company Store, Dawson, 1897-1951 (Ottawa: Parks Canada and Environment Canada, National Historic Parks and Sites Branch, 1982), 42.

¹⁶⁹Charlene Porsild, "Culture, Class, and Community," 105-106.

¹⁷⁰Fitzhugh letter, July 5, 1900.

¹⁷¹Fitzhugh letter, August 1, 1900. See also Porsild, "Culture, Class, and Community," 117-118.

result, natives were pushed to the social and economic margins of white northern society.¹⁷² Although the white population of the upper Yukon and Alaska dropped considerably after 1900—to 6,000 Indians and whites by 1912--the competition for fish continued. After all, there were fewer whites buying fish, so they were more easily supplied by a few white fishers. The Indians' supply niche, established in the population boom of the initial rush, slowly closed.

The local Canadian government responded with licenses and regulations that protected natives by banning all trade in fish on Indian reserves when Indians were subsistence fishing.¹⁷³ Conflicts continued, however, through the first decade of the 20th century. Euro-American commercial grayling fishers ignored license laws and set illegal small-mesh nets in the rivers and creeks around Dawson, took tons of fish, and sold them openly "exposed to view on the sidewalks of Dawson."¹⁷⁴ While white fishers ignored laws that limited their own catch, they sought to enforce laws that kept Indian fishers out of the Dawson market. Chief Silas of the Moosehide Indian village approached a Mountie in 1909 and reported that a white fisherman had told Silas's son that he could be arrested for selling salmon to a restaurant and meat market in Dawson--an apparently illegal activity. The Fishery Inspector, Horace McKay explained that it was indeed illegal for Indians to sell fish, but that in practice he "had never paid any attention to Indians

¹⁷²Coates, "Furs Along the Yukon," 75-77.

¹⁷³Fish Regulations for Manitoba, Saskatchewan, Alberta, Northwest Territories, 1907, Fisheries, Govt. no. 1888, File 2019, Yukon Archive Government Records.

¹⁷⁴Letter to Judge Dugas, Dawson, May 23, 1907, Fisheries, Govt. no. 1888, File 2019, Yukon Archive Government Records.

unless absolutely compelled to do so."¹⁷⁵ Silas then composed his own letter:

We wish to know why the fishermen in Dawson will not allow the Indians to sell salmon in town. Some of our people went to Dawson on Saturday but had to return with their fish not having been allowed to offer them for sale. We wish to know if we are at liberty to sell salmon, and if so, to ask for protection when interfered with."¹⁷⁶

The gold rush affected how, where, and why native peoples hunted, fished, and marketed their catch. But the greatest change may have been in what they themselves ate. Though some Yukon bands had incorporated European foodstuffs into their diet before 1898, the scope and scale of Indians' use of "outside" food increased dramatically with the Klondike rush. Indians ate the miners' foods, while miners ate the Indians' customary foods, like moose and caribou. According to Cornelius Osgood, who studied the Han in the twentieth century, the rush began an "almost complete displacement of the aboriginal foods by the ones sold in stores."¹⁷⁷ Natives continued to hunt and fish, but they sold fish and game to miners for flour, bacon, tea, sugar, butter, syrup, and dried fruit.¹⁷⁸ This exchange was far from even. Miners expanded their resource base and their food supplies by eating salmon and caribou and berries--the richest and most nutritious foods the northern ecosystem had to offer. Indians benefitted from flour and sugar and crackers, in that they took much less labor to procure, and were less seasonal and perishable than

¹⁷⁵Letter to Commander, B Division, Dawson, July 17, 1909, Fisheries, Govt. no. 1888, File 2019, Yukon Archive Government Records, Yukon Archive.

¹⁷⁶Letter from Silas, Moosehide Indian, to NWMP, July 12, 1909, Govt. no. 1888, File 2019, Yukon Archive Government Records, Yukon Archive.

¹⁷⁷Osgood, Han Indians, 139.

¹⁷⁸Moore account, 1898; Osgood, Han Indians, 139-140.

local foods. Because they often lacked cash, however, native peoples adopted only the lower, inexpensive tier of the miners' diet, rather than the more expensive and nutritious outside foods. As miners' tables grew richer, the Indians' tables grew poorer.¹⁷⁹

Of course, white miners experienced dietary displacement as well, as evidenced by scurvy. The seasonal influx of varied upper-tier foodstuffs demonstrated the miners' ability to transport their "home" culture great distances, but the seasonal variations in what foods could be transported created problems. Alaska was not the lower 48. Many miners depended heavily on the lower-tier diet, especially in the winter, and the endless slabs of bacon spoke to the miners' displacement from home. Miners soon discovered that they could eat their fill of bacon and bread and beans all winter long, and still become frighteningly ill with scurvy. Their legs turned black and swelled, making it difficult to walk. Their gums bled, and their teeth loosened. These miners learned the mysterious nature of their own bodies, and the physiological problems inherent in leaving home for an environment in which some crucial dietary element was missing from their diets. Scurvy was a sign that gold miners were ecologically out of place, out of easy proximity to the usual sources of Vitamin C on which their bodies depended--fresh fruit,

¹⁷⁹The work that Indians did supplying miners with food was only one part of the larger story of the effects of the Klondike/Alaska gold rush on native peoples along the Yukon. But it was a significant part of the story. This supply work re-shaped native patterns of subsistence in several ways. Catherine McClellan argues that the 1898 rush "radically changed" the lives of many Yukon peoples and "virtually destroyed" the Han. McClellan, "Intercultural Relations and Cultural Change in the Cordillera," *Subarctic*, 394-395. McClellan writes of the "cataclysmic" nature of the Gold Rush in which "Yukon Indians confronted...an overwhelming mass of new knowledge and new ways of doing things." McClellan, *My Old People Say*, 65.

potatoes, tomatoes--and to the ecosystems that produced those foods.¹⁸⁰ In March 1899, having survived a long winter of pea soup and beans, McCrae visited a friend at a Dawson hospital. "There are a lot of men in there mostly all cases of scurvy," he wrote.¹⁸¹ Bill Ballou himself got scurvy his first winter in Alaska. His legs turned black, but with medicine and fruit he recovered. He found scurvy "quite prevalent" in Rampart City in 1898-99.¹⁸² McMichael's partner Boyd and friend Ed both got scurvy that fall and winter

¹⁸⁰Although my discussion here focuses on scurvy, dysentery and typhoid played a serious role, especially in Dawson. Dawson's swampiness combined with the total lack of sewage facilities to foul the water supply in the hot weather in the summer of 1898, which led to typhoid fever and dysentery, as well as malaria R.M. Courtney wrote on Sept. 28, 1898, "The town is also lately without sewage, and, being on marshy ground, the water is impure." Adney reported only two outhouses in town for over 20,000 people. James Lynn Anderson suffered badly; after spending the entire winter frozen in at "Suckerville" on the lower Yukon, he arrived at Dawson in June and immediately "got the bloody flux," and remained ill until August. "I cam out better than Hundreds of other poor Fellows who between Flux and Fever were laid away in Dawson burial place." (Anderson diary, vol. 2, summer 1898). Adney estimated three or four deaths a day from typhoid, malaria, and dysentery. It was definitely worst in the summer and fall of 1898. "There has been a large amount of malaria and typhoid fever this fall, but now it is turning cool and the sickness is disappearing," Courtney continued in September. The U.S. Consul reported over 200 cases of typhoid in Dawson in October 1898. By the following March, however, the city instituted cleaning rules for privies, pipes, and water closets, and forced everyone to take drinking water higher up on both the Yukon and the Klondike, above the heaviest areas of settlement. By spring, there were ditches draining the Dawson flat, and plans in place to pipe clean water to town from up the Klondike river. Although there were further cases of typhoid in 1899, Dawson became much healthier, and had clean water that summer. See Marks, *Precious Dust*, 234; Adney, *Klondike Stampede*, 429. Courtney diary, Sept. 28, 1898; U.S. Consul letters, Oct 20, 1898; March 1899; May 24, 1899; June 8, 1899; June 20, 1899; July 28, 1899. Kearney letter, May 29, 1899, also describes draining and sewer system in spring of 1899, and enforcement of sanitary regulations. See also M.K. Lux, "Disease and the Growth of Dawson City: The Seamy Underside of a Legend," *The Northern Review* 3/4 (Summer-Winter 1898), 97, 114-115.

¹⁸¹McCrae diary, March 30, 1899.

¹⁸²Ballou letter, June 10, 1899.

as well. The U.S. Consul at Dawson reported scurvy in Dawson as early as August 1898, but reported the cases increasing at an "alarming" rate by December 1898, especially amongst destitute miners without proper food.¹⁸³ The most famous of Robert Service's moilers for gold, Sam McGee, was a fictional creation based on a man who died of scurvy and was cremated in the firebox of a steamer.¹⁸⁴

The miners' displacement from accustomed sources of ascorbic acid was a matter of culture and ignorance as well as nature. There were local, but less familiar, sources of this nutrient at hand. According to all reports and observations, Native Yukoners rarely if ever suffered from scurvy. They derived an adequate supply of ascorbic acid in part from moose and caribou liver, but mostly from plants: blackberry (mossberry), raspberry (cloudberry), blueberry (bearberry), cranberry, strawberry, other berries, wild rhubarb (meadowdock), spruce bark, possibly willow leaves, and a plant called mousenut. Indians dried or preserved berries in fat for winter storage.¹⁸⁵ Miners tended not to see

¹⁸³U.S. Consul letter, August 2, 1898; Dec. 21, 1898. See also E. Hazard Wells, "Up and Down the Yukon," in Compilation of Explorations in Alaska, 1869-1900, 515. Wells wrote of Dawson in December 1897 that "There was more than a dozen cases of scurvy, well defined, in Dawson before I left there on December 20. Dr. Chambers, one of the most experienced physicians in the place, told me that he expected that several hundred of the disease, and possibly many more would develop in camp before next spring."

¹⁸⁴Barry C. Anderson, Lifeline to the Yukon: A History of Yukon River Navigation (Seattle: Superior Publishing, 1983), 47.

¹⁸⁵Karen B. Morehouse, "Alaska Native Diet and Nutrition: An Ethnohistorical View," (M.A. thesis, University of Alaska, 1981), 7-8, 11-18. Morehouse cites only a few reports of scurvy among Indians, 48. She also reports the vitamin C content of common native foods, as measured in the 1950s. Moose: 4 mg/100g; smoked salmon: 3 mg/100g; fresh salmon: 5-13 mg/100g; ptarmigan: 7 mg/100g; willow leaves: 298 mg./100g; salmonberries: 115 mg/100g. A current nutrition text provides vitamin C

this diversity in the Indians' diet. They saw Indians eating fish and meat, and assumed that native peoples were physiologically different--that they did not, unlike whites, require other foods. Here a cultural difference in diets appeared natural. Josiah Spurr saw lower Yukon Eskimos eating only fish. "[W]hite men can hardly become so simple in their diet," he wrote, "without some danger of dying in the course of the experiment...."¹⁸⁶

Along the gold creeks, scurvy spawned all sorts of theories and cures, most of which circled the truth. According to E. Hazard Wells, writing from Dawson in December 1897, "Dr. Chambers, one of the most experienced physicians in the place...attributed the disease to improper diet, or rather the lack of sufficient variety in food."¹⁸⁷ Others attributed it to eating too much of any one food, like pork or beans, or poorly cooked food, a serious problem among men who had never cooked before. Nora Crane described mining to a friend: "The work is hard and you must do your own cooking (which is a great drawback for one gets scurvey easily)...."¹⁸⁸ Others blamed rotten food or a lack of fresh meat and vegetables. Because the disease was far more

contents for other foods: raw blackberries: 30 mg/cup; raw blueberries: 20 mg/cup; raw strawberries: 88 mg/cup. See Ioannis S. Scarpa and Helen Chilton Keifer, con. eds., Sourcebook on Food and Nutrition, 1st ed. (Chicago: Marquis Academic Media, 1978), 73-101. The U.S. Recommended Daily Allowance of Vitamin C for adults is between 50 and 60 mg.

¹⁸⁶Spurr, Through the Yukon Gold Diggings, 113.

¹⁸⁷Wells, "Up and Down the Yukon," 515.

¹⁸⁸Nora Crane letter, July 11, 1898; Adney, Klondike Stampede, 350-51, listed the causes as a lack of fresh meat and vegetables, or badly cooked food as well.

prevalent in the winter, when miners had little access to fresh food, they also, understandably, blamed a lack of sunlight and physical exercise.

In searching for the dietary cure for scurvy, miners resorted to local as well as outside foods. The most commonplace hospital cures in Dawson and Rampart--spruce leaf tea and raw potatoes--typically drew from both categories.¹⁸⁹ Although chemists had yet to pinpoint vitamin C per se, sailors and other adventurers had long known that citrus fruit prevented scurvy, and most Klondike outfitters sold lime juice or citric acid as part of every gold miners' pre-packaged set of supplies. Walter Curtin's party, in winter quarters on a stranded steamer, used citric acid and lime juice to ward off scurvy; a nearby party, from Chicago, lost an old man to the disease.¹⁹⁰ Miners also ate canned tomatoes, and dried apples and prunes, as preventatives. Thomas Moore, cutting wood on the Koyukuk, ate dried fruit two or three times a day to keep scurvy at bay.¹⁹¹ After hearing of scurvy among woodchoppers and at Rampart City, Lynn Smith immediately sat down and "ate a quart of canned cherries."¹⁹² And stories about the curative powers of potatoes circulated quickly. McMichael purchased an expensive load of evaporated potatoes at Circle City in August 1898. "They come high though, but, in spite of that, I

¹⁸⁹Lux, "Disease and the Growth of Dawson City," 101. Adney, Klondike Stampede, 350-351. See also Gates, Gold at Fortymile, 45-46. Among doctors and others who cared for the sick, it became common knowledge that both raw potatoes and tea made from spruce leaves and bark, or poplar bark, cured scurvy.

¹⁹⁰Curtin, Unofficial Log, 98, 102. Archibald, Grubstake to Grocery, 29.

¹⁹¹Archibald, Grubstake to Grocery, 29; Hiscock diary, Feb. 2, 1899.

¹⁹²Moore account, 1898, Yukon Archive; Smith letters, March 2, 16, 1899.

am going to take fifty pounds with me to camp, at 50 cents a pound. Boyd will think this awful extravagance but I think it economy for they are a good scurvy preventative. Raw potatoes eaten every day will cure scurvy. That is what they feed patients at the hospital here, two or three raw potatoes a day."¹⁹³

Processed fruits, citrus products, and evaporated potatoes all had drawbacks invisible to the miners. Vitamin C is the most unstable of all vitamins, and does not survive heating, processing, or dehydrating well.¹⁹⁴ Prunes, raisins, cranberries, apricots, and peaches all lose all or most of their vitamin C when dried. If dried fruits are then cooked, they lose whatever ascorbic acid remains. Fruits lose up to half of their vitamin C content when canned. Tomatoes and potatoes, both crucial sources of vitamin C for gold miners in the 1890s, lose over 70% of their vitamin C in the canning process.¹⁹⁵ As much of potatoes' nutrient value is in their skins, miners eating dehydrated peeled potatoes may well have done themselves little good with regard to ascorbic acid.

This loss of vitamin C may explain why miners eating processed fruit still became ill. It also explains why miners often turned to fresh food to cure scurvy. Some of that fresh food--beef and potatoes--came from outside, but some was local meat and fish that miners believed warded off the disease. In January 1899, Frank Purdy sent his partner to

¹⁹³McMichael letter, August 27, 1898.

¹⁹⁴Henrietta Fleck, Introduction to Nutrition, 4th ed. (New York: Macmillan, 1981), 187.

¹⁹⁵Miloslav Rechcigl Jr., ed., Handbook of Nutritive Value of Processed Food, Vol. I: Food for Human Use (Boca Raton, FL: CRC Press, 1982), 303-309; 353; 488. If dried fruit is sulfured in the process, the Vitamin C is retained.

town for fresh meat and potatoes, as "we have both got scurvy."¹⁹⁶ McMichael's partner Boyd came down with symptoms of scurvy in October 1898 "Well, soon after they began to catch salmon," McMichael wrote, "and the fresh fish drove every symptom away in a few days." His faith in fresh meat, which contained comparatively little vitamin C, led him to trade sixty pounds of bacon to a neighbor for 45 pounds of moose meat."¹⁹⁷ "We will have plenty of fresh meat this winter," he wrote in another letter, "and that will drive it away."¹⁹⁸

McMichael's trade for fresh moose meat--quite possibly purchased from native hunters-- points to an obvious difference. The miners' dietary displacement and disease was minor compared to that experienced by native peoples. Miners had far more economic resources at hand to deal with shortages of customary foods from home. Their industrial economy managed to transplant most of their home diet north with them. Their governments--Canadian and American--acted quickly to avert famine among stranded miners. A contingent of Mounted Police turned back poorly supplied miners at the Chilkoot summit. The U.S. Army dispatched relief expeditions, with mixed success, to supplement supplies along the Yukon, and assist destitute miners in gaining passage home. Army officials also attempted to aid hungry Indians, but not systematically.¹⁹⁹

¹⁹⁶Purdy diary, Jan. 25, 1899.

¹⁹⁷McMichael letters, October 27, 1898; Nov. 28, 1898; Dec. 1, 1898.

¹⁹⁸McMichael letter, August 27, 1898.

¹⁹⁹See Capt. P.H. Ray, "Relief of the Destitute in Gold Fields," Lieut. W.P. Richardson, "Report of an Expedition into Alaska," and Capt. P.H. Ray and Lieut. W.P. Richardson, "Suffering and Destitute Miners in Alaska, And What Was Done For Their

Native peoples not only lacked those formidable resources and outside support, they also faced repeated waves of infectious diseases that, in combination with shifting subsistence patterns and diet, left them susceptible to social disintegration. When white miners carried bacon and flour and guns into the interior, they also carried measles and smallpox. Yukon Indians had had no historical exposure to these and other diseases, and thus no biological defenses. As Frederick Schwatka himself noted, the Yukon was "a great thoroughfare for contagious disease."²⁰⁰ Food and disease moved along the same channels, and they shared a double environmental aspect. They were both connected with outside environments and both took on a physical presence in Alaska. They were both themselves embodied--incorporated into Indian and white bodies--with very different results, given the previous environmental history of those bodies.

Epidemics swept the Yukon interior at contact and throughout the fur trade period, reducing an interior population estimated at 7000 to 9000 to 3000 or 4000 people by 1895.²⁰¹ The great influx of 40,000 white miners in the 1890s brought new epidemics,

Relief," in Compilation of Narratives of Explorations in Alaska, 1869-1900 (Washington: GPO, 1900), 497-504, 504-507, 519-560.

Lieut. Richardson wrote in 1898 from Fort Yukon that "A small supply of provisions left in my charge for certain sick and destitute Indians was distributed; also, such of my own stores as could be spared. These proved sufficient, in my best judgment, for all cases of actual want, and I was not called upon to place the Government under any additional obligation to relieve distress." From "Report of an Expedition," 504.

²⁰⁰Quoted in Osgood, Han Indians, 134.

