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Welcome to the Farm

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Welcome to the Farm

by

Elani Borhegyi

A thesis submitted in partial fulfillment of the requirements for the degree of:
Environmental Science and Sustainability

2023



A view from the Osoyoos Desert Centre, looking over vineyards and the Okanagan Highlands. This region is known as “Canada’s Wine Country”. The photo was taken on Nleʔkepmx Tmíxʷ (Nlaka’pamux), Colville, Cayuse, Umatilla, Walla Walla and Syilx (Okanagan) lands.

Abstract

The purpose of this creative scholarship is to examine human relationships to Earth and the implications for a thriving future. This thesis studies the current environmental state of our planet, then looks at sustainability as a model for improving human and planetary health, and ends by visualizing a thriving future beyond sustainability in which we adopt a “caretaker” culture. The key to this trajectory is to untangle and dismantle colonial relationships with the planet and replace them with “caretaker” relationships - relationships rooted in love, honor, and reciprocity with environmental connection, while taking into account past, present, and future generations

This thesis is a culmination of four years of coursework in environmental science, environmental studies, Indigenous Knowledge, and climate change. These courses included examples of how political divisions prevent climate action, colonial ideas stall progressive wilderness policy, and resource management decisions are made without sufficient community input. These issues have made me realize that cultural change is most urgently needed to solve or manage major environmental and social issues.

To carry out this project, I utilized Western and non-Western concepts. I drew upon lessons learned across many of my courses¹ and read several books and texts to prepare myself for the writing of this thesis. These texts include books, articles, essays, TED talks, and other sources that span environmental, social, economic, and cultural topics. These sources are listed by chapter in the bibliography at the end of this document.

This project communicates to the world that how we live our relationship with the planet matters. Time and time again, the biggest obstacle to climate and environmental solutions is the lack of care for the planet. We need to reimagine our relationship with the planet everywhere and in every way.

¹ Some courses that were particularly influential for this thesis include: Ways of Knowing, Climate and Society, Fire Management & Environmental Change, TEK of Indigenous Peoples, Ecosystem Ecology, Agroecology, Ethnobotany Internship, National Parks and American Culture, Conservation Ecology, and Wilderness and Civilization.

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Preface

Thanks and Acknowledgements

I would like to begin by thanking Mother Earth for sustaining me and providing me with all I need every day. I am always in awe of her beauty and her creations.

Next, I would like to thank my thesis advisor, Caroline Stephens. She has guided this work all while being a stellar educator at the University of Montana. Her wisdom and dedication to seeing me succeed has led to this being one of the most fulfilling projects of my life.

Thank you to all who proofread my thesis, or had conversations with me about the subjects within it, including Charlotte Macorn, Chloe Runs Behind, Daniel Borhegyi, Heidi Junkersfeld, Judith Mendelson, Logan Webster, Rachel Rhoades, Shelby Cole, Sidney Fellows, and Wyatt Day.

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I would like to thank several of my professors during my time at the University of Montana who have been particularly influential in the creation of this work, whether through the content of their courses, or the conversations we had after class. Thank you to Andrew Larson, Ben Colman, Cara Nelson, Kylla Benes, Laurie Yung, Marilyn Marler, Peter McDonough, and Rosalyn LaPier. I would also like to extend a special *mahalo nui loa* to my hula teachers Ka'aumoana Ahina and 'Aukai La'amaikahiki.

Lastly, I would like to thank my friends and family alike for their support in helping me to complete this work, whether through keeping me grounded, giving me space to vent, or making me food. Thank you to my drag family for always being there to listen and provide a strong sense of community. A special thank you to my mom, dad, and my brother for their support and love.

Positionality

My name is Elani Borhegyi. I am a 22 year-old senior at the University of Montana, which is on the lands of the Séliš, Qlispé, Ktunaxa, Piikani, and many other nations. I am a guest here from Newton, Massachusetts, a suburb right next to Boston.

I am White. My Whiteness has a major impact on the lens with which I view the world and research, especially given that I am living in a country with a long legacy of colonialism and White supremacy. My Whiteness makes me privileged and makes it virtually impossible for me to experience the pervasiveness of racism in American society. My Whiteness also influences my research - I may be more biased to make assumptions about the authors of research upon seeing their name or what the research discusses.

My Whiteness is particularly important when considering the in-depth investigation I do on colonialism. Colonialism has its origins in Europe, and colonialist ideas were and still are spread primarily by White settlers. Because of this, my Whiteness prevents me from seeing the full harm of colonialism because the crimes of colonialism implicate White settlers.

In a society created under Western colonialism, White people are assumed to be superior to other races, and so it is unlikely that a White person such as me would come to write about decolonial, Indigenous ideas. I was able to write about this topic through years of questioning and researching why we view colonial worldviews as superior to Indigenous worldviews, and from being invited to do research on Indigenous knowledge.

My ethnicity of being Eastern European also has an effect. My grandparents on my dad's side are immigrants from Hungary, who immigrated shortly after the Holocaust, where they were persecuted for being of Jewish descent. I grew up hearing stories of the Holocaust and the impact it had on my family, and how holding onto the values Judaism teaches is important. Religiously, I now consider myself an atheist with Jewish traditions, and identify with many features of Earth religions such as a belief in all living things having some level of sentience, the rights of nature, and honoring Mother Earth. My religion is rooted in both Western and non-Western beliefs.

I am also disabled and queer. I was born Deaf and use cochlear implants to hear. Sign language was my first language. Unlike most Deaf people, for K-12 education I was schooled in a public, mainstream institution. Because of this, my learning environment was heavily influenced by the perspectives of more privileged, able-bodied people. I am genderqueer and receive gender-affirming care, and also consider my sexuality to be queer.

My identity as a queer person was brought to the forefront when I moved to Missoula, Montana for my undergrad. In Montana, transgender people such as me have faced intense scrutiny in the legislature, making Montana a difficult state to live in socially and politically. As a result, I've become very involved in politics, particularly leftist politics, and my research is influenced by this. I am more likely to seek out and trust sources that I believe reflect or reinforce my political identity.

All of my identities have formulated my beliefs on research methodology and process. I believe that non-Westernized information sources are just as legitimate and should be examined as much as Westernized information sources. This includes sources that discuss the supernatural, oral history and storytelling, and traditional knowledge. Growing up in an era of digital information, I also believe that information found online that comes from a reputable source is legitimate information. I believe that research is a never ending process that should emphasize verification of facts by multiple sources, and if a researcher is proven wrong, they should accept their wrongdoing and work to correct it.

Through writing this positionality statement, I have come to realize that all research and information is biased, and an apolitical stance is hard, if not impossible to achieve. All research is inherently political because how that research is conducted is influenced by the researcher's methodology and views. I wanted to start my thesis with a positionality statement to explain my background, how I came to writing this project, and to assert that no research is done completely without bias, whether that is for better or for worse.

Note on Sources

My thesis is a work of creative scholarship. It is not a traditional Western scientific paper in which sources are cited in-text. It is also a work that heavily relies on scholarly sources that would normally be cited in-text. Because of this, I opted for bibliography in which I reference sources used for the facts I state in each chapter, plus recommended readings or viewings (most of which are from my classes).

In doing this, I hope to make my thesis more accessible and an easier read for a general audience. With my citations at the end of my thesis, rather than throughout, I hope that it will read like a short book, as intended. Additionally, this method allows me to insert recommended readings, which are readings that touch on the topics discussed in the chapter, or contain extra details that were cut from the final draft.

Part I: On Colonialism

Chapter 1: The Farm

I am writing this from a farm.

More specifically, the University of Montana campus.

The campus is well-known for its central structure composed of turf grass in an oval shape, hence its name, “The Oval”. Turf grass is the most irrigated “crop” by acreage in the United States, with an acreage over 40 million, or 2% of the continental US, about the size of the state of Georgia.

Before this campus was here, this land was heavily influenced by the Salish and Kootenai peoples. According to tribal elders, they burned the area around Missoula regularly; the Indigenous peoples of Montana and all over Turtle Island are experts with using fire as a way of clearing brush to make hunting easier and to grow desirable plants. Five thousand years later, we have relabeled this traditional and necessary practice as “prescribed burning”, which scientists have proven to be essential to maintaining biodiversity and preventing large wildfires.

Both prescribed burning and clearing land for this campus was used to create a desirable landscape for certain groups’ needs. In this way, perhaps, we could argue that the campus has been *farmed* in two ways: using the farming technique of burning to grow a variety of edible plants for buffalo to graze on and people to dig up, and clearing the land and seeding a singular species of grass for aesthetic purposes. While one may be better for the planet, or the economy, or society than the other, they are both undeniably farming practices. That is why I call this campus a farm.

According to Oxford Languages, a farm can be defined as “an establishment at which something is produced or processed.” I would add that a farm is not necessarily an establishment, since establishments tend to be seen as formal institutions. In reality, farming has been happening for thousands of years from peoples’ backyards to lands the size of small states. However, what establishment does get at is *intentionality*. There

exists the *intentional* coming together to produce something. Intentionality can include forms of stewardship, cultural practices, beliefs, and ethics.

I propose this slightly modified definition of a farm:

Farm: as a place that intentionally produces something from the land².

So if a university campus golf course is a farm, what else is? A houseplant store? What about a coal mine, as it draws organic matter from the ground in the way that corn draws nitrogen? After all, fossil fuels are simply compressed botanical matter deep in the Earth. Perhaps we could call a mill just an extension of a wheat farm, and the mouth that consumes the flour simply the end of some large complex farming system? Then could we say that this entire planet is a farm, as the land and oceans produce rich bounty and we harvest them for our consumption? I intentionally use farming as a metaphor for human relationships with the planet because it makes it easier for us to understand such relationships. Most are already very familiar with the idea that farming goes from land to food to product to table. This familiarity makes the metaphor of the farm one that can be understood as a metaphor for all types of human relationships and processes with the land, not just the growing of food.

On a farm, there is the farmer. That farmer is characterized by their philosophy around farming, the practices they use, the attitudes with which they view the land.

Then there are the farming practices the farmer uses. Some practices do more harm than good to the land. Some help heal the land, and some do not extract from the land at all, but replenish it.

Lastly, there are the products that the farmer aims to produce. For some farmers, that could be a crop. For others, it may be minerals. It could be structures, like houses, cities, and states.

These all feed into one another. A farmer may buy up forest land (farming practice) in order to log it (product). That timber could then be sold (farming practice) to produce income (product).

² In this book, I talk about the farming practices of humans. But I want to acknowledge the fact that other species farm too. Some examples include: South America leafcutter ants growing fungi, firehawks in Australia burning land for food, and caddisflies' silk homes holding rocks together on the river bottom.

So what does this mean for us? This means that we each have a role to play on our own farm, and those farms look different for each individual. All of these farms are a part of the greatest farm of all: Earth. Earth is the farm we all depend on.

Close your eyes and think. Let go of your preconceived notions of what a farm is, and the people who you typically see working there. Ask yourself:

Whose land am I on? Who does that land belong to, if anyone?

What does the land give me? How are those things extracted?

And most importantly,

How am I giving back to the land?

Let me tell you a story.

I'm in a cave on Es-mock, towards the end of winter. Es-mock is a mountain in Missoula, and is often called "Mt. Sentinel" by the locals. Es-mock is her Salish name.

Mountains are an important part of my life. In general, mountains are seen as sacred and or important places. They hold meaning across all cultures and have many uses too. Mountains fertilize the soil with their unique geologies, provide water downstream, and are places for recreation.

Es-mock formed, like most of the Rockies, from glacial activity and tectonic uplift. Glacial Lake Missoula spanned from Spokane to Boise, with the epicenter in Missoula. Its waters and active glaciers formed Es-mock and the Missoula valley. We see that unique geology today, in the shades of grass, formed across Es-mock like topographic lines.

I began my journey to the cave by hiking up to a grassland on the southern slope. This grassland was, like most grasslands near human habitation, regularly burned by Indigenous peoples, similar to the grassland the University of Montana occupies. Today, in the absence of fire, it has become a home for invasive species such as knapweed and

toadflax. In turn, the number of native species has decreased, and in some areas there are no native species at all.

The story changes in the forest on the eastern slope of Es-mock. The sheer biodiversity of forests makes it harder for invasives to trespass, and much of Es-mock's species are located here, in the trickling streams, lichen-covered trees, and nurse logs. This forest is a hamlet of biodiversity on an otherwise scarred landscape, with intense forest fires and drought knocking on the doorstep.

Now, I come across a clearing in the forest. This is a strange one indeed, a straight line that bisects this seemingly rough terrain.



Further investigation reveals that this clearing is due to a pipeline, a gas pipeline installed by the company NorthWestern energy. NorthWestern also operates Colstrip, the second-largest coal-based power plant west of the Mississippi.

As I am ascending, snow begins to fall. It looks like a light flurry that is going to die out. I go higher, and the snow slows, then stops.

About half an hour later, I am at the saddle that goes up to Es-mock's summit. The snow is picking up again. Quickly. I hike faster, hoping to reach the summit before the snow does.

The next thing I know, I've made it to the top of Es-mock in a full-blown snowstorm. After touching the summit, I immediately rush for cover and begin walk-running down the mountain, this time on the western slope, which is almost entirely grassland. In the haze, I come across the cave.



“The cave” is a copper mine from 1890. The cave remains, but is blocked off about 100 feet in. The dust crunches and kicks up beneath my feet. I can almost smell the copper amongst the grime and the sweat of the workers squeezing through the narrow tunnel. I look around, expecting cobwebs, or small insects scurrying about, but it is devoid of life.

All across Turtle Island, especially in Montana, mountains saw the encroachment of businessmen looking to turn a profit, and who sent workers in droves to extract the precious materials. The riches of these mountains created so-called copper kings, and their ambitions spared no mountain they set their eyes on.

This cave is a place of reflection for me, and a place to release anger. I’ve come up here and shouted into the narrow abyss again and again, even if it’s just to hear my own rage echoing back at me.

I am in a cave,
I am on Es-mock,
A mountain diverse below and above soil,
A mountain that has teemed with life for a
Long, long time,
Has been with people for a short time;
Colonization an even shorter time

This land is sacred,
She gives us love,
And the ground I stand on is holy, and
from it flows abundance, gifts upon gifts
we strive to repay,

I come here to pray,

I am in a mine,
I am on Mt. Sentinel,
A rich hill of timber, pastureland, copper
A hill of pride, that will make us kings,
For us to be fruitful and multiply,
Is now the place we recreate,
A thing of natural beauty against a city

This land is the property of:
The City of Missoula, the state of
Montana, the Federal Government,
Missoula county, private owners, tax
dollars, laws, corporations, pipelines,

I come here to show my power,

I await at the foothills for water,
I saunter, smelling the ponderosas,
I think of the forage, for
Birds, deer, insects, bears, people

I occupy at the base,
Smell the aroma of *utility*
I see it now, we will make this a place for
Recreating above, extracting below

This land gives me as I need

I take as I please

Oh my kin, my kin, my kin, my kin!
Where did we go wrong?
Where did we become two divorced farmers,
In the same place?

