THE 4RS: THE FLINT WATER CRISIS, GOVERNMENT, COMMUNITY, AND SCIENCE

By

Kenlea Pebbles

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

Rhetoric and Writing – Doctor of Philosophy

2023

ABSTRACT

The Flint Water Crisis was an avoidable, man-made disaster that will affect generations of Flint residents and their descendants. By using the Indigenous teachings, framework, methodology, and heuristic of the 4Rs (more specifically—respect, relationship, responsibility, and reciprocity) to analyze the rhetorics of the Crisis, a path forward to a more 'just' future (Henry, 2022) is possible. Like other decolonizing methodologies (Marshall, 2020; Smith, 1999; Wilson, 2008; Walter and Anderson, 2016), there is a commonality in how they are understood and applied—and the 4Rs are at the center of this understanding. And, this dissertation focuses on the development of the 4Rs as a decolonizing methodology and heuristic for diverse communities.

This dissertation is dedicated to my amazing partner and best friend, Mike, and our kids: may you always do the things that challenge and teach you more about the world.

ACKNOWLEDGEMENTS

This acknowledgement highlights that none of us stand alone and how important the collaborative nature of community is in academic research. It takes individuals, institutions, and organizations working together to create work that benefits us all. All have played a role in the creation, support, and completion of this published work. My thanks to my community at all levels and layers. May we always work together for positive outcomes.

TABLE OF CONTENTS

CHAPTER 1:

INTRODUCTION

Two Institutional Land Acknowledgements of Flint:

Land Acknowledgement: University of Michigan—Flint
We would like to acknowledge that the land we are meeting on today is the ancestral, traditional, and contemporary homeland of many Indigenous nations, most recently the Anishinabek (including Potawatomi, Chippewa/Ojibwe, and Odawa) tribal nations.

We acknowledge the painful history of genocide, forced relocation, and removal of many from this territory, and we honor and respect the many Indigenous people, including those of the Three Fires Alliance who are still connected to this land on which we gather.

Extended Land Acknowledgement: Michigan State University, including the Flint Campus
We acknowledge that Michigan State University occupies the ancestral, traditional, and contemporary Lands of the Anishinaabeg – the Three Fires Confederacy of Ojibwe, Odawa, and Potawatomi peoples. The University resides on Land ceded in the 1819 Treaty of Saginaw. We recognize that settler and Indigenous signatories understood the terms of the treaties in starkly different terms. According to a map within the University archive, Anishinaabeg maintained an 'Indian Encampment' south of the Red Cedar River when classes were first held at the University (then known as Michigan Agricultural College) on May 13, 1857. As one of the first Land Grant colleges, Michigan State University is a beneficiary of Land allotted through the passing of the Morrill Act in 1862. The University finds pride in calling itself 'The Nation's Pioneer Land Grant College,' a term we find highly problematic and recommend that it no

longer be used. The Morrill Act, which enabled the Land Grant system, was passed in the same year as both the Homestead Act–granting 160 acres to individual settlers who 'improved' and farmed land in the West–and the largest mass hanging in the history of the United States, the state-sanctioned murder of thirty-eight Dakota. We understand that there is an indelible relationship between the creation of Land Grant institutions, the simultaneous and ongoing expropriation of Indigenous Lands, and the governmentally-coordinated genocide against Indigenous peoples. By recognizing the ways that settler-colonial institutions benefit from these interconnected histories, we work to hold the University accountable.

In American Indian and Indigenous Studies, we recognize, support, and advocate for the sovereignty of Michigan's twelve federally-recognized Indian nations (Bay Mills Indian Community, Grand Traverse Band of Ottawa and Chippewa Indians, Hannahville Indian Community, Keweenaw Bay Indian Community, Lac Vieux Desert Band of Lake Superior Chippewa Indians, Little River Band of Ottawa Indians, Little Traverse Bay Bands of Odawa Indians, Match-e-be-nash-she-wish Band of Pottawatomi Indians, Nottawaseppi Huron Band of the Potawatomi, Pokagon Band of Potawatomi Indians, Saginaw Chippewa Indian Tribe, and Sault Ste. Marie Tribe of Chippewa Indians), as well as other Indigenous people and historic tribes in Michigan (Burt Lake Band of Ottawa and Chippewa Indians, Grand River Bands of Ottawa Indians, Mackinac Band of Chippewa and Ottawa Indians, and Swan Creek Black River Confederated Ojibwa Tribes), across Turtle Island, and throughout the Fourth World.
We acknowledge the real ways that the State of Michigan, Michigan State University, and residents of this Land have benefitted from the forced and systematic removal of Anishinaabeg and other Indigenous peoples from Michigan, particularly during the Indian Removal period of

the nineteenth century. We affirm and acknowledge the Burt Lake Band, who were literally

burned from their houses in 1900. We also acknowledge the Métis community who were forced

from their community on Bootaaganini-minis (Drummond Island), when the border was drawn

between the US and Canada. Likewise, we recognize that parts of what is now Michigan includes

Land within the traditional Homelands of the Miami, Meskwaki, Sauk, Kickapoo, Menominee,

and other Indigenous nations.

We collectively understand that offering Land Acknowledgements or Land Recognitions do not

absolve settler-colonial privilege or diminish colonial structures of violence, at either the

individual or institutional level. We recognize that Land Acknowledgements must be preceded

and followed with ongoing and unwavering commitments to American Indian and Indigenous

communities. In AIIS, we push Michigan State University to recruit, retain, and support

American Indian and Indigenous students, faculty, and staff. Moreover, we affirm that Michigan

State University must support Indigenous communities and nations in Michigan, as well as

throughout Turtle Island, and across the Fourth World. We recognize, support, and advocate for

the sovereignty of Michigan's twelve federally-recognized Indian nations, for historic Indigenous

communities in Michigan, for Indigenous individuals and communities who live here now, and

for those who were forcibly removed from their Homelands. We affirm Indigenous sovereignty

and hold Michigan State University accountable to the needs of American Indian and Indigenous

peoples.

Introduction and how to read the dissertation:

     This dissertation will focus on a point where institutional narratives and community

narratives meet and uses the Native American theory and practice of the 4Rs (more specifically:

respect, relationship, responsibility, and reciprocity) to analyze where these narratives meet and

diverge. It will look at how the 4Rs[1], in application to the Flint Water Crisis, can be used as a

decolonial methodology and heuristic of the Crisis. The reasoning for this is because the Flint

Water Crisis is well known as a failure of communication and as an act of disenfranchisement of

an entire city and the people who work and live there--creating a water crisis in a state where

there is an abundance of fresh, potable water. Exploring failures, solutions, and ways of solving

problems can make it easier to find, resolve, and even prevent future occurrences that are similar

in origin and potential outcome. (For example, the city of Benton Harbor in Michigan and its

people learned how to raise their voices and express their concerns as soon as they encountered

similar water issues as we saw at the start of the Flint Water Crisis and the State—learning from

their slow response time in Flint—responded immediately to address the issues. However, it is

important to note, the State of Michigan learned was to address the issue after it started—not

before—and after the city officials—who were powerless due to the state-appointed emergency

manager--brought it to the State's attention.) This dissertation will analyze and explore these

failures by using the 4Rs as a heuristic to explore how to resolve and avoid failures like the Flint

Water Crisis in the future.

Then, this dissertation will use the 4Rs to analyze events that played a role in the creation

of the Flint Water Crisis as well as narrative accounts of the actors. A rhetorical analysis of the

creation of and the communication of this man-made environmental health catastrophe, the key

---

[1] It is important to note that the 4Rs can be singular (i.e. in reference to the teaching, the framework,
methodology, and heuristic use in this dissertation) or plural (i.e. as it is used in the prior sentence when it
refers to the four words chosen for this particular dissertation: respect, relationship, responsibility, and
reciprocity). As a result, the verb tense will change depending on whether the 4Rs is referring to singular
or plural concepts in this dissertation. Many of the sources used in this dissertation that specifically refer
to the 4Rs do the same. As a result, the context and verbs used will be important in conveying whether the
4Rs in any part of this dissertation is referring to a specific concept or the words that relay the meaning of
the 4Rs.

players are: first, the government on various levels within the state (both legal and policy construction and how these played a role in the crisis); second, researchers in science (more specifically in healthcare and urban design and infrastructure) outside of government; and third, the public, citizens, and community are all players within this Crisis. I hope the work of this dissertation will help analyze the roles all of these players had in the Crisis, and the roles some will have in the decades to come. While community members paid the highest cost in this crisis, there are costs to the government that it did not predict. There is no way to monetize how severe these costs will be in the long run—to human life and health that healthcare providers and community researchers will be working with for the next three or more generations. The cost of trust and the damage to the community trust and relationship that the government caused showed the injustice and inequity in our nation's system that was impossible to deny. As a result, the damage done will take time and work to repair, if we choose to do so as a society.

This paper is a qualitative analysis that includes a winding path of theoretical constellating, and an analysis that–may at times–seem to be a network of paths. But, these paths all merge and are connected to the 4Rs in theory and practice. You, dear reader, will find that this dissertation does not follow the typical Western structure that you expect in a dissertation, instead, you may find it to be more "In the typical circular style common to many Indigenous peoples…" as Wilson (2008) wrote of his work in the "Foreword and Conclusion" in *Research is Ceremony: Indigenous Research Methods* (a work which was originally his dissertation). While I try to provide the information of this dissertation in a way that those of you who are not familiar with Indigenous work may need to navigate, I cannot foresee all of your questions— only anticipate them. So, if you find yourself wondering about something in anticipation of an answer because the organization of this dissertation is not what you expected, I ask that you hold

your question and trust in the process of this writing—that it will be answered. In short–even when there are discussions of topics (like land, community, public, visual rhetorics, voyeurism, othering, and so fourth) as we move through the dissertation, they do connect to the 4Rs. So, I ask of you, dear reader, to enter this dissertation with an open heart and mind and to trust that we will get there—together—to the conclusion. And, we may find ourselves, at the conclusion, wanting to move forward with an open heart and mind.

What to expect:
    After a thorough explanation and analysis of the 4Rs and how they work in Chapters 2 and 4, as well as a literature review in Chapter 3. We will move to an rhetorical analysis in Chapter 5. In the process of getting there, paper will analyze the triangulation of communications from the three different players within this crisis mentioned in the previous paragraph (government, healthcare outside of government, community—and occasional highlights of particular subcommunities within the city of Flint) by using the 4Rs. Also, it will use demographic information of the city of Flint using the different subcommunities and demographic breakdown as determined by the Census measurements and methods for the city of Flint, as well as narrative stories of the city of Flint. The narratives and the analysis of this project will focus on the interaction of the governmental communication and policies (collected from the official communications on the website for the City of Flint), community, and healthcare outside of government (i.e. University of Michigan—Flint faculty member—Dr. Marty Kauffman-- and students in the mapping of the city pipelines; Michigan State University and Hurley Children's Hospital faculty member, Dr. Mona Hanna-Attisha's work and publication; and so forth).

    I started this paper with two land acknowledgements, one from University of Michigan-Flint (UM-F) and one Michigan State University (MSU). These are two of the five institutions of

higher education located in the city of Flint and we know that both of these institutions have

been connected to and affiliated with responses to the Water Crisis in the previous paragraph.

Additionally, both of these institutions are a part of my educational constellation. While the

University of Michigan-Flint does not specify its actions to clarify that it is not an empty

acknowledgement, the University does have close ties to the Indigenous community, including

the Saginaw Chippewa Indian Tribe whose ceded this land. While both MSU and UM-F have

land acknowledgements, I hope that my dissertation, learning, and knowledges are a part of the

act of filling these acknowledgement obligations to provide meaning and, in a small way, give

back.

It is my hope this study of the Flint Water Crisis provides some insight of the scope of the

short- and long-term effects of the crisis, the exposure of the causes and how a humane, holistic,

thoughtful, interdependent response that centers relationship, respect, responsibility, and

reciprocity can start to provide healing and develop trust in a community that will feel the effects

of this crisis for generations.

There is precedence for my argument that the 4Rs should be used in diverse communities,

and this will be developed in Chapter 2 and 4 in more detail. However, until then, it is not

unusual for decolonizing methodologies to be specifically applied to diverse communities. While

the 4Rs is a Native American methodology that is designed for implementation and practice for

Native communities, initially researched in higher education, it is also used inclusively. The 4Rs

is a grounded Native methodology and is adaptive to fit the community it serves, as seen in

Indigenous qualitative and quantitative methodologies. In other words, community is at the heart

of many Indigenous frameworks and methodologies: including the overarching connections

between qualitative and quantitative. While this is not the focus of this dissertation, it is one of

the recommendations in the conclusion—to look at how these frameworks may overlap because the 4Rs is so integral to the methodological basis of research in Indigenous process. It is used in multiple applications.