²⁰¹Coates, Best Left as Indians, 9. Hudson Bay Company boat crews brought scarlet fever in 1855, and up to 200 natives died at Fort Yukon. The Upper Stikine Tahltan population fell by as much as 3/4 in the early 19th century, through contact with coastal Indians. Information is thin at best, but there are indications of epidemics among the Chilkoot Tlingit, Tagish, and Han in the fur trade period as well. See Coates, "Furs

including measles, influenza, diphtheria, dysentery, and typhoid.²⁰² Unlike dietary deficiencies like scurvy, these disease had nothing to do with food per se, but native peoples' niche in the supply economy brought them directly into the vectors of these diseases. As they moved in and out of mining camps and towns they were constantly exposed to illness, which prevented them from hunting and fishing. This led to further sickness, hunger, and reliance on Euro-American store-bought food. Angela Sidney, a Yukon native born in 1902, recounts how her parents lost four young children to a German measles epidemic at Skagway in 1898. "Oh...lots of kids died off, they say, in Juneau and all over," Sidney recalled her mother saying. Her father was working as a freighter on the trails. "They're freighting over the summit toward Bennett," Sidney explained in an oral history story. "They get paid for packing stuff, flour, soap, everything like that."²⁰³ Some native peoples had become accustomed to supplies of flour and sugar through the fur trade, and to rifles and ammunition which they used in hunting. With the gold rush, white traders turned their attention to the miners, leaving native peoples with less access to these supplies. This pushed Indians further from subsistence hunting and into the gold rush economy, in search of cash. U.S. Army Captain P.H. Ray reported such a case in January 1898, when he encountered a band of destitute Porcupine Indians at Ft. Yukon.

Along the Yukon," 69; Bruce B. MacLachlan, "Tahltan," Subarctic, 460; Crow and Obley, "Han," Subarctic, 510-511.

²⁰² Research on the Han, who worked closely with whites, especially at Dawson, mentions diphtheria in particular. Crow and Obley, "Han," Subarctic, 510-511.

²⁰³ Cruikshank, Life Lived Like a Story, 21, 52, 58, 150.

The old local trader here (Mr. Beaumont), who has heretofore supplied their wants, taking their peltries in exchange, was unable to have any stores delivered at this point last summer, as the mining interest assumed such magnitude as to practically obliterate the Indian trading interests, and no attention has been paid to supplying the natives with the necessaries, such as arms, ammunition, blankets, etc.; and even where the companies have any supplies such as the Indians require the prices are such as to practically render it impossible to support themselves by the chase, for the price of such goods has been advanced over 100 per cent. The present outlook for these people is most serious.²⁰⁴

The intersection between Euro-American food supplies, disease, and culture among Yukon natives was born out in a tragic Tagish story from 1898, told by Yukon elder Kitty Smith. According to her story, a Tagish family at Marsh Lake came across a white cabin, and found some baking powder in a can. They had some flour, and used the baking powder to make bread. The can contained arsenic, however, which whites used to refine gold, and a young boy and his grandfather died from eating the bread. One version of events recognized this as an accident. Another saw it as deliberate poisoning. Four Athapaskan men--members of the victims' Crow moiety--avenged the deaths according to custom. They killed a white prospector, and wounded another. The Mounted Police quelled this "uprising" by arresting the men, and trying them for murder at Dawson; two died in the hospital, and two were hanged. Members of the immediate band--the Marsh Lake Crow moiety--came home to Marsh Lake (adjacent to Tagish Lake and on the main route to Dawson) to deal with the tragedy, but were caught up in an influenza epidemic,

²⁰⁴Letter, Captain P.H. Ray, to Adjutant-General United States Army, Fort Yukon, Alaska, July 5, 1898, in Ray and Richardson, "Suffering and Destitute Miners," 551. Ray's subordinate, W.P. Richardson, spent the winter of 1897-1898 at Fort Yukon, where he wrote: "Much sickness prevailed among the Indians, principally of a pulmonary character. From the missionary's report I find that 19 died since the 1st of last August." See Richardson, "Report of an Expedition into Alaska," 505.

and many of them died as well. Kitty Smith's own mother died in this epidemic: "She came back to Marsh Lake that time the rush started. Dawson was just full of white man! Nobody knows what kind of sickness Indians got. They just got sick. Lots of people died at Marsh Lake. That's the time she died, too."²⁰⁵

Miners did not always understand that they themselves posed a danger to their Indian neighbors, but the miners nonetheless recorded ample evidence of the ways in which outside diseases played out in natives' bodies. They often tried to help. James Lynn Anderson spent the winter of 1897-98 frozen in on the Yukon near the mouth of the Tanana. He observed some kind of epidemic among nearby Indians, with whom he traded for moose meat. He got to know them well, treating them for earaches and stomach pain. "I am their doctor," he wrote, "am using pills, Quinine, mustard plasters."²⁰⁶ At another steamer camp near the Russian Mission, Walter Curtin observed his father's ministrations to native peoples who seemed ill: "Papa used to line them up and feed them stewed apricots, canned fruit, and so forth, with a large spoon."²⁰⁷

J.C. Cantwell and the crew of the Nunivak traded with a native band at the Dall River in 1899 and 1900. Cantwell reported that the Indians suffered unduly in the middle of the winter from lack of food. Native groups often went through periods of starvation or near-starvation in late winter, when stored food resources dwindled, but Cantwell

²⁰⁵Cruikshank, Life Lived Like a Story, 161, 166, 176.

²⁰⁶Anderson diary, vol. 2, December 1897-January 1898.

²⁰⁷Curtin, Unofficial Log of the Steamer Yukoner, 185. Curtin thought the "Siwashes" were sick from eating too much of this fruit, that the whites' food was not good for them in large quantities.

observed that some sort of illness, characterized by rashes and skin disease, had prevented them from catching and storing the fish that usually saw them through until the late-winter hunt. Cantwell provided them with food, but felt they had to work for it, inducing some to cut wood for the Revenue Cutter. This was unsatisfactory to Cantwell, however, who found them "shiftless" and unwilling to work hard for the food they needed.²⁰⁸ Just down river at Rampart City in December 1903, Lynn Smith described the Indians trading furs at the NATT store as suffering from something that could have been smallpox. They were "half starved and almost naked all sore eyed and jerking with disease. Leprosy or something of that order."²⁰⁹

In the summer of 1900, American officials at St. Michael made a valiant effort to prevent smallpox from reaching the mouth of the Yukon and spreading upriver. They quarantined all incoming ships and fumigated the mail. But they could not control all diseases. While smallpox was contained, measles spread 1000 miles up the river from the coast, followed by a wave of pneumonia. Cantwell reported the natives "dying like flies" as he traveled up river with supplies for the sick in August 1900. He saw much evidence of suffering, including corpses left unburied at native camps. When he arrived at Dog Fish Village, he found only 7 survivors of 27 people he had met before.²¹⁰ He also saw empty Indian food caches, which indicated a lack of food stored for the winter, due to

²⁰⁸Cantwell, Nunivak, 87. On late winter lean times, see Hosley, "Environment and Culture in the Alaska Plateau," Subarctic, 544.

²⁰⁹Smith letter, Dec. 17, 1903.

²¹⁰Cantwell, Nunivak, 67-69.

illness.²¹¹ There were dysentery, typhoid, and smallpox outbreaks, nonetheless, at Nome in 1899 and 1900, as the city was plagued by sewage and garbage, and had no drainage ditches.²¹² In the summer of 1900 whites fled Nome by ocean steamer, but native peoples, according to Fred G. Kimball, died "like poisoned rats."²¹³

Outside Consequences

These disruptions and changes in Indians' bodies and miners' bodies represented the most immediate, personal side of the knitting together of outside and inside environments. There were far reaching changes for the outside world as well, though not as a direct result of Yukon gold mining. Large-scale grazing, dairying, farming, and food processing fueled the miners' bodies and labor in the Yukon and Alaska, but those industries had long since changed the world outside the Yukon, as farmers and ranchers converted western prairies and valleys into the most productive crop and grazing land on earth. In short, miners along the Yukon had relatively easy access to fresh and processed foods because capitalism had already transformed the American West into an agricultural empire, comprised of a set of economic hinterlands: California's Central Valley, the northern and central plains, and the inland Northwest. In eating canned beef and white

²¹¹Cantwell, Nunivak, 70.

²¹²Terrence M. Cole, "A History of the Nome Gold Rush: The Poor Man's Paradise," (Ph.D. diss., University of Washington, 1983), 87-88, 111-112. See also E.M. Rininger, M.D. "Scourge of the Mining Camps: Typhoid Fever in Alaska," Alaska Journal 15 (Winter 1985), 29-32.

²¹³William H. Wilson, "To Make a Stake: Fred G. Kimball in Alaska. 1899-1909," Alaska Journal 13 (Winter 1983), 109-110.

flour, dried peaches and roast beef, miners linked themselves to those places, to a nature re-made by intensive agriculture.²¹⁴

Just as gold miners disassembled Yukon creeks to produce gold, western producers reorganized tallgrass and shortgrass prairie, high desert, and rich valley bottoms to produce the imported plant and animal species that constituted Euro-American food. As William Cronon argues, wheat and corn farms were "radical simplifications of the grassland ecosystem," that borrowed centuries' of stored sunshine and nutrients to fuel an unprecedented boom in agricultural production. "The general tendency," Cronon continues, "was for people to replace natural systems with systems regulated principally by the human economy." Ranchers converted buffalo range to cattle and sheep range, overgrazed big and littlestem grasses, and spread exotic weeds shunned by the stock. In California, fruit and vegetable growers diverted rivers to reclaim desert lands for raisins and peaches. Cattle and grain and fruit absorbed the accumulated "stockpile" of solar energy stored in rich western soils, and gold miners drew on that organic energy in their search for an entirely different sort of natural wealth.²¹⁵

As dependent as they were on these outside foods, 40,000 or 50,000 or even 100,000 miners represented only a tiny fraction of the population supported by the West's agricultural empire. As a group, Yukon gold miners were not primary agents of the intense ecological change that swept through the West as a whole, though their demands did play a role in reshaping the Pacific Northwest. They hitched a ride with an economy

²¹⁴Cronon, Nature's Metropolis, 146-147.

²¹⁵Cronon, Nature's Metropolis, 145, 150, 212-214, 221-223.

that had already transformed the region, and their presence in that economy registered as a healthy but subordinate blip on the region's economic map. The broader economic transformation of the West enabled many other transformations, including those along the Yukon and in Washington state. Gold miners had a significant impact in the north, however, which reflected the larger changes unfolding outside. In the Yukon and Alaska, they brought a temporary ten-fold increase in the population, and directly affected seasonal ecosystems. Even a few thousand newcomers increased pressure on scarce resources. Gold miners' food consumption connected them to both outside and inside economies, but their relative impact on those regions was decidedly unequal. Though they ate far more outside food than inside food, they changed the inside world far more drastically than the outside.

Gold miners did not strain the outside food production economy which supplied them, but their connections to that economy only grew stronger over the course of the Yukon/Alaska gold rushes. By 1899 and 1900, the miners even began to transcend the tin can. More efficient links to the outside allowed miners to fully reproduce their accustomed diets, right down to roast beef and fresh potatoes. The arrival of these cultural staples represented the nearly complete merging of outside and inside into a single industrial economy in which the outside/inside distinction had far less power and meaning in material life. Miners resembled other late-19th-century consumers in their predilection for fresh meat, specifically fresh beef. By the 1890s, advances in meatpacking, transportation, and refrigeration had made it possible for urban consumers

to purchase and serve fresh beef at low prices.²¹⁶ Middle- and upper-class consumers rejected salt pork as an inferior, lower-class, unhealthy food, and celebrated beef as the healthful, high-status alternative, for three meals a day.²¹⁷ Yukon gold miners carried these cultural preferences to the Yukon, where they ate bacon and beans but aspired to beef and potatoes. Caribou and moose meat provided a certain middle ground, but did not meet the cultural standards required for true high-status dining.

The natural obstacles that kept fresh beef rare and expensive at the start of the Klondike rush, when the only way for steaks to get to the Klondike was for them to walk and take the steamer, slowly yielded to new means of transport. In the mid-1890s, Jack Dalton established the Dalton Trail over Chilkat Pass. This route led from the Lynn Canal at Haines Mission, just south of Skagway, over the mountains to the Yukon at Ft. Selkirk. The trail was far too long--over 200 miles--for prospectors on foot, but drovers took at least forty cattle across in 1896, loaded them on scows, and took them downriver to be slaughtered at Fortymile.²¹⁸ This was the most efficient way to get fresh meat to the miners. As John Callbreath wrote in 1898, in response to a friend's idea of bringing frozen meat up the Stikine River, "the frozen mutton proposition is out of the

²¹⁶Cronon, Nature's Metropolis, 234-35.

²¹⁷Richard White, "Animals and Enterprise," in The Oxford History of the American West, ed. Clyde A. Milner II, Carol A. O'Connor, and Martha A. Sandweiss (New York: Oxford University Press, 1994), 252, 256; Levenstein, Revolution at the Table, 21.

²¹⁸Allen A. Wright, Prelude to Bonanza: The Discovery and Exploration of the Yukon (Sidney, B.C.: Gray's Publishing, Ltd), 232-233, 275. Catharine McClellan, "Tutchone," Subarctic, 503.

question....Meat of all kinds can walk into that country for cheaper than it can be hauled."²¹⁹

When the crowds arrived in 1897, other entrepreneurs took stock over in greater numbers. Sam Dunham reported 350 cattle and 1,550 sheep arriving in the fall of 1897, and 2000 cattle came across the Chilkat route in the summer of 1898.²²⁰ In the fall, drovers would hold the animals at the end of the trail until the freeze, then slaughter them and ship the frozen meat down river. James Cooper's party passed the place where the Dalton Trail met the Yukon, below Five Fingers Rapids, as they raced toward Dawson in October 1897. "[S]ee four men who have just butchered about 20 head of cattle, they came over the Dalton Trail and are freezing them to take to the mines."²²¹ This was a risky business. Cattlemen had to bring expensive feed over the passes as well, and then face the risks of losing the entire investment on the river. Tappan Adney ran into some men on the Yukon who asked if he had seen a missing raft of beef. The owner had driven 70 head of cattle over the Dalton Trail and butchered them below Five Fingers Rapids, only to lose them on the river.²²²

²¹⁹Callbreath letter, March 28, 1898.

²²⁰Archibald, Grubstake to Grocery, 148.

²²¹Cooper diary, October 9, 1897.

²²²Adney, Klondike Stampede, 168-169. Samuel C. Dunham, The Alaskan Gold Fields (1898; repr. Anchorage: Alaska Northwest Pub. Co., 1983), 59. This was originally published as "The Alaskan Gold Fields and the Opportunities They Offer for Capital and Labor," Bulletin of the Department of Labor, No. 16 (May 1898), 297-425. Dunham recorded the perils of livestock drives. One drover, crossing the Chilkat, had 85 cattle sink in quicksand, but 60 of them pulled out and made it to Dawson.

As steamer service improved on the upper and lower Yukon, meat dealers barged live herds safely down from Ft. Selkirk, or up the river from St. Michael's, and then slaughtered them right in town at Dawson. When Mary Hitchcock, an upper-class tourist, visited Dawson in 1898, she visited a butcher to purchase veal, mutton, and brains for a dinner party.²²³ In the summer of 1899, the ACC and NAT&T brought cattle and sheep in for fresh meat, a practice which continued and grew thereafter. The animals themselves came from the interior Northwest and Montana. Seattle meatpacker Charles Bruhn bought cattle from Washington, Idaho, Oregon, and Montana in 1897, which indicates similar sources for cattle brokers shipping animals to Alaska. An August 1897 article spoke of 5000 sheep en route to Seattle from Ellensburg, Washington, and other articles throughout the gold rush reported cattle arriving in Seattle from Walla Walla and Montana for shipment to the Klondike and Nome. Some shipments of live cattle and hogs, however, came from as far away as Kansas City. In 1899 Frye-Bruhn received a substantial shipment for the Alaska trade--17 carloads of live cattle from California.²²⁴

Shipping live cattle, sheep, and hogs to Dawson City, Rampart, and Nome was still an expensive endeavor, however, and the price of fresh meat did not approach outside levels until suppliers transcended the final barrier. In 1899 the Arctic Meat company (of Seattle) fitted ocean steamers and river sternwheelers with liquid ammonia

²²³Mary E. Hitchcock, Two Women in the Klondike: The Story of a Journey to the Gold-Fields of Alaska (G.P. Putnam's Sons: New York, 1899), 100-102, 118, 156, 166, 171, 174.

²²⁴Trade Register (Seattle), August 14, 1897; Oct. 2, 1897, 1; Feb. 22, 1899; May 20, 1899; April 28, 1900, 9.

refrigeration, and shipped fresh cut meats directly to Dawson City. Another transport company, Alaska Meat, contracted with Frye-Bruhn in Seattle to supply 200 tons of fresh meats for the 1899 Yukon season, including 10,000 turkeys, 10,000 chickens, 60 tons beef, 40 tons mutton; the order also included 10 tons of butter and eggs.²²⁵ In the summer of 1900 Cantwell's Nunivak inspected the Steamer Michael Kerr, en route to Dawson with fresh meat and eggs. The crew happily accepted a gift of turkeys.²²⁶ By 1900 meat shippers using refrigerated cars on the White Pass & Yukon Railroad competed with cattle drives over the Dalton Trail and cold storage boats from St. Michael. In June 1901, when the railway announced advance contracts for the new season, it reported a capacity for 1000 tons of perishable merchandise.²²⁷ The railroad so lowered the cost of shipping dressed meat to Dawson that it was almost as cheap as eating moose and caribou.²²⁸ Beef prices at Dawson City fell as low as 30 cents a pound, from a high of over \$2.00 a pound in the early days of 1896 and 1897.²²⁹ As Margaret Archibald points out, these transportation revolutions placed Dawson firmly within the commercial empire of Chicago meatpacking giants like Swift and Armour.²³⁰

As such, the Yukon interior could hardly be said to constitute a fully separate

²²⁵Trade Register (Seattle), May 20, 1899, 29.

²²⁶Cantwell, Nunivak, 72.

²²⁷Trade Register (Seattle), June 8, 1901, 33.

²²⁸McCandless, Yukon Wildlife, 46.

²²⁹Trade Register (Seattle), Feb. 4, 1899, 9.

²³⁰Archibald, Grubstake to Grocery, 148.

inside world. With cold storage trains and steamers, Yukon suppliers broke the final seasonal limits on fresh food from outside. In Archibald's words, it "freed meat from cans."²³¹ Miners at the creeks could sit down any time to a roast beef--or fruit, or eggs--that came from anywhere in the country, or the world. Because the river still froze, such shipments remained seasonal, but storage facilities at Dawson extended the supply of fresh food for months.²³² When it came to food, the Yukon interior was now fully part of the modern world.

Watermelons and Gold

One of Asahel Curtis's more light-hearted photographs, taken in 1913, shows the six children of a Yukon river woodchopper, in summer hats, holding fresh slices of watermelon.²³³ The connections contained in that image range far and wide, for watermelon, like eggs and all other foods, contained both calories and summer fun, nature and culture. Where did that watermelon come from? Whatever its source--most likely Washington or California--it traveled a great distance from the field in which it grew, through a complex set of networks and exchanges, at great costs in money and energy, to end up at a picnic along the Yukon's banks, where the trees were cut away to fuel the boats that carried watermelons. This long journey was a prime example of the ability of

²³¹ Archibald, Grubstake to Grocery, 148.