Come meet me at the cave,
Where I will show you the way

Humanity has farmed the entire Earth to produce resources. The farming activity of colonizers for the last six hundred years has been relentless, pillaging, exploitative, and nothing short of a violation of the land. It has resulted in hurricanes that batter our coasts, mass extinction for agriculture, ocean acidification that destroys reefs, and warming temperatures that kill thousands. Our plethora of environmental harms has created an abusive relationship with Mother Earth.

But we can change that. Not because we will, but because we have to.
Welcome to the Farm.

Chapter 2: Dead Buffaloes

“colonialism is ‘first, foremost and always’ about land.”

- Amitav Ghosh, *The Nutmeg's Curse*

How did we get here?

Many ways, many times, all the same.

Mud, God, flood,

From stars, stones, and soot,

From water-beings,

We came

We covered the land

They call us by many names

Qwey qway

Kuts

Ivanbito

Innii

Takanka

Buffalo

We live across Turtle Island,

Like a blanket across her plains

How did we get here?

We migrated along the threads of a web of

Many things

Seasons,

Water,
Fire,
Grass,
People

Like waves lapping on the shores of lakes,
We move in, and out of the mountains
We are pulled towards water, and pushed away by snow
While we run from fire, we come to feast on newly burned shoots
*(Bouteloua gracilis, Stipa comata, Panicum virgatum, Agropyron smithii, Stipa curtiseta
Blue grama, needle-and-thread, switchgrass, western wheatgrass, western porcupine grass)*
Spreading seeds
Far

And

Wide

From
The far North of Turtle Island

To

The Sierra Madres

We saunter in the fields, eating salty, fibrous, juicy, abundant grasses,
Turning sun, water, and air into fat, muscle, and skin

Oh and the humans know our ways,
They bring us in with offerings of burn sites that birth fresh grass,
Then they harvest us, using every bit to nourish the people

*This is the way, this is the way
Holding us in the balance while feeding the plains*

*Too many of us and the grass is gone.
Too few of us and the people are gone.
Not enough grass or people and we are gone.
It is all a web,
It is a council of beings growing forth from the land*

Centuries of Time Immemorial, we lived in balance



A herd of bison on the Confederated Salish and Kootenai Tribes Bison Range

Not all humans are the same

Overnight, we went from sixty million

To five hundred

How did we get here?

I CAME FROM ACROSS THE GREAT OCEAN

I came from the northern lands,
Lands we call nasty and brutish
We come from the lands of conquer-or-be conquered;
Kingdoms, fiefs, empires, walled cities

How did we get here?
How we survived, is how we got here
Plague, darkness, coldness,
Wandering in cursed hamlets
Until we came across a literal light in the darkness
Energy lives here, in the bones of the Earth

This is where our story begins

We dug right beneath our feet
And ripped up the foundations of our home
And burned them in ovens
The coal smelled of safety,
For we knew that if it was burning we would be warm
We called it progress

How did we get there?

We traveled across the great ocean,
Trying to find our way back around
And happened upon these lands
We called it discovery

Our expeditions were costly,

We determined that there was a world in need of being tamed
And we had the rights to her fruits
We called it conquest

In the New World we went, razing forests and people,
As in the Old World we went, calling nature dark and wild
With civilization a divine beacon of light
We called it supremacy

Our supremacy has always been about taking what we need
Our supremacy has always been about taking what we want
Our supremacy has always been about taking from the land
Our supremacy - we called it colonization

We would burn the world for the goodness of colonization

Overnight, much of Turtle Island was colonized,
Overnight the great plains went from vibrant with life,
Lush with prairie chickens, bats, shortgrass, pronghorn, fish, gophers, ferrets, tallgrass...
To a terraformed empire

They called for our genocide,
For Colonel Richard Dodge who sat in the sacred Black Hills wrote,
“Every buffalo dead is an Indian gone.”

Every buffalo dead is an Indian gone.
Every buffalo dead is land left undefended.
Every buffalo dead is an unraveling of what it means to hold life in the balance
Every buffalo dead is tugging at the heart of the web of life across the great plains

Every buffalo dead is a severed relationship with Mother Earth

This is the way, this is the way

This is the way the world burns

This is the way we lose ourselves

This is the way colonization will kill us all.

Chapter 3: It Will Never be the Same

“We are being led to our slaughter.” wrote Serafinski in their novel *Blessed is the Flame*. In this novel, Serafinski writes about resistance in World War II concentration camps. He explains that resistance from camp prisoners created space for joy, even when prisoners were faced with inevitable death. As someone who is a descendant of Holocaust survivors, this quote has stuck with me when thinking about what life must have been like for my ancestors. But even more, it has stuck with me as an environmentalist. I came to realize that much like my ancestors, resources around the world are being extracted in ways that have a large negative impact on the environment. This quote serves as a jarring symbol of the taking of resources. Whether it be fossil fuels, the land, buffalo, or people, colonialism threatens to lead it all to slaughter. Or it already has.

Let us continue the story of the buffalo. The near-extinction of the buffalo on Turtle Island is perhaps a more literal example of the death, or “slaughter” colonialism causes. This story traces the impacts of colonialism from the first ships landing on Turtle Island to the effect on tribes today, particularly the Dakota people of Standing Rock.

A few years after Colonel Richard Dodge wrote “Every buffalo dead is an Indian gone,” the Great Sioux War began. The war commenced upon the discovery of gold in the Black Hills, when settlers began encroaching on Dakota land. As a result, the US Government targeted the Dakota both to obtain control of the Black Hills and to further colonize the West. One important battle of the Great Sioux War was the Battle of Little Bighorn, also known as Custer’s Last Stand or the Battle of the Greasy Grass. Near the Little Bighorn River, several Indigenous nations came together to defeat an army of 700 men and Colonel George Armstrong Custer, with only about 31 Indigenous combatants killed and about 268 of Custer’s men killed. To this day, it is one of the grandest Indigenous victories against colonial war (and colonization) and remains a symbol of Indigenous resistance.

The US answered brutally, forcing the Dakota to surrender. About a decade later, the US Military slaughtered the Dakota en masse at the Wounded Knee Massacre. The Great Sioux War ended with the Agreement of 1877, which established the Great Sioux

Reservation that spanned the western half of South Dakota. The US Government shrank the reservation several times with several acts such as the Dawes Act, the dissolution of the Great Sioux Reservation, and the Enlarged Homestead Act. Now, a few major reservations remain. One of these is the Standing Rock Reservation in South Dakota.

The Lakota of the Standing Rock Reservation is still working to reclaim stolen land. One example is the Black Hills. Since 1877, Standing Rock's government has been working to reclaim the Black Hills, even rejecting a monetary settlement from the Government. Another example is the building of dams; the Army Corps of Engineers and the Bureau of Reclamation have built five dams on the Missouri, each forcing Standing Rock Indigenous people to relocate from their riverside ancestral homes. One of the dams, the Oahe Dam, flooded a total of 200,000 acres of land between the Standing Rock and Cheyenne River Reservations. The survivors of these floods are still seeking reparations. And most recently, the Dakota Access Pipeline was built near the Standing Rock Reservation and directly threatens their water supply. Despite massive protests, international condemnation of the project, and a NEPA violation, the pipeline operates to this day. It is just one of dozens of pipelines that have proliferated across the United States.

The slaughter of the buffalo led to a weakening of the Dakota, which enabled the US Government to more easily take control of their lands and extract resources. In the Standing Rock Reservation, the US Government has continued to use the environment as a tool to further subjugate the Dakota, through land dispossession, river damming, and industry. There is a pattern here. This continued pattern of violence - from violence against the land to violence against ways of life - is key to colonialism.

But what exactly is colonialism? According to Merriam-Webster, colonialism is: "the domination of a people or area by a foreign state or nation". In order for colonialism to exist, there must be a belief in the need for colonization, first and foremost. This belief I have already introduced in a word: supremacy. The idea of superiority provides a basis for why a resource (whether that be "people or area") should belong to the superior party

(the “foreign state or nation”). We call the people that perpetuate the belief in superiority “colonizers”.

Thus, colonialism could be defined as: a belief in colonial supremacy over land. It is important to emphasize *colonial* supremacy. Colonizers believe that only their superior group should have control, not the colonized. Not all beings have equal power in this system, and is part of the reason why colonialism is so dangerous and destructive.

Colonial supremacy over land is clearly shown in the story of the Dakota and thousands of histories of colonialism across the globe. In these stories, colonial governments exert control over land in order to exert control over people and natural resources.

The practice of colonialism is such that it begins with the first contact with the land and her people, and then works to weave colonialism into the local environment, society, and economy³.

This progression is a farming practice: the colonizer farming practice. The colonizer farming practice can be defined as using colonial methods (methods that exert colonial supremacy over land) to farm (producing something from) the land. In fact, the word *colonize* comes from the Latin root *colonus*, which means “tiller of the soil, farmer”.

Down to its etymology, colonialism is about the treatment of the land and relates to the act of producing from it. Colonialism is about a relationship to the land, and one with a power imbalance that is inherently abusive.

We see this farming practice repeated in many ways, and in many places. The Opium Wars, for example, saw the United Kingdom waging war against China and forcing them to trade with the West. The Opium Wars opened up the gates for manufacturing in China. The demand for products abroad is a major reason why China is one of the biggest greenhouse gas emitters of all time. In Brazil, the demand for beef by China, Egypt, and Iran has been met through the unjust land-grabbing of Indigenous nations and the widespread clearing of forests, particularly in Cachoeira Seca do Iriri in

³ This sentence hints at Part II, where I will dive much deeper into the relationships between environment, society, and economy.

the state of Pará. In fact, experts have found that about 90% of Amazon deforestation is linked to ranching. In Latin America, gold and metal mines have been achieved through the desecration of mountains and the poisoning of water supplies. Open-pit mines create waste and deforest vast tracts of land, while water sources downstream are contaminated by the leaching of acids, toxic metals, and byproducts from explosives such as ammonia.



Bolivia's Cerro Rico, an infamous mine that is known for its silver and use of child labor.

Source: Carlos Villalon for NPR

It is clear that the demand for product and resources, and the environmental degradation that comes with them, is rooted in colonial exploitation. This statement is key when looking at today's multitude of environmental problems: deforestation, climate change, ocean acidification, sea level rise, food waste, and mass extinction, to name a few. All of these have roots in colonial exploitation of the land. For instance, sea level rise is occurring due to the melting of ice caps caused by climate change, and furthermore, degradation of land such as mangrove forests have made certain areas like the coasts of Nicaragua more vulnerable to sea level rise.

And the worst part about all this is the realization that there is no undoing the damage we have done. Some parts of the Brazilian Amazon will likely never revert back to

forest, the melted permafrost is practically irreparable, the atmosphere is locked in for several more degrees of warming, and extinct species cannot be recovered. Even if there was a way to “undo” all of these, the ripple effects from both the damage and the resources required to create a solution would likely cause more harm than good. The world will never be the same because the world has not been the same in a long time. The current state of the environment is a result of a long history of abuse and inaction. From the first buffalo slaughtered to the first drop of oil in the Dakota Access Pipeline, the world has been permanently altered by colonial farming practices.

This is nihilism - the subject of Serafinski's *Blessed is the Flame*. The nihilist perspective is one of three ways people generally deal with environmental destruction, the other two being “hope” and “resolve”. The nihilist perspective is called “despair”. I used to be in the “despair” group of environmental activists. I saw the heat death of the planet as inevitable as the heat death of the universe, and questioned if doing anything was even worth the effort.

Reading *Blessed be the Flame* put me in my ancestors' shoes, particularly those of my grandma, who told me numerous stories of the concentration camps she was in. I remember how she talked about the violence with which the Nazis ripped her from her home, how she was put to work in the labor camps because her fingers were small enough to put machine parts together, and the filth she lived with day in and day out, all before the age of ten. I can only begin to imagine the bleak world of the Holocaust. But *Blessed be the Flame* goes beyond this, saying that there are lessons to be learned from those who did resist, even in such a world. The book argues that nihilism, for some, is in fact, a way out. Nihilism tells us that yes, it is worth resisting because resistance in and of itself is a meaningful response to an empty future. While not all nihilists believe in the importance of taking action, nihilism itself as a philosophy easily lends itself to the importance of resistance.

We cannot passively accept the future, we must act against it whether because resistance makes us feel joy or because we are morally obligated. Resistance is never futile

because the act of resistance itself is not a futile act. Everything that we do to prevent or slow the horrors of colonization is an act of rebellion against the machine.

The nihilist perspective is not only a worthy one: it is one that we can embrace as a powerful perspective in environmental activism. Nihilists are a powerful group of activists because they recognize that nothing goes too far when it comes to resisting the future colonialism is likely to cause. For everyone, whether hopeful, resolute, or disparate, the revolution of widespread anti-colonial resistance is valuable.

And that is precisely why I am writing this: reimagining new farming practices that can ground the revolution towards a sustainable and a thriving future. In the next part, we will focus on how to lay the grounds for a postcolonial world through the practice of sustainability.

Part II: On Sustainability

Chapter 4: The Greenhouse

“It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred.”

- The Intergovernmental Panel on Climate Change

Our Farm takes place in a greenhouse. The sun from outside controls the heat, and the glass traps it. But this is no ordinary greenhouse - the thickness of the window panes changes over time depending on the concentration of the gasses in the greenhouse.

Greenhouse gasses take on many forms. In order of abundance, they are: CO₂ (carbon dioxide), CH₄ (methane), N₂O (nitrous oxide), fluorocarbons, and sulfur hexafluoride. The most abundant of these, carbon dioxide and methane, alone make up 75% of all greenhouse gasses emitted by the human race. These gasses are not inherently bad for the planet. In fact, they provide many benefits. Carbon dioxide in particular is not inherently bad. It nourishes our plants, builds carbohydrates (sugars), and protects us from ultraviolet radiation (which causes nasty sunburns). Without carbon dioxide, life on this planet would not exist. All these other greenhouse gasses have roles to play as well in providing energy for life, shielding us from the sun, and creating weather patterns.