The 4Rs are not the only Indigenous methodology to be used inclusively (Two-eyed Seeing[2] and Rights of Nature are examples of this native practice and methodology that is inclusive in both design and in application). While this dissertation is focused on the 4Rs, it is not alone in inclusion of non-Native and non-Indigenous peoples. While some may argue that all Native and Indigenous practice and methodologies should remain only withing these communities, others see the practices and methodologies as inclusive—as we all live on Native and/or Indigenous lands, thus sharing our environments on multiple levels.

The basis of this work is practical and pragmatic. The value of this work is *not* a theoretics construct in a hypothetical situation; this is not a practice of scenarios that is often done in policy studies (Henry, 2022). It is taking what a just transition (as laid out by Henry, 2022) looks like from an Indigenous perspective. Using how the 4Rs work is used in Indigenous and diverse environments and communities and how the framework applies outside communities that are Indigenous majority(as developed and explained to various degrees throughout the other chapters of this dissertation—specifically in Chapters 2 and 4), this dissertation explores the specifics of Flint and the conditions that created and responded to the Flint Water Crisis as a case

---

[2] Two-eyed Seeing is an approach centered on the idea of "learning to see from one eye with the strengths of Indigenous knowledges and ways of knowing, and from the other eye with the strengths of mainstream knowledges and ways of knowing, and to use both these eyes together, for the benefit of all," as envisioned and explained by Elder Dr. Albert Marshall (Reid et al., 2021). This is an inclusive approach, commonly used and practiced by First Nation, Tribal and Métis communities and individuals. It is essential in understanding the complexity of the Great Lakes region and the interconnection of the land within it and how all living things within the environment are connected to each other and the land and water we share.
Two-eyed Seeing will be referred to again in Chapters 5 and 6.

study of how the 4Rs can process and create understanding of what happened, and continues to happen, in Flint. The 4Rs, as a framework, is the backbone of this dissertation. Without understanding what the 4Rs are and what they highlight and show, nothing else will make sense as we look at the environmental rhetoric in application to the Flint Water Crisis.

Part of the reason it is so important to understand the specifics—that may be the same or differ—in a multitude of other communities that are facing similar challenges that are also different because of place and community (i.e. like Michigan cities such as Detroit, Pontiac, Saginaw, and Benton Harbor and cities in other states like Chicago, Pittsburg, Philadelphia, and Jackson), is it makes what may seem to an outsider who has piecemealed information on each of these crises and community-driven responses to governmental management that has failed in protecting them and their health, more concrete. As we will look at Indigenous methodology and practice—it is place specific and community-driven. The 4Rs as an Indigenous methodology and practice is a means to respond to the specific challenges within a place and the communities who live there and using Flint is a way for us to process how the 4Rs apply and can be addressed in a way to move toward a just transition.

In short, it is a real-world case study exploration of how a man-made disaster that used settler colonial, capitalist logics that clearly did not and do not function well—with disastrous, long-lasting, generationally-damaging results. And, this application of the methodology and practice of the 4Rs in this place- and community-specific case study shows us an alternative approach to one that is clearly not working to the level that it is literally alienating, devaluing, decapacitating, dehumanizing, and killing the people who, in the idealized theory of our current democracy, *should* be served and supported by the system that is, far too often, not doing that. What can we do for justice? How can justice be achieved? Clearly, it is not in the system that is

9

currently being used. Complacency with the system as it is will not achieve it. Change must be

made if we want a more just system and a system that actually serves all the people.

The use of the 4Rs, drawing us back to land, back to the common pot[3], and back to

Indigenous peoples—whose land we are on, supplies a very different framework. This suggests a

very different way of approaching Flint and the situations of other communities and cities that

are dealing with environmental crises, that does lead to a just transition. It does lead to an

alternative that is workable, that is doable, that is grown from the community up.

We are not going to see this from the administration down—which is a western, colonial

settler construct that we will see mapped out in Chapter 3. We see it in practice in communities

like Flint. And, we see that in both constructs—the community is literally absent, removed, and

non-existent in these constructs. The value of this dissertation and case study is it shows how the

removal and forced silencing and ignoring of community on the administrative level shows how

disastrous, dangerous, and ineffective these constructs are in service, let alone, justice. What we

are seeing is the current system, as it is, failing. It is failing to extraordinary levels. And, Flint's

strength, unity, resistance, and resiliency stems from a community who would not stop. A

community that would not be silenced. A community that resisted the system that silenced,

removed their ability to have a say in their governance, dehumanized, harmed, and—in specific

instances—killed their own citizens. It is the work of the community of Flint that made the

change that was needed to even declare a state of emergency. It is the community, not the

administration that was forced upon the citizenry of Flint, that fought to be heard and for change.

---

[3] Common pot refers to the Indigenous practice of responsibility for reciprocal relationship and respect
with the world around us. If we take, we must give back. It is a social obligation and cultural framework
that uses the 4Rs in its construction and practice as outlined and discussed by Brooks (2008).

However, in this current structure, this will be an ongoing act of resistance and resiliency until systemic change is made.

It is through this case study—it is made visible how the current systemic structure can change and how it could be done. It is through the Flint Water Crisis we can see a new way forward. We can see this through the stories that were told by the system and those creating the dominant narrative, those that have come forward since the Crisis has become public by voices that were not a part of this dominant narrative, we can see how the breaking of the 4Rs (from completely breaking the connections or creating dysfunctional ones) forces us into complacency that harms all of us.

So, let us look at how we can start viewing the Crisis through the Indigenous methodology and practice of the 4Rs and see how the actual, not theoretical, case study of the Flint Water Crisis helps us to inform policy and practice in a way that will help us move forward toward a more equitable and just future.

A quick summary of the Flint Water Crisis:

Most people in the US have been aware of the Flint Water Crisis on some level or another. However, most people are aware of the general string of events, but not of the details. When many of my friends or I would travel outside of Michigan, for the window of time when the Crisis was declared, we were often met with comments about how horrid the Crisis is or was. These comments are often sad, heartfelt comments made by people who heard about the Crisis on social media, on a talk show, or as a featured piece on the tv, news, or radio. Often, it is met with a comment about how the area they live in has or had a similar issue but not to the level of the Flint Crisis.

April 25, 2014, the temporary plant of Karegnondi Water Authority (KWA) opened and was using water from the Flint River—a river that was considered to be precarious because testing showed it had over 90 chemicals in it from over a century of manufacturing dumping and agricultural runoff. People in the area often referred to it as a 'dead river' that was too dangerous to swim in or eat anything that might be caught in it that would be considered edible. In less than a month, May 2014, some citizens were complaining about the smell and color of their tap water. During the summer of 2014, it became obvious that there was an outbreak of Legionnaires' Disease (a waterborne disease) in the City of Flint; it would continue from 2014 to 2016. By August 2014, E. coli and total coliform bacteria was found in the water. Boil water advisories were given and the KWA increased chlorination levels to treat it. By October 13 of 2014, General Motors stopped using Flint water on the assembly lines because the water was too corrosive with the added chlorine levels and it was damaging the car assembly machines.

If this was not enough warning to the emergency manager and the KWA plant, on January 2nd in 2015, the level of total trihalomethanes (TTHM) found in Flint violated the Safe Drinking Water Act. This occurs when a disinfectant, like chlorine, encounters organic matter in the water—the byproduct of this reaction is TTHM and some of TTHM are possible carcinogens. As a result, the state started buying bottled water for state workers in their offices in Flint. It was not until September 2015 TTHM levels returned to acceptable levels for the Safe Drinking Water Act.

Meantime, in February 2015, the first incident of high lead levels in the tap water in a home occurred. The home of Lee Anne Walter's tested at over 7xs higher than levels allowed by the Environmental Protection Act (EPA); the water collection from her tap was at 107 parts per billion (ppb) and the EPA threshold for lead is 15 ppb. In April 2015, Walter's child was

diagnosed with lead poisoning. A test run by Virginia Tech researchers showed the lead levels from Walter's to be 13,200 ppb over 100 times higher than the State (and it is important to note that water at 5,000 ppb is considered to be toxic waste). During this time, the State of Michigan, Genesee Department of Health, and Michigan Department of Health and Human Services (MDHHS) had boil water advisory information posted in public places—like the Flint Farmers Market. The people of Flint were being told to boil the water (which would soon be lifted and changed as the boiling condensed the lead levels and concentrated the toxins and heavy metals consumed in the boiled water). This was a health alert that was in place due to concerns over the bacterial levels (i.e. Legionnaire's Disease). This meant that many Flint citizens were consuming even more lead than the tap water test levels indicated. Additionally, this health alert caused issues when the State of Emergency over the lead levels in the city water system was eventually announced.

By the last week of April 2015, one year after KWA opened, the Michigan Department of Environmental Quality (MDEQ) acknowledged that KWA did not have a corrosive control treatment in place despite what had already happened in 2014. By July 2015, the ACLU was following what was happening in Flint, the EPA was concerned about lead poisoning in the city, and the MDEQ had released a statement that there was no concern about lead in the city's water supply. By August 20 in 2015, the MDEQ was proven to have dropped two measurements from their selected water sampling locations. The removal of these two locations allowed them to meet the required lead levels for the federal lead levels.

By September 2015, Virginia Teach researchers were running water quality tests across the city and identifying areas where the lead levels were beyond the levels where the water being piped into homes would be considered toxic waste. They identified hundreds of homes in their

sampled homes and business across multiple neighborhoods in the city where the lead levels exceeded EPA levels to varying degrees, contradicting the MDEQ data and announcements.

In September 2015, Dr. Hanna-Attisha, a pediatrician at Hurley Hospital, collected data on the sudden rise of lead poisoning in her young patients and wrote a study based on this alarming increase. She released this study without peer-review because of the gravity of the results. (It is important to acknowledge that the risk she took by releasing this study and information prior to peer-review could have damaged her career if it was incorrect. However, she felt that the findings and ramifications were too serious to wait for what can be a lengthy process.) Based on her findings, the number of children under the age of 5 with lead poisoning in the city had nearly doubled in a year. A spokesperson for the MDHHS said this change in number was due to seasonal changes, not the change in water supply or the lack of a corrosion control plan in the water supply at KWA. That same month, Flint issues a lead advisory for the water and the Governor's office, MDEQ, and MDHHS are stated in a governmental report to be concerned for the health of children and that they are being extremely cautious to protect the youngest citizens of Flint with this advisory.

Within a week, the state is dispersing water filters to the homes and businesses in the city of Flint. And, by the middle of October 2015, the city switches back to the Detroit water supply they were using before KWA was opened and used to treat Flint's water supply. The MDEQ director released a statement that the federal guidelines on corrosion control plans which were confusing, and this is the reason KWA says it did not have a corrosion control plan in place.

In December 2015, the city of Flint was released from emergency manager control and the Mayor of Flint issued a State of Emergency. Later that month, the state regulation directors resigned. And, in January 2016, Governor Snyder of Michigan and President Obama also

declared a State of Emergency for the water and people in the City of Flint. This meant that it was a State of Emergency on a city and local level, as well as state and federal levels now. The EPA declares the drinking water unsafe in January and April—two years after KWA started supplying Flint's drinking water.

At this time, the city had to go through a transfer of power from the emergency manager appointed by Governor Snyder to the elected city officials. During this power shift, state and city communications informed Flint citizens and businesses to stop boiling the tap water (and subsequently condensing the lead levels in it) to stop drinking the water. However, this proved to be a task with non-English speakers and other citizens in the city with limited access to news and information—not to mention the economic barriers that presented themselves to access affordable clean water.

It is in 2016 that the legal cases against those involved started. Since then, no one has been found guilty and some cases are still ongoing at the time of the publication of this dissertation. The most common part of the series of events in the news coverage is that Flint switched its water source from Detroit water (via a pipeline from Detroit to Flint) to a local one. Sometimes people are aware that this decision was made for 'financial reasons' or that there was an emergency manager who made this decision. However, most people do not know more than that. They are often very confused why it took so long for the Crisis to be declared or they think the Crisis was resolved as soon as new pipes were put in within the year that followed.