²³² Archibald, Grubstake to Grocery, 147.

²³³ Richard Frederick and Jeanne Engerman, Asahel Curtis: Photographs of the Great Northwest (Tacoma: Washington State Historical Society, 1986), 65.

the mining supply economy to reproduce such reminders of home, and of the connections that held that economy together.

Although gold miners along the Yukon often endured poor diets of bacon, beans, and bread, they were thoroughgoing modern consumers. They ate many of the same foods as other modern consumers, and that food came from the same--or very similar--places as that of other modern consumers. Whenever possible, miners ate fresh eggs, poultry, meat, and dairy products from the nearest possible truck farms, which for the Yukon were in western Washington state. They ate canned and fresh meat from Chicago stockyards and Seattle butchers, oranges and beans and dried apricots from California, flour from mills in Seattle, Portland, and St. Paul, potatoes from Washington and Idaho, and apples from Wenatchee. At such great distances, gold miners seemed entirely separate from the orchards, farms, ranches, and cities that fed them. But in the the energy that fueled their bodies, they were directly connected to those outside places.

To imagine two groups of gold miners at Christmas dinner, one eating a Porterhouse roast beef and canned peach pie, the other fresh moose and local huckleberry pie, is to imagine very similar scenes--almost indistinguishable. The pathways that those foodstuffs followed to reach those holiday tables, however, could not have been more different. Roast beef and moose steak came from very different places, and the act of eating those meals had far different consequences for native peoples in the Yukon than for farmers and ranchers in the American West. Those meals had far different consequences for the different ecosystems that produced them.

Food, however, was not the only thing that miners carried. They carried diseases,

which devastated native peoples even as those peoples labored to feed miners. And they carried gold, which moved out of the interior as food and supplies moved inside. It was, after all, the presence of gold in the Yukon basin that put thousands of people, tons of food, and invisible infectious diseases in motion. The promise of gold put other things in motion as well: clothing, tools, timber, animals, and the gold itself. Through their bodily labor, miners exchanged the energy stored in food for the wealth stored in gold. The gold's journey out of the ground and into the broader economy mirrored the food's journey in the opposite direction. While it is tempting to conclude that the people, their food, and supplies moved from culture into nature, and the gold itself from nature into culture, neither journey proved so simple. Both journeys were more complicated--embedded in both natural systems and human understandings at both ends of the trail.

Chapter 7: Seattle: Alaska's Emporium and Metropolis

All of the work involved in the Alaska/Yukon gold rush, the work of mining, movement, and supply, connected the Yukon interior to the outside, to the rest of the industrial world. Gold forged these connections through specific places: gateway cities. When Josiah Spurr traveled down the Yukon in 1896, he stopped at the future site of Rampart City, Alaska, where the local people spoke a few telling words of English, including "yes," "no," "steamboat," and "San Francisco," this last term, Spurr explained, "being...a general name for the world of the white men."¹ Before the Klondike, San Francisco stood for the "outside" world. It was the gateway city for the Yukon interior, the urban marketplace which funneled people and supplies to and from the north. Like other gateway cities in the American West, it "served as the entrance and exit linking some large region with the rest of the world."²

With the gold rush Seattle emerged as the new gateway to Alaska and the Yukon, the new linkage to the rest of the world. Gold miners and their outside food supplies came from all over the country and the world, but they came through Seattle on their way north. As gold moved out of the creeks and into the world economy, it too moved through Seattle. The city became the place where the ecological systems that produced flour, bacon, fruit, wool, and lumber met and mixed with those that produced gold. Miners and merchants exchanged all of these commodities in Seattle, turning gold into money, money into food, and food into more gold. Nature's wealth left Seattle a larger

¹Josiah Edward Spurr, Through the Yukon Gold Diggings: A Narrative of Personal Travel (Boston: Eastern Publishing Co., 1900), 215.

²William Cronon, Nature's Metropolis: Chicago and the Great West (New York: W.W. Norton, 1991), 307.

and richer city.

For merchants and boosters, Seattle was naturally the gateway to Alaska, and to a broader Asian-Pacific trade empire. Gold miners, flour, bacon, fruit, and gold itself flowed through Seattle by nature, according to natural economic laws. A 1900 trade summary listed the key factors in the city's expanding fortunes: the Panama Canal project, Asian trade, increased steamship and railroad transportation, the wheat, flour, timber, and fish exports, and, fifth or sixth on the list, the Alaska trade. "Seattle has, in fact, by a most natural order of things, become the great northern territory's emporium and metropolis, not only in a shipping and commercial sense, but, as is well known, many of Alaska's wealthy miners make this city their home...."³ In so naturalizing their own economy, Seattleites deployed the language and imagery of the natural to promote a set of economic, social, and cultural connections between gateway and hinterland.

Hard work rather than nature or gold made Seattle into Alaska's emporium and metropolis; Seattleites turned to the "natural" to explain, and mask, their own efforts. Seattle's ascendance appeared pre-destined and natural only if it unfolded easily, without hard work. The city's boosters believed that constant invocations of natural economic forces might set those forces in motion, make them real. In reality, though, the labors of Seattleites, merchants, and miners strengthened an existing geographical linkage between the city and Alaska during a moment of great economic excitement. Seattle used its infrastructure--both existing and new--to organize market exchanges, and to transport miners and commodities between the two sites. The three economic sectors that together

³Trade Register (Seattle), December 29, 1900, 27-29.

made up the Alaska trade--the assay and purchase of gold, groceries and mining supplies, transportation--took the credit for Seattle's rise, but they made up only part of the city's broader, fast-growing economy. And Seattle's economy, no matter how fast it grew, required the help of a national industrial economy to gather and distribute the products of the world to its emerging hinterlands, including Alaska and the Yukon.⁴

As legend has it, Seattle's destiny as the gateway to Alaska and the Pacific was assured the moment that the Steamer Portland touched Schwabacher's Wharf with its ton of Klondike gold in July 1897, setting off the rush to the Yukon. Despite the severe depression of the 1890s, however, Seattle had a diverse economy and a growing trade with Alaska and the Yukon before that moment. The arriving gold and the sudden rush to the Klondike provided an extraordinarily visible jolt to that economy, so much so that the gold appeared, single-handedly, to spur the Northwest economy out of depression and into a long and rapid expansion. The gold certainly boomed the Alaska trade, but it was not, in and of itself, the only cause of Seattle's subsequent emergence as the Northwest's leading metropolis. The initial 1897-1900 boom was accompanied by, and then followed by, a prolonged economic expansion, beyond the Alaska trade, into world-wide markets in wheat, flour, fruit, forest products, salmon, and general merchandise. Those markets

⁴Seattle was not the only place where these processes occurred; miners bought food and exchanged gold in numerous other places: San Francisco, Vancouver, Victoria. I focus here on Seattle because it provided more to Yukon/Alaska miners than the other cities, and because it emerged, in rhetoric and trade, as the leading gateway city for Alaska. The actual percentages of business that went to each city are unclear, as is the specific amount of gold that went to each city. However, all the broader processes of exchange I describe for Seattle were taking places in these other cities as well. The larger environmental and economic points hold for all.

included Alaska, but the expansion was fueled as much by rail and steamer connections to the eastern United States, California, Europe, Hawaii, and South America. Between 1895 and 1900 the city's economy expanded by a factor of eight.⁵

The Seattle Argus recognized and naturalized this broader growth as early as December 1897, four months into the Klondike rush. A brief editorial fused the naturalization of the Seattle as the gateway to Alaska with the recognition that northern gold has simply set broader economic forces in motion. The city, according to this editorialist, had "burst the bonds of poverty and restricted trade...flashed the fire of hope from her weary eyes and fixed the attention of the world by her proud position in the gateway of the road leading to the golden land of the North." "The sudden change," the Argus continued, "was wrought by a fast-swelling stream of gold....but the sight of it, and the news of it, brought forth other streams from the many hidden sources...and they all flowed towards Seattle." The Seattle Trade Register agreed. "The gold excitement did not start the wheels going," it asserted, "it only gave them a big whirl."⁶

As the Argus continued, however, this naturalization of the city's rivers of trade shaded toward a more historical explanation of good fortune. History and nature were at work together:

The current had set strongly towards Seattle, for the people of that city had been working for years and dug their channels wide and deep, foreseeing what a great stream might flow through them....year by year it grew in volume...until now...it has become a mighty torrent. For trade, like water, follows the line of least of

⁵Richard C. Berner, Seattle 1900-1920: From Boomtown, Urban Turbulence, to Restoration (Seattle: Charles Press, 1991), 10.

⁶Trade Register (Seattle), August 21, 1897, 22.

least resistance, and when the laws of nature, seconded by the energy of man, have cleared the way for it, flows along the channel thus created, and any obstacles placed in its way in defiance of natural law will give way before it as the ramparts of sand before the incoming tide.

In other words, Seattle was ready before 1897. It had railroads and steamship lines in place. It had supplied miners in Alaska already for years. It had banks "to buy the product of the mines and exchange it for the coin of the republic." "In short," the editorial concluded, "Seattle had been wide awake and had made ready to grab the ripening plum when it should drop from the tree."⁷

From Gold to Money

The Portland's arrival with Klondike gold constituted the best of all ripening plums, but it was not a force of nature. The gold was rather a raw natural resource on its way to market, and in the late 1890s Seattle became that market, as it did for salmon, timber, and wheat. As with these other commodities, Seattle played a crucial role in the gold's journey from "nature" into the culture that gave it economic value. That was what gateway cities did; they provided the infrastructure that brought nature to market. The movement of gold to the gateway city gave form to a cultural value. Gold was valuable, and was money, before the miners ever left home for the northern creeks. They naturalized gold as money before they got it out of the ground, and when they did get it out of the ground, they saw it as money, used it as money, understood it as money.

When that gold came out of the ground, however, it was not literally money. To

⁷Seattle Argus, "The Klondike Year," 18 December 1897.

transform gold into money, miners physically moved gold from the Yukon interior to the outside world. Gold was deeply cultural long before it reached government assay offices and banks in Seattle and San Francisco, but its journey to the outside world nevertheless constituted something of a journey out of nature and into culture. To exchange it for money, miners had to have it weighed and valued; the gold had to be given the governmental stamp that made it truly money, equal to all other money, truly interchangeable--a standard of value.

The first stage of this journey out of nature took place at the creeks and in Dawson City and other towns, where miners used gold dust as the standard currency, as money. Merchants and bartenders kept scales on hand to measure out the dust and set its value for exchange, and miners carried moose-skin sacks of gold rather than wallets. In 1897 Sam Dunham reported that gold dust was the only medium of exchange in Dawson, and James Hamil wrote home that "All business is done with Gold dust no money."⁸ Though miners immediately used their gold as money, the nuggets and dust at that stage retained natural characteristics: impurities, variable value, and an awkward weight and form. Each transaction required another weighing. Miners wanted nothing more than to exchange gold for something easier to handle. Tappan Adney met some men hauling 85 pounds of gold dust on foot down the Skagway Trail. "They told me that they threw the sack of dust

⁸Samuel C. Dunham, The Alaskan Gold Fields (1898; repr. Anchorage: Alaska Northwest Pub. Co., 1983), 37. This was originally published as "The Alaskan Gold Fields and the Opportunities They Offer for Capital and Labor," Bulletin of the Department of Labor, No. 16 (May 1898), 297-425; James H. Hamil Letter, October 8, 1897, Vertical File MS, UAF Archive.

down fifty times, not caring if they ever picked it up again."⁹

Making gold not the equivalent of money but literally money began in the Yukon. The ACC and NAT&T trading companies assayed and stored gold dust, and shipped it outside to San Francisco (ACC) and Seattle (NAT&T). Later, in the summer of 1898, the Bank of British North America and the Canadian Bank of Commerce (CBC) opened branches at Dawson, the latter contracted by the Canadian Minister of Finance to assay, buy, and store gold, collect royalties, and ship gold outside. The banks took miners' gold, and gave them signed bank notes payable at outside banks in Canada and the United States. The first season the CBC bought, assayed, and shipped \$2.3 million in gold, much of it to the U.S. Mint in San Francisco and the Selby Smelting Co. in San Francisco and Seattle.¹⁰ Miners flooded the newly opened assay office and bank, arriving day and night. The CBC assayed only small samples of each lot, paid the miners based on that sample, and left the rest as dust to be shipped outside for full measurement. Dawson assayers prided themselves that their assays "accorded almost precisely" with those done by experienced professionals to the south. They packaged the gold in iron-bound boxes and shipped it by steamer, accompanied by armed guards.¹¹

The assaying of gold was a crucial part of the process because, by nature, not all

⁹Tappan Adney, The Klondike Stampede (New York, 1900; repr. Vancouver, B.C.: University of British Columbia Press, 1994), 87.

¹⁰Iris Warner, "Pioneer Mining at Dawson," Alaska Journal 1 (Spring 1971), 41-48. Victor Ross, A History of the Canadian Bank of Commerce, vol. II (Toronto: Oxford University Press, 1922), 188, 162-63.

¹¹Warner, "Pioneer Mining at Dawson," 41-48. Ross, Canadian Bank of Commerce, 188; 162-63; Adney, Klondike Stampede, 416.

gold dust was the same. Gold came from specific creeks, and its fineness or purity varied from creek to creek, and even among different parts of the same creek. In 1897, Bonanza Creek gold ruled the Klondike with values between \$15.75 and \$18.50 per ounce.

Hunker Creek gold was valued at \$17.50 per ounce, with Dominion Creek not far behind at \$17, Eldorado at \$16.50, and Bear at \$15.00.¹² Gold retained its naturalness, and its inherent variability as Bonanza gold or Manook gold, even as it was measured and used as money. Its value remained in part a function of where in nature it came from, and thus it mattered to miners and merchants where in nature the gold came from. The clerks at the Canadian Bank of Commerce could look at gold dust and tell which creek it came from; gold carried its nature, and thus its value, along with it.¹³ These distinctions followed gold to the outside world. Even when merchants shipped gold en masse, they referred to it by creek. John Callbreath sent 324 ounces out to his bankers in Victoria in 1878. He knew its estimated value, \$5,750, but he referred to it as "McDame, Walkers, Snow, and Dennis Creek dust."¹⁴ The Alaska Commercial Company sent gold to San Francisco for assay by an independent company. The assayer reported the values by weight, fineness, creek, and claim. Gold from claim 26 Above Discovery on Bonanza assayed at \$18.35 per ounce; from 18 Below on Sulphur, \$15.17; from the bench on

¹²John A. Gould and Richard C. Stuart, "Permafrost Gold: A Treatise on Early Klondike Mining History, Methods and Technology," Microfiche Report Series No. 11 (Ottawa: Parks Canada, 1980), Dawson City Museum Microfiche, 57.

¹³Gould and Stuart, "Permafrost Gold," 58; Ross, Canadian Bank of Commerce, 184.

¹⁴John C. Callbreath Diaries, Callbreath, Grant, & Cook Papers, Charles Hubbell Collection, UW MS. and Archives.

Monte Christo hill above Bonanza, \$10.68. Even in San Francisco, the gold was Bonanza or Sulphur gold--still the product of nature, of a specific creek.¹⁵

The variable nature of the gold itself provided miners ample opportunity to trade on the differences. Banks and merchants set a standard value of \$14 or \$16 per ounce for "trade dust," the common gold dust used as money. Trade dust carried that value no matter what its actual purity. "I went over Town this afternoon and changed my gold dust for currency," James McRae reported after the cleanup in 1899. "I could only get \$15 an ounce for it."¹⁶ Miners saved money by using the "cheapest," least pure dust as trade dust to pay for goods. It might be worth only \$12 or \$13 an ounce, but bought \$15 worth of goods. Meanwhile, miners saved their better dust, worth \$17 or \$18, to take to Dawson banks, or out to U.S. assay offices in the states.¹⁷ They also used gold's natural variability to play fast and loose with the 10% Canadian royalty on all Klondike gold, payable along the creeks and at the Dawson branch of the Canadian Bank of Commerce.¹⁸

¹⁵Statement of gold assayed by Selby of San Francisco for the Alaska Commercial Company," in "Banking in Yukon Territory," Govt. no. 1629, File 3429, Yukon Archive Government Records.

¹⁶James A. McRae Diary, June 9, 1899, MSS 104, Acc. 80/1, Yukon Archive.

¹⁷Gould and Stuart, "Permafrost Gold," 56-57.

¹⁸David Doig, "Opening of the First Bank in Dawson in May 1898: How the Bank of British North America Pioneered the Way to the Heart of the Gold Country," MSS 006, Acc. 82/103, Yukon Archive; Canadian Bank of Commerce correspondence, Feb. 5, 1898, "Banking in Yukon Territory." Also Canadian Bank of Commerce, 137-139. In 1897, the Klondike royalty was 10% of the output of placer mines up to \$500 per week, and then 20%; in 1898, it was 10% of output with an exemption of \$2,500 per year; in 1899 the exemption rose to \$5000; in 1901 the royalty was reduced to 5%; in 1902 to 2.5% (Ross, 174).

The bank accepted low-purity dust, high-purity dust, and coin in payment for the royalties. Miners paid with the cheapest available form of currency, either trade dust or coin. "A considerable amount of Royalty this year is being paid in Currency," the Gold Commissioner wrote to Ottawa in 1900, "and I find that the Creeks that produce the most valuable gold are paying largely...in currency, while the Creeks which produce inferior gold pay almost altogether in dust."¹⁹

The further the gold got from its source however, and the further along its pathway to the U.S. Mint, the more culture it contained, layered on top of its variable nature. Though crowds of miners took gold to the Alaska Commercial Company or to the Canadian Bank of Commerce in Dawson, many Americans trusted only American banks and the U.S. government with their Yukon gold. They paid the Canadian royalty and physically carried their remaining gold dust outside to the United States. As Seattle booster Erastus Brainerd explained, the U.S. government guaranteed miners full value, backed by a trusted cultural and economic authority. "[A]n assay office is maintained for the purpose of placing the stamp of the highest authority...upon the produce of precious mineral mining, to serve as an assurance of the value of his product to the miner, to save him from possible imposition by private persons or corporations...."²⁰ The assay offices and the Mint provided the final measure of value, and thus became the point at which gold ceased to be Eldorado gold or Bonanza gold, and became simply U.S. bullion or

¹⁹Letter, July 7, 1900, "Banking in Yukon Territory."

²⁰Erastus Brainerd letter, July 1897, to J.J. Hill, St. Paul, Minn., "United States Assay Office at Seattle," Erastus Brainerd Scrapbooks, UW Microfilm.