However, it is the concentration of greenhouse gasses that is the problem. Greenhouse gasses are what thicken the walls of our greenhouse, and if they get too thick, all of the life inside the greenhouse will need to adapt to warmer and fluctuating temperatures. Or perish.

As mentioned before, carbon dioxide is used to build carbohydrates. Carbon in general is the basis for the major biomolecules that make up life on Earth - lipids (fat), carbohydrates (sugars), amino acids (DNA/RNA), and protein. These biomolecules work to store energy in the form of chemical bonds, which powers life. When a lifeform dies, some of those chemical bonds remain and follow the lifeform as it is buried for thousands

of years and becomes a fossil. This becomes several carbon-based products known as fossil fuels. The fossil fuels are then sold as a solid in the form of coal, liquid in the form of oil and petroleum, or a gas in the form of natural gas.

For millennia, these fossil fuels remained underground, and undisturbed. They awaited, like a powerful energy right beneath the feet of a rapidly changing world. As these fuels rested, countless lifeforms walked the world above while extinctions and ice ages raged on.

Early humans used fossil fuels for thousands of years in small quantities. Peat has been used to heat homes and cook food. Coal was used for smelting. Oil, with its water-repellent properties, proved useful for waterproofing and embalming. Mainly, fossil fuels are combusted: the process of burning a carbon-based molecule with oxygen to produce water, carbon dioxide (sometimes other gasses), and heat. Heat is the most important part of this equation - it's why we burn fossil fuels to this day. Since the first mined lump of coal, we have been burning fossil fuels to warm our homes.

Then, around the 1700s, Europeans used heat to power steam engines, and found that coal was a cheap, long-lasting source of heat. This began the Industrial Revolution, a time of rapid production of material goods, powered mainly by fossil fuels. Europe's use of coal skyrocketed in the next century, and as Europe colonized the rest of the world, they brought the Industrial Revolution with them.

What we have done in our greenhouse is discovered a wealth of chemical energy lying right beneath our feet. Without thinking, we ripped up the foundations of the greenhouse, unearthing fossil fuels, and then burned those fuels right in our own house. This thickened the glass, and now our greenhouse is trapping heat faster than we ever predicted. This is called climate change, and it is one of the largest symptoms of colonialism-fueled environmental degradation.

As I have already discussed at length, colonization is the reason for fossil fuel extraction. Colonization and fossil fuels have an intertwined history, with oil rigs that dot the oceans, coal mines that run rampant across mountains, and pipelines stretching like black snakes across continents. Activity due to or originating from colonialism is the

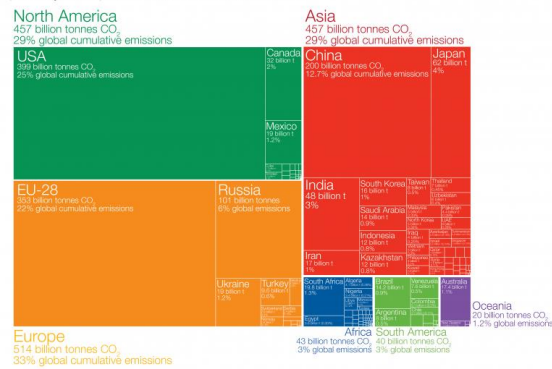
primary reason for colonial nations (Europe and the United States) being some of the largest polluters per capita, and the biggest drivers of climate change of all time. The United States has emitted nearly 30% of all-time emissions - as much as the whole of Asia. Europe has emitted slightly more than 30% of all-time emissions. The entirety of South America, Africa, and Oceania - most of the colonized world - have emitted under 10%.

No sane person would go ripping out the foundations of their own home. But consider this - before fossil fuels, Europeans lived in cold, dark, diseased towns. When they uncovered fossil fuels, it became a literal light in the darkness, providing the promise of a warmer, brighter, and safer future. Out of desperation and hope, they rapidly plundered the foundations of the greenhouse. Overall, the quality of life for Europeans improved. Along with an improved quality of life came more resources and time to explore and exploit the rest of the greenhouse, digging into the foundations from Turtle Island to Aoroteora.

The result of this conquest has led to an increased dependence on fossil fuels in developing nations. Even more so, while colonial nations have decreased fossil fuel emissions within their borders in recent years, their demands for goods have increased fossil fuel emissions outside of their borders. If the United States' fossil fuel emissions were adjusted for trade from 1990 to 2020, their emissions would go up by about 10% (nearly 500 million metric tons). China's fossil fuel emissions would go down by about 8.5% (a bit over 900 million metric tons).

Who has contributed most to global CO₂ emissions?

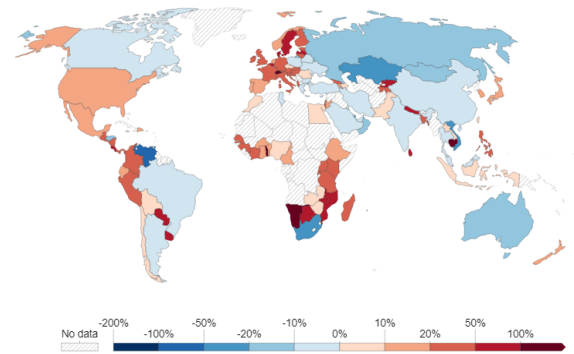
Cumulative carbon dioxide (CO₂) emissions over the period from 1750 to 2017. Figures are based on production-based emissions, which measure CO₂ produced domestically, from fossil fuel combustion and cement, and do not correct for emissions embedded in trade (i.e. consumption-based). Emissions from international travel are not included.



Figures for the 28 countries in the European Union have been grouped as the EU-28 since international targets and regulations are typically set as a collaborative target between EU countries. Where not shown, 100% due to rounding. Data source: Calculated by Our World in Data based on data from the Global Carbon Project (GCP) and Carbon Dioxide Analysis Center (CDAC). This is a visualization of Our World in Data, where you first discuss and then share the work with colleagues. Licensed under CC BY by the author Hannah Ritchie.

CO₂ emissions embedded in trade, 2020

This is measured as emissions exported or imported as a percentage of domestic production emissions. Positive values (red) represent net importers of CO₂. Negative values (blue) represent net exporters of CO₂.



Source: Our World in Data based on the Global Carbon Project (2023) OurWorldInData.org/co2-and-greenhouse-gas-emissions • CC BY

Cumulative emissions and emissions accounting for trade. Chart credits: Our World in Data

While it is true that colonial nations have decreased fossil fuel use in recent years, that in no way absolves them of their exploitation of the planet and her people. You wouldn't let someone destroy the foundations of your home without at least paying a sort of reparation or offering to rebuild the foundation. Cumulative emissions, emissions due to trade, and the history of these countries all place blame exactly where it lies: the colonizers. Here on the Farm, colonial nations have turned fossil fuels into climate change, and trapped the whole world behind the thick glass of the Greenhouse.

Carbon dioxide is a simple molecule. It is one carbon atom tightly holding hands with two oxygen atoms. It seems silly at times that such a simple structure can wreak so much havoc on a complex planet. Only by understanding the mechanisms, history, and use of this molecule can we gain insight into why it has such a profound impact. Now, it is up to the entire human race to change our habits and minds, to fill this hole in the ground where we dug out Mother Earth's heart.

Chapter 5: Defining Sustainability

“For a colonized people the most essential value, because the most concrete, is first and foremost the land: the land which will bring them bread and, above all, dignity.”

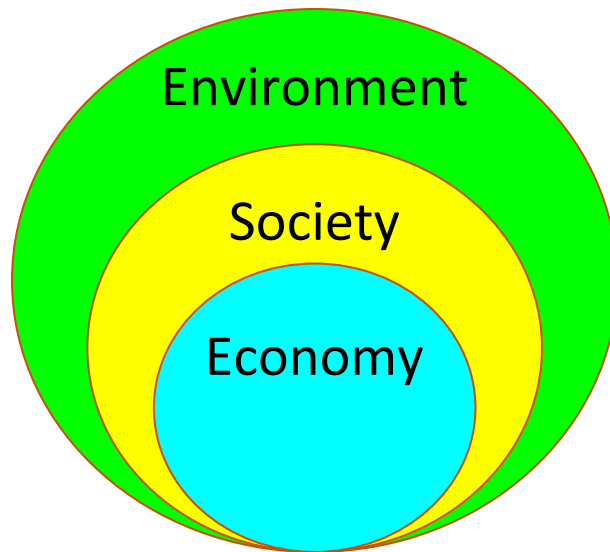
- Frantz Fanon, *The Wretched of the Earth*

Ecology is the study of how living things interact with their environment. As an environmental science major, I am surrounded by ecology at all times, whether it is looking at the environmental impacts of oil pipelines, the trophic cascades of wolves in Yellowstone, or the symbiosis in a four sisters garden. It is a part of everything I do.

Sustainability is another term I encounter quite often. In fact, the full title of my major is “Environmental Science & Sustainability”. When we talk about sustainability, we are talking about the ability for a process to sustain itself. In an environmental context, sustainability refers to the ability for humans to continue living on the planet without the depletion of natural resources.

In my Junior year of college, I developed a Sustainability Action Plan (SAP) for my university. One of the biggest and most exciting chapters (for me) of the plan looked at how we could change our land management practices to sequester carbon dioxide. It was while I was thinking about restoring ecosystems on campus and how that could be used to achieve our sustainability goals when I had a lightbulb moment: sustainability and ecology, while different disciplines, can be blended together quite easily.

In sustainability, there are “the three pillars”. These pillars are: environment, society, and economy. These pillars refer to each part of the humanized world that we live in. We humans live in a society that feeds off of the land, and within our society, we exchange goods through the economy. Sustainability models dictate that in order for the economy to thrive, society must thrive, and in order for society to thrive, the environment must thrive. Therefore, economic and social health is first and foremost dependent on environmental health.



The three pillars of sustainability

My realization came when I was in a class on Traditional Ecological Knowledge and discussing how traditional knowledge is an ever-evolving body of information that is formulated based on environmental observations and cosmology. Thinking about how traditional knowledge is formed reminded me of biomimicry, when scientists emulate nature to solve human problems. Biomimicry is mainly applied to technology and architecture, but I realized that the definition of biomimicry goes beyond those subjects. Biomimicry can also be applied to environmental philosophy. The rules of nature can be mimicked to create models that improve our understanding of the world.

So, I applied biomimicry to sustainability and saw that the three pillars of sustainability work so well because it mimics ecology. *Ecology is the study of how living things interact with their environment.* Sustainability considers the environment, living things (society), and interactions (economy). If we then replace the definition of sustainability with an ecologically-minded definition, we get:

Sustainability: the ability for living things to interact with the environment without
diminishment of these interactions

This definition of sustainability is a framework that can help us to work towards a world without colonialism because it centers environmental interactions (like ecology does), which is the opposite of what colonialism does. Colonialism places colonizers above land. Sustainability puts all people and land at the same level as two entities that are constantly in communication with one another through interactions (through the economy).

Now, let's apply the three pillars of sustainability to different contexts.

In the classical model of sustainability, the three pillars are environment, society, and economy.

In ecology through the lens of sustainability, the three pillars are environment, living things, and interactions (mainly energy and matter flow).

What about on a Farm (a place that intentionally produces something from the land)? The first pillar is where the farm takes place - Earth or the land the farm is on. The second pillar is who lives on the Farm. People are not the only ones who are intentionally producing from the land. Plants, animals, fungi, and bacteria are also producing from the land, so they are also a part of the Farm's society. So when we say "farmers", we are referring to all living beings that produce from the land. Then the economy is the interactions between all the farmers and Earth.

Therefore, the three pillars of the Farm are Earth, the farmers, and the interactions between them.

And therefore, a countermeasure to colonialism is one in which Earth, the farmers, and their interactions are sustained.

So what does our current Farm look like? Our environment is still the same - Earth. Farmers tend towards two dominant orientations: the colonizers and the colonized. There are many economies, but the dominant economic model of this farm is capitalism. Capitalism is an economic system in which private entities obtain profit through the means of capital. Capital is tradable units of profit created from the land, and can be exchanged between farmers. By making capital the unit of profit, rather than the

product itself, the colonial disconnect from land is now woven into the language of the economy. Capitalism also emphasizes continuous economic growth, despite being on a finite planet, because the primary goal of capitalism is to obtain capital. In a colonialist system, colonizers have the power advantage over the colonized, so they are much more likely to obtain capital than the colonized.

Capitalism is the engine that facilitates colonizers' supremacy over land, and a solution to colonialism needs to contain within it a solution to capitalism.

Through looking at how sustainability models the economy within society and society within the environment, we can apply sustainability to farming. Sustainability shows us exactly how colonialism and capitalism are incompatible with a planet of finite resources, while also showing us what needs to change in order to create a system that is compatible. In the next chapter, we will dive deeper into what sustainability means and why some systems are sustainable and others are not.

Chapter 6: Colonialism is the Antonym of Sustainability

“So we are left with a stark choice: allow climate disruption to change everything about our world, or change pretty much everything about our economy to avoid that fate.”

- Naomi Klein, *This Changes Everything*

A system that places anything above the environment is doomed to fail because such a system is set up for the complete extraction of the environment. In the case of colonialism, colonizers deem themselves superior to Earth, and use capitalism to deplete Earth's resources.

Of course, when we apply this model to the real world, it is much more complicated. The US Environmental Protection Agency (EPA) is one of many agencies of a government that was created under colonial and capitalist conditions that aims to protect the environment using safeguards that, hypothetically, minimize the harms of industry.

Safeguards are methods designed to reduce environmental harm that do not fundamentally change the systems responsible for the harm. While safeguards are beneficial as individual actions and are often effective in reducing environmental harm short-term, there are two glaring problems with safeguards that are in place in colonialist and capitalist systems. The first is that safeguards are dependent on colonizers to be enforced, and the second is that these safeguards are futile against a system that prioritizes the health of the land last.

The enforcement mechanism of safeguards that currently exist in colonialist and capitalist countries are often enforcements that allow for colonizers (industries, billionaires, large landowners) to continue to reap profit while continuing their environmental destruction. The fines continue to be too low for oil spills, the injunctions continue to fail to prevent companies from operating, and the condemnation from the United Nations continues to be like wind against a brick wall. Even if the law and the international community manage to take real action, the agents that carry out said action

are heavily influenced by colonizers; police are likely to be paid off, and judges are likely to have colonial biases.