However, this means that they were unaware that it took over a year for the Crisis to be declared because there were no elected officials placed in office to declare it. When the state-appointed emergency managers were in power, the elected officials' positions were defunct—essentially removing a layer of local government—and this made it impossible for there to be an

official declaration of a state of emergency. Likewise, many people who are or were aware of the Crisis are not aware that the water lines were unmapped at the official start of the Crisis and this caused delays. And, when these lines were mapped by the University of Michigan-Flint (UM-F) team including faculty member, Dr. Marty Kaufmann, and a team of other academics and UM-Flint students--the hubs and not the pipelines themselves were replaced. The completion of this work took place from 2016 to August 2023—the time of the publication of this dissertation. While the 2020 deadline was missed, as was the one from earlier in 2023—but it appears that the third deadline for August 2023 was met.

So, while many people think the Crisis is over, the Crisis will not be over for a century or longer. Between the lifespans of the children raised and born during the Crisis to the intergeneration damage of lead poisoning. This crisis will last for generations. In short, the cost of this Crisis is long reaching. Likewise, the ability to act and make a significant difference in peoples' lives and in the community of Flint is also very possible.

My positionality:

Much like Kimmerer (2013) and Hernandez (2022), before we move into this dissertation, I want to explain my own positionality. I have two stories of positionality that I want to establish before I move further into this dissertation. The first one is my positionality to the city of Flint and the communities that are there. My second one is related to the communities that are in Flint—including the Saginaw Chippewa Tribe—but is about my identity and positionality of using an Indigenous methodology as the basis of clear path forward to slow and failed response to a real-life case study of the Flint Water Crisis.

My positionality is in relation to Flint and how I moved there and came to consider it one of my real homes. I am a child of a white mother who descends from the white colonizers who

16

came to America prior to the creation of the United States of America and German immigrants who came over and settled in Southern Illinois. I am also the child of a father who is Irish, German, Cherokee, and Choctaw and who looked part white and part Native. My father, after the age of 3, was raised by as single mother and her family in Southern Illinois after his father walked on. He was raised to be white, and that is what he wanted for my brother and I, too.

My parents, who grew up working poor, were first-generation college students until my older brother's teens. My brother and I were not first-generation college students, we were generation 1.5.

So, after many moves across a few states, my parents moved to Detroit, Michigan on my 4th birthday. I have moved many times in my life, nearly 30 times now; but, since that move, Michigan is my home because it is where my (some of my) family, friends, and communities are.

My brother and I attended schools in Detroit and Madison Heights. My parents lived in various locations along the I-75 corridor, slowly moving further and further out of Detroit. The I-75 corridor is one of the transportation spokes connecting Detroit to other industrial cities (specifically, Pontiac, Flint, and Saginaw) that will be acknowledged throughout this dissertation.

I was a blonde in my early years and started to brown and darken as I entered elementary school. So, while there was no question I was related to my father when we were out, I was often treated as white when I was with my mother. Growing up in areas that focused on the difference between black and white, I knew that I was treated differently when I was with my father to a small degree by some people, and more so when we were with our African-American friends or family members. However, most of the time then and now, I am seen as a white female.

By the time I was in third grade, I attended elementary school in Ferndale in the 1970s during the busing era—as a way to push against de facto segregation. Mrs. W (who was African-

American as we integrated the teaching faculty and administration as well as the children in the school system) recognized my father was Native and included a book by Basil Johnston in our classroom curriculum. After we moved to Clarkston for my 4th grade year. It was a small, sleepy town that was just beginning to become a bedroom community for the main cities along the I-75 corridor. My teacher, Mrs. B, in the extremely white Clarkston Elementary School that I attended, made a point of identifying my father—very openly—as Native. She ended up including the same book by Basil Johnston that Mrs. W had done the year before, but she made a point of highlighting my mixed-race identity in class. While their attempts of inclusion did not take into account that there are differences between Indigenous nations, there was also a difference between of how Mrs. W and Mrs. B approached the inclusion of Basil Johnston in our class curriculum and how they approached my identity.

Growing up in the extremely white community of Clarkston, there were a handful of us who saw each other for who we were—students of color in a white institution. A couple of us passed as white, most of us did not. While I was growing up, some kids would insist that my father was my stepfather when he attended school functions. When I brought this up over dinner one night after a band concert one of kids insisted my father was my stepfather—as my classmate quickly identified my father was not fully white and I looked white—my father stopped coming to my school events. It was a way to ensure that I was seen as white by my classmates who did not know otherwise.

After I graduated from high school, I commuted to college at the University of Michigan—Flint. During this time. I put myself through college. My parents were divorcing when I started college; this is why I had to pay my own way through. During my first semester in college, due to a violent divorce, I had to move out of the house and move in with a friend who I

met in one of my classes during the first month of college. There were four of us living in a one

bedroom. I shared the two papasan chairs in the living room with another girl who ended up

crashing in the apartment because her boyfriend beat her up and put out cigarettes on her arm.

After my parents' divorce, I moved back into the home, which my mother now had. I continued

commuting to college in Flint while my mother commuted each week to work in the Dallas-Fort

Worth area.

Over the years that followed, I moved back to Flint, started my own family, followed my

then-husband overseas to Japan and Germany with only four classes left for both of my degrees.

A few years later, I returned to Flint with two children and became a single parent. I returned to

finish my degrees at University of Michigan—Flint. After living in Flint for a decade—not

including the years I lived overseas, I moved to Mount Pleasant, Michigan for a job.

My children who were so familiar with Flint, their weekly classes at the Flint Institute of

the Arts (FIA) and dance and music classes at the Flint School of Music and Dance, were not

happy about leaving Flint and the Flint area. In particular, they missed the regular trips to the

Flint Farmer's Market and Steady Eddie's after art classes on Saturdays. They missed out weekly

roams the halls of the FIA, and attending the science show performances I gave during my

internship at the Sloan Museum. They missed the community of people they had become

familiar with at the UM-F Campus, and they missed seeing the people I worked with and came to

know after years there. From spending hours at the University computer lab as I worked and did

my homework there, to having picnic meals on the lawns of the courtyard and friendly lawn and

park during my work breaks or with our friends, or to occasionally coming with me to some of

the elementary school events for the America Reads Program I helped coordinate for the

University—these were the things they were used to doing with me after school were not a part

of their community activities anymore. After we moved to Mount Pleasant, and my kids left the city we had called home.

While my children were welcomed and supported by the school programs supported by the Saginaw Chippewa Indian Tribe, the adjustment for them was difficult. We spend most of our weekends for the next few years driving back to Flint to visit with friends and enjoy the activities that brought them happiness and comfort.

Our connection to Flint was and is still strong.

When the Crisis happened, I was shocked at how many people in Mount Pleasant were not aware of the water quality issues that were not declared an emergency—as it could not be declared an emergency as long as there was an emergency manager in charge of the city instead of elected officials. The lack of understanding and awareness of the issue that had been going on for almost a year in the city where I now lived, only 78 miles away from Flint, was staggering.

Not only was the level of understanding of the Crisis incomplete, but it was also a complete surprise to some people. Even as this surprise was closely related to the Nestle Corporation's agreement with Michigan[4] to double the amount of water pumped out of Mount Pleasant's aquifer for a mere $200 a year, increasing their outtake from 130 to 210 million gallons a year. So, while Nestle bottled 4.8 million bottles of water a day while paying pennies to the state for the water they are selling at a massive markup; Nestle was paying substantially less in a day than Flint families paid per month for the water it are taking and selling. In turn, Nestle sold their water rights to Blue Titan in 2022. Early in the Flint Water Crisis, Nestle did provide

---

[4] This section is based on a variety of news that emerged at the same time as the Flint Water Crisis, pulling from sources like Glenzain, 2017; Winter, 2017; Zorthian, 2017; Taylor, 2016; Graham, 2022

many bottles of Ice Mountain water to the residents of Flint as it was pumping out water from

just miles away and it was making massive profits on the sale of water in the state in more way

than one. As Benevento (a former UN diplomat) writes in an Al Jazeera piece:

> While Flint was experiencing the worst point in its water crisis, only two hours away in
>
> Evart – small town America, with clean streams and an untainted aquifer – the corporate
>
> multinational, Nestle, was pumping the equivalent of 100,000 times an average Michigan
>
> resident's water use into plastic bottles for sale at $1 a bottle across the American
>
> Midwest.
>
> In return, Nestle paid the state of Michigan $200 annually – an amount equal to
>
> the quaterly [sic] water bill of an average Flint resident, who is charged at one of the
>
> highest rates for tap water in the US. (Benevento, 2018)

This connection to austerity and profiteering will make more sense as we move into Chapter 3

through 5. While this is not the focus of this dissertation, it is related to the systemic structure

that the State of Michigan was supporting and enforcing at the cost of its residents, as well as

showing the community voices of resistance in addition to the voices of compliance and

repetition of the institutional and governmental voices that were in power at the time.

As I mentioned before, I have moved almost 30 times in my lifetime. During this time, I

lived in Flint or just outside of Flint, for almost a decade. In turn, I have lived in Mount Pleasant

for over 20 years. It is not just the water that connects Flint and Mount Pleasant, they are two of

the places I have lived the longest and have strong connections to the places and communities

over the years. But, this is not the only connection between these two cities. Part of the city of

Mount Pleasant is on the reservation of the Saginaw Chippewa Indian Tribe. Part of the

homeland of the Saginaw Chippewa Tribe includes Flint. The treaties of 1807 and 1819 outline

the removal of the Saginaw Chippewa from their Native lands that are now called Flint and the

Flint River in an agreement between nations with the U.S. government (Saginaw Chippewa

Indian Tribe).

Flint is Native land.

The land I am living on is Native land.

I live on Native land that is not my Native land. I live on this land as a displaced

Cherokee and Choctaw descendant. My ancestors were removed from our lands. I live on

treatied land that is not the homeland of my peoples. It is with an open mind that I learn about

this land from the people whose land it is. And, as such, I need to enter this land with an open

heart for it is a gift for me to live here and learn about this land. It is an honor to live here and I

accept this gift comes with obligation. The obligation to respect and honor this gift and thank the

people whose land this is for sharing it with me and my family.

As I lead with an open heart and mind into this work, I honor the land where I live and

the people who share their land with me and mine.

The Flint Water Crisis:

The discussion and analysis of the Water Crisis in Flint will seem familiar to many of my

readers. We have seen health issues (the COVID pandemic, long COVID and COVID-related

health issues, and deaths) emerge from the pandemic. Likewise, we have seen similar issues of

climate change denial by governmental leaders and a lack of response being challenged on a

global scale.

We are all living, to one extent or another, in a time of calls for action, inaction of the

government, and a pushback and denial of conditions. We see and hear denial that there is a

crisis first. Then, this denial is paired with or followed by ineffective decision making and weak

measures taken to slow crises. We are seeing global leaders making these soft decisions because

they are worried about self-preservation of their own careers and perceived power, as they and

the rest of the globe know that these minimal actions mean that it will negatively affect our

futures.

There is no shortage of crises. On multiple levels, we are living in a time of crises.

It is exhausting.

It affects our health, individually and collectively, directly and/or indirectly.

It erodes trust in our governments and creates further instability.

In short, we are all living in layers of crises at this time and the sense of frustration and

loss that comes with them. It is because of these layers and the intertwined nature of these crises

that is important to acknowledge: first, that these crises are happening; second, that they are not

affecting all of us the same way; third, that they are layered upon each other; and, fourth, that we

understand how the rhetorics and responses around them can be structured and analyzed.

We find ourselves in a situation where—when I drafted my proposal for this dissertation–

we have shown our struggles to be able to trust a literal neighbor to a global neighbor with our

health and wellbeing. We are struggling with this on a local to a global level. Flint shows us one

scenario of how this can play out on local, regional, state, and national levels.

On the same day as I started drafting my dissertation, the City of Flint (and two other

defendants) settled with the state for a total of $641.2 million. Now, these settlements are being

contested and I (and many others) expect that no one of consequence in the Crisis, like former

Governor Snyder, is expected to be called on in trial; and, if he ever does get taken to court for

his role in the Crisis, he is expected to plead the Fifth all the way through his questioning. In

short, the people accountable for this horrific, globally-recognized failure of US governance will

never stand trial for what they have done to the citizens of Flint and their descendants. The

surreal situation in which we find ourselves in the United States, is the same sense of public horror that merged into cycles of anger, mistrust, frustration, alienation, and exhaustion that the citizens of Flint are still happening to this very day.