U.S. currency, a uniform commodity. As Brainerd put it, the U.S. Treasury functioned "to convert a bulky and inconvenient article of uncertain value into coin or its equivalent."²¹

President McKinley's gold standard ensured that the U.S. government provided an excellent market for gold. Whether shipped outside by Dawson banks or by individual miners, the great bulk of Yukon gold ended up in San Francisco, or, increasingly, in Seattle, where the Bank of British North America and the Canadian Bank of Commerce opened branch offices.²² The journey from dust and nuggets to actual U.S. currency was thus a journey through a set of cultural institutions with the authority and skill to bestow and certify monetary value, and to reshape lumps of gold into something that looked and acted more like "money." Gold was given monetary value everywhere, but more often than not it was given official, final, and certain dollar value only when it reached San Francisco or Seattle. According to Canadian Ministry of Finance letters in 1900, the final net assay value of gold purchased by the Canadian Bank of Commerce was determined at San Francisco or Seattle.²³ Vancouver, British Columbia did not open a government assay office until 1901, or a branch of the Royal Mint until 1907.²⁴

²¹Brainerd letter to Hill.

²²Trade Register (Seattle), April 28, 1900, 22; Gould and Stuart, "Permafrost Gold," 58.

²³Letter from Deputy Minister of Finance, July 17, 1900, Govt. #1626, File 3429, Yukon Archive Government Records.

²⁴Gould and Stuart, "Permafrost Gold," 58; Margaret Archibald, Grubstake to Grocery Store: The Klondike Emporium, 1897-1907 (Ottawa: Parks Canada, Dept. of Indian and Northern Affairs. rev. ed., 1973), 82. It remains unclear why Dawson City

Because the journey from metal to money involved physically moving the gold itself, the specific places, including Dawson City, Seattle, and San Francisco, where gold stopped along the journey mattered, because gold left wealth behind, enriching people and communities. When the Portland tied up in Seattle in July 1897, the nearest U.S. Assay Office was in San Francisco or Helena, Montana. Though a few Seattle banks, jewelers, and private smelters bought miners' gold, San Francisco had served as the best and nearest market for Yukon gold throughout the 1880s and early 1890s. Although the Portland's arrival in Seattle galvanized the city, sending hundreds of prospective miners into frenzied preparation to head north, the Klondike gold itself travelled on south to California with stopping. N.H. Lattimer of the Dexter Horton bank--the bank which had purchased large lots of gold in 1896--explained that all Dexter Horton could do for returning miners was advance a rough estimate of the gold's value, ship the actual gold to San Francisco, and await assay returns before paying miners the full value. "So the miner goes on to San Francisco," Lattimer lamented, "where he can at once get the full assay value." "Every miner thinks his gold is the best and he will not believe otherwise until he

banks shipped gold to the United States, instead of to Canadian institutions in Canadian cities. Apparently, it was either cheaper, more profitable, or more convenient to have gold assayed in the United States. According to historian Norbert MacDonald, Vancouver, like Seattle, sought and obtained a government assay office. See Norbert MacDonald, Distant Neighbors: A Comparative History of Seattle & Vancouver (Lincoln: University of Nebraska Press, 1987), 53. Histories of the Rossland mines in southern British Columbia in the 1890s indicate that gold ore there was also shipped to the United States for smelting. See Kenneth Norrie and Douglas Owram, A History of the Canadian Economy, 2d ed. (Toronto: Harcourt Brace Canada, 1996), 263; and Jeremy Mouat, Roaring Days: Rossland's Mines and the History of British Columbia (Vancouver: University of British Columbia Press, 1995), 24-25.

gets returns from a government assay office...."²⁵ The city needed an institution powerful enough to purchase all of the miners' gold immediately, at full value. As the Post-Intelligencer put it in January 1897, Seattle was well on its way to controlling the supply trade, but one thing was missing: "[S]ome bank or business which will purchase the placer gold and prevent its passing on to San Francisco."²⁶

No one took more acute notice of the gold's physical departure than Seattle's Chamber of Commerce. For over a year, since Circle City and Cook Inlet gold had begun trickling into the city, Seattle's bankers and merchants had been lobbying for their own federal assay office. Within days of the Portland's arrival, the Chamber met and, under the vociferous direction of Erastus Brainerd, redoubled its pleas to Congress, pledging a site and building free to the government.²⁷ The assay office campaign was part of businessmen's campaign to boost Seattle fortunes, to establish the city once and for all as the gateway to Alaska and the Yukon. The city had two basic goals: to capture miners' supply money as they headed north to the creeks, and to capture their gold--and with it their spending power--as they headed home.²⁸ The frenzy caused by the Portland gold made it extraordinarily clear that the physical presence of gold, more than any other factor, stimulated the entire mining economy--supply, transportation, shipbuilding, and

²⁵Trade Register (Seattle), July 24, 1897, 25.

²⁶Seattle Post-Intelligencer, January 2, 1897.

²⁷Trade Register, July 24, 1897, 22.

²⁸Seattle Chamber of Commerce letter, Sept. 7, 1897, Brainerd Scrapbooks, UW Microfilm.

every related trade. With an assay office, Seattle would be the point at which gold was turned into liquid cash. Miners would sell their gold for money, and spend at least some of that money in Seattle. "If we had a government assay office," banker Lattimer continued, "the miners could sell their gold to the banks and they could get returns on it the same day. Then the miners would buy their goods here, spend the winter here and outfit here the next spring, so that every branch of business would gain by it."²⁹ Getting the gold to stop over in Seattle would ensure the annual, seasonal repeat of the Portland's arrival. Gold pouring into the city would draw people, no matter what.

Seattle's business community had long since begun to naturalize Seattle as the gateway city to the north, and they extended that rhetoric to the assay office campaign. Brainerd and other boosters promoted Seattle as a natural market for gold. "Seattle, being the outfitting point for the Yukon and the port of departure and arrival for the steamers plying to Alaskan ports," the Seattle Argus asserted, "is the natural market for the great quantities of gold which will come thence during the next few years. The location of an assay office here is therefore the logical outcome of the city's position."³⁰ A Seattle assay office was not just natural and logical, however, it was also utterly necessary and just. As part of the campaign, Brainerd himself wrote a lengthy letter to James J. Hill, President of the Great Northern Railroad, Seattle's financial patron saint and a man powerful enough to secure an assay office anywhere in the Pacific Northwest. Brainerd's letter captured the range of wholly cultural arguments Seattle was able to

²⁹Trade Register (Seattle), July 24, 1897, 25.

³⁰Seattle Argus, 18 December 1897, 17.

muster for itself as the natural location of an assay office: "The miner as a rule is a poor man....," Brainerd wrote.

If ever a man earned a dollar the miner has earned his. Often he is a man of little education in the world's affairs....He believes in his government, in the government of the American nation....To him its official seal, its stamp, is solemn and binding. He wants it, and he wants it as soon as possible, upon the product of his toil....He arrives in Seattle with his buck-skin bag in his hand or belted to his waist....After a prolonged sojourn he is more often penniless than not. The shortest time in which he can now secure the stamp of his government upon his bullion, or its certificate of its coin value, either of which are equivalent to cash, is six days, a working week. He may be a resident of a distant state, he may desire to leave Seattle immediately for his home, but by his needs and lack of cash money he is subjected to prolonged delay and to expense of a week's sojourn in Seattle upon credit, and to the further expense of expressage. It is not right that he should be subjected to this expense. The federal government has already recognized this by establishing assay offices in nearly all known centers of precious mineral mining, except within the state of Washington. The government has further recognized its duty or obligation to the miner by its exceedingly liberal statutes in his favor and in the constructions of its court decision. No other country on earth has such liberal mining laws as this nation of ours....It is bound by laws and by precedents to encourage the miner. It must sooner or later do so by establishing an assay office....I believe that I have shown that Seattle is the nearest most desirable and most available point for this purpose.

Seattle's campaign worked. Less than a year later, by the end of March, 1898, word arrived that Seattle was to have its assay office, just in time to process the 1898 Klondike clean-up. "[T]o none more than to Erastus Brainerd is credit due for the successful conclusion," the Trade Register announced.³¹ The office opened on July 15, just days before the summer's gold shipments began to arrive.³² In late July, the Trade Register reported that "large amounts of gold from the Klondike and Alaska gold fields

³¹Trade Register (Seattle), March 26, 1898, 21; May 21, 1898, 29.

³²Trade Register (Seattle), July 9, 1898, 34.

continue to arrive and the assay office and safe deposit are kept busy taking care of the fortunes of the fortunate ones."³³ That busy-ness continued. Miners went directly to the assay office, or turned gold in at the banks, which then deposited it with government assayers. Between July and December 1898, the assay office took in \$5.6 million in gold. In 1899, with gold from the Nome rush beginning to pour in, the total climbed to \$12.8 million, in 1900 to \$22 million, and in 1901 to \$14 million. In total, between 1898 and 1901, the Seattle Assay Office received over \$54 million in gold from the Klondike, the Alaskan Yukon, Nome, and other regions.³⁴ By the end of the rush, according to historian Margaret Archibald, Seattle dominated the process of turning Yukon gold into American money.³⁵ In 1898, the Seattle Assay Office's \$5.5 million represented about 40% of the total \$13.5 million of Alaska/Yukon gold that entered the United States for processing. In 1899, the Assay Office and private smelters in Seattle took in 60%, and in 1900, the Assay Office alone processed 71% of Alaska and Yukon gold. Both figures support Archibald's claim.³⁶

³³Trade Register (Seattle), July 30, 1898, 19.

³⁴Report of the Director of the Mint Upon The Production of Precious Metals in the United States During the Calendar Year 1898 (Washington: GPO, 1899), 56, 222; Report of the Director of the Mint Upon The Production of Precious Metals in the United States During the Calendar Year 1899 (Washington: GPO, 1900), 51, 55, 193, 356-357; Trade Register (Seattle) May 26, 1900, 3; December 7, 1901, 22.

³⁵Archibald, Grubstake to Grocery, 82.

³⁶Report of the Director of the Mint...1898, 56, 222; Report of the Director of the Mint...1899, 51, 55, 193, 356-357. Report of the Director of the Mint...1900: Bullion of Alaskan Production received at US Mints and Assay Offices and private smelters: 1900: \$8,166,187 (55); Bullion of NW Production received at US Mints and Assay Offices and

The presence of the Assay Office was crucial to the city's effort to create itself as the gateway to Alaska, but, as Brainerd recognized in practice if not in metaphors, gold flowed not by natural law or destiny, but by federal decree. Like many aspects of economic growth in the American West, it was a function of a government bureaucracy. From the middle of 1898 on, the Seattle Assay Office--and all of this gold--served the city in several ways. It provided the government assay services closest to the Yukon, and thus encouraged Alaska and Klondike miners to return to Seattle with their gold each season.³⁷ Seattle became a seasonal home base for career miners, who migrated north and south between the mines and Seattle's hotels and supply outfitters. The ease of turning gold in at the assay office encouraged this migration, although Bill Ballou found the service slow. In July 1901, he had a long wait at the Seattle office. "[D]elay here is caused by the mint," he wrote, referring to the Assay Office, "which is a little one horse affair which at this time of the year can't handle the biz--that is, with any speed."³⁸

The Assay office did not literally make gold into money; it did not coin money, per se. Neither did it consume the gold, for the gold moved on intact, in a new form. The assay office simply coordinated the exchange of raw gold for money. When Charles

private smelters, 1900: \$22,419,626.85 (57).

Total: gold received at U.S. mints and Assay offices and private smelters, from Alaska and NWT; 1900: \$30,585,813; 305-305: Deposits and Purchases of gold and silver by value during the calendar year ended Dec. 31, 1900: Seattle Assay Office; Domestic Bullion, unrefined: \$4,375, 366; Foreign Bullion, unrefined: \$17, 346, 884; Total incoming, unrefined: \$21,722,250.

³⁷Archibald, Grubstake to Grocery, 129.

³⁸William B. Ballou letter, July 20, 1901, William B. Ballou Papers, 1889-1918, UAF Archive.

Mosier and miners like him arrived in Seattle, they took their gold to the U.S. Assay Office and exchanged it for a receipt which tied them to ownership of a specific lot of gold. When they returned a few days later, they exchanged that receipt for U.S. currency--cash or check--equal to the value of their gold according to the assayer. "Got returns from U.S. Assay Office in morning," Mosier wrote in July 1899 in Seattle.³⁹ At that point, they relinquished all ties to the physical gold that their labor had won. Their cash represented universal value, rather than any specific value linked to the gold and the creeks from which it came.

The physical gold continued its journey to the U.S. Mint. After assayers estimated the gold's value and notified the clerks how much to pay the depositing miner, melters combined individual deposits, heated the gold to 1063 degrees Celsius in a smelting furnace, and cast the liquid into bars. They carefully took samples from each new bar, re-assayed the samples, recorded the bars' numbers, weights, and values, and then packed them into bags to be shipped by train to the U.S. Mint at San Francisco or Denver. In Denver or San Francisco, another set of assayers again tested the samples, compared their results with the Seattle values, and determined the final value of the Yukon gold. Only then did the Denver Mint notify the U.S. Treasury to transmit an equal amount of money by check from its Bullion Fund to the Seattle assay office. That transfer reimbursed the assay office coffers by roughly the same amount that miners like Charles Mosier and Bill Ballou had taken away to upstate New York, or to Stetson Bros. in Seattle to buy bacon.

³⁹Charles P. Mosier Diary, July 20, 1899, MSS 012, Acc. 82/168, Yukon Archive.

This process had its problems and expenses, because turning gold into money required physically moving bills and coin in order to exchange them, at Seattle, for raw gold. This transportation and coordination was essentially a government service, but it required work, and it cost money. For the director of the Mint, running Seattle's assay office was all a question of physical distance and expense. The Treasury paid to move the gold from Seattle to San Francisco and Denver, paid for its processing, and paid to ship money to Seattle to reimburse miners for their gold. In order to buy gold, the Assay Office and Seattle banks had to keep huge stocks of cash on hand, which meant shipping bills, notes, and coin long distances, usually from New York. This was an even more pressing problem along the Yukon, of course, where transportation costs were so high. In Seattle, the Assay Office sometimes avoided such costs by paying miners with U.S. treasury checks, rather than cash. The miners then took the checks to the local Seattle banks or businesses to be cashed. In 1900, the Director of the Mint granted the Assay Office the authority to pay miners by draft on U.S. sub-treasuries in Chicago and New York. The letter explained that the Treasury literally did not have the cash to send to Seattle to pay miners directly in money for their gold; it was "difficult to accumulate the money in New York fast enough to meet them."⁴⁰ It was so costly to ship paper bills that far that sometimes, according to a 1910 letter, customers at the assay office received

⁴⁰Letter from Director of the Mint to U.S. Assay Office, Seattle, July 20, 1900, Records of the Assay Office, Seattle, Records of the U.S. Mint, Record Group 104, Box 11, Folder 5-4-2, National Archives and Records Administration, Pacific Northwest Division, Seattle, WA.

actual gold coin for their gold, shipped from the Denver or San Francisco mints.⁴¹ It was either cheaper or more convenient to ship gold coins from western cities than to bring paper currency all way from New York.⁴² In such a scenario, Alaska/Yukon gold could arrive in Seattle as dust, leave as bullion, and return as coin, to be exchanged once again for dust.

Seattle bankers, too, shouldered the burdens of supplying gold miners with actual money. Several years after the gold rush, they complained about the assay office's practice of buying miners' gold with checks, for the banks themselves had to then cash the checks. In the summer, during "Alaska season," such checks strained banks' and stores' supplies of bills and coins. A 1914 letter from a Seattle banker to the Assay office requested that bankers and miners be able to receive either gold certificates or actual coin at the assay office, rather than Treasury checks, so that the banks would not have to cash the checks. The banker also requested shipments of gold coin from the San Francisco mint--at government expense--as some miners, on their arrival with gold, wished "to be handed gold coin at the Assay Office."⁴³

Outraged by such complaints, the Director of the Mint fired back, informing Seattle bankers that it was up to them to bear the cost of transporting money into their

⁴¹Director of the Mint to U.S. Assay Office, Seattle, Sept. 27, 1910, RG 104, Box 11, Folder 5-4-2.

⁴²Director of the Mint to U.S. Assay Office, Seattle, August 17, 1904, RG 104, Box 11, Folder 5-4-2.

⁴³Director of the Mint to U.S. Assay Office, Seattle, Aug. 4, 1914; Oct 2, 1914; RG 104, Box 11, Folder 5-3-8, "Currency."

coffers in order to cash miners' checks. He reminded Seattleites of the precarious position of the city's assay office. The Treasury had limited funds to move bullion to the mint and to ship coin back to the assay offices and banks in gold-processing cities. "The cost of handling these assay office checks is incidental to the benefits that the assay office confers upon the banks and community," the Mint Director lectured.

[O]ne of your correspondents thinks it unfair that the banks should be burdened with this expense 'for the benefit of Uncle Sam,' and that raises the question, for whose 'benefit' the assay office is sustained. That question comes up of late every time the appropriations for its support are made. The express rate of bullion from Alaska points to the Mint at San Francisco is only 50 cents per \$1,000 greater than the rate from the same points to Seattle, but Uncle Sam maintains an office at Seattle to intercept the bullion, and then ships it to a mint at a cost of \$1.25 per \$1000. With another \$1.25 to pay for coin shipments in the opposite direction the showing for the office would not be a good one. It seems to me that it will be a mistake for the friends of the assay office in either place it in this position or allow its checks to be discounted."⁴⁴

Despite this precarious margin of government expense, the subsidy the government provided ensured that Seattle became the place where for many, gold turned into money. But Seattle was home to many other economic and ecological transformations as well. The continued physical arrival of gold produced a long series of smaller, seasonal gold "rushes." Each year, the summer influx of gold into Seattle revived interest in Alaska/Yukon gold mining, and thus revived the supply and transportation businesses. Whenever the Alaska trade slowed, gold consistently speeded it up. As Callbreath wrote to relatives in July 1898, as the spring exodus to the north slackened, "the gold will commence pouring out soon and then the rush will

⁴⁴Letter from Director of the U.S. Mint, July 9, 1913, RG 104, Box 11, Folder 5-4-2, "Payment for Deposits."

set in again."⁴⁵ In April 1899 the Trade Register noted that "Since the arrival of the first treasure ship this spring from the north, \$150,000 on the Steamer Laurada, shipments of goods have been steady and large."⁴⁶ By far the greatest benefit conferred on Seattle by its assay office, however, was the money that miners received there. Even though the gold itself physically moved on to the Mint, the miners' money stayed in Seattle at least as long as the miners themselves did. And the longer the miners stayed, the more money they spent.

The Chamber of Commerce campaign for the assay office was only one part of a comprehensive effort to capture the miners' spending power, both when they left for the north, and when they returned with gold. Seattle's fame started when the Portland unloaded its gold, but the real wealth came with what flowed out of Seattle in the other direction.

Before the Gold Rush

Seattle's Alaska Trade did not invent itself with the arrival of Klondike gold in 1897. Before the 1890s, however, San Francisco did outstrip Seattle and other coastal cities in supplying Alaska and Northwestern Canada, chiefly because of its railroad supply networks, rich agricultural hinterland, and steamer line, the Pacific Coast Steamship Company. No other city sent as many boats north. Trader John Callbreath

⁴⁵John C. Callbreath letter, Wrangell, Alaska, July 18, 1898, Letterpress Books, v. 6, Callbreath, Grant, & Cook Papers, Charles Hubbell Collection, UW MS and Archives.