One such example is the oil pipeline Line 3, which was created by the Canadian company Enbridge. In 2022, Enbridge was ordered to pay \$11 million in fines for spills and leaks related to the construction of the pipeline. Despite this, and a letter from the United Nations, Enbridge is still raking in record profits. Enbridge even paid off police to shoot rubber bullets and spray mace at pipeline protestors. The fact that Enbridge managed to not just survive, but grow after safeguards (the fines, the letter) were enacted, is proof that safeguards are ineffective. If anything, they teach companies that they need to work harder to cover up the damage they do.



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REFERENCE: CERD/EWUAP/104th session/2021/CS/ks

25 August 2021

Excellency,

I write to inform you that in the course of its 104th session, the Committee on the Elimination of Racial Discrimination considered information received under its early warning and urgent action procedure, concerning the situation of the Anishinaabe indigenous peoples in Minnesota, in the United States of America.

The information received alleges that the decision of the Government of the United States of America and of the State of Minnesota to permit the expansion of a tar sands pipeline ("Line 3") has been conducted without adequate consultation with and without obtaining the free, prior and informed consent of the Anishinaabe indigenous peoples, despite the serious harm such pipeline could allegedly cause.

It is further alleged that the "Line 3" project would infringe the rights of the Anishinaabe indigenous peoples, in particular by significantly reducing their traditional source of food, the "manoonim" wild rice, by encroaching on their lands and sacred sites and increasing health risks connected to environmental degradation, due to, in particular, air and water pollution. Reportedly, this project would exacerbate the already disproportionate impact of climate change on indigenous peoples in Minnesota, putting at risk their watersheds and their wild rice ecosystem.

A portion of the letter sent by the United Nations regarding Line 3's human rights violations. Source: Office of the High Commissioner for Human Rights

Even if these safeguards are enforced and everyone works together to create a capitalist system that keeps industries “in check”, those safeguards will work on a timeline too slow or not work at all to prevent the current environmental crisis. The reason why is because of the colonizer culture. In Frantz Fanon’s *the Wretched of the Earth*, Fanon describes how the colonized are indoctrinated into the colonizers’ system that places the colonized below the colonizers, and how in order to decolonize, a new national culture must be created that liberates both mind and land.

The campaign for *land back* is one example of a modern and ongoing attempt to create a new national culture. In the land back movement, Indigenous peoples are working to get ancestral lands returned to their respective tribes. There is the literal buying up of land through the form of deeds, but beyond that, there is the return of cultural practices to land such as the reintroduction of Indigenous culture and land management styles.

One example of this is the Secwepemcúlecw in Canada. When land was returned to Secwepemcúlecw, environmental health and biodiversity improved along with the presence of cultural practices. Not only that, but the Secwepemcúlecw combined their Indigenous land management practices with Western practices, such as dendrochronology (tree-ring dating) and the extensive use of quantitative data. The combining of Indigenous and Western knowledge created a new way of managing the land.

There was a change in the culture of land management in the returned Secwepemcúlecw territory. It was a new national culture for the land and the people who depended on it.

A new national culture is required for decolonization because such a culture will prevent colonial values from re-instilling themselves. In the context of safeguards, if there is no new national culture then people will strongly resist safeguards, see them as unjust, and work to remove them through legal means or brute force in order to continue profiting off the land.

Though safeguards do their best to protect the environment, they ultimately fail at creating fundamental change in the systems that caused the issues in the first place. Safeguards distract us from doing the work that urgently needs to be done: changing culture.

Colonialism is the antonym of sustainability because no society that operates under colonialism can ever be sustainable. The exploration of safeguards proves this. Safeguards attempt to calm the symptoms of colonialism without addressing the problem of colonialism itself. To truly decolonize is to not only place the land and people in balance, but to realize a sustainable future for all.

Part III: On Caretaking

Chapter 7: The Land

“I’ mupa wa’ teweoni’ tasike-
Na eteka na mita tamiha o-
Take ate ptaha pana sohe

“My closest friend, what is it you adore?
You told me in reply, ‘It is the corn
Of ancient name which pleases to my core.’”

- The Corn is My Pleasure, a traditional Nú’eta (Mandan) song

I would sometimes chant “The Corn is My Pleasure” before entering the Four Sisters Garden I had planted at the PEAS Farm. The Four Sisters Garden is a polyculture of sunflower, corn, beans, and squash, grown together in accordance with the traditions of the Nú’eta (Mandan), Hiraacá (Hidatsa), and Sáhniš (Arikara) peoples (The Three Affiliated Tribes).

Ruth Plenty Sweetgrass-She Kills, a member of the Three Affiliated Tribes, taught us this chant when she came to Missoula to bless and help us begin our garden. I had just started working at the garden when she visited us, and was unsure of what the full extent of my role in the garden should be as a White person of Eastern European descent.

So I asked her, “I’m not Indigenous. Should I still sing this chant?”

She answered, “It is for everyone.”

I thought about my role in the Four Sisters Garden. How do I describe this? I am an intern, sure, but to this garden I am more than that. I am a Farmer. I am producing from the land.

No, that’s not quite it. I am a gardener? Still doesn’t sound right.

I looked at all the corn, growing, thriving, under my care. I thought of where this corn came from.



The Four Sisters Garden at the University of Montana PEAS Farm. Photo taken in late August 2022.

How did we get here?

According to the Sáhníš Chief Four-Rings, domesticated plants come from Mother Corn. She helped guide the early humans by laying down thirty-four sticks to represent the structure and teachings of the world made by Nishanu Natchitak, the Chief Above. Each quarter of sticks represented a different aspect of Nishanu Natchitak: the southwest quarter represents water and thunder, the northwest quarter represents the air, the northeast quarter represents night and rest, and the southeast quarter represents the light of the sun and vegetation.

Mother Corn would continuously visit the humans to explain the significance of the individual sticks. One day, Mother Corn realized how much the humans were suffering from exposure, starvation, and disease from their lack of knowledge. So Mother Corn came to the aid of the humans once again, this time focusing on the southeast

quarter of sticks. She renewed their hope as she spoke of plants that would help the people survive.

There were two sticks. One represented wild plants, and the other domesticated plants. The stick representing domesticated plants foretold a promise: that certain plants would give the people better quality and quantity of food through domestication. Sunflower, corn, squash, and beans gave this promise.

And in return, smoke offerings should be made towards the southeast to show gratitude for sun and vegetation.

Mother Corn takes care of the people, and offerings are made in return.

The Three Affiliated Tribes' ancestral territory is located in eastern Montana and North Dakota, along the Missouri. While the Nú'eta, Hiraacá, and Sáhniš historically lived in different regions, the Fort Laramie Treaty of 1851 outlined their lands, and they were all living together in the largest village, Like-A-Fishhook Village, by 1862. Smallpox decimated the populations of the Three Affiliated Tribes, and conflicts with colonizers forced them to band together for survival. In 1870, the Fort Berthold Reservation was created, a reservation that would continuously shrink from 12 million acres to its present-day 988,000 acres. In 1887, Congress passed the General Allotment Act, a thinly veiled attempt to get tribes to sell off their land. Families were forced to send their children to boarding schools to be assimilated (colonized), or they would not receive their government rations.

Then, the US Army Corps of Engineers built the Garrison Dam beginning in 1946, flooding over 25% of the Fort Berthold Reservation, and resulting in the loss of 94% of Fort Bethold's agricultural land.

I can only imagine such an apocalyptic event. Entire villages washed away by waters that once sustained thousands. I can see it now: fences, roofs, lumber, crops, dolls, being carried downstream by a deluge of water. On one end of the newly-formed Lake Sakakawea are devastated families, and on the other end, the US Government trying to sop up the waterlogged villages and the peoples' tears with money. In between, land.

Land, land, land. Land underwater is still sacred land. Sacred land brutally taken by colonialism.

And still, through disease, battle, flood, and the desecration of land and livelihoods, they are still here.

After the flooding of the Garrison Dam, the tribal headquarters was relocated to New Town, which also hosts Nueta Hidatsa Sahnish College. At the college, they cultivate Four Sisters Gardens. Colleagues from NHS came to visit us in Missoula, Montana, and help us to start our own Four Sister Garden.

And still, traditional knowledge has survived and spread far and wide.

And that is how we got here.

I sat in the garden for a long time and thought about this legacy.

Whose land am I on? Who does that land belong to, if anyone?

I am on the lands of the Séliš, Qlispé, Ktunaxa, and Niitsitapi. I am in Montana, a state that has had at least 12 tribes within its colonially-imposed borders.

Colonizers say that this land belongs to whoever owns the deed. But everything I have learned in my studies on the environment and this garden says otherwise. This land is owned by plants, animals, microbes, an infinite series of species composing a sum that is Mother Earth.

The whole is greater than the sum of its parts.

What does the land give me? How are those things extracted?

The land gives me so much. This garden in particular gives me two things: food and knowledge. I look forward to harvesting the food from this garden, but already it has taught me so much about what it means... what it means to...

Take care.

Extraction?

Sunlight, water, and soil is turned into food. Humans assist with the creation of said food by watering the land. We harvest this food by hand.

Knowledge is much simpler. I listen, and they tell. I learn, and I connect.

How am I giving back to the land?

This question gives me the most pause. I am just an undergraduate student who is doing their best to cultivate a garden from scratch. I feel like a fraud. I feel like I have ended up in charge of a project I have no place in undertaking. I question why my internship advisor (who is an Indigenous elder) put me in charge of this garden.

“Elani, are you ready for the workshop?” I hear my supervisor ask. I turn around to see about twenty workshop participants, tools in hand, ready to harvest. These people have come to workshops I have led in the garden to educate on the history of the Three Affiliated Tribes, how the garden got here, the importance of each plant, and the role we all have to play in preserving Indigenous knowledge.

There are children among the crowd, children who are sticking their hands in the dirt and learning what jewel corn looks like for the first time. Children who are going to grow up and impart the lessons I teach today unto their grandkids.

I have a moment. I feel like a student who has just been asked to teach the class in place of the teacher - literally.

What am I doing here?

My hands grip the pouch of tobacco and everything seems to come at once. My feet became heavy, as if they were taking root on this Farm.

Farm: a place where something is produced from the land. It all starts and ends here.

I am meant to be here. I am here.

For the Three Affiliated Tribes, everything was about connection to the land. From the promises of working with the land to picking up the pieces after losing it, land was always there. Genocide displaced the Indigenous peoples of Turtle Island. Genocide also displaced my ancestors. The fact that I am meant to be here is an answer to my ancestors' prayers. Belonging to the land once again. Again, and again.

It all traces back to colonialism. We live in a world where toxic relationships with the land have resulted in environmental disaster. A sustainable relationship is one where the land, living beings, and the interactions between them are sustained.

I sustain these connections because I love this place.

Connection to the land is rooted in love. Love for place keeps us alive. Love keeps us interacting with place.

I love this garden, and I love this land. I feel it deep in my soul, deep in the soil.

Connection to the land is rooted in reciprocity. False hope will not save us. A mutual, shared bond will save us. A serious determination to fundamentally change the way we live with the land is what we need to survive. A change in culture is what we need to thrive.

Here at this workshop I have an opportunity to change people through education.

And I hope that by the end of this workshop, you will feel some of that connection.

Connection to the land is rooted in honor. This land has honored me. It has taught me what it means to take care of connection. Honor is where we plant the seed, with hopes that it will blossom into something beautiful and deep-rooted.

I hope this land will honor you, as you honor it today.

I have found a word to represent my role.

“Hi! My name is Elani, and I am a caretaker here at the Four Sisters Garden.”

Chapter 8: Being a Caretaker

“Future survival of all life on this planet will be dependent on humans being able to perceive and be custodians of the patterns of creation again, which in turn requires a completely different way of living in relation to the land.”

- Tyson Yunkaporta, *Sand Talk*

Land is always here

Land is what remains

Life comes and goes,

Climates warm and cool,

Structures collapse and arise,

And land stays



The sunrise in Saguaro National Park, Arizona US.

We are temporary guests on a miraculous planet

We are here with freedom to do what we will

We are ready to make a difference

We are the caretakers

CARETAKER: /'ker,tākər/ *n.*

ONE WHO LOVES, HONORS, AND RECIPROCATES CONNECTION TO THE LAND
FOR THE SAKE OF PAST, PRESENT, AND FUTURE GENERATIONS

The caretaker is an answer to colonization

Caretakers seek no compromise,

Seek nothing less than absolute

Connection

To land

Caretakers

REJECT supremacy

REJECT one-sided extraction

REJECT the bare minimum

Caretakers

DEMAND love

DEMAND honor

DEMAND reciprocity

All in the name of the land, of Earth, of Mother Nature

May caretaking be embedded in a new culture so that colonization is overcome!

LOVE

There is a need
To fall in love

For Earth showers us in love every day
With water that quenches our thirst and nurtures life
With plants that sustain all webs of life
With animals that care for the water, land, skies, and provide good company
With landscapes that teach us endurance and bring us wisdom
With natural forces that guide us
With people, networks, and ecosystems that make us who we are

HONOR

Is what I am doing honorable?
Am I treating the land with esteem?
Do I properly conduct myself in this place?

Honor is a special way of being with each other
I dream of a world where we come into one another's embraces,
And I say that I am *honored* to be in your presence,
That I am honored to lean on your mountains
And take shelter in your trees

You honor me every day with life and all that sustains it

I hope to do the same

RECIPROCITY

Earth gives, gives, gives, gives

Colonizers take, take, take, take

Caretakers return the favor to the best of their ability

Ecology teaches us that energy flows in,

Out,

And between beings

Energy is taken,

Released,

Exchanged

Caretaking is about restoring ecological balance

Is about giving as much as we take

Life is a gift,

And reciprocity is the mode of production

CONNECTION

I look at the diagrams of metabolic processes

Of chemical cycles,

Of food webs,

And am reminded

That all life is about connection

The glucose I break down,

The carbon from my lungs,

The food for plants,

All are connection

Connection is life, it is exchange

Part of caretaking is feeding those connections

I love those connections,
I honor them,
And I reciprocate them

PAST

Our past plays a role,
Whether you are descended from colonizer,
Colonized,
Or a blend of both,
You must consider the role of the past in what connections you make today

Taking the past into account makes our connections deeper

PRESENT

“Your generation will save us!”
I hear for the millionth time
As if climate change,
Resource extraction,
Colonialism,
Were started by us

How dare they come to us, when it is the colonizers of their generations
That occupy the offices and the land?
My answer is that this generation will not save them
We have the right to be a little selfish here,
Saving our connection with the planet,
Not just for them, but for us,

For us,
For us we are doing this
For out of love for ourselves we want to heal

FUTURE

AND for the future we do this
Our thinking must be long-term
Our thinking must be like evolution,
That
“Everything I do is for you,
To pass down my wisdom, and a place to live”

All we owe
Is the most thriving future possible

...