This is a sensation that many of us can relate to in our own daily experiences. We are often working and living in a society that is dealing with crises (such as racism, classism, sexism, and so forth) in our daily lives. It is difficult to keep up with all of it. As a result, we are often unaware of a pending crisis until it becomes a state of crisis, living our lives until we, on a personal level, are affected. Examples of this are the Pandemic, and the Climate Crisis; they began even before the awareness of the issue emerged in the general populace. And, none of these were seen as a crisis even when the general populace was first aware—only after there was no or minimal response by governance and time was given for the crisis to grow. The Flint Water Crisis, in many ways was an alarm for the United States, as multiple cities (many of them Black-majority cities) have had very similar issues as Flint: Benton Harbor, Detroit, Jacksonville, Chicago, Pittsburgh, Philadelphia, and so on. While some of these have very parallel details, there is always some variation in the breakdown of infrastructure, maintenance, communication, and response by the governmental systems, despite the fact that these instances should not be surprising given the frequency of similar occurrences elsewhere in the nation.

There are two ways time is given by governmental reaction: denial and delay. Denial is a way of holding off the disaster until it becomes too large to contain or not acknowledge anymore. Delay is when the response is not immediate or quick because there is: a lack of organization or systemic structure to respond, there are changes in protocol and procedure, there is too much to respond to as we move from one disaster to another, and so forth.

24

Instead of allowing ourselves to be consumed by disaster after disaster, we need to think of a way to address these issues in a more strategic way. We need to think of the commonalities and how to address them in a way that resolves multiple common issues instead of tackling them one at a time. This is why looking at a recent crisis, acknowledging common issues within the crisis, and looking at how these were or were not resolved and how well they were resolved is important for creating more strategic approaches.

However difficult it may be to even define when consciousness of a crisis occurs, as this awareness can happen days, months, or even years apart in different people and in ideological thought, there is no denying these crises started earlier than the institutional or public awareness registered them. So, consciousness is not what we need to respond to, we need to respond to common underlying issues that connect the individual crises to the sequences of crises as we are seeing more and more NGO's, non-profits, and governmental organizations on all levels starting to do: i.e. Flint Cares (an organization of dozens of non-profits and NGOs such as: American Red Cross, the AARP Foundation, St. Paul's Episcopal Church, Greater Flint Health Coalition, Hurley Medical Center, and so forth), Flint Rising, the Charles Stewart Mott Foundation, Bottles for the Babies, Clean Water Campaign, FlintNOW Foundation, the UN, NIH, and CDC.

For this reason, my dissertation will focus on the Flint Water Crisis. The Water Crisis in Flint encapsulates many of the factors we are seeing on this broader scale: environmental racism and degradation, challenges to democracy, privatization of basic human rights (as outlined in the UN human rights declaration) and services, disaster capitalism, the unsustainability of capitalism, the interconnection and inseparability of our wellbeing to our environment and each other, to name a few.

Our awareness of a crisis is often misleading. It starts much earlier than the declaration of an emergency. It is a quiet progress and process that culminates in the crisis when precautions and measures are not taken, from cost-cutting measures to reduce the cost of clean, potable water to steps that cost the people of Flint their health for generations to come. In turn, will cost the local government hundreds of millions to return to their original potable water source to the disregard of pandemic preparation and community supplies and goods that are needed to the political manipulation of the health of a national and global population--leaving financial and physical costs for this lack of thought and preparation in the false sense of frugality. It is in this silence before the eruption that a crisis starts. So, how can we prevent a crisis from happening in the first place or minimize the scale of the crisis?

The answer may be in the relationship between the community and the government. Given the crisis was so severe because of the string of multiple emergency managers placed by republican Governors Engler and Snyder, which nullified the power of the elected officials of the City of Flint for durations from 2002 to 2018 (when the state officially gave the elected officials and the city control of its own finances again). During this time, the government of the City of Flint was vacillating between governance systems in a rotating door of governance and financial processes and systems. Even in this disarray and inconsistent structure, the community of Flint– which has shown resilience and strength in its ability to organize and collaborate due to decades of community partnerships and social networking structures (just like many of its formerly strong, unionized communities in the rust belt of the US). The community of Flint, the Flint public, have long had to fill in the institutional gaps for the citizens of the city through union negotiations and strikes over the previous century. The non-profit services and networks there

are still strong, as strong as the understanding of social obligation is among many of the residents in the city.

Many times, the news treats crises as unrelated events. For example, extreme flooding in various communities is presented as isolated incidents that are not related to the Climate Emergency. Likewise, the cities like Flint or Benton Harbor are treated like unrelated incidents of infrastructure failure, while not addressing the harm and damage done to the local communities, finances, infrastructure, and local institutions by decades of emergency managers replacing local elected officials and the removal of community voices in their own governance. These events are not unrelated, they are connected and often are influenced by common issues that contribute to these crises.

The Flint citizenry and those who were connected to the communities of Flint were aware of long before there was even a way to have it recognized by governing officials so the response could be started or news coverage and a public awareness could be achieved. It started with community and citizens long before there was any broader public awareness. Similarly, the crisis started and was recognized by the community and citizenry long before it was officially 'identified' by government officials and organizations. In fact, it was denied by emergency managers and governmental leaders long before locally elected officials were re-established to give voice and start the process of declaring a 'state of emergency.' In short, when the crisis is actually identified depends on who identifies it and acknowledges it exists. It was affected by both denial and delay. It is related to *power*, who has it and who does not, and the *systemic structure* that gives and denies power-based construction and design. In the case of Flint, it took too long, did not heed the warnings of community members, and crushed a broken faith in democracy.

In the case of the Flint Water Crisis, there were valid experiences of crisis. The voices of those in crisis had no local elected officials who could do anything to change the trajectory of the crisis, leaving the community in a sustained crisis. The emergency manager at the time made it clear he did not serve the citizens of Flint, leaving the citizens with no governmental voice. As a result, they had to rely on their own voices to start creating a broader public awareness of the issue in those who would *listen* and *elevate* their lived experiences in a state of crisis to apply pressure for the changes they needed to get elected officials to start the process of a declaration of a state of emergency to initiate the response their community needed. In this case, there was a distinct conflict of interest in politics, declaration of an avoidable crisis, and the effects of this manmade, avoidable crisis on generations of the people of Flint and their descendants.

The effects of the Flint Water Crisis will not be short-lived. The physical repercussions of lead poisoning (not to mention silver and copper toxicity and the consumption of a variety of chemicals used to treat the water for Legionnaires and other contaminants), will be felt for three generations, if not more. This does not even begin to address the issues of trust in our governmental systems, democracy, and other institutions.

Just Transition:

One of the implicit issues driving this investigation is justice, equity, and a just transition. Matthew Henry's *Hydronarratives: Water, Environmental Justice, and a Just Transition* was published in 2022, during the writing of this dissertation. And, in many ways, this dissertation answers what Henry asks for–a road map forward to a just transition of water issues in the USA. While there is another book covering similar issues (e.g. Anna Boast's *Hydrofictions*) it does not center on the USA, but the water tensions in Palestine and Israel. So, while this dissertation did not set out to address the issue of creating a roadmap forward in response to *Hydronarratives* by

Henry, it does so. And, while both texts are rooted in many, but most decidedly not all, ways the environmental humanities and social sciences discuss water and environmental justice. *Hydronarratives* discusses the idea of just transitions through the case studies of multiple communities struggling with water and environmental justice. One of these case studies focuses on a narrative of the Flint Water Crisis. Because of this, Henry's *Hydronarratives* has been integrated into this dissertation.

Henry (2022) writes about the importance of narratives, specifically from people who are historically excluded from the dominant narratives, in *Hydronarratives: Water, Environmental Justice, and a Just Transition.* Henry pulls from the social sciences and humanities (specifically the energy humanities) to stress the importance of the capitalist structures put into place with colonization, extraction economics, static governance structures to reinforce these systems, to disaster capitalism to explain why cultural narratives are so important to push back on the narratives that support these systems; he writes about the complexity of scenarios (which are 'speculative' and not 'community-driven') often have "real-world implications for policy and governance" are not very effective in environmental work, which leaves us with narratives/case studies/ethnographies as a key research tool, and one that builds connection and empathy between the reader and the participant.

> By contrast, narrative methods accommodate participatory processes and are thus more conducive to justice and equity…Drawing on context-specific stories gleaned during the scenario-planning process can render scenarios more believable to local constituencies, thus rendering communities more amenable to change and improving adaptive capacity. Attention to narrative and storytelling as data garnered through participatory research can counter more "extractive" research methods, prompting a community-driven approach to

policy development and implementation. This represents a significant departure from

policy studies which tend to view narrative as subjective, unreliable, and untranslatable to

usable data. Again this resonates with environmental humanities research, which

considers how human values, beliefs, thought systems, and even the imagination serve as

obstacles to or opportunities for collective change. (*Hydronarratives*, p. 14-15)

So, not only are these stories essential in the actual data collected and bringing the community

and public into the conversation (as we will soon discuss in more detail how these ideas can be

contested even in the humanities), They can push on a dominant narrative (i.e. that the water is

fine in Flint) and show different perspectives, nuance, understand, lived-experience, and

connection of the lived experience–which may result in reactions as strong as empathy and

action from those how listen to these stories. Henry (2022) is adamant that the way forward to a

just transition must include community and stories that reflect the diverse cultural representation

of the members of these communities.

Cultural representations play an important roles in challenging dominant narratives and

are well-positioned to support the planning and the implementation of the just transition

processes and policies by recognizing history erasure and exclusion and elevating diverse

ways of knowing often omitted from policy design. (*Hydronarratives*, p. 15)

Given the importance of voice, diversity, context, and equity in creating a just response—it is

important to look at how environmental theory influenced environmental humanities, technical

communication in relation to institutional and social organization's inclusion and exclusions, and

the importance of cultural rhetorics—specifically Indigenous rhetorics and studies—in moving

towards a just transition.

30

Henry (2022) connects the environmental sociologists to the decolonizing work of environmental organizations like the Climate Justice Alliance (CJA)—which is a coalition of 70 grassroots environmental justice organizations--and the Indigenous Environmental Network (IEN). He merges the goals of these community-driven environmental organizations to the theories in the social sciences. Finally, Henry pulls from different working definitions and ideas in theory and policy of what a just transition is. He uses all of this work to argue that this is why narratives are essential to helping us find a path towards a just transition.

More specifically, Henry (2022) argues the binary arguments 'job vs. the environment' are problematic (with a nod to Patel) because:

> These radical arguments aim to debunk mainstream narratives touting the emancipatory potential of free-market capitalism and the attendant emphasis on privatization, deregulation, and individual entrepreneurial spirit. It is precisely because it is easier to imagine the end of the world than the end of capitalism that we need new stories, new narratives, and new counternarratives for a just transition. (*Hydronarratives*, p.12).

And, Henry focuses on the environmental humanities and the "humanistic modes of inquiry such as discourse analysis, historical research, and literary and cultural criticism can offer deep insight into human motivations, values, beliefs driving environmental decisionmaking [sic]." (*Hydronarratives*, p. 15), and addresses the "epistemological dualisms of anthropocentrism (e.g. nature vs. culture, human vs. more than human, ecology vs. economy) that underpin many of the social ideologies (i.e. –colonialism, capitalism[5], anti-black racism, patriarchy) driving our most

---

[5] Much like the 4Rs is a basic concept in Indigenous teachings, capitalism is a basic concept that is used by colonialism and western thinking and ideology. It is the reason for colonial expansion during the Enlightenment—to seek out goods like spices, labor like the slave trade, and land which lead to the slaughter, genocide, removal, and forced assimilation of many Indigenous peoples.
The breadth and scope of this idea has been the life work of many scholars and researchers, such as Karl Marx who wrote numerous volumes on the ideas of capitalism. So, while the definition I am supplying

pressing environmental crises." (*Hydronarratives*, p.13) While pulling from theorists in both the humanities and the social sciences to explore the reasoning for using narrative, Henry (2022) does not include many Native American theories or methodologies (while giving Kyle Whyte acknowledgement, given his strength in Native American philosophies and work in national policy). Instead, he focuses on how '…the rise of environmental humanities has given occasion to rethink what it means to be human and to challenge the Anthropocene as a concept that over emphasizes human agency at the species level while ignoring human difference, nonhuman agency, and the differentiation of human values within the parameters of capitalism." (*Hydronarratives*, p. 41). Giving nods to the importance of the work by researchers in the humanities, such as Joni Adamson, Julie Sze, Rob Nixon, as well as empirical ecocriticism by Matthew Snyder-Meyerson and other practitioners that "scenario-*imagining* [commonly used by those in public policy work as they consider narratives and qualitative work unreliable] …does not necessarily correlate with action." Moreover,

> Empirical ecocriticism can be described as a social sciences approach to narrative analysis that combined the type of textual analysis that is typically the province of the humanities with empirical research on the efficacy of environmental narratives. The latter is often achieved through social scientific methodologies such as consulting interviews, convening focus groups, and administering surveys…. Awareness does not necessarily result in activism or other forms of civic engagement, especially when narratives evoke responses such as fear, helplessness, and dread. (p. 13)

---

here in the footnote is extremely superficial and underdeveloped, the context in which I use this term and the subsequent term that is also defined in a footnote later in this text, frontier capitalism, is an indication of the breakdown of different types and categories of this extremely large concept of what capitalism is and how it functions sociologically, culturally, and institutionally.