⁴⁶Trade Register (Seattle), April 1, 1899, 20.

was a typical Alaska/British Columbia supply customer, and his buying patterns revealed Seattle's position in the west coast trade hierarchy in the late nineteenth century.

Throughout that period, Callbreath depended on merchants and bankers in Victoria, San Francisco, Portland, and Seattle to supply his trading posts along the Stikine River and in the Cassiar and Dease Creek areas of the British Columbia interior. Callbreath ordered supplies from urban wholesalers by mail, and also made annual spring trips south to purchase groceries, clothing, and hardware in bulk.

Between the 1870s and the 1890s, his supply runs and trade connections shifted from a clear dependence on San Francisco, Portland, and Victoria, B.C., to almost exclusive business with Seattle and Victoria. Because Callbreath did most of his business with gold miners and fur traders in Canada, he did all of his banking and deposited the gold dust in Victoria. His 1878 spring buying trip, however, indicated heavy purchases in San Francisco, at establishments that included Cutting and Co. wholesale foods, Levi Strauss and Co., and Goodyear Rubber Co. He purchased apples and bread in Portland, liquors, drugs, and dry goods in Victoria, and everything from 2000 pounds of onions to silk handkerchiefs in San Francisco. His order books listed only three Seattle purchases: cheap jewelry, dried beef, and salt pork.⁴⁷

Over the next 15 years Callbreath recorded more and more transactions in Seattle. He came to depend exclusively on Moran Bros. Shipbuilding for parts and hardware for his Stikine river steamer, and after 1890 was a regular customer of Schwabacher's grocery and hardware, ordering a wide range of items by mail and in person: copper pipe, coal,

⁴⁷Callbreath Journal/Order Book, 1878-1879, Box 3 of 4, Hubbell Collection.

potatoes, washers and bearings, a pump. The rise of Schwabacher's and other wholesalers reflected Seattle's expanding transportation linkages: rails from the east and steamers to the north.⁴⁸ Fischer and MacDonald and Schwabacher Bros. grocers expanded from retail to wholesale operations in 1887 and 1889, and Schwabacher's added wholesale hardware in 1893. These were the years when eastern rail links--the Northern Pacific Railroad in 1884 and the Great Northern in 1893--opened direct access to eastern producers. Fischer and MacDonald (Fischer Bros. after 1893) did most of its buying in Chicago.⁴⁹ Schwabacher Bros. bought stock from San Francisco until the Northern Pacific allowed the company to open a buying office in New York, build a second warehouse, and expand wholesale grocery and hardware operation around the Puget Sound region.⁵⁰

In the early and mid-1890s, both the grocery supply and transportation sectors of Seattle's northern trade grew in tandem. Railroad-supplied jobbing houses and their eastern goods drew Callbreath increasingly to Seattle, but the expanding steamer network provided the other half of the transport system necessary to the Alaska trade. New boats brought Alaskans down to Seattle, and goods north to Alaska. The first regular steamer service between Seattle and Alaska started in 1886, and in 1891 Seattle businesses began

⁴⁸Department of Commerce and Labor, Bureau of Statistics, Commercial Alaska, 1867-1903 (Washington, D.C.: GPO, 1903), 114.

⁴⁹Richard Ralph Still, "Historical and Competitive Aspects of Grocery Wholesaling in Seattle, Washington" (Doctor of Commercial Science thesis, University of Washington, 1953), 21-22, 26. Two other large wholesalers, Seattle Hardware and Stewart and Holmes Drug Co. appeared in 1888.

⁵⁰Still, "Grocery Wholesaling in Seattle," 5-7, 17, 26.

sending salesmen and agents to Juneau to offer lower freight rates for goods in only four days, as opposed to seven days from San Francisco.⁵¹ In 1892, the Pacific Coast Steamship Co. moved its headquarters north to Tacoma, and the same year the NAT&T chose Seattle as its West Coast headquarters. The NAT&T brought its ships to Elliott Bay, along with the business of supplying its trading posts at St. Michael and Fortymile, and later at the other towns. This set up direct competition between Seattle and San Francisco, which remained home to the Alaska Commercial Company. Much of the NAT&T merchandise came by train from Chicago, but the company patronized Schwabacher's and Fischer Bros. as well, and helped to shift the flow of goods toward Seattle.⁵²

John Callbreath's supply purchases reflected these and other developments. In 1894, the U.S. Postal Service switched Alaska mail service from its former coastal terminus at Pt. Townsend, to Seattle, which improved mail orders for Seattle businesses. In 1895 Callbreath ordered peaches, fresh eggs, and navel oranges from Schwabacher's, and both Schwabacher's and Fischer Bros. sent salesmen to Alaska. To save time and money, these and several other Seattle wholesalers combined forces to send a single sales representative north to take orders for groceries, dry goods, drugs, and hardware.⁵³ And that year, with the founding of the Alaska Steamship Company in Seattle, the city gained

⁵¹Still, "Grocery Wholesaling in Seattle," 203.

⁵²Still, "Grocery Wholesaling in Seattle," 42-44; Norbert MacDonald, "Seattle, Vancouver, and the Klondike," Canadian Historical Review 49 (September 1986), 236-237.

⁵³Still, "Grocery Wholesaling in Seattle," 45.

its own direct Seattle-Alaska steamer line. This made it possible for Seattle merchants to compete directly with older cities and lines for Alaskan markets.⁵⁴ Although Callbreath continued to patronize certain favorite San Francisco establishments, his routine orders for fresh food and bacon, as well as for hardware and animal feed, went directly to Seattle's leading Seattle wholesalers. He also traveled to Seattle to buy mules, feed, and Winchester rifles. For dry goods and liquors, and also other groceries, Callbreath patronized his good friend Simon Leiser in Victoria. Victoria and Seattle, only a brief steamer ride apart, were one combined market, and Callbreath moved back and forth between them several times on each extended purchasing trip, comparing prices and patronizing specialists in both cities for various products. In March 1896 he wrote to relatives from Wrangell, at the mouth of the Stikine, "I will start for Victoria and Seattle tomorrow on the Steamer City of Topeka to buy our seasons outfit."⁵⁵

By the spring of 1898, with new waves of customers (including Hunter Fitzhugh) coming up the Stikine en route to the Klondike, Callbreath's business showed Seattle's wholesale and transportation sectors at work together within the Alaska trade. On May 6, he posted a letter to Schwabacher requesting by the first Pacific Coast SS Co. steamer a large shipment of groceries including 1000 lbs. of butter and 3000 lbs. of bacon and hams. Although both Seattle and Victoria seemed capable of providing the basic foodstuffs, Callbreath favored Seattle for hardware, machinery, rifles and ammunition,

⁵⁴Still, "Grocery Wholesaling in Seattle," 42; MacDonald, "Seattle, Vancouver, " 236-237.

⁵⁵Callbreath letter, March 27, 1896.

processed meat, fresh eggs and butter, and Victoria for cigars, canned goods, dry goods, and liquors. Those patterns spoke to Seattle's increasing command of its own egg-meat-and-dairy hinterland, as well as its rail connections to eastern and California producers of food and metal goods. Seattle's wholesalers sat ready at the crucial transportation juncture. Stetson Bros. and Co., a leading outfitter at the corner of Western and Columbia, ran an advertisement stating that "The location is one of the best in the city, being within 200 ft. of the railroad depots of the roads entering the city, and is also near the landings of the various Sound and sea-going Steamers."⁵⁶

These sale networks were thus already in place in 1896 when gold strikes at Circle City and Cook Inlet spurred a two-month supply boom in Seattle, with heavy sales of lumber, animals, hardware, and food.⁵⁷ These smaller gold rushes, along with continued mining at Fortymile, turned out to be brief but significant pre-Klondike "dry runs" for Seattle merchants. Cooper & Levy grocers on Commercial St. ran front-page advertisements in the Post-Intelligencer in March 1896, announcing "ALASKA. We are supplying a great many Alaska outfits."⁵⁸ "To the Alaska Gold Fields' is the cry," the PI reported as it listed ships bound for Cook Inlet. "No Abatement in the Rush to the Alaskan Miners: Schooner Lincoln Sets Sail. Three More to Sail Soon--Steamers Crowded Every Trip." Seattle papers also listed arriving miners, nineteen men from Pennsylvania, sixteen from Michigan, going to Fortymile, Sixtymile, and to Cook Inlet,

⁵⁶Trade Register (Seattle), June 18, 1898.

⁵⁷Still, "Grocery Wholesaling in Seattle," 48.

⁵⁸Seattle Post-Intelligencer, March 8, 1896.

186 on the steamer Mexico, a crowd of 411 on the steamer City of Topeka, and 2000 total to the Cook Inlet mines.

Seattle supplied most of them. By 1897 the city was vigilantly alert to the benefits of keeping such gold-boom trade. "It is indeed very gratifying to the local merchants," the Post-Intelligencer noted, "to behold the numerous groups of men entering their establishments buying outfits previous to their journey northward into the gold fields of Alaska. Transportation Companies are also well pleased with the outlook." The paper continued, "Seattle merchants...well know the value of the Alaska trade, and are making every effort to hold it. They have a bureau of information open at all hours, and whenever a person makes inquiries about Alaska he is told it is the best country in the world and that Seattle can furnish all supplies needed for a trip to the north."⁵⁹ Nora Crane letter passed through Seattle in June 1897, a month before the Portland's arrival. "[T]here is about 46 Alaska headquarters here going to Alaska is about all one hears."⁶⁰

The Boom and the Boosters

John Callbreath's four trading posts did not make a gold rush, nor did the Cook Inlet and Circle City strikes. For that, it took tangible gold, proof for even the most confirmed skeptics that the Yukon offered a chance at real wealth. When the Klondike gold itself arrived in July 1897, Seattle's Alaska trade exploded. The Post Intelligencer

⁵⁹Seattle Post-Intelligencer, March 8, 9, 13, 16-17, 29-31, 1896; January 3, 1897; Still, "Grocery Wholesaling in Seattle," 48.

⁶⁰Nora Crane letter, June 1897, Kepner-Crane Collection, Microfiche, UAF Archive.

headline said it all: "Gold! Gold! Gold! Gold!" A few inches down on the front page, the paper listed the supplies necessary to go to the Klondike.⁶¹ The city emptied out. "They Are All Going," the P-I exclaimed, "The Population Preparing to Move to Klondike."⁶² Steamers left for the North on July 18, 19, 22, 23, 25, 27, 28, 31, and August 2,3,5, 7,9, 10, 12, and 13.⁶³ The Seattle Chamber of Commerce estimated (perhaps quite liberally) that 8000 miners left Puget Sound in the fall of 1897, with the initial wave of the rush. The city's suppliers and shippers brought in \$16 million in the last few months of 1897 alone--an amount equal to all of their business in 1896.⁶⁴ "Prosperity is Here," the P-I announced, with news of economic recovery from Seattle to New York.⁶⁵ The Trade Register commented on the political implications: "Free silver isn't in these days with free gold." The trade paper added, to sum it up, that "The country wears a great, big smile."⁶⁶

This boom in Seattle's Alaska trade only seemed a force of nature. It happened, to a certain degree, according to plan. The city's existing transportation and supply networks and expanding economy combined with the Chamber of Commerce's booster campaign to

⁶¹Seattle Post-Intelligencer, July 17, 1897, 9 O'Clock edition.

⁶²Seattle Post-Intelligencer, July 17, 1897.

⁶³Trade Register (Seattle), July 31, 1897, 26.

⁶⁴Trade Register (Seattle), December 25, 1897, 1; Margaret Archibald, Grubstake to Grocery Store: The Klondike Emporium, 1897-1907 (Ottawa: Parks Canada, Dept. of Indian and Northern Affairs. rev. ed., 1973), 35; Still, 48-49; Charles M. Gates, "Human Interest Notes on Seattle and the Alaska Gold Rush," Pacific Northwest Quarterly 34 (April 1943), 207-209.

⁶⁵Seattle Post-Intelligencer, July 24, 1897.

⁶⁶Trade Register (Seattle), August 21, 1897, 19, 22.

draw miners to the Seattle waterfront. A growing wholesale and retail sector, connected by rail to eastern cities and to a rich agricultural hinterland, made it possible to supply great volumes of food and equipment, and thus to capture miners' business. In the same exultant article celebrating the gold, the Trade Register carefully listed factors contributing to the region's rapid rise in prosperity: "The close of Congress, the assurance of abundance of wheat at high prices, good hay crop, enormous salmon pack, large fruit yield, etc., assured customers that large stocks of goods might be bought with a certainty of sale. Once the pace had been set everybody made a jump for the band wagon of prosperity to the tune of gold."⁶⁷ Having launched its campaign for a federal Assay Office, the Chamber of Commerce focused on a second major goal: to convince all Klondike miners that Seattle was the best outfitting city on the West Coast, and the natural gateway to Alaska and the Yukon.

The first step in gaining this monopoly of the supply trade was to claim that Seattle already had it, by nature. "Alaskan Trade Absolutely Controlled by this City," the P-I declared on July 25, 1897, the week after the Portland arrived. "Naturally and inevitably," the paper explained, "the great bulk of adventurers who propose to seek fortune...will flock to Seattle."⁶⁸ The next step was to make this "natural" migration to Seattle real, using a most cultural tactic: advertising. Erastus Brainerd master-minded Seattle's advertising campaign with a unique blend of aggression, thoroughness, and

⁶⁷Trade Register (Seattle), August 21, 1897, 22.

⁶⁸Seattle Post-Intelligencer, July 28, 1897, as quoted in MacDonald, "Seattle, Vancouver," 234-246.

paranoia. His paranoia was fueled by letters and telegrams that poured into his office from Chicago and New York, warning Seattleites that other companies and cities were "taking from Seattle an enormous amount of revenue that her merchants are justly entitled to...."⁶⁹ The fear that Portland, San Francisco, Victoria, or Vancouver would capture the nation's attention and the miners' business mounted with each incoming report of conspiracy and defamation. A December 5, 1897 telegram from New York City reported to Chamber President E.O. Graves that rival cities were printing anti-Seattle reports in the New York dailies.⁷⁰ A few days later another New York missive arrived with dire reports of massive publicity campaigns for Portland, Tacoma, and San Francisco, but little information on Seattle. "Seattle's rivals are in the field," wrote Eugene Higgins. "The ticket bookers have books on the Klondyke with maps showing Portland only as a starting point."⁷¹ Mapmakers certainly got in on the competition, as rival cities struggled to naturalize their geographic linkages to Alaska and the Yukon. J. J. Millroy, a map publisher in Salt Lake City, offered Brainerd "a proposition to make Seattle the chief starting point on my new map," but for reasons not revealed, Brainerd refused the deal.⁷²

Brainerd pursued several advertising strategies in this propaganda war, all designed to link Seattle, the Klondike, and Alaska in people's minds. The ads--placed in

⁶⁹Thomas J. Church letter to General J. B. Metcalfe, July 19, 1897, Chicago, IL, Erastus Brainerd Scrapbooks, UW Microfilm.

⁷⁰Telegram, Brainerd scrapbooks.

⁷¹Eugene Higgins letter, New York to Seattle, January 22, 1898, Brainerd scrapbooks.

⁷²Letter, Millroy to Brainerd, San Francisco, Dec. 14, 1897, Brainerd scrapbooks.

6,244 weekly newspapers--consisted mainly of three words, together in bold print:

Seattle, Klondike, Alaska. This rhetoric made the connection between these three places if not exactly natural, then second nature. Miners saw the linkages as a given, and decided to travel via Seattle without questioning those linkages. Other ad copy repeated "Seattle" over and over, explaining the city's capacity to provide outfits at low prices. "Look at your map!" the ads demanded. "Seattle is a commercial city, and is to the Pacific Northwest as New York is to the Atlantic coast. All railroads in United States connect with three great transcontinental lines running to Seattle." "Every steamship line but one leaves Seattle," they continued. "You must go there before you can get to Alaska. Do not be deceived by misleading or false statements to the contrary."⁷³ All of this, according to the Trade Register, "made plain all over the United States" the "general conviction" that Seattle "was the starting point for Alaska and the return point from Alaska."⁷⁴ Brainerd ran a larger, five inch ad in daily papers in Butte and Anaconda, Montana, Denver, Chicago, and St. Paul. In December, 1898, he followed up with quarter-page advertisements in several national magazines, including McClure's, Cosmopolitan, Harper's, Century, and Review of Reviews. The Seattle Bureau of Information also distributed over 200,000 copies of a special Klondike edition of the Seattle Post-Intelligencer, mailing it to every postmaster and library in cities over a certain size. Ten thousand went to the Great Northern Railway, and five thousand to the

⁷³"Seattle 'The Queen City': Klondike--Alaska," and "SEATTLE," Chamber of Commerce, Seattle, Washington, Brainerd scrapbooks.

⁷⁴Trade Register (Seattle), December Trade Summary, 1898, 28-29.

Northern Pacific.⁷⁵ In December, the Argus put out a Klondike edition as well, to demonstrate to those looking to Alaska "the advantages of this city not only as an outfitting center, but as a point for the residence of families whose head is engaged in hunting gold in Alaska."⁷⁶

Rival cities challenged Seattle's claims to gateway status, but none of them acted fast enough to overcome Seattle's voluminous early campaign.⁷⁷ Vancouver's Board of Trade followed Seattle's lead, and advertised in papers and brochures around the world. Their efforts, according to Vancouver historian Norbert MacDonald, "never achieved the volume, co-ordination, or impact of that of Seattle."⁷⁸ Victoria's Board of Trade turned away from arguments about the "natural," and used the more cultural rhetoric of tariffs and borders in their advertisements, pointing out that all goods purchased in the United States were subject to customs duties on entering the Yukon over the passes--making it cheaper to buy supplies at Victoria, "the best place to Fit Out and Sail from."⁷⁹ Did supplies cost more in Victoria or Seattle? The debate raged. The Seattle papers recorded that a man from Victoria came across the Sound to Kline and Rosenberg to buy complete outfits for fifty men because the prices were lower.⁸⁰ Vancouver merchants, on the other

⁷⁵"Report of the Klondike Advertising Committee," Brainerd scrapbooks.

⁷⁶Seattle Argus, Nov. 3, 1897; Brainerd scrapbooks.

⁷⁷MacDonald, "Seattle, Vancouver," 234-235.

⁷⁸MacDonald, "Seattle, Vancouver," 240.

⁷⁹Telegram and Klondyke Advertisement, Brainerd scrapbooks.

⁸⁰Trade Register (Seattle), October 9, 1897.

hand, established offices in Seattle and offered miners transportation to Vancouver to buy goods, which could then be bonded across American territory, tax free, into the Yukon.⁸¹ A weary and experienced John Callbreath informed inquiring parties that prices were largely equal, even given Canadian tariffs on American goods. "Yes there is a heavy duty on American goods, but if you buy at Victoria you will not be required to pay duty but goods will be proportionately higher."⁸² Brainerd countered Victoria's claims by pointing out in his own advertisements that Canadian prices were higher to begin with, having been produced in the United States and charged customs en route to Victoria and Vancouver. He also (rightly) pointed out that miners buying goods in Seattle paid no Canadian duties on blankets, clothing in use, the food and supplies needed for the journey, and cooking utensils.⁸³

Brainerd's efforts did not stop with advertising. Brainerd wanted miners to come to Seattle by second nature, without even thinking of other options, but he also understood that personal connections were key to the miners's decisions as to where to outfit. He directed his colleagues in the Chamber and around Seattle to pen letters to relatives, friends, and newspapers in eastern cities and towns, extolling Seattle's virtues as "the best Alaskan outfitting point." Other cities were spending more money than Seattle, he noted, but "the letter to the trade paper, the religious papers, the society papers...coming from you and your clients, congregations, subordinates, employees or

⁸¹Maxwell & Co. letter, Feb. 17, 1898, Brainerd scrapbooks.