On the podcast *On Being*, Dr. Ayana Elizabeth Johnson said, “imagine if someone — you asked someone if their marriage was — how their marriage was doing, and they said, ‘it’s sustainable.’ You’d be like, ‘Are you sure you want to stay married?’”

Johnson begs the question of if sustainability is what we *truly* want our relationship with the planet to look like. I argue that while sustainability is a great starting place, it is the bare minimum starting place. Practicing sustainability means that we can exist in the present with the planet. Simply exist, and carry out our lives while the natural world does the same. It is a great first step, and a much better state for humanity than the current colonial relationship.

Johnson is right. Sustainability is livable, but dissatisfactory.

Frantz Fanon, in his *Wretched of the Earth*, discusses at length how colonization not only occurs physically, but mentally. His cataloging of mental disorders and trauma

induced by colonialism shows this. He shows that mentally, colonization can continue even if the country has physically been decolonized. In other words, physical decolonization does not simply end colonization.

He proposed that one way to counter mental colonization is through the creation of a national culture. He says “A national culture in underdeveloped countries should therefore take its place at the very heart of the struggle for freedom which these countries are carrying on.” Perhaps then for us, a new national culture is one of caretaking.

A culture of caretaking is a culture that aims for a thriving future with the planet. The next chapter details what a caretaking world would look like, and how we might start to get there.

Chapter 9: Caretaker Revolutions

“We must understand that what happens to the land, happens to the people (and vice versa). The protection of relatives must include all relatives. No one is free unless we are all free.”

- The Red Nation, *The Red Deal*

A sustainable future, a future of caretaking, calls upon us to reimagine our relationship with the land. This act of reimagining, as we have discussed at length, requires fundamental changes in our way of being with the land and each other. The gravity of such change cannot be understated. In fact, it would be *revolutionary*. I use the term “revolutionary” because to go from colonizer to caretaker is a dramatic shift. Furthermore, militaristic language, such as the use of the word “revolution” invites us to take an aggressive stance against colonization, rather than a passive one. We must avoid “asking” for a sustainable future; we must *demand* it. We must hold people accountable and attack colonialism head-on. Militaristic language reflects the need for direct action.

Before I go further, I want to clarify that I am not an experienced revolutionary. I have experience participating in nonviolent direct action (NVDA) and have done research on revolutionary groups such as the Black Panthers, the Zapatistas, and the Red Nation. However, I lack the knowledge of how to specifically, step by step, carry out a revolution or determine what actions should be taken to achieve the revolution’s goals. I also want to clarify that I am not taking a stance on whether or not caretaker revolutions should or should not be violent. Both nonviolence and violence have important places in the revolutionary’s toolkit, and I do not yet have the knowledge to fully say when one strategy is more appropriate than the other.

What I intend on doing in this chapter is describing what the aims of a caretaker revolution may look like. I will do this by discussing a concept that I have extensively studied and written about in this book: sustainability. We have defined sustainability as the ability for living things to interact with the environment without diminishment of these interactions. In a caretaker revolution, there are three areas of focus, or “fronts”: the

environmental front (focusing on the interactions with the environment), the social front (focusing on the community of living things), and the economic front (focusing on the interactions themselves).

Many of the ideas in this chapter may seem improbable, dreamlike, or even *impossible* to achieve. Despite this, these radical ideas and transformations are worth envisioning. As I state in chapter 3, resistance in and of itself is an important act, even in the face of despair. Envisioning how to achieve a sustainable future is a form of resistance, and is an act that can lead to real, tangible action, even if on a small scale. All visions of a sustainable, or even a thriving future, are worth discussing because they all contribute to the dismantling and abolition of colonialism. Even if we do not succeed in abolishing colonialism, weakening it can be a victory on its own.

Some day, I hope to expand this chapter into a larger written work of its own, which would include specific action items and how to carry them out. What I have written here is a start to that work.



Art created on the site of the Treaty People Gathering, a major protest against Line 3 in

2021.

The environmental front of a caretaker revolution is the one that requires the most effort on the part of revolutionaries: to do the groundwork of changing culture. Time and time again, we see that colonization is land-based (whether it is seeing land as equal or inferior), and colonized people turn to land as their bedrock for movement and identity. Land is part of one's culture. Amitav Ghosh in *The Nutmeg's Curse* sums this up by quoting environmentalist and scholar Edward Valandra: that fighting colonialism is "fundamentally a culture or paradigm war." This means that our goals for an anti-colonial future, a future of caretaking, are only possible if there is a shift in culture.

Speaking from personal experience, the biggest obstacle to environmental action, especially climate action, is changing peoples' way of being, their culture. People will never vote for climate-friendly politicians if they don't believe that climate change is an important issue, will never believe that preserving nature is important if they don't see that nature is necessary for life, and will never agree to revolution if they don't think that there is a problem with business-as-usual. What needs to be done is active work to promote caretaker culture.

One simple, nonviolent way to promote caretaker culture is through discussion. Discussions must be had between individuals on the importance of the land and how the health of the land is directly related to our health. One conversation starter is to ask people to think about the water they drink. How would their way of life change if their watersheds were polluted? What effects would that have on their body, on their food supply? Now we have common ground for which to begin conversations about the importance of caring for our watersheds, and the environments surrounding them.

Aside from seeing land as important or even as equal, considering the meaning of land is also a useful conversation starter. One common way people find meaning from land is through religion. In particular, Indigenous religions and cosmologies relate to land, and land produces significant meaning for them. Often, these religions focus on showing gratitude for and living in harmony with the land. Even in Abrahamic religions, there are sacred sites and holy lands to which people return to for important rituals and

their identity. For everyone, even those who are not religious, land still produces meaning and is a part of identity because all living things must interact with and understand the land to survive.

Not only is it important for living things to interact with the land, it is important to maintain a culture of caretaking between each other.

The social front of a caretaker revolution requires careful attention to how we live together as a united group focused on decolonization. In order to do this, there must be a focus on the inclusion of voices belonging to those who have been colonized, particularly those who have caretaker characteristics, and to let them lead caretaker revolutions. One especially important group to look to for leadership is Indigenous peoples. Having read several definitions of what it means to be Indigenous, I have come to summarize it as this: Indigenous means having an ancestral connection to the land prior to colonization. So for Indigenous peoples, the emancipation of one's ancestral land is closely tied to one's own emancipation. We must fuse Indigenous knowledge and leadership with caretaker movements.

Indigenous leadership is also an opportunity for those with colonizer ancestry to step back. Part of the reason caretaking is done is for the sake of past generations. Those with a colonial legacy can still participate in caretaking by taking steps to amend the harms their ancestors have done. One of these ways is by actively listening to and taking direction from Indigenous leadership, especially in caretaker revolutions.

Since caretaker culture emphasizes seeing the land as equal, every effort must be made to promote equality in our everyday lives. One way to promote this culture is by treating each other equally and abolishing hierarchies that promote supremacy between our fellow human beings. No one human is more important than another and no human should have more power than another without being freely and democratically elected by the people.

To see land as equal in society, a belief in land ownership must be abolished. Land ownership happens because of the colonial belief in the ownership of land, often in the

form of deeds. It is an especially strange concept when one considers that it allows for people to “own” land without even having a presence or direct connection to it.

When land is no longer under the belief of ownership, it will be much easier for caretakers to rebuild decolonial communities in which all have equal rights to the gifts of the land and at the same time, do not fall under the political construct of needing to own land. In these communities, further work such as education can be done to promote caretaker culture between land and each other.

Promotion of caretaker culture between land and each other requires sustainable interactions. The economic front of a caretaker revolution emphasizes the importance of a society built on connection. In capitalism, the land is objectified to have only material, monetary value. This makes land a commodity. We instead must see the land as an entity with which we are continuously interacting, and whenever the land gives us something, we must give back too. This is the nature of reciprocity.

When reciprocal relationships are created, there is an added level of connection. The trading of resources becomes the trading of *gifts*. Robin Wall Kimmerer, in *Braiding Sweetgrass* calls this a gift economy. What makes gift economies unique is that when material goods are exchanged, social bonds are created.

Another interesting characteristic of the gift economy is that the more gifts that one gives, the more respected they are. So when a society that sees land as equal participates in a gift economy, the land comes to be seen as the most respected entity because she gives the most.

The gift economy is not a new idea either. The Blackfeet, the Kula, the Haudenosaunee, the Klallam, and the Inca all live in gift economies. Even in colonized societies, a gift economy is seen in many forms, such as food pantries, blood and organ donations, volunteering, and potlucks. We already have ways of interacting with each other reciprocally, honorably and with love. It is time to do the same with Mother Earth.

The time is past due to create a thriving future with each other and Mother Earth. Creating such a future is a matter of survival. By changing the way we think of our

relationship with the environment, the way we relate to each other, and the way we exchange goods between us, we have a major opportunity to not only survive, but thrive.

Caretakers rise!

Chapter 10: Live for Love

“For all of us, becoming indigenous to a place means living as if your children’s future mattered, to take care of the land as if our lives, both material and spiritual, depended on it.”

- Robin Wall Kimmerer, *Braiding Sweetgrass*

And at the end of the day, love is a risk. Love leaves us vulnerable to heartbreak, even if we love something as mighty and resilient as land. No moment proved this more for me than when I sat on a hill-top in Northern Minnesota, overlooking a forest that had been cleared to make way for the Line 3 Pipeline.



As far as the eye could see, there was desecration. The soil had been broken up, and parched of all life. I climbed the hill in my sandals, and what once was deep, dark Earthy soil moved like sand beneath my feet, and was hot like asphalt on a sunny day.

The United Nations said that Line 3 violated human rights, but it did so much more than that. It violated the rights of nature. It raped the Earth. It raped her to make way for a thick black snake to move crude oil across Turtle Island.

And this outraged me. This broke me. The previous day I was part of the Treaty People Gathering, and we took direct action against the pipeline through sabotage, vandalism, and stopping construction. Our actions had given me hope, but now I sat upon that hill and saw nothing but destruction.

I wanted to water the land with my tears in hopes that it would drench the soil anew and life may grow again. I wanted to grab all the shoved-aside Earth and push it back into place. I wanted to reseed the land with my words. I wanted to --

Not feel so powerless.

Ecological restoration is the field of study that deals with the improvement of degraded ecosystems. Restoration ecologists study natural history, ecology, chemistry, hydrology, and much more in order to restore land to a period of time in which it had better health.

Restoration on its own is actually less broad in a sense than *ecological* restoration. When restoration work is done, restorationists pick a period of time in the past, and make a plan for how to get a present place to closely mirror that period of time. For example, a restorationist might restore a 100-year old painting to its former glory. Similarly, a restoration *ecologist* would look back in history to see when an ecosystem may have had better qualities such as increased biodiversity, reduced toxins, and improved aesthetics, and make an effort to manifest those qualities again. For instance, in Yellowstone, wolves were eliminated from the ecosystem, resulting in an increase in herbivores. But restoration ecologists have brought wolves back to Yellowstone, which

has decreased the herbivore population, leading to an increase in riparian vegetation and making streams less vulnerable to erosion.

But what is quite interesting about ecological restoration is that unlike regular restoration, ecological restoration's only qualification is improved ecosystem health. This means that planting native tree species in a city is an example of ecological restoration (you're restoring a native species to its original habitat), but it is not an example of restoration (you're not converting the city back to a non-cityscape). This is why ecological restoration is broad.

One major blindspot in ecological restoration, especially when done in colonized societies, is the idea that land is better off being restored to a state where humans are not a part of the ecosystem. In reality, we are a part of nature, and restoration can and should be done to include humans. Not only does this recognize the reality that humans have always lived with nature, but this viewpoint and practice is more vital than ever in an era where human connections with the land are desperately needed.

There are several examples that show how humans are capable of better managing land. In much of the American West, fires have been suppressed under the false belief that forests are better off without fire. In reality, fire is a natural part of the landscape, and even more so, many areas of forest are used to being regularly burned by Indigenous people. For example, the Karuk and Yurok tribes both use cultural burning to clear underbrush, a practice that has been shown to improve forest health, maintain biodiversity, and decrease fire risk.

In Java, Indonesia, home gardens or *penkarangan* are managed plots on human settlements. Penkarangan contain perennial and annual crops, with different types of plants growing at different heights to maximize available space. Because of the diversity of plants, pekarangan can have hundreds of plant and animal species. In just a small plot of land, one would see a dense forest floor, with shrubs, saplings, and towering trees above. This seemingly chaotic mix of greenery is bursting forth with crops such as coconut, breadfruit, papaya, cardamom, coffee, and so much more.

In Brazil, the Indigenous Kayapo grow native plants in savannah *cerrados* (open areas). *Cerrados* can include open fields, farmland, and trail networks. *Cerrados*, especially those on farmland, are known for being infertile, but the Kayapo purposefully grow native plants in the *cerrados*, creating *apetes* (forest patches). The *apetes* are formed by planting crops in a succession from annuals to trees, which eventually builds up the mound and forms a small island of forest surrounded by the savannah *cerrado*. The *apetes* reforest the *cerrados*, increasing biodiversity and long-term soil fertility, and are especially important as a method of reforestation in the face of a shrinking Amazon.

I looked out over the defiled strip of what was forest, and wanted nothing more than to feel empowered, to feel hopeful. I longed for it.

It was surprisingly instantaneous as I found a word for what I wanted to do.

I wanted to heal this land.

I wanted to put my hands into the Earth and watch sprouts grow from my fingertips.

When I got back into the car to head home from Line 3, I turned to my friend who I had driven here with and told him “I want to heal this land. I want to come back to heal this land.” I looked longingly at the Mississippi Headwaters as it disappeared from the rearview.

“I will be back.”

A few months later, at University, while discussing career paths with a professor, I talked about Line 3, and I talked about doing land-healing. And that was all I could imagine myself doing.

Environmental policy? The government rarely has the environment’s best interests at heart.

Sustainability planning? I would hate to waste away in an office.

Environmental law? I’ve had too many negative experiences with the justice system to like the law.

Environmental scientist? Not quite right, I’ve had my fill of lab work.

Parks and Rec? The tourism aspect would drive me insane.

“Land-healing?” he asked. “Have you considered restoration ecology?”

A few Google searches later, I was hooked.

But what I didn’t realize at the time was the overlooked connection between restoration ecology and anti-colonialism.