Please note, many different kinds of capitalism are referred to in this section of the dissertation which also exemplifies the various different kinds of capitalism that are recognized and studied in the social sciences.

While this is quite a dense point of argumentation—on (1) methodology *as well as* (2) the emotional response to environmental narratives, this point is important, and we will come back to it a few times in this dissertation. Going back to the construction of the argument, there is a lack of Indigenous work being connected to these theories and practices. And, in many ways, this dissertation is a response to that and looks at what the inclusion of Indigenous research, methodologies, and practices may look like when applied to a different set of narratives than those in Henry's *Hydronarratives* (2022)–focusing on both the creation of and the response to the Flint Water Crisis. Additionally, this dissertation focuses on how this path toward a just transition through the approaches of rhetoric and writing (specifically through technical communication and cultural rhetorics), which are not included in the energy humanities focus of Henry's book.

Throughout the rest of my dissertation, I will have personal narratives that relate to the section of the dissertation where they are included. These will be in *italics* and marked off with lines separating them from the parts of the dissertation proceeding and following the personal narrative sections, to make it clearer to my readers that this is a personal narrative and not a section of the dissertation that is researched. We cannot put down our experiences of the world around us as we research, our experiences create us and make us who we are. Our responses to the world around us, how it is organized, and our relationships with others influence us, as we will see from the diagram in the next chapter, we do not live in isolation. These influences interact with and affect our intellectual, emotional, spiritual, and physical being. And, as a researcher, I am no different than anyone else in this respect. And, the inclusion of my personal stories is a reflection of my positionality as a human being who is in relationship to the places and spaces I have lived and am currently living, my relationship with others who are close and

adjacent to my world—and on occasion those who are remote to it, as well as others and the institutions and systems that influence my life. I want to respect myself and my experiences, as well as those of my readers, as we move forward and explore the 4Rs and narrative throughout this dissertation.

In Chapter 2, "R.E.S.P.E.C.T.," I explain how the 4Rs relates to community and Native land. I give the reader the background needed to explain *why* the 4Rs is an appropriate methodology and heuristic to use for the City of Flint and the conditions and early events of the Crisis. This is the first part of the methodology section of this dissertation.

Chapter 3, "Theoretical constellations," is the literature review. This is navigation of the different theoretical positionalities of environmental sociology and humanities, technical communication and environmental rhetorics, and cultural rhetorics and Native American rhetorics. It is a map of how these different theories relate to each other in the context of this dissertation.

Chapter 4, "What's the 4Rs gotta do with it?," is an explanation of the 4Rs. By looking at the early work of the 4Rs in higher education and how the definition changes over time, we can see how the application of the 4Rs to community can expand its application and contract with specifics. Then, by looking at how the 4Rs are used in Native American rhetorics and law, we can see how adaptable the applications can be.

Chapter 5, "Give me one reason," is an exploration of the 4Rs and how they apply to the Flint Water Crisis through news narratives and personal narratives. It is through these narratives we will see aspects of justice in play as well as colonization. The inequality and cost to all of us and how colonization takes a toll on human dignity and our relations will be applied. And, Chapter 6, "What's up," concludes the dissertation, discusses what I learned in the process of

writing this dissertation, make recommendations for further research, and encourages us to move toward a more hopeful future and take action.

So, I ask that you open your heart and mind, and trust in the circular path of this dissertation as we move forward. Wado and Miigwetch!

CHAPTER 2

R.E.S.P.E.C.T.

In Chapter 1, the Introduction, I gave two land acknowledgements from institutions in Flint, my positionality for this work, an overview of the dissertation, the purpose of this dissertation, and a summary of the upcoming chapters—including this one. As we move forward, I want to remind the reader that this dissertation is not linear in nature, and it will often feel circular in nature as there is no clear place to start in this work—like other Indigenous work. The work is circular in part because it takes time and space to weave together complex ideas, and I ask that grace is given as these ideas are woven together through this dissertation.

There are ideas and information I will give you to help you process the information to come. So, to prepare you for this chapter, dear reader, you will not see a traditional methodology chapter here. Instead, you will get some methodology and context to help clarify the work I am doing and prepare you for the literature review in the next chapter. Do not worry, we will come back to these ideas again in Chapters 4 and 5 and develop the methodology and application of the ideas I will start introducing here. Until then, this chapter will start laying the groundwork that you will need to move forward through this dissertation.

The purpose of this chapter is two-fold. The first purpose of this chapter is to give a general groundwork of the 4Rs and how it is being used on the community-level. The first example is of an institution that is trying to address colonial institutional structure, approaches, and plans in order to alter the current institutional design so that *all* of the community benefits, trying to create a truly inclusive structure change from the inside of the system by using the 4Rs. As we are all connected to the land we live on, which is Native land,

and this is the land where our communities are formed, reside, live, and thrive. The colonized

structures of our environments affect our communities, our relationships, and ourselves. The

second example is a grass-root activist movement that is designed to start on the community

level to create changes on a societal level; in other words, this example is one that promotes

change on the community and societal level to change colonized institutional structures from the

outside inward. The second purpose of this chapter is to explain how the 4Rs act as a heuristic.

"We will never have true civilization until we have learned to recognize the rights of others."
— Thomas King (*The inconvenient Indian: A curious account of Native people in North America*, 2012)

What ARE the 4Rs?

The first of the two purposes of this chapter is to explain what the 4Rs are and explain

how the 4Rs is being used on both the institutional level and grassroot level to create change in

colonized structures. While these two examples are in Canada and they are inclusive to both Indigenous and non-Indigenous communities, the application process and procedure can also be applied to other Westernized colonial structures and societies.

Figure 1: Indigenous Wholistic Framework for the 4Rs
Pidgeon 2016a

The 4Rs is an "Indigenous wholistic framework" that "illustrates Indigenous values and ways of being." (Cull et al. 2018) When the first applications of the 4Rs were being used by

Kirkness and Barnhardt (1991), they explained how they used the 4Rs (in this structure they

used: respect, responsible relationships, reciprocity, and relevance) to create safe institutional

spaces for their Indigenous students in their community research. This was expanded upon by Pidgeon (2016a, 2016b) who created one of many models that have been used to think about the wholistic student experience by using the 4Rs, including Figure 1 (above). Pidgeon, Archibald, and Hawkey (2014) found these relationships can create a sense of belonging and responsibility among the Indigenous students. Interestingly, all of these studies mentioned that enacting the 4Rs benefited *all* students, but they did not expand on this much as their work uses an Indigenous framework (the 4Rs) for Indigenous students. This is of the *utmost* importance, so I will repeat it: *their work uses an Indigenous framework (the 4Rs) for Indigenous students.* This is the purpose, the cultural context, the design, and the people it is for.

However, it works for *all*.

It *must* be recognized who it is by and who it is for.

It is on Native land.

It is on land that has been colonized. This land has been systemically colonized. These systems are not working for the land and, in relation, this system is negatively impacting communities.

The answer is to use the systems that co-existed with this land prior to colonization.

This framework is designed to relate to the individual, faculty, and community, both institutional and Indigenous communities within and outside the institution. It can be implemented within institutional structures. It is inclusive. It is beneficial for *all* participants. It

reinforces connection and mutually beneficial relationships through respect, responsibility, and reciprocity.

Please note, three things before we move on in this project. First, the 4Rs used in this particular project differ some from the 4Rs given by those who researched learning environments in higher education (where it was first applied by Kirkness, Barnhardt, Pidgeon, Archibald, and Hawkey). However, this is common when referring to the 4Rs—and this is seen in other community and/or institutional programs, like those mentioned earlier (e.g. Canada's 4Rs Youth Movement and York University) and will be developed in more depth in this chapter. The main difference is 'relevance' or 'relationality' [Kirkness and Barnhardt (1991); Pidgeon (2016a, 2016b); Pidgeon, Archibald, and Hawkey (2014); and Cull et al.(2018)] is shifted to 'relationship' in this dissertation as it is a term often used in Native American rhetorics (which is a subfield within cultural rhetorics) and it is extremely applicable to power differentials and ensuing communication and policy issues in the Flint Water Crisis (this will be developed more in Chapters 4 and 5). It is not unusual for the wording of the 4Rs to shift some—but the Indigenous teachings that are the roots that the words grow from do not change, but they do vary.

Secondly, I want to note that place is ever present in the 4Rs, in all forms. Native land, as discussed earlier in this chapter, is essential to the underpinning of the 4Rs and the reason it is inclusive—as we share the land we are on. This is why many researchers focus on educational environment and how it interacts with the environment of the community and the people in the community—and while they focus on the Indigenous communities, all of these researchers recognize and acknowledged that these environments are shared [Kirkness and Barnhardt (1991); Pidgeon (2016a, 2016b); Pidgeon, Archibald, and Hawkey (2014); and Cull et al. (2018)]. In

39

turn, they also measured and acknowledge that non-Indigenous participants also benefited from the programs. This was expanded upon by Cull et al. (2018) when they were training non-Indigenous school staff on how to support Indigenous students with this method and when they identify that this method will benefit other students, while limiting their focus on Indigenous students in the K-12 educational environment.

York University designs their program to be inclusive to diversity in all ways—and centering the 4Rs methodology in a way to be inclusive to "accessibility", "decolonization" and, gender and sexual identity inclusion, and our relationship to the Native land we are on and our relationship with the land. More specifically, as we will see soon, "Rights of the Planet" is included as one of their outer petals. These different rights are based on the "Framework of Black Inclusion" as well as "Indigenous Framework" (the 4Rs). In turn, 4Rs Youth Movement uses a framework that depicts a garden and growth, and the images are in Appendix 1. Again, defying a hierarchical structure—as no step in the process is more important that the others—and showing the wholistic, cyclical interconnected structure of planting the seed to consuming and collecting the seeds to plant. Connecting our own lives and changes to that of the land we live on. As 4Rs Youth Movement (2023) explains it:

> The Framework is represented visually as a garden which reminds us that growth takes time. It reminds us that all of this work takes place on Indigenous land. The 4Rs approach embraces the complexities involved in cross-cultural experiences and conversations; we understand that learning is a lifelong journey, as is the journey of building and changing relationships. It is with all of this in mind that we put great thought and care into how we approach this work. ("Our Framework")

40

All of these 4Rs researchers and practitioners acknowledge how central the connection to our environments and the land is in the development of this work. It is the grounding of the community and shared experiences.

Both 4Rs Youth Movement and York University's DEDI Strategy are letting the Indigenous lead. It is a recognition of the land, whose land we are all on, and allowing the Indigenous ways of knowing to lead through Indigenization and decolonize. This is in recognition of Native land.

Thirdly, the 4Rs are widely used in Native American (and in an even broader sense, Indigenous) theoretical work and practice are designed to include the communities they represent; this is why the 4Rs is designed to be flexible and adaptable to community needs in order to reflect the specific needs and cultural practices of each community that implements the theoretical work and practice. Additionally, this theoretical practice is designed for the theoretical and practical to be adapted to flexible and adaptable to the community needs in order to reflect the specific needs and cultural practices of each community that implements the theoretical work and practice. In short, this means that it will apply to culturally inclusive, diverse communities like we see in Canada's 4Rs Youth Movement to mostly culturally homogenous groups on the national level for tribal governments. This flexibility is a staple within qualitative and quantitative research practices and implementation of these community-centered practices. As discussed in Indigenous ways of knowing and being, this is an adaptable model for Indigenous communities. More specifically, in the directions of "How to use and adapt this guide" it states:

> *A Guide for Front-Line Staff, Student Services, and Advisors* explores relationships
>
> between the institution, students, and Indigenous communities. These relationships are

interconnected and are guided by shared values of Indigenization to both improve the

educational and employment experiences of all students, faculty, and staff across the

institution. It also explores how Elders, Indigenous community members, and community

education partners are heard and included in the educational experience. This guide

reflects a holistic way to serve Indigenous students. (Cull et al., 2018)

While this guidebook's focus is Indigenization, the focus of the work being done at York and

4Rs Youth Movement are different. But, in the case of the guidebook, the fact that the people

working at the higher education institutions in British Columbia may not be, and very likely are

not Native or Indigenous themselves, which means that there will be cross-cultural learning,

communication, reconciliation, and so forth happening as the work the guidebook calls for

happens.