⁸²Callbreath letter, July 14, 1897.

⁸³Brainerd Memo, Brainerd scrapbooks.

friends will be apt to receive more careful attention than one coming from an organization...."⁸⁴ Brainerd also sent questionnaires to thousands of mayors in small towns and cities across the country, asking for information on how many town citizens planned to leave for the Klondike, and whether those adventurers were well prepared, had proper supplies and information, and planned to travel via Seattle. Brainerd also asked the governors and mayors to publish the Chamber's statement as to the true dangers, distances, and expenses involved in a Klondike journey. Most gold seekers did not realize what they were getting into, Brainerd explained, and he wished all to be adequately prepared. "Seattle can outfit all BONA FIDE intending prospectors," he wrote, but did not seek anyone likely to become a public burden.⁸⁵ This show of concern, no matter how self-interested, proved an impressive source of contact between Seattle and community leaders across the nation. If mayors provided names of prospective gold seekers, Brainerd gave the miners' names to Seattle merchants, who contacted them to solicit their business. He also sent copies of Seattle newspapers, full of Klondike information, to each one, in an attempt to make personal contact with every potential outfitting customer.⁸⁶

The tactical war of words between rival cities continued unabated through the winter of 1897-98. Brainerd's dogged campaign moved to the railcars themselves,

⁸⁴Brainerd letter, Nov. 20, 1897, Brainerd scrapbooks.

⁸⁵Brainerd circular, October 1, 1897, Brainerd scrapbooks.

⁸⁶Brainerd, "List of the members of Watertown, S.D., Organization going to Alaska. In handwriting: "Argus to checks," which check marks next to names. Brainerd scrapbooks.

proving beyond all doubt that it was human beings and not "nature" at work here. One of Brainerd's informants reported in February 1898 that Juneau, Alaska--another outfitting city--had newsboys distributing circulars for Juneau on trains between Tacoma and Seattle. In March 1898, Brainerd, fighting the battle car by car and man by man, boarded a Great Northern train in Spokane to convince a party of 25 Klondikers to outfit in Seattle, rather than Vancouver.⁸⁷ Brainerd also used national newspaper clipping services to uncover other cities' strategies. He kept track of any and all derogatory or even neutral references to Seattle as an outfitting port, and fired off indignant missives to surprised newspaper editors around the country, upbraiding their ignorance of Seattle's superiority. He demanded that any and all such slanders to be retracted or clarified, as a means of boosting Seattle's image. The New York Herald of December 5, 1897, reported several miners departing for the West Coast, planning to outfit at Tacoma, as they had heard that Seattle merchants imposed high prices on miners and "Eastern people generally." The Denver Times noted charges that "the Klondyker is just about robbed blind in Seattle...."⁸⁸ In 1900 the Tacoma Ledger claimed Seattle outfitters were once again fleecing gold miners with high prices. Such slanders sent Brainerd into action.⁸⁹ Seattle's trade paper responded that such unjust attack was due to the "insane desire to injure Seattle business

⁸⁷Great Northern Railway Co., Letter from R.C. Stevens, General Western Pass Agent, to Conductor, Gr. Nor. Train No. 3, Due Spokane March 4, 1898; E. Brainerd to I.A. Nadeau, Bureau of Information letter, Feb. 26, 1898, Brainerd scrapbooks.

⁸⁸Gliddon of Denver Times to Brainerd, Jan. 3, 1898, Brainerd scrapbooks.

⁸⁹Brainerd clippings, dated New York Herald, Dec. 5, Brainerd scrapbooks. On Brainerd's Seattle career, see also Victoria Livingston, "Erastus Brainerd: The Bankruptcy of Brilliance," (M.A. thesis, University of Washington, 1967).

because Tacoma does not command nor care for a respectable part of the trade."⁹⁰

Of course, such charges sometimes were true. Not every Seattle outfitter was filled with the virtuous concern that Brainerd advertised. Even Seattle's Trade Register warned businessmen about "cappers," purchasing agents who contracted to buy high quality outfits for miners, took their money, purchased cheap food and equipment, and then pocketed the difference.⁹¹ And Seattle's press demonstrated a creative capacity to slander rival ports. In January 1898, the Seattle Trade Register lampooned Portland and San Francisco. "The moss backs may chronicle the advent of every new row boat which manages to waddle over the sand bar up to the Portland docks, and San Francisco may continue to gloat over her Alaska trade and her sensational newspapers, but Seattle keeps steadily forging ahead...."⁹² The same paper proudly cited a New Jersey article proclaiming that the difference between Seattle and Tacoma was like that "between New York and a village. Seattle is all life and bustle, while Tacoma is as dead as a post."⁹³ Granted, other cities played fast and loose with publicity and insults as well. The Tacoma papers claimed steamer sailings as their own, when the boats merely stopped at Tacoma for additional freight and passengers before or after the main departure for Seattle.⁹⁴

But advertising and insults alone could not physically move miners to Seattle.

⁹⁰Trade Register (Seattle), June 2, 1900, 29.

⁹¹Trade Register (Seattle), April 23, 1898, 21.

⁹²Trade Register (Seattle), January 1, 1898, 1.

⁹³Trade Register (Seattle), September 18, 1897, 24.

⁹⁴Trade Register (Seattle), June 2, 1900, 29.

None of Brainerd's efforts could bear fruit in bodies and trade without the railroads, and rate wars and other machinations provided further proof that miners came to Seattle not by nature, but along corporate-controlled pathways. To benefit from the nationwide Klondike craze of 1897 and 1898, the transcontinentals paired themselves with particular outfitting cities. The Southern Pacific directed miners to San Francisco; the Canadian Pacific, clearly, to Vancouver and Victoria; the Oregon-Washington Railway and Navigation Co. to Portland; the Northern Pacific to Portland and Seattle; and the Great Northern to Seattle.⁹⁵ Brainerd teamed up with the Great Northern to draw miners both to the railroad and to Seattle. Over the winter of 1897-98 the Chamber of Commerce dispatched 30 pounds of Bonanza and Birch Creek gold by train for exhibition along Great Northern routes, in depots from St. Paul to Boston.⁹⁶ "From the very first day that the Alaska excitement commenced," wrote a Great Northern official to Brainerd in January 1898, "we have worked steadfastly to establish Seattle as the principal outfitting point, and every page of advertising which we have gotten out will show this."⁹⁷ "In doing this we have antagonized other localities," the traffic department wrote in another letter, responding to a Brainerd complaint, "which are now actively working against us in the East, and I do not want you to think for a moment that we are the least bit desirous of

⁹⁵Jeannette Paddock Nichols, "Advertising and the Klondike," Washington Historical Quarterly 13 (January 1922), 20-21.

⁹⁶Trade Register (Seattle), January 1, 1898.

⁹⁷Trade Register (Seattle), January 8, 1898.

hiding your light under a bushel."⁹⁸ Brainerd critiqued the Denver and Rio Grande as well, for discriminating against Seattle in routing Klondike passengers to other ports. Ticket agent S.K. Hooper wrote back at length, explaining the complexities of the connections between southwestern points, Portland, and Seattle. A miner riding the Northern Pacific could not purchase a ticket straight through to Seattle. He had to break his journey at Portland and pay the Oregon Railway and Navigation Co. a further fare to continue on to Puget Sound. "This disadvantage," Hooper explained, "has had no effect to induce us to attempt to influence business as against Seattle, as your city is so well known as an outfitting point that it would be against good business policy even if we did not feel pledged to neutrality."⁹⁹

A Very Large Trade

As with the assay office, Brainerd's campaign to attract miners worked. Like Yukon gold, miners flowed through Seattle and left money in their wakes. Brainerd worked the telegraph wires, naturalizing the city's pre-eminence as an outfitting point, but Seattle's storekeepers and shippers did the actual work of knitting their city both to eastern cities and to its emerging northern hinterland. Seattle claimed Alaska as its natural hinterland, but the material linkages between the two places did not arise from either nature or booster bombast; they were a product of hard work. With rail links and

⁹⁸This and previous quote, letter, GNRR traffic department to Brainerd, Jan. 13, 1898, Brainerd scrapbooks.

⁹⁹S.K. Hooper, Denver and Rio Grande Railroad Co., to E. Brainerd, February 3, 1898, Brainerd scrapbooks.

shipping lines in place, Seattle's jobbers, wholesalers, and retailers gathered hundreds of products from across the country and the world, brought them together in stores and warehouses on Elliott Bay, and then marketed and redistributed them to north-bound miners. As the downtown retail and wholesale core expanded to meet the miners' demands, the city's business community built a lasting network of connections--connections of finance, patronage, and personal ties. These linkages of human social and economic life shaped the material exchange between the two places, the products of nature that moved between them. Those connections further perpetuated Seattle's dominance of the Alaska trade.

The initial wave of miners faded in November and December 1897, but the numbers exploded in January, February, and March 1898 as waves of people headed north to the Chilkoot and White Passes. Steamers left Seattle every day. Two thousand miners departed in a week in January, with "hundreds arriving daily by all trains."¹⁰⁰ On March 11, the Great Northern and Northern Pacific together deposited 35 coaches of passengers--1800 people--on Seattle's doorstep. That weekend 1500 left for Alaska. Between January and March, 15,000 total left from Seattle, and 7,500 from other Pacific ports. After the ice broke at the Yukon's mouth, another wave of miners and supplies headed for St. Michael, along with "no end of river craft for prospecting and freighting."¹⁰¹ Seattle thus supplied up to 2000 pounds of goods apiece to well over

¹⁰⁰Trade Register (Seattle), Jan. 8, 15, 22, 1898.

¹⁰¹Trade Register (Seattle), May 21, 1898, 21; March 26, 1898; Erastus Brainerd letter, April 26, 1898, Brainerd scrapbooks.

25,000 miners in 1897 and 1898--more, according to Seattle, than any other city.

Wholesale grocers alone took in \$6.5 million.¹⁰² In a year, clearings at eight banks increased from \$33.3 million to \$67.3 million.¹⁰³

Hunter Fitzhugh, Bill Ballou, Stewart Campbell, Charles Mosier, and Mac McMichael all joined the teeming mob that wandered Seattle's streets from outfitter to outfitter, comparing prices, buying supplies, gawking at the crowd. "They are all going crazy about Alaska...I am besieged by dozens of people who call at the hotel to talk to me about the trail....," Fitzhugh wrote from the Hotel Northern in January, after his first trip up and down the Stikine.¹⁰⁴ "Seattle is all Klondike," Ballou observed. [E]verybody and everything pertains to it nothing is talked of thought of but Klondike, the war question takes a second place here."¹⁰⁵ McMichael visited Vancouver and Victoria before outfitting in Seattle. "This is a busy town," he wrote. "Vancouver and Victoria are like country villages in comparison. At all times the streets are like Woodward on Saturday nights."¹⁰⁶

¹⁰²Seattle Post-Intelligencer, July 24, 1897.

¹⁰³Trade Register (Seattle), 1898 Summary, December 1898, 26, 35.

¹⁰⁴Hunter Fitzhugh letter, Seattle, Jan. 7, 1898, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

¹⁰⁵William B. Ballou letter, March 29, 1898, William B. Ballou Papers, 1889-1918, UAF Archive.

¹⁰⁶Alfred "Mac" McMichael letter, March 1898, Alfred McMichael Diary and Letters, Juliette Reinicker Papers, MSS 100, Acc. 79/68, Yukon Archive. McMichael's letters have also been published in Juliette C. Reinicker ed., Klondike Letters: The Correspondence of a Gold Seeker in 1898 (Anchorage, AK: Alaska Northwest Publishing Co., 1984). My references are all to the typescripts of the letters in the Reinicker

The miners saw only crowds, but the chaos masked the real work going on, as wholesalers and retailers expanded their economic networks to meet the tremendous gold rush demands. Schwabacher Bros., Fischer Bros., and Stetson Bros. were all jobbers and wholesalers, merchandise middlemen who ordered large lots of goods from producers, brought them west by train, and then distributed goods at wholesale prices to retailers throughout the region. Seattle's wholesalers held the key to the city's gateway status. They served, as William Cronon explains for Chicago, as the "go-between linking the settlements and natural resources of the Great West with the cities, factories, and commercial network of the Northeast."¹⁰⁷ Seattle's large jobbing houses streamlined the city's supply lines by sending a few buyers east each year, rather than having countless smaller retail shops each send its own representative. By sending buyers east to Chicago and New York, and salesmen north to Alaska, these Seattle jobbers forged commercial connections that made it easier and easier to move large stocks quickly and efficiently over great distances, at lower and lower costs.¹⁰⁸

In 1897 and 1898, Seattle wholesalers and department stores dispatched both telegraph orders and buyers east to fill their warehouses for the Alaska trade. Seattle and its local hinterland produced some of the desired grocery items, including eggs, bacon, and condensed milk, but clothing and dry goods had to come from the East. In September

Collection in the Yukon Archive.

¹⁰⁷Cronon, Nature's Metropolis, 307.

¹⁰⁸Alfred D. Chandler, Jr., The Visible Hand: The Managerial Revolution in American Business (Cambridge: Harvard University Press, 1977), 24-26, ch. 7.

1897, Seattle Woolen Manufacturing dispatched Thomas Eyanson east to buy "heavily of such lines as they do not manufacture," which would insure the company's ability to "outfit from foot to head any man intending to go to the mines...."¹⁰⁹ Mr. Fraser of Fraser and Wilson dry goods went east "to New York and other cities" and made the "largest purchases in underwear as well as in other lines ever made by any house in the West." The Bon Marche department store buyers, Mr. and Mrs. Nordhoff, spent two months in eastern cities the following spring; they returned to find the department store moving to bigger quarters. J. Berkman and Co., Seattle's first wholesaler of "gentleman's furnishings," bought a large stock from eastern suppliers in September, especially goods required by miners.¹¹⁰ Jobbers had strategies beyond mere increases in stock. They ordered American brands, preferred over Canadian products by American miners in the north. Wholesalers also re-packaged existing products to meet gold-related demands, creating Alaska-related brand names of their own. Seattle's leading grain and feed dealer, Lilly Bogardus, sold sacks of dog feed from the Chicago stock yards as "Alaska Dog Feed."¹¹¹

Wholesalers not only expanded their stock lists and their eastern orders, they expanded geographically as well, as the city's "jobbing district" in Pioneer Square spread uphill from the waterfront, all the way to Fourth Avenue on the east and "far out to north

¹⁰⁹Trade Register (Seattle), September 25, 1897, 19, 26.

¹¹⁰Trade Register (Seattle), September 18, 1897, 26; Jan 1, 1898; March 19, 1898; April 1, 9, 1898; August 12, 1899.

¹¹¹Gates, "Human Interest Notes," 209.

and south."¹¹² The Seattle Woolen Manufacturing Company moved downtown onto the second floor of the Seattle National Building, to find space for its expanding stock. Charles Louch of Louch and Augustine wholesalers rented four floors in the Dexter Horton building to open a new outfitting house, "backed by large capital." Mitchell, Lewis, and Staver started making and selling portable saw mills, which they claimed could be packed over the Chilkoot summit for 18 cents a pound. They enlarged both their store rooms and warehouse space to double their capacity.¹¹³ Other companies arrived from around the country to get in on the wholesale boom. In April 1898, Sydney Shephard & Co. of Buffalo, Chicago, and St. Louis, the "largest manufacturer of tinware in the world," leased premises at the Schwabacher dock for a new wholesale house because Seattle was now the "best distribution center on the Coast."¹¹⁴ By the end of 1898, Seattle was unquestionably the jobbing center of Washington State and the Pacific Northwest, especially with regard to grocery wholesaling.¹¹⁵

Seattle jobbers met competition, however, from national producers who by-passed jobbing middle-men and instead sent agents to market goods directly to Seattle retailers. Sprague, Warner, & Co. of Chicago installed an agent in the Pioneer Building, ready to sell canned goods and syrup directly. "You know that most everything comes from the

¹¹²Trade Register (Seattle), December 1898 Trade Summary, 2.

¹¹³Trade Register (Seattle), September 25, 1897, 19, 26; September 18, 1897, 26; December 25, 1897, 32; July 24, 1897, 19.

¹¹⁴Trade Register (Seattle), April 2, 1898, 36; May 28, 1898, 36.

¹¹⁵Trade Register, December 1898 Trade Summary, 2

east, anyway," the advertisement read, "and you can buy so much cheaper in Chicago."¹¹⁶

Philip F. Kelley brokered Baker's chocolate, Ivory Soap, and Lea and Perrin's Worcestershire sauce. M.J. Connell was one of the city's more successful grocery agents, judging from his volume of advertising. Connell represented food processors all over the country--Columbus Canned Fruits, Del Monte Milling Co., Omaha Packing, Crystal Salt Works. Dealers looking for these companies' products went to Connell to place orders. In May 1898, Connell announced that he had moved to a larger office due to the rapid increase in business. Such agents flocked into the city in 1897 and 1898, and added accounts from around the country. Charles T. Battelle brokered "eastern and California canned goods by the carloads." Nelle and Engelbrecht set up as agents for paint manufacturers in New York and Chicago.¹¹⁷

This sudden growth in Seattle's stock of wholesale products made it possible for the city's retailers to outfit crowds of miners; they prided themselves on the speed with which its "20 or more first-class outfitting houses" could assemble supplies for the smallest and the largest parties of gold seekers. Miners looked to outfitters for a range of goods--clothing, food, equipment--and Seattle retailers captured their business by marketing complete outfits as single units. As early as July 1897, Z.C. Miles, Fischer Brothers, and the Seattle Trading Company ran advertisements for "Complete Alaska

¹¹⁶Trade Register (Seattle), January 1, 1898, 13.

¹¹⁷Trade Register (Seattle), Jan 1, 1898; Jan 8, 1898, 31; April 19, 1898; April 23, 1898; May 14, 1898, 14; May 28, 1898.

Outfits."¹¹⁸ Miners did not have to go to a long list of different retailers to purchase all their individual items. Instead, they bought all the goods together, measured out and packed to go. The Seattle Trading Company printed special forms for Alaska outfitting, listing all necessary supplies; miners simply read down the columns, and checked off what they wished to purchase.¹¹⁹ O.S. Johnson spent \$517.16 on a complete outfit at Stetson Bros., an outfitter that did "very large trade, in 1898."¹²⁰ Johnson's purchases ranged from all of the expected food stuffs--bacon, flour, rice, evaporated potatoes--to a rip saw and claw hammer, shovel and camp stove, gold pan, needles and yarn, rubber boots, suspenders, blankets, and a rifle--all packaged in one efficient lot.¹²¹ Where Vancouver outfitters left the miners to traipse from store to store themselves, which raised prices and cost time, in Seattle the Columbia Grocery Co. put together an outfit for 56 miners from Lancaster, Wisconsin in only 27 hours.¹²² The Seattle Trade Register celebrated this achievement with a typical photograph: miners perched five feet off the ground on piles of sacks and boxes stretching 50 yards along the storefront, and bearing signs: "Alaska supplies."¹²³

¹¹⁸Trade Register (Seattle), July 31, 1897, front cover, 2, 27.