Colonialism: colonial supremacy over land.

Ecological restoration:

- Restoration: returning to a past state, doing present work, improvement for the future
- Ecology: species connections between each other and the land

Therefore,

Ecological restoration: reviving connections to the land, in the context of the past, present, and future.

Therefore,

When ecological restoration is done from a place of love, honor, and reciprocity, it is the definition of caretaking.

And therefore,

Ecological restoration can be a caretaker revolution.

...

We are surrounded by ecological restoration efforts, more than we realize. Line 3 is just one example.

On Mauna Kea, Kanaka Maoli (native Hawaiians) have resisted efforts to build a Thirty Meter Telescope atop the sacred mountain, a construction project that would see widespread degradation and desecration of an ecologically and culturally important site.

In Vancouver, British Columbia, the largest civil disobedience movement in Canadian history is underway to protect old-growth forest from logging. Over 1,000 arrests have been made, and activists are determined to protect the future of the forest as a carbon sink and a sacred site.

Guerilla gardening has seen countless people doing small-scale ecological restoration in cityscapes through gardening on property that does not belong to the gardener. Whether it is planting trees, or growing food, guerilla gardening resists industrial city life and improves connection to land for citizens, all while making the area more biodiverse. Guerilla gardening efforts can include native plants too.

The Rojava region of northern Syria exemplifies ecological restoration efforts in the face of war. Rojava is surrounded by nations and groups hostile to the region's majority Kurdish ethnicity, such as Turkey, ISIS, Iraq, and even the Syrian government themselves. Despite this, Rojava's people place an emphasis on sustainable living and direct democracy, and have succeeded in being one of the most pro-humanitarian regions in the Middle East.

In South Dakota, the Dakota Access Pipeline protests at Standing Rock saw the rise of a resistance camp without hierarchy and operating on a gift economy. It had several thousand people and was briefly the fourth largest human settlement in South Dakota. People saw each other as equal, no matter their background, and found community amongst each other despite differences. What arose was a gift economy with medical camps, childcare services, community kitchens, storytelling spaces, and sacred sites. All the people were united with each other and the land, and were determined to stop the pipeline.

The Zapatistas, another non-hierarchical and gift economy society in Chiapas, Mexico, has carried out efforts for major land reform, especially for Indigenous peoples, and to protect the environment within their territories. Steps have been taken in particular to improve conservation in agroecosystems (agriculture-based ecosystems).

Across the globe are efforts to return land to her original caretakers, Indigenous peoples. These efforts are often referred to as "land back". Land back movements seek to

reestablish Indigenous sovereignty. Because of the unique and important role Indigenous peoples play in ecosystem management and caretaking, land back efforts are paramount to both ecological restoration and caretaker revolutions.

These are just a few examples of resistance and restoration efforts. Caretaker revolutions are not yet to come; they are already here, and now it is our turn. We must find and join local caretaking movements, or start our own.

When all hope seems lost, feel the pain. Grab the Earth with your fists and feel the anguish within your heart and within the soil. Think about your rage. Most importantly, think about your resolve. Then, turn that energy into a roaring force to do whatever necessary to reconnect with the land. To love, honor, reciprocate. For the sake of the past, present, and future.

Caretakers rise!

...

Futurism is the practice of anticipating what exciting new things (or not so exciting) may await us in the future. I've done my fair share of dwelling on what the future may look like.

I see myself ten years from now returning to Northern Minnesota. Enbridge has finally decommissioned Line 3 after continuous guerilla-style action against the pipeline, from sabotaging pumps to galvanizing local communities to demand the pipeline's removal.

I am one of dozens of people who have the honor of being selected by local Indigenous groups and local communities to assist with the restoration of the land the pipeline has degraded. I arrive, and we all share a meal together. Manoomin. Wild rice. Once threatened by Line 3, it now thrives on riverbeds and we eat it at every meal.

We talk for hours. The pipeline is a small fraction of the conversation. We talk about our shared love for Earth, about our hopes and dreams for this land. About the

memories of the Line 3 protests. We laugh as we remember the joy of bathing in the Mississippi headwaters.

We set up the next meeting. At that meeting, we talk about restoration plans, how we will work with communities to bring back the forest. We discuss whether or not to remove the pipeline, or to leave it standing to gather moss and detritus like a *hugelkultur* mound. We listen to oral histories of plants that are important to the area, of stories we hope to revive in the landscape.

We bring our proposals to the community. We get feedback. We revise, oftentimes with community members in the room. We share every meal together with everyone. The worst thing that can happen during a meeting is an empty stomach.

And then, we act. We work together, moving soil with shovels, electric machines, or our hands. We use new technology to inoculate the soil with beneficial bacteria, fungi, and protists. New studies have revealed deceptively simple methodologies for conserving water in the soil so that when it rains, the water is retained for much longer. Seeds are scattered across the landscape. The project becomes very, very involved. Families with children begin to set up daycares. In my spare time, I teach an elementary science class about native plants. Trips to bathe in the Mississippi are common; no longer do we have to worry about oil in the water. By 4 pm, we have all gathered and are busy making supper. Manoomin again is prepared, along with pemmican - sweet berries mashed with fatty deer and moose meat. As the meal wraps up, some of us smoke tobacco. We talk and share stories until the only thing we can see are the dying embers of the fire and the glittering stars in the sky above.

Our restoration closely parallels the resistance camps that were in the exact same spot during the Treaty People Gathering. It is the same mechanism after all, isn't it?

Connection. Caretaking.

Dear Earth,

I love you.

...

I await for you, at the cave
Show me the way

I crawl out of the dark comfort of the cave on Es-mock. The sun is shining bright as I continue to walk southward, along the fireroad, a dirt road installed to help control Es-mock's fire-prone terrain.

Its presence alone is an indicator that this land seems to *miss* fire. It has a need, a hunger to burn...

In August of 2020, a portion of the western slope of Es-mock burned. The fire was quickly put out, and crowds of people gathered in the streets to watch the raging war between the fire and the firefighters. The gathering of people, all together in awe.

As recently as three hundred years ago, Indigenous peoples gathered here too, but they were the ones setting the fires, and skillfully controlling them.

I am walking, and the sun is setting. I come across that burn site. It has been over two years, and you would be hardly able to tell the fire was here at all. In fact, this landscape will soon be due for another burn.

It's still here. It's still here.

We have always been here.

Fire burning on the landscape,

The ashes mixed into the soil below your feet

The people who set the fires

Emblazoned into the history of this place

Just under a mile down the trail is the buried gas pipeline that tracks across Es-mock.

I am watching the sun set now, the sky going from blue to orange.

And how did I give back?
This land has given me so much,
The least I owe her is my
Love, honor, and desire for reciprocity

...

Veni, vidi, vici
I am king upon this hill
This land belongs to me,
Requires nothing of me

I declare myself over this land!

...

Hello? Hey-

Just stop, just stop talking,

HOW MUCH LONGER CAN WE GO THIS WAY
HOW MUCH LONGER CAN WE AFFORD TO SHOUT WHILE THE BRIDGE LITERALLY
BURNS BETWEEN US?
ENOUGH!

The sky has turned from orange to purple.

Let there be no mistake, no quarter, no excuses any longer for colonizers!

Let it be apparent that the planet has been harmed by extractivism, a connection severed, and one we so desperately need now!

Don't believe that there is a reason to caretake?

Colonization in and of itself is a reason for caretaking!

We demand an END to the occupation, to the extraction, to the disconnect!

So long as there is hurt, there is reason to care.

This Farm has been mismanaged for far too long! Everywhere the colonizers walk, they leave death in their wake,

And this is not sustainable,

No, this will never be the same, so let us take a different path forward,

In this home, a place for us, where we can live, live, live,
Finding connection between hope and despair,
Restising by finding each other, ourselves, and the land again. For love, honor, and reciprocity! For the sake of past, present and future generations, we must! We must usher in a revolution of life, new life blooming forth between whatever crack anything can grow between.

And tell me!

LOOK AT ME IN THE EYES
AND PROMISE ME,
CARETAKER!
THAT YOU WILL LIVE FOR LOVE!
RESOLVE TO LOVE
LOVE OUT OF NECESSITY!
LOVE THIS WORLD, AND ALL THAT INHABIT IT!
YES, LIVE FOR LOVE!

The end of colonization,
A sustainable future,
A thriving future,
And Caretakers rise...

Bibliography

My thesis is a work of creative scholarship. It is not a traditional Western scientific paper in which sources are cited in-text. It is also a work that heavily relies on scholarly sources that would normally be cited in-text. Because of this, I opted for bibliography in which I reference sources used for the facts I state in each chapter, plus recommended readings or viewings (most of which are from my classes). Sources are listed in order of reference in the text, rather than alphabetically.

Chapter 1: The Farm

“Turf grass is the most irrigated ‘crop’ by acreage in the United States, with an acreage over 40 million, or 2% of the continental US, about the size of the state of Georgia.

- Source: Harrington, Rebecca. “Grass Takes up 2% of the Land in the Continental US.” *Business Insider*, February 19, 2016.

<https://www.businessinsider.com/americas-biggest-crop-is-grass-2016-2>.

“they burned the area around Missoula regularly... which scientists have proven to be essential to maintaining biodiversity and preventing large wildfires.”

- Sources: Abdelfatah, Rund, and Ramtin Arablouei. “Fighting Fires and Family Secrets : Throughline.” *NPR*, November 25, 2021.
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<https://treesource.org/news/management-and-policy/native-fire-history-salish/>.

“According to Oxford Languages, a farm can be defined as ‘an establishment at which something is produced or processed.’”

- Source: “Farm.” In *Oxford Languages*, n.d. Accessed May 10, 2023.

“Es-mock is a mountain in Missoula, and is often called “Mt. Sentinel” by the locals.”

- Source: Omundson, Don. “Study of Place Names in Missoula County, Montana.” *Graduate Student Theses, Dissertations, & Professional Papers*, January 1, 1961. <https://scholarworks.umt.edu/etd/3727>.

“it has become a home for invasive species such as knapweed and toadflax. In turn, the number of native species has decreased, and in some areas there are no native species at all.”

- Source: Missoula Parks and Recreation. “Missoula Conservation Lands Management Plan.” Missoula Parks and Recreation Department, n.d. <https://www.ci.missoula.mt.us/DocumentCenter/View/4499/Conservation-Lands-Management-Plan?bidId=>.

“this clearing is due to a pipeline, a gas pipeline installed by the company NorthWestern energy. NorthWestern also operates Colstrip, the second-largest coal-based power plant west of the Mississippi.”

- Sources: Montana Pipeline Awareness. “National Pipeline Mapping System.” Accessed May 10, 2023. https://mt.pipeline-awareness.com/montana/national_pipeline_mapping.; Puget Sound Energy. “Colstrip Facts,” 2017. <https://www.colstripfacts.com/facts>.

“mountains saw the encroachment of businessmen looking to turn a profit, and who sent workers in droves to extract the precious materials. The riches of these mountains created so-called copper kings, and their ambitions spared no mountain they set their eyes on.”

- Source: Glasscock, C.B. *The War of the Copper Kings*. Riverbend Publications, 2002.

Chapter 1 recommended readings:

- Gilio-Whitaker, Dina. “The Problem with Wilderness.” *UU World Magazine*, 2020. <https://www.uuworld.org/articles/problem-wilderness>.
- Ghosh, Amitav. “The Nutmeg's Curse.” In *The Nutmeg's Curse*. University of Chicago Press, 2021.

- Denevan, William M. "The Pristine Myth: The Landscape of the Americas in 1492." In *The Great New Wilderness Debate*. University of Georgia Press, 1992.
- Fabienne Bayet. "Overturning the Doctrine: Indigenous People and Wilderness - Being Aboriginal in the Environmental Movement." In *The Great New Wilderness Debate*. University of Georgia Press, 1994.

Chapter 2

"Mud, God, flood,

From stars, stones, and soot,

From water-beings"

- Sources: Bullchild, Percy. *The Sun Came Down: The history of the world as my Blackfeet elders told it*. U of Nebraska Press, 2005.; Carey, Harold Jr. "Navajo Creation Story – Nihalgai – The Glittering or White World." *Navajo People*, March 21, 2011. <http://navajopeople.org/blog/navajo-creation-story-nihalgai-the-glittering-or-white-world/>.; "The First Buffalo Stone." Accessed March 29, 2022. <http://www.ocbtracker.com/ladypixel/buffston.html>.

"They call us by many names

Qwey qway

Kuts

Ivanbito

Innii

Takanka

Buffalo"

- Sources: "People and Bison - Bison (U.S. National Park Service)," November 1, 2018. <https://www.nps.gov/subjects/bison/people.htm>.; Kelly, Alyssa. "Telling the Story of the National Bison Range | News | Charkoosta.Com." *Char-Koosta News*, December 6, 2018. https://www.charkoosta.com/news/telling-the-story-of-the-national-bison-range/article_3c1eefe8-f9a7-11e8-8449-4beca69422f6.html.

"We migrated along the threads of a web of

Many things

Seasons,
Water,
Fire,
Grass,
People...

*(Bouteloua gracilis, Stipa comata, Panicum virgatum, Agropyron smithii, Stipa curtiseta
Blue grama, needle-and-thread, switchgrass, western wheatgrass, western porcupine grass)*”

- Source: Olson, Wes, and Jim Ellis. *Intertwined Histories: Plants in Their Social Contexts*. University of Calgary Press, 2019.
<https://prism.ucalgary.ca/handle/1880/110196>.

“From

The far North of Turtle Island

To

The Sierra Madres”

- Source: Feldhamer, George A., Bruce C. Thompson, and Joseph A. Chapman, eds. *Wild mammals of North America: biology, management, and conservation*. JHU Press, 2003.

“They bring us in with offerings of burn sites that birth fresh grass,
Then they harvest us, using every bit to nourish the people”

- Source: Brink, Jack. *Imagining Head-Smashed-In: Aboriginal Buffalo Hunting on the Northern Plains*. Athabasca University Press, 2008.

“we went from sixty million

To five hundred”

- Source: “IUCN Red List of Threatened Species: Bison Bison.” *IUCN Red List of Threatened Species*, September 1, 2016. <https://www.iucnredlist.org/en>.

“Lush with prairie chickens, bats, shortgrass, pronghorn, fish, gophers, ferrets, tallgrass...”

- Source: Hultman, G. Eric. *Trees, Shrubs, and Flowers of the Midwest*. Chicago : Contemporary Books, 1978. <http://archive.org/details/treesshrubsfloweohult>.