While there is great diversity among Indigenous Peoples, there are also some

commonalities in Indigenous worldviews and ways of being. Indigenous worldviews see

the whole person (physical, emotional, spiritual, and intellectual) as interconnected to

land and in relationship to others (family, communities, nations). This is called

a **holistic** or **wholistic** view, which is an important aspect of supporting Indigenous

students. The Canadian Council of Learning produced *State of Aboriginal Learning in*

Canada: A holistic approach to measuring success [PDF] to support diversity of

Indigenous knowledges from First Nations, Métis, and Inuit perspectives. Across all three

of these perspectives, relationships, and connections guide the work of supporting

Indigenous students within the PWIs of higher education. (Cull et al, 2018)

While this work is centered on one kind of colonized institutional structure, higher education,

and it connected communities-- it may not be clear how this successful outreach design that

started in Saskatchewan and is being implemented across multiple provinces in Canada (and into some institutions in the USA as well) can be applied to other communities and other colonized institutions that are included in this structure. The visual (Figure 1, on p. 37) makes it clear that we are all interconnected: from the self to the national level. But, what can this look like if this is done to include the institution, non-Indigenous, our environment, Native peoples and our relations?

While York University in Canada, 5 years ago, started incorporating the ideas of the 4Rs in their community outreach. One place where York University specifically integrated this approach in their community relationships in their Center of Human Rights, Equity and Inclusion (including the decolonizing workshops they provide for Rights, Equity, Diversity, Decolonization and Inclusion: REDDI). They state,

> As a foundational principle of York's Equity, Diversity, and Inclusion Strategy,
> decolonization refers to the processes of deconstructing colonial systems, institutions,
> logic, and practice to transform the social and political relations with Indigenous people.
> It centers and values Indigenous knowledges in service of the reestablishment of
> Indigenous sovereignty and the repatriation of Indigenous land and life. (REDDI
> educational materials)

This is directly connected to their use of their community outreach and inclusion with the

University policies and goals, including the Decolonizing, Equity, Diversity, Inclusion (DEDI)

Strategy for 2023-2028. And, the 4Rs are present in their visual presentation of DEDI. The

influence on the structural layout of this visual and the clarity of how York is incorporating

Indigenous knowledges and methods in their work with the campus communities and the

communities they serve, is a clear nod to the 4Rs visual by Pidgeon, Archibald, and Hawkey

Figure 2: DEDI Strategy
York University
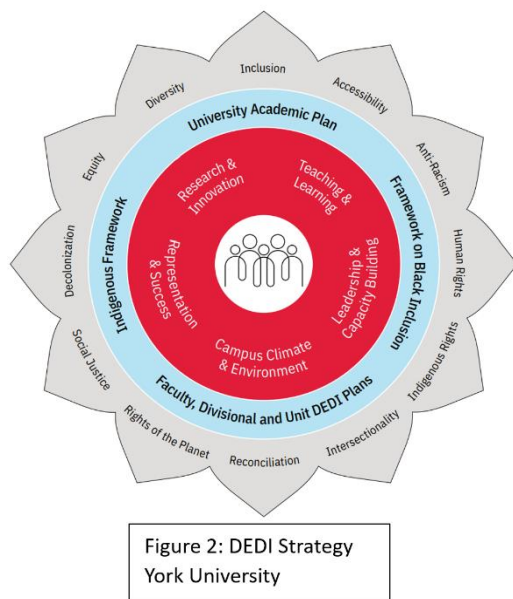
(2014) which was given earlier in this chapter. While

they do a wonderful job acknowledging the

Indigenous basis of this work, they do not

acknowledge the specific academic work that they are

pulling from in this design, like the 4Rs on the

website (as retrieved in May 2023).

The visual rhetorics of York's DEDI strategy, in

Figure 2 (left), is different from depiction of the 4Rs

(Pidgeon et al. 2014) in Figure 1 (p. 37). This one is a

representation of a strategy—a visual mapping of an approach to resolve the problem of colonial

institution structure, approaches, and plans. It is a way to visualize a task and relate it to the

institutional work of DEDI (Decolonizing, Equity, Diversity, Inclusion[1]), community and

---

[1] Equity and inclusion are terms that are often whitewashed, particularly in education. While York defines these two terms as: "Equity refers to the guarantee of fair treatment, access, opportunity, and advancement for students, faculty, instructors, and staff at every stage of educational and career development" and "Inclusion refers to creating space for all individuals on our campuses to enjoy the opportunities the university has to offer and strives to ensure people feel a sense of belonging." This is an example of these definitions. However, in the DEDI materials from York, there is a breakdown of the contributing factors of issues of inclusion and equity—including coming to terms with the University's settler colonial past and the moves it is making to correct these actions. An acknowledgment of the past, actions of reconciliation being made, and their insistence on connection to the land as a way to Indigenize and decolonize through recognition of Indigenous influences is way forward.

meeting institutional goals. The influence of the 4Rs on this design is clear—but it has a different

purpose in its representation, which is specific to the institution and the community it serves, as

discussed in Cull et al. 2018, Pigeon et al., 2014; Kirkness and Barnhardt, 1991; Pidgeon, 2016a;

Pidgeon, 2016b. This representation is one that may guide an institution on how to create a

visual representation that will guide their specific institution and the communities it serves, but it

is not one that will be applicable, or should be applicable to other institutions. The visual shows

the wholistic and equitable balance in the representation as well as the interconnection of the

different actors and values defying a hierarchical structure, just as the visual representation of the

4Rs does. In fact, some institutions and organizations may not choose to have a visual

representation to guide their use of the 4Rs in application to the work they are doing, and the

next community organization discussed is an example of this.

There is a clear connection of environment in the representation that York created as a

part of the DEDI program. As mentioned earlier in this section, there is a petal that specifically

addresses the shared environment, under the petal of "Rights of the Planet." This is an

acknowledgement of the environment we all share, but the inclusion of the planet's rights along

with "Human Rights" and "Indigenous Rights" is an acknowledgement to what is often referred

to as non-human rights or "our relations," depending on one's understanding of the world.

Additionally, it acknowledges the rise of the Rights of Nature legal actions around the globe. As

York University explains this in the section of their website on "Campus Climate &

Environment":

Campus climate includes the circumstances, objects, or conditions that surround all

community members. Environment is not limited to the physical (built) environment,

though that contributes significantly to a sense of place and belonging. This strategic

direction includes co-curricular activities for students and how they are supported; experiences that contribute to the development of culture; how York community members are engaged; and the structures of the organization that help create and shape the environment where everyone lives, works and studies (such as policy or organizational structure).

The clear connection of policy structure or organizational structure are parts of who we are, who we interact with and how we interact (in short, it is all about structure and relationship). This is not just the case of institutional structures like in higher education. This is the case with all of the institutions we encounter. And, as we can see in the 4Rs Youth Movement, this can be a part of community inclusion and outreach and even to encouraging future generations to move beyond the current institutional designs and look at creating a new environment, "in policy and organizational structure."

Another example of community inclusion and outreach is Canada's 4Rs Youth Movement. This is a community-based organization that is not directly tied to an institution. According to the home page for the 4Rs Youth Movement, they are:

The 4Rs Youth Movement is a youth-driven initiative that was launched to change the country by changing relationships between Indigenous and non-Indigenous young people. Through the networks and support of 14 founding national organizations, 4Rs is about engaging young people in critical cross-cultural dialogue that furthers reconciliation.

However, while this program, like that of York University, is focused on supporting diverse students, it centers the 4Rs of respect, reciprocity, reconciliation, and relevance. It is designed, like York, to center Indigenous teachings in its community outreach while very specifically

working with *diverse* populations. This is where it leaves initial work of the 4Rs which centered

on serving Indigenous communities, but by chance found this was beneficial to all participants.

But, this is not the only purpose of the 4Rs Youth program. As discussed by Whitebear,

Pebbles, and Gasteyer (2024):

> Canada's 4Rs Youth Movement describes the disconnect of non-Indigenous people and
>
> Indigenous peoples' relationships with lands and waters as "fractured," and as something
>
> Indigenous youth inherited from previous generations (4rsyouth.ca, nd). They rely on the
>
> 4Rs (respect, reciprocity, relevance, and responsibility) as a framework to restore these
>
> relationships as well as to serve as a reminder that we are on Indigenous lands. As with
>
> the other movements discussed in this chapter, the 4Rs Youth Movement recognizes that
>
> disrupted relationships must be restored. The 4Rs provides an interconnected, adaptable
>
> framework that works across communities that is grounded in Indigenous systems and
>
> practices that are necessary in restoring the connections between communities, lands, and
>
> waters. The 4Rs Youth Movement reminds us that there is no magic formula and that
>
> adaptability is needed to meet the needs of each community, but that the 4Rs help provide
>
> necessary components that can create action for change through grassroots resistance. (p.
>
> 5-6)

Again, this 4Rs Youth Movement are acknowledging that relationships are disrupted and that

these relationships can be restored. It also makes it clear that we do not need to wait for one

particular moment to do this—it can be done at any point and start with any one of the 4Rs.

There is no restriction on how or where one can start. It also highlights the connection of

community to land and water. While the start (note, the end is generations away) of the Flint

Water Crisis is an example of this breakdown of the 4Rs and what happens when relationships

47

are disrupted, this is an example of how we can start to make a change and restore relationship

and any of the other Rs used in this framework. So, while a demonstration of how the 4Rs have

been broken in Flint Water Crisis Chapter 4 and 5 through the practice of storytelling and

narration, it is not the end of the story. Change can still happen. And we, and future generations,

can restore these relationships through work that is grounded in Indigenous systems and

practices; through restoring connections between communities, lands, and water; and meeting the

needs of each community. Again, we see that our connection to Native land and understanding

how to care for it so it can care for us—as a reciprocal, responsible relationship—will only

happen when we enter that relationship with respect.

        4Rs Youth acknowledges four grounding aspects—just as York University. It

acknowledges: (1) we are on Native land and we have a relationship with this land, (2) Native

land has rights, (3) the design is grounded in and based off of Indigenous knowledges, methods,

and practices, (4) is inclusive and beneficial to all participants in design as we are all living on

this Native land, (5) it is adaptable as the path to decolonization is not set, *and* (6) it is flexible in

design to meet community/public needs. These four design elements are essential and cannot be

altered. These four aspects are extremely important because they are showing us how a

community organization that is designed to serve multiple communities in a single nation (4Rs

Youth) and a university (an institutional organization) that acknowledges its service to

community as different than it was when it was designed. These grounding aspects are a part of

this way forward in achieving a more equitable and just future while focusing on community.

        These two examples of 4Rs Youth and York University are very important—because

they are focused on two things: serving ALL their participants and students (the communities

they serve) while focusing on Indigenous methods in a way that alters colonized structures and

design. It is not the first Indigenous methodology or practice to be applied to Native communities and inclusively to other communities, i.e. two-eyed seeing—which will not be discussed in this dissertation until the conclusion as a point of further research due to space. And, in order to understand how the 4Rs fit in the constellation of environmental studies and rhetorics, cultural rhetorics, and Indigenous qualitative and quantitative work (which is often included within Indigenous rhetorics), we must explore the relationships between these different frameworks, methodologies, and practices as discussed in Chapter 1 and will be brought up again in Chapter 5 as a recommendation for future research.

Now that we see that there is a reason to seriously look at the 4Rs as a way to break with colonial structures that are not serving the public as a whole and wholistically beneficially, we need to look at the 4Rs as a heuristic. So, let us move to the second purpose of this chapter.

The 4Rs as a Heuristic: Why should we use a Native methodology on Native land

Because of the thinking from the Enlightenment influencing American social constructs and institutions (Killingsworth and Palmer, 1992), it is important to think of the epistemology that influences the Western writings and perspectives we will explore more in the literature review, Chapter 3. Because of this, my work uses the key concepts from Indigenous studies and rhetoric: respect, relationality, responsibility, and reciprocity (Deloria et al., 1999; Johnson,1990). While higher education studies started using these Indigenous concepts, with minor modification, to be more inclusive to allied support of Indigenous students, they have found Latinx and African-American students also benefit from these concepts when they are put into action and practice in higher education communities (Kirkness & Barnhardt, 1991; Pidgeon et al., 2014). Since then, the 4Rs have been used in higher education staff training and community endeavors to similar success (Pidgeon et al., 2014; Cull et al. 2018). Given the

application of the 4Rs to diverse communities (as discussed earlier in this chapter), my work creates a heuristic from these four concepts (as modified to fit a diverse community, like the one in Flint) and applies it to the triangulation of community, government, and science as rhetorical interest groups within the Flint Water Crisis. But, to put this in context, we need to understand how the 4Rs is used and applied to community work within Indigenous communities (as shown by how the ideas are conveyed and used in Indigenous rhetorics) and Indigenous researchers (for the purpose of this dissertation, I will focus on the work of 4Rs in higher education).