¹¹⁹Seattle Trading Company form, April 5, 1898, in O.G. Herning Collection, UAF Archive.

¹²⁰Trade Register (Seattle), June 18, 1898, 1.

¹²¹O.S. Johnson records, in author's possession, on loan from Kathryn Utter.

¹²²Archibald, Grubstake to Grocery, 36.

¹²³Trade Register (Seattle), 19 March 1898, 39.

The "complete outfit" strategy served Seattle well, but the city also experienced an instantaneous expansion in the retail sector that paralleled the rising number of wholesale operations. The streets around the city's retail core sprouted new grocery and supply houses. Storekeepers flocked into the city from outlying towns, like Black Diamond, bringing their grocery and dry goods stocks with them to sell out to larger concerns, or to hawk from temporary storefronts.¹²⁴ William J. Dean, a North Seattle grocer, moved to First Avenue downtown.¹²⁵ Stevens and Stevens of Olympia opened a clothing and shoe store nearby on Pike Street.¹²⁶ The boom not only drew retailers from satellite towns, it also brought businesses in from other major cities, eager to be part of the gold trade. Brunner and Co. of California and Warner and Co. both established grocers in San Francisco and Chicago, respectively, opened Seattle outlets.¹²⁷ Regular rail and steamer service made it a simple and inexpensive matter for such operations to shift their stock north or west to take advantage of the boom. George A. Johnson, a manufacturer of oil clothing from Leominster, Massachusetts, relocated to Seattle.¹²⁸ Smaller and newer concerns started from scratch. In December 1897 Adolph Heller of Sioux City and C.E. Chase of Milwaukee organized a company to sell outfits at Skagway, with Heller posted in Seattle as manager, in charge of buying and shipping goods.¹²⁹ Two men from

¹²⁴Trade Register (Seattle), October 2, 1897, 26.

¹²⁵Trade Register (Seattle), Feb. 5, 1898.

¹²⁶Trade Register (Seattle), Sept. 11, 1897, 26.

¹²⁷Still, "Grocery Wholesaling in Seattle," 50.

¹²⁸Trade Register (Seattle), March 12, 1898, 36.

Minneapolis opened the Yukon Supply Company on First Avenue. A Pittsburgh grocer named Milton Pritchard stopped in Seattle en route to the Klondike, found business prospects good, and instead bought a half interest in the Rainier Produce Company-- whose manager was off to find gold.¹³⁰

As "Alaska Dog Food" and other such products suggested, not all in the outfitting trade sought efficiency. Miners touring the streets in search of ways to spend their money could seem like easy marks, who could be persuaded that Alaska gave them unimagined needs. They bought frost extractors (boilers), Klondike Saw Mills, Yukon dredges, and Seattle Hardware's Buckeye flour gold washer, able to pan as much dirt as 150 men.¹³¹ Up at Rampart City, Hunter Fitzhugh saw a lot of these useless "wonders of science" discarded by miners, "laid away on the bier of the Yukon to be borne back to Seattle and other seaport towns, whence they came."¹³² William Ballou, on the other hand, enjoyed Seattle's carnival consumer air. "I like Seattle...all its different fakirs trying to sell you a gold washer, a K. stove, or a dog team with one lame dog which would get well by tomorrow." In Ballou's account, all the stores had Klondike departments, the hotels were Klondike houses, and "fellows give their girls K. nugget breast pins...."¹³³ Mac

¹²⁹Trade Register (Seattle), Dec. 25, 1897, 30; Feb. 26, 1898: C.H. Metcalfe of Detroit in Seattle bought goods to establish a trading post at Dawson.

¹³⁰Trade Register (Seattle), Jan. 15, 1898, 3.

¹³¹Trade Register, Jan. 15, 1898, 30; Jan. 29, 1898, 51.

¹³²Fitzhugh letter, Rampart City, May 18, 1899.

¹³³Ballou letter, April 1, 1898.

McMichael simply tired of it. "It is two weeks today since I came here and I shall be glad to get away from 'Klondike Supplies', 'Alaska Outfittin' and the hundreds of other signs which have been staring us in the face so long."¹³⁴

While old and new Seattleites extended economic ties by rail to the east, others built trade and supply networks to the north, which further cemented the flow of money and goods between Seattle, the Yukon, and Alaska. Seattle supplied miners along First Avenue, but also through retailers in Skagway, Dyea, Dawson, and Nome who stocked their shelves from Seattle. Some of these start-up retailers had direct ties to Seattle, including M.K. Kalem, who in 1897 moved his grocery stock from a store on Pike St. in Seattle to Dyea. From there he reported back that business was booming, and he was always running out of goods.¹³⁵ F.W. Hart of Dyea purchased fifty tons of merchandise in Seattle in December 1897, and 30,000 feet of lumber.¹³⁶ Gordon & Co., a Western Ave. supplier, opened a wholesale commission house at Skagway; George R. Adams left the Alaska Transport Co., bought a grocery and outfitting stock in Seattle, and went into business at Dyea. A.A. Anderson left his job as a hardware clerk in Seattle, opened his own store at Skagway, and by 1900 had one of the largest stores there, having become "a capitalist."¹³⁷ In 1900, Seattle's expanding supply network shifted to Nome to meet the miners rushing down the Yukon to the Bering Sea.. A. Dinklespeil, an outfitter on

¹³⁴McMichael letter, March 28, 1898.

¹³⁵Trade Register (Seattle), Dec. 4, 1897, 9.

¹³⁶Trade Register (Seattle), Dec. 25, 1897, 30.

¹³⁷Trade Register (Seattle), April 28, 1900, 31.

Washington Street in Seattle, shipped his whole stock to Nome in July 1899.¹³⁸ As the northern retail network expanded, Seattle became more and more of a wholesaler for Alaska in general. "The outfitting will likely be done more and more by Alaska firms," the Trade Register speculated in 1899, "while they in turn will in turn buy supplies mainly from Seattle jobbing houses. We will get the trade just the same."¹³⁹ The following year, Fischer Bros. opened a branch at Nome. With large shipments of goods from Seattle, it supposedly became the "northernmost wholesale store of any in the world."¹⁴⁰

Seattle storekeepers and wholesalers created these economic ties to the north, but transportation companies and boat builders did the work of carrying people and goods from place to place. The city profited from moving miners' outfits as well as selling them. "Steamer passage has to be engaged weeks before hand," Fitzhugh reported from Seattle in January 1898, "and every boat is loaded to the gunals."¹⁴¹ As with the outfitting sector, an immediate expansion followed. The Pacific Coast Steamship, Alaska Steamship, and NAT&T boats on the Alaska run were quickly joined by new competitors, each of them capturing, in their chosen names, the linkages being forged between inside and outside. In January 1898 "eastern capitalists" formed the Seattle & Yukon SS Co; grain dealers Lilly Bogardus found partners to form the St. Louis and Alaska

¹³⁸Trade Register (Seattle), July 1, 1899, 29.

¹³⁹Trade Register, (Seattle) Feb. 25, 1899, 26.

¹⁴⁰Still, "Grocery Wholesaling in Seattle," 203; Trade Register (Seattle), May 25, 1900, 31.

¹⁴¹Fitzhugh letter, January 7, 1898.

Transportation Co. The Alaska Transportation and Development Company arrived from Chicago, planning six modern steel ocean boats and six light Yukon steamers. Then there were the Upper Yukon Transportation Co., the Boston and Alaska Transportation Co., the Washington and Alaska Steamship Company, and the Empire Transportation Co. of Philadelphia.¹⁴² Schwabacher Hardware's 1898 accounts ledger listed over twenty companies, most of them transport operations with names referring to Yukon or Alaska or gold.¹⁴³ The northbound boats glutted the transportation market and the competitors inevitably lowered fares to undercut each other's business. Alaska Steamship and the Pacific Coast SS Co. engaged in rate wars through 1897 and 1898, against each other and against other smaller start-up transportation companies. This resulted in near-ruin for many companies, and in May 1898 the principal transportation companies of Seattle, San Francisco, Portland, and Vancouver formed the Alaska Traffic Association to set standard passenger and freight rates to Lynn Canal and Dawson.¹⁴⁴

The capital investment came from eastern and Midwestern cities, but the new Alaska fleet came out of Seattle's burgeoning shipyards. Some companies bought steel steamers from the Union Iron Works in San Francisco, and from yards in Pennsylvania and New York, but Seattle produced 84 new vessels in 1898: 57 steamers, 12 schooners,

¹⁴²Trade Register (Seattle), December 1898 Trade Summary; October 2, 1897; October 8, 1897, 17.

¹⁴³Schwabacher Hardware ledger, 1898, Schwabacher Hardware Collection, UW MS and Archives.

¹⁴⁴Trade Register (Seattle), May 21, 1898, 9; Marylou McMahon Haughland, "A History of Alaska Steamship Company, 1895-1954," (Master's thesis, University of Washington, 1968), 1-7.

and 15 barges.¹⁴⁵ Moran Bros., the leading shipyard, built 12 Yukon river sternwheelers simultaneously, including three for the NAT&T and three for the Seattle & Yukon. Such intense demands transformed Seattle's waterfront from a gateway entrepot to a heavy industrial production site, complete with labor strife. Labor conditions at Moran's led to a strike in April, when steam fitters and helpers walked out, demanding higher wages and a nine-hour day.¹⁴⁶ "There is hardly a question," the Seattle Chamber of Commerce declared in 1900, "that Seattle will continue to be the shipbuilding center of Puget Sound, and further that it will be in due time one of the shipbuilding centers of the world...."¹⁴⁷

With so many boats and passengers mobbing the waterfront, the city expanded and improved the wharves, roads, and sidewalks to withstand the wear and tear of thousands of feet, and millions of boxes and sacks of supplies. In 1898 alone A.A. Denny announced plans for a new wharf, Amos Brown and Schwabacher's both rebuilt and extended their wharves, and the city let a contract to replank First Avenue from Yesler Way to south of Jackson Street. Large-scale improvements followed, though not necessarily for the Alaska trade alone: a realignment of all wharves on the waterfront, and a new Great Northern Railway facility with wheat elevator, docks, and warehouses. The Northern Pacific Railroad extended the Yesler dock and dredged beneath it, and the city hired the San Francisco Bridge Company to build a draw bridge across First Avenue

¹⁴⁵Trade Register (Seattle), December 4, 1897; October 9, 1897;

¹⁴⁶Trade Register (Seattle), April 8, 1898.

¹⁴⁷A.S. Allen, comp., The City of Seattle, 1900 (Seattle: Chamber of Commerce, 1900).

South to allow Moran Bros. to float their fleet of new Yukon river steamers out into the harbor.¹⁴⁸

Such economic growth took place away from the steamer docks as well. The number of city building permits doubled between 1897 and 1898, leading to a "phenomenal increase in new buildings," from the new Denny Hotel, to the new Vulcan Iron Works manufacturing plant on the tide flats by Fifth Avenue. The iron works was testimony to the large market for mining machinery afforded by mines in Washington, British Columbia, and Alaska.¹⁴⁹ G.W. Folsom of the Novelty Mill Co. went off "to get a fortune to put into flour mills in Seattle."¹⁵⁰ Some of the building finance came directly from the Yukon mines. Thomas Lippy was one of the first to strike it rich in the Klondike. In March 1900, Lippy obtained a building permit for a \$30,000 five-story brick and stone block on First Avenue South in Seattle, to be let to a paint and glass dealer and a harness store.¹⁵¹ Brick buildings seemed to spring out of the ground, a \$60,000 six-story building at First and Spring, three on Second Avenue, one adjoining the Rainier-Grand hotel, and another on the Collins block--along with the Great Northern's

¹⁴⁸Trade Register (Seattle), January 15, 1898, 19, 30; April 20, 1898, 36; May 7, 1898, 9; August 20, 1898, 26; October 22, 1898, 20; December 1898 Trade Summary.

¹⁴⁹Trade Register (Seattle), December Trade Summary, 1898, 47. For Building Permits, July 1, 1899, 25.

¹⁵⁰Trade Register (Seattle), July 21, 1897, 26.

¹⁵¹Trade Register (Seattle), March 10, 1900.

new stone and brick warehouses on Jackson Street.¹⁵² In a telling shift, the Seattle National Bank, at the corner of Yesler Way and Occidental, carved a new name over its entrance in 1899: Pacific National Bank.¹⁵³

Not all was success, however. Many smaller firms failed as the seasonal boom and bust cycle weeded the Alaska trade economy. Between June 1898 and the end of 1899 the Trade Register reported at least six or seven Alaska-related grocery and transportation companies in receivership, including the Cash Buyers Association, which brokered local produce and dairy products for the Alaska trade. The Klondike-Chicago and Boston & Alaska Transportation Companies were among the casualties as well. The trade papers did not necessarily note the smaller operations that sold out to the bigger wholesalers.¹⁵⁴

With ships in motion to and from the network of businesses in the Seattle and Alaska, Seattle soon hosted a seasonal migration of buyers and sellers to and from Alaska. Northern merchants travelled south in spring and summer to buy supplies, and Seattle businesses sent salesmen and agents north to take orders. "I.D. Spencer, merchant of Skagway, was in Seattle this week buying goods," the trade paper announced

¹⁵²Trade Register (Seattle), 1898 Seattle Commerce Edition, 30D, 47; March 31, 1900, 22.

¹⁵³Trade Register (Seattle), July 22, 1899, 29.

¹⁵⁴Notices of receivership in Trade Register: Klondike-Chicago Transportation and Trading Company (June 4, 1898, 34); Boston & Alaska Transportation Co. (Aug. 20, 1898); Conner Bros, Grocer (April 29, 1899); Cash Buyers Association, J.J. Sloan, Grocer, M.E. McKinley, Meats (May 13, 1899); Seattle & Alaska Steamship Co. (October 17, 1899); Seattle Steamship Co. (October 28, 1899).

in April 1898.¹⁵⁵ A year later, the Trade Register reported a "large group of Alaska merchants were visiting Seattle this week."¹⁵⁶ In the summer of 1899 a group of Seattle businessmen made a trip north to survey their Alaskan interests. They returned with a totem pole, to be placed in Pioneer Square.¹⁵⁷ And in 1904 a beneficiary of the Nome gold rush, Jafet Lindeberg, helped finance the Alaska Building, Seattle's first steel skyscraper. It became, according to Terrence Cole, "a symbol of the economic ties between Seattle and Alaska." The Alaska Club on the twelfth floor was a meeting place for Alaskan businessmen working in or visiting Seattle. Porthole windows looked out at the waterfront, and there was a gold nugget above the front door.¹⁵⁸ Miners themselves formed a large part of these Alaska-Seattle seasonal migrations, often wintering in Seattle in hotels and rooming houses that proliferated to meet miners' demands. The Chamber of Commerce canvassed available lodging space in January 1898, and logged 2,700 hotel rooms and 500 available houses, able to sleep over 2000 visitors a night.¹⁵⁹ With the end of the Nome mining season in the fall of 1900, Seattle's hotels filled with

¹⁵⁵Trade Register (Seattle), April 30, 1898, 36.

¹⁵⁶Trade Register (Seattle), April 1, 1899, 25. Other examples of Alaska merchants buying in Seattle: Joseph Burkhart of Skagway, Feb. 25, 1899; Frank Mangralla of Dawson. Trade Register (Seattle), August 12, 1899.

¹⁵⁷Trade Register (Seattle), September 2, 1899, 17.

¹⁵⁸Terrence Cole, "Home of the Arctic Club: The Alaska and Arctic Buildings in Seattle," Alaska Journal 15 (Winter 1985), 8-12.

¹⁵⁹Trade Register (Seattle), Jan. 22, 1898, 26.

the "Alaska migrators," come south to "winter quarters."¹⁶⁰ "A large number of Alaska people will winter the city," the Register observed," which is now crowded with visitors."¹⁶¹

From Boom to Alaska Trade

Having forged these linkages between Seattle and Alaska, Seattle's business community faced a pressing question: What happened when the flow of miners and the gold through Seattle slowed? The Dawson Daily News asked that question in an advertisement in the Seattle trade paper. "What would happen to Seattle if Yukon Territory trade should go elsewhere? What are you doing to make the acquaintance of that great army of wealth producers? Seattle jobbers and manufacturers should advertise in the Dawson Daily News."¹⁶² The Klondike/Alaska gold rush made Seattle the gateway to Alaska, but could that relation hold past the initial boom, and could it remain profitable for Seattle? Seattle's answer was, of course, a resounding YES, despite evil reports from rival cities that it was, by the end of 1898, "a busted boom town" with grass growing in the streets.¹⁶³ Seattleites believed nature had made Seattle the gateway city, and nothing so naturally ordained could easily fade. The business community denied that the Klondike rush had ever been a "boom" at all; it was a natural expansion of the Alaska

¹⁶⁰Trade Register (Seattle), November 17, 1900.

¹⁶¹Trade Register (Seattle), Oct. 13, 1900, 22.

¹⁶²Trade Register (Seattle), May 25, 1901, 16.

¹⁶³Trade Register (Seattle), October 1898, 25. The evil city was Tacoma.

trade, one of Seattle's many thriving economic sectors. "None of this increase has been of the boom order," the Trade Register's editors assured the city's merchants. "The great Alaska gold rush has subsided, but it left Seattle a steady demand for supplies that has astonished our jobbers and manufacturers almost as much as it does the inquiring visitor." Growth had come from abundant crops, high prices, an increase in both jobs and population, and from "increased rail and water transportation facilities which have given us new markets--to all of these Seattle is indebted for her large commerce this year."¹⁶⁴ "[T]here is no Alaska boom...," another author asserted, also in late 1898. "There is, however, a steady and remarkably large Alaska trade which Seattle mainly supplies, having San Francisco as a competitor to some extent."¹⁶⁵

The Trade Register's assessment of Seattle's growth was remarkably accurate. Between 1898 and 1900, Seattle's role as gateway to the north did not boom and bust, but rather shifted and grew. As the Klondike boom waned, Vancouver and Victoria wholesalers increased their control over the supply trade in the Yukon Territory, while Seattle concentrated its powers on Alaska.¹⁶⁶ In 1899 and 1900 Nome graciously provided another gold strike, the benefits of which fell firmly into Seattle's economic sphere. Nome inspired spring supply rushes for three more years, and a lesser but significant trade for several years thereafter. In 1899 the spring Alaska trade was reported as "brisk," with shipments "steady and large," until June, when it turned briefly

¹⁶⁴Trade Register (Seattle), December 1898, 1.

¹⁶⁵Trade Register (Seattle), October 1, 1898, 24.

¹⁶⁶MacDonald, "Seattle, Vancouver," 244.