“For Colonel Richard Dodge who sat in the sacred Black Hills wrote,
‘Every buffalo dead is an Indian gone.’”

- Source: Notes From the Frontier. “Every Dead Buffalo Is an Indian Gone,” November 15, 2019. <https://www.notesfromthefrontier.com/post/every-dead-buffalo-is-an-indian-gone>.

Chapter 2 recommended readings:

- Bullchild, Percy. *The Sun Came Down: The History of the World as My Blackfeet Elders Told It*. University of Nebraska Press, 2005, 1985.
- Carlisle, Liz. *Healing grounds: climate, justice, and the deep roots of regenerative farming*. Island Press, 2022.
- Eisenberg, Cristina, and Grace Morgan. *Beaver, Bison, Horse: The Traditional Knowledge and Ecology of the Northern Great Plains*. University of Regina Press, 2020.
- Smith, Thompson. “Aay u Sqélix” : A History of Bull Trout and the Salish and Pend D’oreille People.” CSKT | Division of Fish, Wildlife, Recreation, & Conservation., January 2010.
<http://fwrconline.csktnrd.org/Explore/ExploreTheRiver/CultureHistory/History/>.

Chapter 3

“We are being led to our slaughter.”

- Source: Serafinski. *Blessed Is the Flame: An Introduction to Concentration Camp Resistance and Anarcho-Nihilism*. Little Black Cart, 2016.

“The war commenced upon the discovery of gold in the Black Hills, when settlers began encroaching on Dakota land. As a result, the US Government targeted the Dakota both to obtain control of the Black Hills and to further colonize the West.”

- Source: Jackson, Donald. *Custer's Gold: The United States Cavalry Expedition of 1874*. Vol. 543. U of Nebraska Press, 1966.

“also known as Custer’s Last Stand or the Battle of the Greasy Grass”

- Source: McCabe, Brendan. “The Battle of the Greasy Grass | Smithsonian.” Accessed May 10, 2023.

<https://web.archive.org/web/20190405165634/https://www.smithsonianmag.com/ideas/category/history/the-battle-of-the-greasy-grass/?no-ist>.

“Near the Little Bighorn River, several Indigenous nations came together to defeat an army of 700 men and Colonel George Armstrong Custer, with only about 31 Indigenous combatants killed and about 268 of Custer’s men killed.”

- Source: Fox, Richard A., Melissa A. Connor, and Dick Harmon. *Archaeological perspectives on the Battle of the Little Bighorn*. University of Oklahoma Press, 2000.

“About a decade later, the US Military slaughtered the Dakota en masse at the Wounded Knee Massacre.”

- Source: Prucha, Francis Paul. "Wounded Knee through the Lens of Colonialism." (2005): 725-728.

“The Great Sioux War ended with the Agreement of 1877, which established the Great Sioux Reservation that spanned the western half of South Dakota.”

- Source: Hyde, George E. *Red Cloud's Folk: A History of the Oglala Sioux Indians*. Vol. 15. University of Oklahoma Press, 1937.

“The US Government shrunk the reservation several times with several acts such as the Dawes Act, the dissolution of the Great Sioux Reservation, and the Enlarged Homestead Act. Now, a few major reservations remain.”

- Source: Kmusser. *Carte de La Great Sioux Reservation, Original de Kmusser*. November 6, 2011. [Siouxreservationmap.png](https://commons.wikimedia.org/wiki/File:Siouxreservationmap-fr.png).
<https://commons.wikimedia.org/wiki/File:Siouxreservationmap-fr.png>.

“Since 1877, Standing Rock’s government has been working to reclaim the Black Hills, even rejecting a monetary settlement from the Government.”

- Source: Lazarus, Edward. *Black hills white justice: The Sioux nation versus the United States, 1775 to the present*. U of Nebraska Press, 1999.

“the Army Corps of Engineers and the Bureau of Reclamation have built five dams on the Missouri... The survivors of these floods are still seeking reparations.”

- Source: Trymaine, Lee, and Matt Black. “Geography of Poverty Northwest.” MSNBC, May 18, 2020.

<https://web.archive.org/web/20200518175101/http://www.msnbc.com/interactives/geography-of-poverty/nw.html>.

“directly threatens their water supply”

- Source: “Standing Rock Sioux and Dakota Access Pipeline | Teacher Resource.” Accessed May 10, 2023. <http://nmai.si.edu/nk360/plains-treaties/dapl.cshtml>.

“massive protests, international condemnation of the project”

- Source: Liu, Louise. “Thousands of Protesters Are Gathering in North Dakota — and It Could Lead to ‘Nationwide Reform.’” Business Insider. Accessed May 10, 2023. <https://www.businessinsider.com/photos-north-dakota-pipeline-protest-2016-9>.

“a NEPA violation”

- Lakhani, Nina. “US Supreme Court Rejects Dakota Access Pipeline Appeal | Dakota Access Pipeline.” The Guardian, February 22, 2022. <https://www.theguardian.com/us-news/2022/feb/22/us-supreme-court-dakota-access-pipeline>.

“According to Merriam-Webster, colonialism is: ‘the domination of a people or area by a foreign state or nation’.”

- Source: “Colonialism Definition & Meaning - Merriam-Webster.” Accessed May 10, 2023. <https://www.merriam-webster.com/dictionary/colonialism>.

“In fact, the word *colonize* comes from the Latin root *colonus*, which means ‘tiller of the soil, farmer’.”

- Source: “Colonize | Etymology, Origin and Meaning of Colonize by Etymonline,” January 22, 2018. <https://www.etymonline.com/word/colonize>.

“The Opium Wars... byproducts from explosives such as ammonia.”

- Sources: Abreu, Allan de, and OCCRP. “How Illegal Land Grabs in Brazil’s Amazon Feed the Global Beef Industry.” OCCRP, July 8, 2022. <https://www.occrp.org/en/investigations/how-illegal-land-grabs-in-brazils-amazon-feed-the-global-beef-industry>.; Asia Pacific Curriculum. “The Opium Wars in China.” Accessed May 10, 2023. <https://asiapacificcurriculum.ca/learning-module/opium-wars-china>.; Interamerican Association for Environmental Defense (AIDA). “Understanding the True Costs of Mining in Latin America,” June 28, 2018.

<https://aida-americas.org/en/blog/understanding-the-true-costs-of-mining-in-latin-america>.

“The nihilist perspective is one of three ways people generally deal with environmental destruction, the other two being ‘hope’ and ‘resolve’.”

- Hanson, Mark. “Hope, Despair, or Resolve?” *Ways of Knowing* - HC121L, November 10, 2020.

“*Blessed be the Flame* goes beyond this... nihilism itself as a philosophy easily lends itself to the importance of resistance.”

- Source: Serafinski. *Blessed Is the Flame: An Introduction to Concentration Camp Resistance and Anarcho-Nihilism*. Little Black Cart, 2016.

Chapter 3 recommended readings:

- Fanon, Frantz. *The Wretched of the Earth*, 1961.
- Ghosh, Amitav. "The Nutmeg's Curse." In *The Nutmeg's Curse*. University of Chicago Press, 2021.
- Margolin, Jamie. *Patriarchy, Racism, and Colonialism Caused the Climate Crisis* *TEDxYouth@Columbia*, 2019. <https://www.youtube.com/watch?v=amGyIqIBzEk>.
- Serafinski. *Blessed Is the Flame: An Introduction to Concentration Camp Resistance and Anarcho-Nihilism*. Little Black Cart, 2016.
- Thomas, Madeline. “Climate Depression Is for Real. Just Ask a Scientist.” *Grist*, October 30, 2014. grist.org/climate-energy/climate-depression-is-for-real-just-ask-a-scientist/

Chapter 4

“In order of abundance, they are: CO₂ (carbon dioxide), CH₄ (methane), N₂O (nitrous oxide), fluorocarbons, and sulfur hexafluoride. The most abundant of these, carbon dioxide and methane, alone make up 75% of all greenhouse gasses emitted by the human race.”

- Sources: Ritchie, Hannah, Max Roser, and Pablo Rosado. “CO₂ and Greenhouse Gas Emissions.” *Our World in Data*, May 11, 2020.

“Carbon dioxide in particular is not inherently bad... shielding us from the sun, and creating weather patterns.”

- Sources: Doyle, Heather. "Greenhouse Effect: Keeping the Balance." NASA Climate Kids, March 31, 2023. <https://climatekids.nasa.gov/greenhouse-effect-and-carbon-cycle/>; Gould, S. E. "Shine on You Crazy Diamond: Why Humans Are Carbon-Based Lifeforms." Scientific American Blog Network. Accessed May 10, 2023. <https://blogs.scientificamerican.com/lab-rat/shine-on-you-crazy-diamond-why-humans-are-carbon-based-lifeforms/>; "Photosynthesis." Accessed May 10, 2023. <https://education.nationalgeographic.org/resource/photosynthesis>; World Health Organization. "Radiation: Ultraviolet (UV) Radiation," March 9, 2016. [https://www.who.int/news-room/questions-and-answers/item/radiation-ultraviolet-\(uv\)](https://www.who.int/news-room/questions-and-answers/item/radiation-ultraviolet-(uv)).

"Carbon in general is the basis for the major biomolecules that make up life on Earth - lipids (fat), carbohydrates (sugars), amino acids (DNA/RNA), and protein. These biomolecules work to store energy in the form of chemical bonds, which powers life."

- Source: "Important Biomolecules." Accessed May 10, 2023. <https://www2.nau.edu/lrm22/lessons/biomolecules/biomolecules.html>; Khan Academy. "Carbon and Hydrocarbons (Article)." Accessed May 10, 2023. <https://www.khanacademy.org/science/ap-biology/chemistry-of-life/elements-of-life/a/carbon-and-hydrocarbons>.

"the lifeform as it is buried for thousands of years and becomes a fossil. This becomes several carbon-based products known as fossil fuels. The fossil fuels are then sold as a solid in the form of coal, liquid in the form of oil and petroleum, or a gas in the form of natural gas."

- Source: Department of Energy. "Fossil." Energy.gov. Accessed May 10, 2023. <https://www.energy.gov/fossil>.

"Peat has been used to heat homes and cook food. Coal was used for smelting. Oil, with its water-repellent properties, proved useful for waterproofing and embalming."

- Sources: Bilkadi, Zayn. "Bulls from the Sea: Ancient Oil Industries." *Aramco World*, Archived from the original on 13th Nov (2007). Kopp, Otto. "Peat | Description, Formation, Importance, Carbon, & Uses | Britannica." Accessed May 10, 2023. <https://www.britannica.com/technology/peat>; Riva, Joseph, Priscilla McLeroy, and Gordon Atwater. "Petroleum | Energy, Products, & Facts | Britannica," March 12, 2023. <https://www.britannica.com/science/petroleum>.

“fossil fuels are combusted: the process of burning a carbon-based molecule with oxygen to produce water, carbon dioxide (sometimes other gasses), and heat.”

- Source: Kondratiev, Victor Nikolaveich. “Combustion | Definition, Reaction, Analysis, & Facts | Britannica,” March 25, 2023. <https://www.britannica.com/science/combustion>.

“around the 1700s... they brought the Industrial Revolution with them.”

- Source: “Industrial Revolution | Definition, History, Dates, Summary, & Facts | Britannica,” April 2, 2023. <https://www.britannica.com/event/Industrial-Revolution>.

“colonization is the reason for fossil fuel extraction. Colonization and fossil fuels have an intertwined history”

- Ghosh, Amitav. "The Nutmeg's Curse." In *The Nutmeg's Curse*. University of Chicago Press, 2021.

“Activity due to or originating from colonialism... have emitted under 10%.”

- Source: Ritchie, Hannah. “Who Has Contributed Most to Global CO₂ Emissions?” Our World in Data, October 1, 2019. <https://ourworldindata.org/contributed-most-global-co2>.

“Overall, the quality of life improved.”

- Source: “Industrialization, Labor, and Life.” Accessed May 10, 2023. <https://education.nationalgeographic.org/resource/industrialization-labor-and-life>.

“The result of this conquest has led to an increased dependence on fossil fuels in developing nations... China’s fossil fuel emissions would go down by about 8.5% (a bit over 900 million metric tons).”

- Source: Ritchie, Hannah. “How Do CO₂ Emissions Compare When We Adjust for Trade?” Our World in Data, October 7, 2019. <https://ourworldindata.org/consumption-based-co2>.

“While it is true that colonial nations have decreased fossil fuel use in recent years”

- Source: Ritchie, Hannah, Max Roser, and Pablo Rosado. “CO₂ and Greenhouse Gas Emissions.” *Our World in Data*, May 11, 2020. <https://ourworldindata.org/co2-emissions>.

Chapter 4 recommended readings:

- Angus, Ian. *Facing the Anthropocene: Fossil capitalism and the crisis of the earth system*. NYU Press, 2016.
- Battle, Colette. *Climate Change Will Displace Millions. Here's How We Prepare*. TED Talk, 2020. <https://m.youtube.com/watch?v=8NSQYOzes3U>.
- Ghosh, Amitav. "The Nutmeg's Curse." In *The Nutmeg's Curse*. University of Chicago Press, 2021.
- Klein, Naomi. *This changes everything: Capitalism vs. the climate*. Simon and Schuster, 2015.
- Margolin, Jamie. *Patriarchy, Racism, and Colonialism Caused the Climate Crisis* TEDxYouth@Columbia, 2019. <https://www.youtube.com/watch?v=amGyIqIBzEk>.

Chapter 5

“Ecology is the study of how living things interact with their environment.”

- Source: “What Is Ecology? – The Ecological Society of America.” Accessed May 10, 2023. <https://www.esa.org/about/what-does-ecology-have-to-do-with-me/>.

“sustainability... the ability for a process to sustain itself. In an environmental context, sustainability refers to the ability for humans to continue living on the planet without the depletion of natural resources.”

- Source: Mollenkamp, Daniel Thomas. “What Is Sustainability? How Sustainabilities Work, Benefits, and Example.” Investopedia, April 8, 2023. <https://www.investopedia.com/terms/s/sustainability.asp>.

“In sustainability, there are “the three pillars”... and in order for society to thrive, the environment must thrive.”

- Source: Mollenkamp, Daniel Thomas. “What Is Sustainability? How Sustainabilities Work, Benefits, and Example.” Investopedia, April 8, 2023. <https://www.investopedia.com/terms/s/sustainability.asp>.

“biomimicry, when scientists emulate nature to solve human problems. Biomimicry is mainly applied to technology and architecture”

- Source: Biomimicry 3.8. “What Is Biomimicry?” Accessed May 10, 2023. <https://biomimicry.net/what-is-biomimicry/>.