Pulling from multiple Native studies writers and Native American rhetorics (i.e. Deloria et al., 1999; Johnson, 1990; Smith, 1999; Wilson, 2008), the work of Pigeon et al. (2014) and Kirkness and Barnhardt (1991) explore how the concepts of respect, relevance, responsibility, and reciprocity (the 4Rs) can be applied in higher education, and I would argue environmental rhetoric as the ideas come from Indigenous rhetoric, to increase inclusion and a stronger community web on multiple levels. This concept can be shown visually in the image, created by Pigeon et al. (2014), of "A representation of a wholistic Indigenous framework" (see Figure 1 from this chapter):

> This framework is not meant to be a model that treats all Indigenous Peoples as the same but a model to show how the diversity of Indigenous understandings of place, language, and cultures relates to the individual, faculty, and community, both institutional and Indigenous communities within and outside the institution. (Cull et al., 2018)

The model is adaptable and adjustable. Also, it is important to note that "diversity of Indigenous understanding of place" is the first part of the list of model diversity. Place is an integral point being made a major thread throughout this dissertation.

50

The reason place is so essential to this idea is because we are all on Native land. While

not at the forefront of this work, it is a constant within it. This constant presence of land in the

work of environment and relationship with the 4Rs research (Cull et al., 2018; Pigeon et al.,

2014; Kirkness and Barnhardt, 1991; Pidgeon, 2016a; Pidgeon, 2016a) the literal presence of the

relationship to land in the DEDI figure (Figure 2, p. 43) and the garden visuals used in 4Rs

Youth Movement (Appendix 1), is part of that relationship and connection. (Please note, this will

also become clearer in Chapter 3, the literature review, Chapter 4, the analysis of the 4Rs and

how it connects to Native American rhetorics, and in the application of the Flint Water Crisis in

Chapter 5.) Native American and Indigenous researchers often make the connection to land more

concrete—as land and culture varies and we need to adapt to respect that variation to build that

relationship. For example, Brooks (2008) writes:

> To be clear, what I am talking about here is not an abstraction, a theorizing about a
>
> conceptual category called "land" or "nature," but a physical, actual, material relationship
>
> to "an ecosystem present in a definable place" that has been cultivated throughout my
>
> short life, and for much longer by those relations who came before me, which, for better
>
> or for worse, deeply informs this work. (p. xxiv)

Indigenous work is informed by our relationship to the land. It is connected to the sacred, as we

can see through the work discussed above but also the visual of the 4Rs (Figure 1, p. 37). There

is a need for the sacred within this connection and relationship to our environment. It is also

explained by other Native researchers. For example, Basso (1996) says, "Essentially. . . instances

of place-making consist in an adventitious fleshing out of historical material that culminates in a

posited state of affairs, a particular universe of objects and events—in short, a place-world—

wherein portions of the past are brought into being. One of the key concepts Basso (1996)

connects is that our stories are a part of how the 'past is brought into being.' And, building on the concept of 'place-world,' Brooks (2008) further connects Basso's (1996) idea to Deloria's (2003), a central player in Native American rhetorics, ideas of the importance of the sacred stories:

> in concert with Basso's description of place-making, this book puts as much emphasis on "where events occurred as on the nature and consequence of the events themselves." A key influence is the work of Dakota scholar Vine Deloria Jr. In discussing Native oral traditions, religions, and histories in his landmark *God Is Red,* Deloria argued that creation stories are actually much more concerned with geography and spatiality, "what happened here," than with chronological origins and temporality, "what happened then." These stories, he maintains, function practically and artistically as narrative maps of "an ecosystem present in a definable place." (p. xxv)

This concept of land as being integral and inseparable from Native culture, traditions, history, religion, and space—as much as it is to story. Just as the history and colonization of the land and the people is as inseparable from what was here before settler colonization and capitalism and the response of decolonial work.

Many times, the concept of land education is focused on relationality and how story is used. When we all enter a space, we come with prior experience, information, and stories--much like the personal story I included in Chapter 2 and the one I will include later in this Chapter. Land education is one way we can decolonize our interactions and our relationships to it and each other—which is part of the approach 4Rs Youth Movement is implementing. Many of the readings and materials they use are centered on this decolonizing methodology, such as the inclusion of Tuck and Yang (2012) in addition to other decolonial and relational readings; part of

the reasoning for this inclusion is that land education is thought of as inclusive and diverse (4Rs Youth Movement; Tuck and Yang, 2012; Tuck et al. 2014). As Tuck, McKenzie, and McCoy (2014) address, Indigenous epistemology and ontology is at the heart of land education, incorporating "Indigenous understandings of land, Indigenous language in relation to land, and Indigenous critiques of settler colonialism." Story is the expression of these teachings and our connections to the land (Wilson, 2008; King, 2005; Johnson,1990; Deloria et al., 1999; Deloria, 2003; Kimmerer, 2013; Hernandez, 2022; Mills, 2019). To understand our differing stories and experiences with spaces, including the different understanding of the history of a place, we must address and incorporate the concept of relationality.

Brooks (2008), in *The Common Pot,* invokes the common pot metaphor used during ceremonies as "shared space," and within this space, the "longhouse [becomes] a microcosm of the world [...] reminding humans of their place within it." This understanding within daily life/practice necessitates "distribution of resources, equality between community members, and interdependency inherent in the network of relations." (Brooks, 2008) In this network of relations, we see the relationalities between identities within the shared space as different because we see them within the context of the ecosystems and nonhuman relations present, of our positionality within a time construct, and of the linguistic and rhetorical nature of our positioning with relation to others.

As Warrior (1995) states when addressing the power of Native American traditions and practices:

First, we see that, far from engaging in some new and novel practice that belongs necessarily to the process of assimilating and enculturating non-Native values, we are doing something that Natives have done for hundreds of years—something that can be

53

and has been an important part of resistance to assimilation and survival. Such a

generational view. . . provides a new historical and critical site that invites us to see

contemporary work as belonging to a process centuries long, rather than decades long, of

engaging the future contours of Indian America. Second, we stand on firmer ground in

our interlocutorial role with Eurocentric scholarly theories and categories. . . . Third,

critically reading our own tradition allows us to see some of the mistakes of the past as

we analyze the problems of the present. (p. 2, *Tribal Secrets*)

A part of Warrior's positioning is the relation of ourselves, as Native peoples, to the values that

were in place prior to colonization—to the teachings, stories, and practices that were used prior

to colonization by our Native ancestors. [It is important to note that as Brooks (2008) points out,

particularly in the Northwest, there are gaps in the teachings, stories, and language in relation to

these practices.] Another part of the this is the role of Native and Indigenous language in the

connections we have with 'place-world,' which is further explored by many other Native and

Indigenous researchers (Itchuaquiquq & Matheson, 2021, Tuck & Yang, 2012; Kimmerer, 2013;

Hernandez, 2022 Brooks, 2008). The final part Warrior (1995) addresses is the connection of the

problems we are dealing with now in connection to our history and our traditions.

So, given the final part of the quote from Warrior (1995) it is perhaps best connected to

the emerging decolonial practices and acceptance of traditional Native American and Indigenous

practices in land management. These acts of land management are seen in a variety of locations

in the Americas and well as globally. In the Americas, we are seeing Indigenous practices being

explored and implemented in agricultural and water management practices (Michigan Farmers

Union, 2020), forestry management (First Nations Development Institute, 2020), state and

federal governments (National Park Services: Redwood and Yale Environment 360),

conservation practices (Kimmerer, 2013; Hernandez, 2022; World Bank) and in a multitude of other ways. Additionally, we are even seeing court cases around the globe for rights of nature-- the first case was Māori fighting for and winning personhood for the Whanganui River in New Zealand and pending cases in the USA: one in the Great Lakes region on the Menominee River and one neighboring the Great Lakes region on the rights of nature case on Manoomin, also known as wild rice (White Earth Nation and Menominee Nation). According to the United Nations (UN) the other examples of water-based Rights of Nature legislation include—but are not limited to: Galapagos Marine Reserve (Ecuador), Manglares Cayapas Mataje Ecological Reserve (Ecuador), Whanganui River (New Zealand), Atrato River (Colombia), Magpie River (Canada), [and] Mar Menor (Spain). While there are more examples of concrete implementation of Indigenous practices in relation to land, there are many others that are not included due to the limitations of the dissertation.

In Indigenous work, the Native and Indigenous methods above as often referred to as TEK (Traditional Ecological Knowledge). The National Park Service (NPS) defines TEK as:

> Traditional Ecological Knowledge (TEK) is the on-going accumulation of knowledge, practice and belief about relationships between living beings in a specific ecosystem that is acquired by indigenous people over hundreds or thousands of years through direct contact with the environment, handed down through generations, and used for life-sustaining ways. This knowledge includes the relationships between people, plants, animals, natural phenomena, landscapes, and timing of events for activities such as hunting, fishing, trapping, agriculture, and forestry. It encompasses the world view of a people, which includes ecology, spirituality, human and animal relationships, and more. TEK is also called other names, such as Indigenous Knowledge, Native Science.

Indigenous peoples as well as non-Indigenous peoples who are long-term (hundreds of

years) local residents, e.g., Appalachian communities, Spanish land grant communities,

can also provide TEK.

TEK is different from user knowledge and local knowledge. User knowledge is one

person's experience over a lifetime or less. Local knowledge is more than one person's

experience aggregated, showing a trajectory, but not yet time tested. Individual users

sharing knowledge with other local users and elders, and then time-testing this new

knowledge is part of the evaluation and validation process for TEK. (National Park

Services: TEK)

While this definition of TEK makes some very clear distinctions, such as how it differs from user

knowledge and local knowledge, the definition is different than one that Native and Indigenous

researchers and practitioners would give. For example, The First Nations Development Institute

defines TEK in their Indigenous California Land Stewards Practitioners of Kincentric Ecology

Report for 2020 says:

The authors would like to acknowledge that the original intention of this paper was to

articulate the intersection of Traditional Ecological Knowledge (TEK) and regenerative

agriculture. However, the authors made a change in direction after realizing that what is

needed is not an attempt to fit Indigenous land stewardship and food systems into a

Western framework, but to deepen the understanding of these practices, cultural mores,

and knowledge from a California Native perspective. In the section "Problems with TEK

and Regenerative Agriculture Models" it is noted that TEK and regenerative agriculture

are Western ideologies and frameworks. While TEK may be the most commonly

understood way to frame and understand Indigenous food production and land

stewardship practices, and many modalities of regenerative agriculture are rooted in

Indigenous knowledge, it is more meaningful to the authors to rightfully acknowledge

and deepen understanding of California Native communities as practitioners of kincentric

ecology and leaders of land stewardship and food systems.

These two definitions highlight the assumption that the Western perspective is the default. They

both acknowledge that there is a different, more wholistic perspective: a Native perspective and

approach. While, both definitions highlight the importance of relationships within the Native

practice of TEK. There is an aspect of othering happening in the NPS definition and that othering

is happening to Native peoples on Native land. It is being done by settler colonizers who set up

the colonial institutions and practices that are the default on Native land.

This act of othering is further addressed by Smith's *Decolonizing Methodologies* 1999) in

context of the state in which Native and Indigenous peoples are being 'othered' while still being

asked to help change our current environments:

A critical aspect of the struggle for self-determination has involved questions relating to

our history as indigenous peoples and a critique of how we, as the Other, have been

represented or excluded from various accounts. Every issue has been approached by

indigenous peoples with a view to *re*writing and *re*righting our position in history.

Indigenous peoples want to tell our own stories, write our own versions, in our own ways,

for our own purposes. It is not simply about giving an oral account or a genealogical

naming of the land and the events which raged over it, but a very powerful need to give

testimony to and restore a spirit, to bring back into existence a world fragmented and

dying. (p. 28)

While the language limitations and the Western default are a part of this colonial structure in which we are working in—the result is there must be change for us all to survive the damage colonization has done. The '*re*righting' is beyond '*re*writing' Indigenous histories in a colonized world and its structures—it is '*re*righting' our relationships, what practices are used in our environments (physical and institutional), as well as connecting to the land and each other and rebuilding these relationships in a healthy way and moving forward with respect, responsibility, and reciprocity.