"phenomenal."¹⁶⁷

Because of Bering Sea ice, Nome was not "getatable" until May or June. This meant that the Seattle's work of supplying Nome took place later in the year than the supply work for the upper Yukon. In February 1900, Seattle jobbers nervously observed the "late Alaska business," but, with patience, the supply boom did come. Outfitters once again worked day and night to fill orders, this time in May, rather than February and March.¹⁶⁸ "This week has been Alaska week," the Register wrote on May 12, 1900, "with heavy purchases for both Nome and Yukon account....Retail business has kept stores open late; hotels are overcrowded...and the week has seen another larger flow of miners North."¹⁶⁹ By the first week of June, an entire fleet of 19 steamers and 35 sailing ships left for Nome, carrying 43,000 tons of goods and over 10,000 eager miners north to the gold-bearing beaches of Norton Sound.¹⁷⁰ Seattle's supply trade further expanded with Nome, providing not only transportation, food, and clothing, but all the supplies for Nome City's instant infrastructure: tons and tons of lumber. One schooner sailed in May with 700,000 feet of lumber, 500,000 shingles, and 500 doors.¹⁷¹ The wind-swept tundra of Norton Sound offered not a stick of wood. Miners instead tapped the forests of the Pacific Northwest, far to the south. As far as shelter was concerned, Nome miners lived

¹⁶⁷Trade Register (Seattle), March 18, April 1, 1899; June 10, 1899.

¹⁶⁸Trade Register (Seattle), February 17, 1900, 22.

¹⁶⁹Trade Register (Seattle), May 12, 1900, 22.

¹⁷⁰Trade Register (Seattle), April 21, 1900, 13.

¹⁷¹Trade Register (Seattle), May 26, 1900, 18; June 9, 1900, 22.

firmly in Seattle's hinterland. "Seattle is the gateway to Alaska," read an article in the National Magazine of Boston in June 1900. "You may get there by way of other west coast cities, but you will be as a man using a side door."¹⁷²

Arguably, however, the Nome rush constituted another gold boom, rather than a bona fide and lasting expansion of the Alaska trade. Like the Klondike/Alaska gold rush, Nome filled the streets with people and the assay office with gold--\$500,000 from Nome in one week in November 1899.¹⁷³ These were both quite visible developments, and, at certain times of the year--November 1899, for instance--Seattle's whole economy seemed to the observer on the street to revolve around miners and Alaskan gold. That November, as the city recovered from one gold season and prepared for another, the Trade Register noted the city's overflowing hotels, and thousands of returning miners in search of housing. "Alaska seems to be responsible for much of Seattle's prosperity at the present time," it stated.¹⁷⁴

Such appearances were deceiving. Though Alaskan gold brought much prosperity to Seattle, the city's growth had other, less visible sources that commanded less attention. By 1901 and 1902, the gold rush settled into the "Alaska trade," one of Seattle's many seasonal economic sectors that connected it with its growing Northwestern and Pacific hinterlands. The Register's 1898 trade summary presented a series of sections on Seattle's economy, addressing "The Fish Industry," "Grain, Flour, and Cereals," "The

¹⁷²Trade Register (Seattle), June 30, 1900, 11.

¹⁷³Trade Register (Seattle), November 11, 1899, 29.

¹⁷⁴Trade Register (Seattle), November 25, 1899, 7.

Lumber Industry," "Seattle-Oriental Trade" and "Coal Mined and Shipped." "Our Alaska Trade" was only one of these sections, far from dominant, but nonetheless significant.¹⁷⁵ Shipments of Alaska salmon, and the annual migration of Chinese and Japanese cannery workers to and from coastal canneries grew in importance, and received as much notice each spring and summer as shipments of gold.¹⁷⁶ Steamer shipments from the port of Seattle between 1897 and 1902 showed other sectors of the regional economy expanding as well. The city exported increasing amounts of wheat, flour, and lumber to the U.K., Peru, Chile, Hawaii, Tahiti, and Japan, coal and lumber to San Francisco, shingles and salmon east by rail to Chicago and beyond, and also to South Africa and Australia. The amount of wheat and flour shipped from Seattle and Tacoma around the world doubled between 1899 and 1900, reaching over 14 million bushels--a close approach to Portland's 17.7 million bushels.¹⁷⁷ All of this "tremendous" economic growth, the Trade Register declared, "is not one of accident; it is one of absolute commercial naturalness."¹⁷⁸

What was remarkable about Seattle's economy in the direct wake of the gold rush, however, was the city's step-by-step economic extension of its gateway function to new regions and hinterlands. Seattle's outfitting prowess won the Klondike miners' business; that success in turn won the patronage of the federal government, which supplied Army

¹⁷⁵Trade Register (Seattle), December 1898.

¹⁷⁶Trade Register (Seattle), Aug. 19, 1900, 20. SS Cottage City arrived Aug. 10 from Alaska with 500 tons freight including 6000 cases salmon.

¹⁷⁷Trade Register (Seattle), July 13, 1901, 17.

¹⁷⁸Trade Register (Seattle), June 16, 1900.

outposts and troops in Alaska through Seattle outfitters. The crew of the Revenue Cutter Nunivak, for one, stocked its ample larder entirely from Seattle, and two government expeditions went forth to Alaska in 1899 with Seattle goods.¹⁷⁹ Once Seattle proved able to feed the Army in Alaska, it then expanded to feed and supply the Army in Manila, with the occupation following the Spanish-American War and the Philippine Insurrection. Seattle regularly shipped horses, mules, feed, and supplies to Manila in 1900 and 1901. Seattle's hay and grain traders, who began by supplying horse packers on White Pass, expanded their markets to Hawaii and to Manila, shipping tons of compressed hay bales all over the Pacific, as well as all over Alaska.¹⁸⁰

Having proved its powers as a gateway--the place where commodities taken from nature came together to be exchanged--Seattle grew into an even bigger gateway, to China and Japan, the Philippines, Hawaii, and South America. By the middle of 1900, it was second only to San Francisco among Pacific ports in exports and imports, and the tenth most active city in the nation.¹⁸¹ In July there were six steamers in port loading for China and the Philippines, alongside Nome-bound boats.¹⁸² The Trade Register stated proudly that "It is a notable commercial fact that for the seven months ended Jan. 31, 1900, the Puget Sound district exports to the Philippines were over three times greater

¹⁷⁹John C. Cantwell, Report of the Operations of the U.S. Revenue Steamer "Nunivak" on the Yukon River Station, Alaska, 1899-1901 (Washington, D.C.: GPO, 1904), 26, 285; Trade Register (Seattle), April 8, 1899.

¹⁸⁰Trade Register (Seattle), August 11, 1900, 6.

¹⁸¹Trade Register (Seattle), June 16, 1900, 26-27.

¹⁸²Trade Register (Seattle), July 29, 1900, 22.

than from San Francisco."¹⁸³ James J. Hill's Great Northern Railroad already had a trade partnership with Japanese shippers Nippon Yusen Kaisha, whose steamers unloaded rice, tea, and silk in Seattle, to return to Japan with cotton, salmon, tobacco, hardware, pig lead, guns, and cartridges.¹⁸⁴ Hill oversaw the creation of the Great Northern Steamship Company in 1899 to extend his reach over Asian trade. "The Oriental trade, on which this port has set much of its future," the Trade Register explained, "has been confirmed to it more surely the past year by the magnificent project of the Great Northern railway, which is building the largest freight steamships in the world...for the Seattle-Oriental trade."¹⁸⁵ A 1900 trade report even went so far as to declare that with these Japanese trade connections, "Seattle is a natural rice center."¹⁸⁶ In 1899, the Trade Register reported two visitors in Seattle investigating Japanese-American trade and the possibility of opening a local office. They were representatives of a Japanese trading concern, "merchants of London, New York, Shanghai, Singapore, Hongkong, and Tokyo."¹⁸⁷ The Tee Globe Transportation Company incorporated in 1901 with plans for a fleet of 10 sailing vessels for the Pacific shipping business.¹⁸⁸ Within that context, the end of the Klondike-Alaska gold boom appeared not as a bust, but as a regular cycle in a prominent

¹⁸³Trade Register (Seattle), March 31, 1900, 27.

¹⁸⁴Trade Register, (Seattle), April 16, 1898, 21.

¹⁸⁵Trade Register (Seattle), December 29, 1900, 27-28.

¹⁸⁶Trade Register (Seattle), June 16, 1900, 27.

¹⁸⁷Trade Register (Seattle), February 18, 1899, 21.

¹⁸⁸Trade Register (Seattle), April 20, 1901, 17.

trade sector of a thriving gateway city.

Seattle's Nature

The Portland's arrival in Seattle in 1897, while significant in its own right, has grown far beyond its own historical importance to stand for the broader, long-term rise in Seattle's commercial fortunes that began in the 1890s but continued well into the new century. The Portland's gold has come to stand for all of the wealth that flowed into the city in that period, from many sources other than Alaska and the Yukon, and for the abundance of natural resources and merchandise that flowed outward, around the world. The Portland was a problematic symbol because Seattleites equated the ship, and Seattle's leap to prosperity, with destiny and with nature. "The hand of destiny seems to guide to sure and certain success," the Trade Register wrote in July 1898, "for she has opened up to the world the great Alaskan gold fields, the pathway to which lies directly through the heart of the Queen City...."¹⁸⁹ Seattle so successfully routed gold and supplies on pathways through its streets and across its wharves, that the city's Alaska trade--a thoroughly cultural exchange of commodities within a capitalist economy--seemed a naturally occurring phenomenon, a seasonal event somehow integral to Seattle's very nature.

That pathway through Seattle's heart was not natural, however, and was not constructed by destiny. Seattle's workers in groceries and outfitting stores and shipyards constructed it carefully, brick by brick, and advertisement by advertisement, and they

¹⁸⁹Trade Register (Seattle), July 2, 1898, 5.

connected it to existing railroads that led east and south. The Portland remains a telling historical symbol nonetheless, because it so powerfully captured Seattle's emergence as a gateway city. The Portland's gold and the gold that followed was a raw material demanded by a world-wide economy, and Seattle provided the means and the infrastructure by which that material was harvested, processed, and shipped on into the economy. The nature and culture of gold connected the Yukon interior to the rest of the world, and those connections were real, physical, material exchanges. Such linkages took work. Seattle did a good bit of the work required to knit together Alaska and the outside world--the buying, selling, gathering, distributing, shipping, building, melting, and processing of gold and many other commodities. What that work ultimately demonstrates is that it was not the mere presence of gold on the Portland that linked the Yukon to Seattle, and to the outside world. It was the linkages formed in reaction to that gold, deep and lasting connections between the industrial culture that valued gold, and the northern creeks--the nature--that contained gold.

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Conclusion

On the evening of November 4, 1900, Hunter Fitzhugh left his cabin on Slate Creek near Rampart City to hunt ptarmigan. Sometime that night he was killed in an avalanche. His last letter home to Lexington, Kentucky reached his parents at the same time as the news of his death. "Be sure to send clippings," he had written in late October, "and Don't forget the election."¹ In the last moments of Fitzhugh's adventurous life, nature was a real and deadly force beyond human control and beyond human culture. The Alaska/Yukon gold rush revealed that little else about gold and gold mining could be so singularly natural. Nature mattered, especially when snowslides or raging rivers took miners' lives, but how human beings valued nature and how they harvested it and used it mattered more. In the 1890s in the Yukon and Alaska, gold demonstrated how complicated were the ways in which people valued parts of the natural world. What humans valued had far-reaching consequences for both humans and ecosystems. Gold revealed that the material world, even at its most remote and wild, was both a thoroughly cultural and a thoroughly natural place.

This gold rush unfolded out of a series of naturalizations--human definitions of what was natural. Late 19th-century Americans gave gold cultural value, but called that value natural. They understood gold to be naturally money and believed that their industrial economy and their very civilization required growing stocks of metal money. Miners made a journey to a place they deemed natural to extract gold from the earth and return with it to civilization. They brought the gold back to Seattle, the gateway city

¹Alaska (Rampart) Forum, November 8, 1900; Hunter Fitzhugh letter, October 29, 1900, Robert Hunter Fitzhugh Collection, Box 2, UAF Archive.

whose location naturally drew miners, gold, and wealth as its economy expanded along pre-destined lines.

This gold rush was not, however, the result of gold's natural value or its ahistorical power. Gold itself, the journey to the Yukon, the work of mining, and Seattle's role--everything that late 19th-century American defined as part of gold's nature--contained culture, labor, and a complex physical world. Gold's naturalized value, laden with political and social promise, set people and resources in motion. Miners sought gold and gold mining as both natural wealth and as labor in the earth, an escape from industrial labor. As "nature" became a separate, far-away place for late 19th-century urban dwellers, gold miners correspondingly saw the Yukon as a more natural place, with little connection to their constricted modern lives. That separation did not hold. Miners did not journey into nature. They carried their culture, their industrial modes of labor, their food, and their diseases to the Yukon, and in doing so created transformative linkages between gold-bearing creeks and the outside world. Their labor brought the Yukon interior into the industrial world and the industrial world to the Yukon, right down to the roast beef on the dinner table.

This knitting together of inside and outside changed nature along the gold creeks, marking them as places of modern, industrial life. Miners stripped ground vegetation, cut and burned riparian forests, dug and sluiced tons of earth, and dumped sediment in streams and rivers. These environmental changes were not caused by the mere presence of gold. They were the product of grueling physical labor in mining, transportation, and supply. That labor produced new understandings of how the world was put together. even

as miners took it apart. The miners' labor demonstrated that the ways in which human beings took resources from the earth involved living systems and reorganized those systems into new patterns of production and consumption. This was true even when the resource taken was an inorganic yellow metal for which people had no biological need. Everything harvested from the material world no matter how seemingly inert was connected to other resources, and to human culture.

Those other resources included the spruce forests that fueled steamboats and the food that fueled miners as they sunk holes to bedrock and hauled supplies through intractable bogs. Gold miners were themselves organic. Their labor was always natural as well as cultural because they had bodies that demanded nourishment. The miners' labor transformed the creeks and forests, but their bodies' demands connected them in to other places and peoples. Miners drew energy from Californian fruit, Midwestern beef, and Yukon caribou and salmon. The foods they ate and the diseases they carried transformed the material and cultural world of native peoples who provided miners with fish and meat and guided them over the Chilkoot and up the Yukon. Finally, Seattle merchants' and boosters' hard work rather than natural forces made Seattle the urban marketplace for gold, mining supplies, and gold rush transportation. The literal valuing of gold was as much the work government bureaucracy as laws of nature. Miners and bankers shipped gold outside to Seattle, where the federal government measured and certified its value, and moved it on to the U.S. Mint to turn it into money.

The environmental history of this gold rush is ultimately the story of all of this human labor, in Seattle, on the trails, and on the creeks. It is the story of the human

relations with the material world that all of these naturalizations masked. And it is the story of the environmental and social consequences of the ways in which humans valued and harvested gold. The last word belongs to Nora Crane's husband, Edward, who wrote from Circle City to his mother in June 1898. "It gives me great pleasure to hear of your good health and happiness, and they are the good things that count in this world," he told her. "[G]old dust is not it, comparatively speaking."²

²John Edward Crane letter, June 23, 1898, Kepner-Crane Collection, UAF Microfiche.

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BA, Yale University, 1988, History (magna cum laude)**

Employment

Assistant Professor, Department of History, Middlebury College, 1997-

Dissertation

**"The Nature of Gold: An Environmental History of the Alaska/Yukon Gold Rush"
Committee: Richard White (Chair), John Findlay, Bruce Hevly
Exam Fields: American West, American Colonial, History of Technology, Modern Latin America**

Thesis

"Nature's Second Course: Water Culture in the Mormon Communities of Cache Valley, Utah, 1860-1916," M.A. thesis, Utah State University, 1992.

Teaching Fields

**American West
American Environment
19th Century America
Colonial America
History of Technology**

Teaching Experience

**Instructor, Univ. of Washington Dept. of History, American Environmental History,
Summer 1996
Instructor, Univ. of Washington Dept. of History, History of the Pacific Northwest,
Winter 1996
Instructor, Univ. of Washington Dept. of History, History of the Pacific Northwest,
Summer 1995
Instructor, Univ. of Washington Dept. of History, Nature in American History, Winter
1995
Teaching Assistant, University of Washington, 1992-1995
Courses TA'd: United States History Survey; Twentieth Century United States; America
Since 1945; Colonial America; Science and Religion in Historical Perspective**

Fellowships and Awards

University of Washington Graduate School Humanities Dissertation Fellowship, 1996-1997

John Calhoun Smith Dissertation Fellowship, Univ. of Washington Dept. of History, 1996

Rondeau-Evans Dissertation Research Travel Grant, Univ. of Washington Dept. of History, 1995

Daughters of the Pioneers of Washington Scholarship Award, 1994

John Calhoun Smith Memorial Scholarship, University of Washington, 1990-1992

Western History Association Editorial Fellowship, Utah State University, 1988-1990

Cache Valley Local History Award, Utah State University, 1989

Scholarly Presentations

"Nature, Culture, and Wealth: The Environmental History of Gold in Seattle and Alaska," Western History Association, Lincoln, Nebraska, October 1996.

"Nature, Culture, and Wealth: Toward an Environmental History of Gold in the 1890s," Environmental Cultures: Historical Perspectives," University of Victoria, Victoria, British Columbia, April 1996.

"Creating Alaska: The Seattle Chamber of Commerce and the Alaska Railroad Bill of 1914," Power and Place in the Pacific Northwest, Center for the Study of the Pacific Northwest, Seattle, WA, November, 1994.

"Measuring Water: The Irrigation Exchange System in Cache Valley, Utah, 1860-1916," American Society for Environmental History, Pittsburgh, PA, March 1993.

Book Reviews

A Sermon in the Desert: Belief and Behavior in Early T. George, Utah by Larry Logue, Western Historical Quarterly 21 (May 1990).

The Northern Gold Fleet: Twentieth-Century Gold Dredging in Alaska by Clark C. Spence, Western Historical Quarterly 28 (Summer 1997).

Additional Work Experience

Researcher/Consultant, Curriculum Project for Pacific Northwest History in the Washington Public Schools, Center for the Study of the Pacific Northwest, Univ. of Washington, 1996-1997.

Researcher, University of Washington Libraries, Department of Special Collections, Summer 1993. Exhibit: "Silence and Solitude: Mountaineering in the Pacific Northwest."

Historian, National Park Service, Summer 1992. Research on Pacific Northwest cultural landscapes.

Research Assistant, Profs. Richard White and John Findlay, University of Washington Department of History, Summer 1990, 1991.

Editorial Assistant, Western Historical Quarterly, Utah State University Department of History, 1988-1990.

SERVICE

Graduate Liaison Committee, Department of History, University of Washington, 1993-1995.

MEMBERSHIPS

American Society for Environmental History

Western History Association

Organization of American Historians

American Historical Association

REFERENCES

Prof. Richard White, University of Washington Dept. of History

Prof. John Findlay, University of Washington Dept. of History

Prof. Bruce Hevly, University of Washington Dept. of History

Prof. Richard Johnson, University of Washington Dept. of History

Prof. Clyde A. Milner II, Utah State University Dept. of History

Prof. Carol O'Connor, Utah State University Dept. of History