“Capitalism is an economic system in which private entities obtain profit through the means of capital.”

- Source: Smith, Andy. “What Is Capitalism: Varieties, History, Pros & Cons, Socialism.” Investopedia. Accessed May 10, 2023.
<https://www.investopedia.com/terms/c/capitalism.asp>.

Chapter 5 recommended readings:

- Ohu Gon III, Sam. *Lessons from a Thousand Years of Island Sustainability*. TED Talk, 2014.
https://www.youtube.com/watch?v=lgfv_2XIJBk&ab_channel=TEDxTalks.

Chapter 6

“One such example is the oil pipeline Line 3... is proof that safeguards are ineffective.”

- Sources: Beaumont, Hilary. “Revealed: Pipeline Company Paid Minnesota Police for Arresting and Surveilling Protesters.” *The Guardian*, October 5, 2021, sec. US news. <https://www.theguardian.com/uk-news/2021/oct/05/line-3-pipeline-enbridge-paid-police-arrest-protesters.>; “Enbridge Inc Revenue 2010-2023 | ENB | MacroTrends.” Accessed May 10, 2023.
<https://www.macrotrends.net/stocks/charts/ENB/enbridge-inc/revenue.>; Evan, Simon, Byron Pitts, Kim Soo Rin, and Jake Lefferman. “Pipeline Firm Deposited Millions into State Fund to Pay Local Police to ‘patrol’ and ‘Protect’ Controversial Line 3 Project - ABC News,” November 1, 2021.
<https://abcnews.go.com/US/pipeline-firm-deposited-millions-state-fund-pay-local/story?id=80844727.>; “United Nations Issues Letter Regarding Violations of Anishinaabe Human Rights from Enbridge Line 3, Requests Measures from the United States — Stop Line 3,” September 2, 2021.
<https://www.stopline3.org/news/unitednations.>; Wiita, Tommy. “Enbridge to Pay \$11M for Line 3 Pipeline Spills, Breaches.” Bring Me The News, October 17, 2022.
<https://bringmethenews.com/minnesota-news/enbridge-to-pay-11m-for-breaches-spills-caused-by-line-3-pipeline.>

“Fanon describes how the colonized are indoctrinated into the colonizers’ system that places the colonized below the colonizers, and how in order to decolonize, a new national culture must be created that liberates both mind and land.”

- Fanon, Frantz. *The Wretched of the Earth*, 1961.

“In the land back movement... such as the reintroduction of Indigenous culture and land management styles.”

- Source: Fellows, Sidney. Personal communication, March 31, 2023.

"One example of this is the Secwepemcúlecw in Canada... The combining of Indigenous and Western knowledge created a new way of managing the land."

- Source: Dickson-Hoyle, Sarah, Ronald E. Ignace, Marianne B. Ignace, Shannon M. Hagerman, Lori D. Daniels, and Kelsey Copes-Gerbitz. “Walking on Two Legs: A Pathway of Indigenous Restoration and Reconciliation in Fire-Adapted Landscapes.” *Restoration Ecology* 30, no. 4 (2022): e13566.
<https://doi.org/10.1111/rec.13566>.

Chapter 6 recommended readings:

- Fanon, Frantz. *The Wretched of the Earth*, 1961.
- Ohu Gon III, Sam. *Lessons from a Thousand Years of Island Sustainability*. TED Talk, 2014.
https://www.youtube.com/watch?v=19fv_2XIJBk&ab_channel=TEDxTalks.
- The Red Nation. *The Red Deal: Indigenous Action to Save Our Earth*. Common Notions, 2021.

Chapter 7

"I'mupa wa'teweoni'tasike-

Na eteka na mita tamiha o-

Take ate ptaha pana sohe

'My closest friend, what is it you adore?

You told me in reply, "It is the corn

Of ancient name which pleases to my core.'"

- This song was given to me at the PEAS Farm by Ruth Plenty Sweetgrass-She Kills. She recommended that for practicing singing the song, I search for a transcript online. This is the source for that transcript:

"The Four Sisters Garden is a polyculture of sunflower, corn, beans, and squash, grown together in accordance with the traditions of the Nú'eta (Mandan), Hiraacá (Hidatsa), and Sáhnish (Arikara) peoples (The Three Affiliated Tribes)."

- Source: Waheenee, and Gilbert Livingston Wilson. "Buffalo Bird Woman's Garden." UPenn Digital Library, 1917.
<https://digital.library.upenn.edu/women/buffalo/garden/garden.html>.

"According to the Sáhnish Chief Four-Rings... smoke offerings should be made towards the southeast to show gratitude for sun and vegetation."

- Source: North Dakota Studies. "Mandan Creation Narratives." Government, n.d.
<https://www.ndstudies.gov/curriculum/high-school/mandan-hidatsa-sahnish/culture-mha>.

"The Three Affiliated Tribes' ancestral territory is located in eastern Montana and North Dakota... resulting in the loss of 94% of Fort Bethold's agricultural land."

- Source: Mandan, Hidatsa and Arikara Nation. "MHA Nation History." Government, n.d. <https://www.mhanation.com/history>.

"I am on the lands of the Séliš, Qlispé, Ktunaxa, and Niitsitapi."

- Sources: Native-Land.ca. "Native Land Digital." Accessed October 5, 2023.
<https://native-land.ca/mapbox-map/>.; Woody, Frank H. "A sketch of the Early History of Western Montana." *Contributions to the Historical Society of Montana* 2 (1896): 88-106.

"Montana, a state that has had at least 12 tribes within its colonially-imposed borders."

- Source: "Tribal Territories in Montana - Indian Education for All | Montana State University," January 14, 2019.
<https://www.montana.edu/iefa/introductiontomtribalnations/tribalterritories.html>.

Chapter 7 recommended readings:

- Kimmerer, Robin Wall. *Braiding Sweetgrass*. Milkweed Editions, 2015.
- Waheenee, and Gilbert Livingston Wilson. "Buffalo Bird Woman's Garden." UPenn Digital Library, 1917.
<https://digital.library.upenn.edu/women/buffalo/garden/garden.html>.

Chapter 8

"CARETAKER: /'ker,tākər/ n.

ONE WHO LOVES, HONORS, AND RECIPROCATES CONNECTION TO THE LAND FOR THE SAKE OF PAST, PRESENT, AND FUTURE GENERATIONS"

- This definition arose from a long discussion with my thesis advisor, Caroline Stephens. It has several components all inspired by different texts. I must acknowledge that most of these texts were created by Indigenous scholars and this definition of Caretaker heavily relies on Indigenous knowledge. Originally, I had considered using Robin Wall Kimmerer's definition of "indigenous" as an answer to colonialism. Her definition of being indigenous to a place, as she writes in *Braiding Sweetgrass*, is: "to treat the land as if the next generation's needs depended on it". Since the book was published in 2015, the word "indigenous" has taken on more emphasis as a ethnicity, rather than a way of living. In writing, the two terms are distinguished as a lowercase i for "indigenous" the way of living, and an uppercase I for "Indigenous" as an ethnicity. However, not everyone distinguishes between the two, and i/Indigenous as a term is much more commonly used as an ethnicity, and using indigenous to refer to a way of living is much more likely to result in confusion, especially if non-Indigenous people use the term as an identifier. Due to these reasons, I saw an entirely different term as a way forward. By using a neutral term such as "caretaker", I hope to create a label that all people feel comfortable using and is free of ethnic connotations. However, I also recognize that the definition of caretaking heavily relies on Indigenous knowledge. Thus, if people want to use the definition I have for caretaker and

apply to another term, such as being indigenous to a place, or environmental stewardship, that is entirely up to them. Caretaker is simply a word for a set of values that we should strive to have for a thriving future.

There are two parts to the definition of "caretaker": connection to the land, and the "sake of" or purpose of that connection.

Connection to the land is based on three concepts: love, honor, and reciprocity. Love is about the emotional investment in connection to the land. Honor is based on respect we have for those connections. Reciprocity is about giving as much connection as we receive.

Connection is done for the sake of past, present, and future generations. Past generations should be taken into account, whether you seek to continue the goodness of your ancestors, or to rectify the harm they have done. Present generations are concerned with how action is being done and carried out now. It is for the present that we act with urgency. Future generations are most affected by our actions and should be considered as having the most stake in the decisions we make today.

Below are texts most important to this definition. All of these texts discuss all aspects of this definition in some way, but I will indicate what part(s) these texts discuss the most.

- Kimmerer, Robin Wall. *Braiding Sweetgrass*. Milkweed Editions, 2015. - discusses all parts of being a caretaker
- Yunkaporta, Tyson. *Sand Talk: How Indigenous Thinking Can Save the World*. HarperOne, 2020. - discusses past, present, and future generations and honor
- Ohu Gon III, Sam. *Lessons from a Thousand Years of Island Sustainability*. TED Talk, 2014.
https://www.youtube.com/watch?v=l9fv_2XIJBk&ab_channel=TEDxTalks. - discusses love and honor, past generations
- Sources from other classes?

"On the podcast On Being, Dr. Ayana Elizabeth Johnson said, 'imagine if someone — you asked someone if their marriage was — how their marriage was doing, and they said, "it's sustainable." You'd be like, "Are you sure you want to stay married?"'"

- Source: Tippet, Krista. *Ayana Elizabeth Johnson: What If We Get This Right?* On Being, n.d. <https://onbeing.org/programs/ayana-elizabeth-johnson-what-if-we-get-this-right/>.

"Frantz Fanon, in his *Wretched of the Earth*, discusses at length... a new national culture is one of caretaking."

- Source: Fanon, Frantz. *The Wretched of the Earth*, 1961.

Chapter 8 recommended readings:

- Ibrahim, Hindou. *Indigenous Knowledge Meets Science to Take on Climate Change*. Youtube, 2020. https://m.youtube.com/watch?v=z3d_UsYgt1c&t=14s.
- June, Lyla. *3000-Year-Old Solutions to Modern Problems*. Ted Talk, 2022. https://www.youtube.com/watch?v=eH5zJxQETl4&ab_channel=TEDxTalks
- Kimmerer, Robin Wall. *Braiding Sweetgrass*. Milkweed Editions, 2015.
- Ohu Gon III, Sam. *Lessons from a Thousand Years of Island Sustainability*. TED Talk, 2014. https://www.youtube.com/watch?v=lgfv_2XIJBk&ab_channel=TEDxTalks.
- The Red Nation. *The Red Deal: Indigenous Action to Save Our Earth*. Common Notions, 2021.
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Chapter 9

"Amitav Ghosh in *The Nutmeg's Curse* sums this up by quoting environmentalist and scholar Edward Valandra: that fighting colonialism is 'fundamentally a culture or paradigm war.' This means that our goals for an anti-colonial future, a future of caretaking, are only possible if there is a shift in culture."

- Source: Ghosh, Amitav. "The Nutmeg's Curse." In *The Nutmeg's Curse*. University of Chicago Press, 2021.

"One simple, nonviolent way to promote caretaker culture is through discussion."

- Source: Hayhoe, Katharine. *The Most Important Thing You Can Do to Fight Climate Change: Talk about It*, 2019. <https://www.youtube.com/watch?v=-BvcToPZCLI>.

"Having read several definitions of what it means to be Indigenous, I have come to summarize it as this: Indigenous means having an ancestral connection to the land prior to colonization."

- Sources: Cambridge Dictionary. "Indigenous," May 10, 2023. <https://dictionary.cambridge.org/us/dictionary/english/indigenous>.; "Indigenous Definition & Meaning - Merriam-Webster," April 30, 2023. <https://www.merriam-webster.com/dictionary/indigenous>.; Masaquiza, Mirian. "Who Are Indigenous Peoples?" United Nations, n.d. https://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf.

"In capitalism, the land is objectified to have only material, monetary value."

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"When reciprocal relationships are created, there is an added level of connection. The trading of resources becomes the trading of gifts. Robin Wall Kimmerer, in *Braiding Sweetgrass* calls this a gift economy. What makes gift economies unique is that when material goods are exchanged, social bonds are created"

- Source: Kimmerer, Robin Wall. *Braiding Sweetgrass*. Milkweed Editions, 2015.

"The Blackfeet, the Kula, the Haudenosaunee, the Klallam, and the Inca all live in gift economies. Even in colonized societies, a gift economy is seen in many forms, such as food pantries, blood and organ donations, volunteering, and potlucks."

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Chapter 10

"The United Nations said that Line 3 violated human rights"

- Source: "United Nations Issues Letter Regarding Violations of Anishinaabe Human Rights from Enbridge Line 3, Requests Measures from the United States — Stop Line 3," September 2, 2021. <https://www.stopline3.org/news/unitednations.>

"Ecological restoration is the field of study that deals with the improvement of degraded ecosystems."

- Source: Society for Ecological Restoration. "Restoration Resource Center What Is Ecological Restoration?," 2023. <https://www.ser-rrc.org/what-is-ecological-restoration/>.

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- Source: Nelson, Cara. Personal communication, November 2022.

"In much of the American West, fires have been suppressed... a method of reforestation in the face of a shrinking Amazon."

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"On Mauna Kea, Kanaka Maoli (native Hawaiians) have resisted efforts to build a Thirty Meter Telescope... land back efforts are paramount to both ecological restoration and caretaker revolutions."

- Sources: Bookchin, Debbie, and Internationalist Commune of Rojava. *Make Rojava Green Again*, 2018. <https://theanarchistlibrary.org/library/internationalist-commune-make-rojava-green-again.>; Ghosh, Amitav. "The Nutmeg's Curse." In *The Nutmeg's Curse*. University of Chicago Press, 2021; Hammy, Cihad, and Thomas Jeffrey Miley. "Lessons From Rojava for the Paradigm of Social Ecology." *Frontiers in Political Science* 3 (January 10, 2022). <https://doi.org/10.3389/fpos.2021.815338>; Hernández, Carol, Hugo Perales, and Daniel Jaffee. "'Without Food There Is No Resistance': The Impact of the Zapatista Conflict on Agrobiodiversity and Seed Sovereignty in Chiapas, Mexico." *Geoforum* 128 (January 1, 2022): 236–50. <https://doi.org/10.1016/j.geoforum.2020.08.016>; Kuchta, David. "What Is Guerrilla Gardening? Definition, History, and Examples." *Treehugger*, April 4, 2022. <https://www.treehugger.com/what-is-guerrilla-gardening-5196129>; Larsen, Ksrin. "Fairy Creek Protest on Vancouver Island Now

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