In order to move forward in a way that '*re*rights' what has been broken, we can look at how one kind of colonial institutional structure is starting to change. The concept of the 4Rs is already being applied to higher education in various parts of Canada from programs in Saskatchewan and staff training guides in British Columbia (Cull et al., 2018; Pigeon et al., 2014; Kirkness and Barnhardt, 1991), Canada's 4Rs Youth Movement and York University is designing a wider community outreach program for the communities they serve. These programs are growing because they have found that the work is not only beneficial to Indigenous people, but students and community members of color (Pigeon et al., 2014; Kirkness and Barnhardt, 1991; Pidgeon, 2016a; Pidgeon, 2016a). In short, the flexibility of the structure to accommodate the "diversity of Indigenous understandings" to a wide breadth of identity and community structures "of place, language, and cultures relates to the individual, faculty, and community, both institutional and Indigenous communities within and outside the institution." (Cull et al., 2018) Each of these following applications of the 4Rs are centered on place (a.k.a. Native land) and all the other points Cull et al. (2018) stresses. The idea that using Indigenous concepts and understandings of the world is controversial. However, these examples of both the training guidebook in Canadian schools to better support the communities they serve by Cull et al.

(2018), *Pulling together: A guide for front-line staff, student services, and advisors*—which I have already included in this chapter as an example—and the design and application of the higher education programs and the resulting research publications from Pigeon et al. (2014), Kirkness and Barnhardt (1991), Pidgeon (2016a), and Pidgeon (2016a). Shows how the 4Rs were already being used in academic structures prior to York's implementation and how York has expanded and developed this concept to encompass *all* of their student population. It is because of the earlier work which *is* already being done on the institutional level in higher education in Canada, and York University shows how it *is* being used on the institutional and community levels, and 4Rs Youth *is* a model of how it is already being implemented on the community level. It *is* already being used in application to diverse communities. So, the argument is not *whether* it should be used, but *how* it should be used.

There are a number of reasons I am using the 4Rs as a heuristic overlay to the communication and institutional design and organization of the communication design in the Flint Water Crisis, beyond the fact that we are on Native land. First, Sullivan and Porter (1993) argued that "...methodology as praxis requires methodology to function… as a heuristic." (p. 315) and using the 4Rs as a heuristic to the communication patterns from the three different interest groups in the Flint Water Crisis provides valuable insight into the communication flow and pattern. Second, there is a strong Native community presence in Flint (which is exemplified by the community Pow Wows, the Water Blessing Ceremony in 2016, the ongoing donations made by the Saginaw Chippewa Tribe) and these events stress the connection to the land in Flint—Native land; but, on the Native land of Flint there is an culturally diverse community of a strong African-American population, Native Americans, immigrants (including speakers of multiple languages, such as Arabic and Spanish), and so forth. Third, Indigenous methodologies

(both qualitative and quantitative) are designed to be adapted to, for, and by Indigenous

communities, but we are increasingly finding out that these practices are helpful when applied to

diverse communities (Smith, 1999; Wilson, 2008; Walter & Anderson, 2016)[2] communities like

Flint and many others.

By analyzing the public messages given by state officials, state policies enacted, and a

variety of state communications given to the public during the crisis and how these actions

addressed complex community needs as reflected in the 4Rs (respect, responsibility, reciprocity

and the relevance of the responses and needs of the community), I hope to gain, and relay this

information to others, a deeper understanding of how to remedy communications (like the ones

we will apply the 4Rs to in Chapter 5) within the particular case study and acquire knowledge

that may help future communities who find themselves facing similar or overlapping challenges

(e.g. Benton Harbor, Detroit, Chicago, Baltimore, Pittsburgh, and so forth).

Now that the 4Rs are established as a heuristic to analyze the structural design, power

breakdown, the "public," and technical communications in the Flint Water Crisis; this will be

done in Chapter 3. The chapter will move into a more detailed exploration of the 4Rs in Chapters

4 and 5. It is essential to understand that while we can look at each 'R' individually, they are

interdependent and intertwined with each other. The show interconnection and interdependence

---

[2] These three sources of Indigenous qualitative and quantitative research methodologies all address the importance of community involvement on a variety of levels: from member checking to the use of community categories, classifications, organization, and input. This aspect of Indigenous methodology— whether it is qualitative or quantitative—is essential to respect and relationship. The work done in conjunction with communities and their members is a part of responsibility and reciprocity.
This idea will be revisited in Chapter 5, especially in conjunction with the U.S. Census work in Flint.
For more information on Indigenous qualitative and quantitative research and the importance of respect, relationship, responsibility, and reciprocity, refer to: Smith, 1999; Wilson, 2008; Walter & Anderson, 2016.

to create the whole, in all its complexity. And, all of this work will be done in Chapters 4 and 5.

_____

We often make assumptions about the institutional design of communication and connections, and the power hierarchies that are reinforced by the design and implementation of these structures. One example of this is the implied structures of education and collaboration that took place when I was a guest speaker in a graduate-level education course where I was also speaking on the 4Rs with a dear friend and colleague who is the director of the Native American Programs at a R2 regional university. We were asked, before we started, why the local tribe did not collaborate with the college of education more often, despite faculty often reaching out to do research.

My friend and colleague and I looked at each other, and responded to the faculty member leading the class and said we would be addressing this in our presentation.

After going over the history of the Native people in the region, their experiences with education—including the boarding school that was closely affiliated to the creation of the R2 regional college we were at, we moved on to how can we change how research looks for Native communities and students through the use of the Grandfather Teachings used in the Native communities in this region and the 4Rs.

After going over (1) the history of removal of the Native Nation from their land to the reservation, (2) the removal of their children to attend the boarding school—a school where many children did not survive and were forbidden to speak their language, practice their culture, and were there to "Kill the Indian and save the man", (3) what the Grandfather Teachings are (the core cultural teachings on how to lead one's life and interact with the lives around one) and how these teachings incorporate many aspects of the 4Rs, (4) the direct discussion of the 4Rs,

and that relationships are long-term (not for a single project) and need to be maintained with respect, reciprocity, and responsibility, and that the relationship is not reciprocal if it is the faculty at the R2 coming over to observe and write about what they observe—as it is not an equal relationship lead by respect and reciprocity without acknowledging the past and the role the R2 institution played within the violent colonization of the past, more specifically the boarding school that played a direct role in the creation of the University.

At this point in time, we addressed the question the faculty member had for us before we started the presentation. And, we asked if this answered the question with the content of the presentation.

The response was a resounding, "YES!"

It opened a conversation about how the University and faculty have approached the goals, outcomes, design, and structure of the projects in a way that shuts down communication and collaboration. The difference between cultural approaches and expectations became much more apparent to the faculty member and really created long-reaching discussions that were also revisited for the duration of the course.

CHAPTER 3:

THEORETICAL RELATIONS

In the last chapter, there was an argument made as to why the 4Rs should be applied to the Flint Water Crisis when it is not a Native-majority city [and given that I live on a reservation and the city is not a Native-majority city (the Native population is fairly consistently at 7% in Mt. Pleasant, Michigan which is on the Isabella Indian Reservation)] *is* applicable because we all live on Native land in the Americas. And this leads us to the second argument made in the dissertation—whether the 4Rs should be applied to a diverse city that is a black-majority and has a small Native American population (and as we can tell from the Native population in Michigan—this is all relative); but, the argument is clear—there is precedence for the 4Rs to be used in diverse or formerly diverse communities like Flint and for colonized and colonizing institutions to use them to serve diverse communities. Therefore, the second point of the Chapter 2 focused on the 4Rs, what it is, and how is it used by both Indigenous and diverse communities.

While some researchers and theorists focus on Indigenization (Kirkness & Barnhardt, 1991; Pidgeon et al., 2014; Pidgeon, 2016a; Pidgeon, 2016b; Cull et al. 2018), others focus on decolonization with a focus on Indigenous methodologies and practices (i.e. York University and 4Rs Youth Movement). For the purpose of this dissertation, we will use the working definition from the staff guidebook by Cull et al. (2018) which states:

> Indigenization is a process that requires an appreciation of the sacred and that must include ceremony. One must prepare emotionally, mentally, spiritually, and physically for the journey of Indigenization.

The Indigenization process strives to share Indigenous ways of knowing, being, and doing in ways that will educate and engage all members of the college or university community and foster the effective inclusion of Indigenous learners and educators… Indigenization is a process that requires an appreciation of the sacred and that must include ceremony. One must prepare emotionally, mentally, spiritually, and physically for the journey of Indigenization.

The Indigenization process strives to share Indigenous ways of knowing, being, and doing in ways that will educate and engage all members of the college or university community and foster the effective inclusion of Indigenous learners and educators. ("Ikta: What is indigenization?")

This is focused on Indigenous peoples and communities, even though it "educates and engages all members of the … community" of an institution, higher education in this case. It is designed to create "effective inclusion" of Indigenous community members. This is different than what is seen in the materials provided by York University's DEDI program (Figure 2 from Chapter 2, p. 43) and the 4Rs Youth Movement.

Both York University and the 4Rs Youth Movement are focused on decolonization. As explained in the framework of the 4Rs Youth Movement, which acknowledges Tuck and Yang (2012) "Decolonization is not a Metaphor," which is a part of the teaching materials provided on their website: "It is not possible provide a neat definition of decolonization, because it is a complex concept that will be taken up differently depending on the lands and nations involved a given context. Decolonization centers land." (4Rs Youth Movement) Again, as discussed in the last chapter, Native land is a central aspect of the work in decolonization. It is central to the work and visual rhetorics of both York University (Figure 2 from Chapter 2, p. 43) and 4Rs Youth

Movement. The focus is on unity and working together toward a decolonized future. It is more inclusive, as can be visually communicated by the York University DEDI visual. Likewise, this diversity is shown in the garden image (see Appendix 1) used by 4Rs Youth Movement: our roots are connected and we are all connected to the earth—and "We nourish the garden, so it can take care of us in return." 4Rs Youth Movement's constant connection that we are connected to the land, our relations, and each other is done through the materials used in the program and the garden imagery. While not using a circle in the visual representation like the 4Rs and DEDI do (Figure 1 and 2—respectively, p. 37 and 43), 4Rs Youth Movement does use the cyclical aspect of the seasons in gardening. In turn, York University's DEDI program uses the circular flower image that includes community and rights—including "Indigenous Rights," "Human Rights," and "Rights of the Planet" along with "Decolonization" among other key concepts on the petals.

Likewise, to reiterate my statement from Chapter 2, "Given this easy application to broader applications, my work creates a heuristic from these four concepts (as modified to fit a diverse community, like the one in Flint) and applies it to the triangulation of community, government, and science as rhetorical interest groups within the Flint Water Crisis" and we are going to explore this statement more, we are going to move into the literature review of this chapter. So, to understand how the 4Rs (as well as its connection to the Flint Water Crisis, Indigenization, and decolonization) relate to the theoretical work, we must go and look at the theoretical relations.

"The truth about stories is that that's all we are."
— Thomas King (*The truth about stories: A Native narrative*, 2005)
"You have to be careful with the stories you tell. And you have to watch out for the stories that you are told."
— Thomas King (*The truth about stories: A Native narrative*, 2005)

As King (2005) writes above, stories have power. Stories connect us in many ways, and they can create a 'common ground' when talking about place and space. We cannot avoid our lived experience in the places and spaces we share. Stories are meant to be shared as much as the environment is. Likewise, stories and the environment both shape each and every one of us through our thoughts, interactions, and being. Environment is something that shapes us as much as we shape it, we interact with our environments and visa-versa in a way the creates a shared realization and creates context for our shared experiences on this 'common ground' we stand on together and draw from the 'common pot' we all share, as discussed in Chapter 2.

The choice of the quotes by King (2005) that start this section of theoretical processing of environment, discourse, social organization, and response is very intentional. While we are all influenced by our environments—the physical, mental, emotional, and social—it is essential to explore how our understanding of our environment comes from stories. This chapter will weave the theoretical explanation of why stories are important and diversification and inclusion are essential to collective storying for communities, helping to explain the exemplification of the previous chapter's storying. In the process we will discuss how stories influence our understanding of the world and our communications with each other, how we interact and respond to our environment, and how we can move forward—or not—based on these stories and responses. As King says, "Stories are wondrous things. And they are dangerous." (2005); if no other stories of Flint had gotten out, the narrative from the Flint City Managers, State of Michigan, and former Governor Snyder would still hold.

However, other stories did eventually get out in a variety of ways—from stories by community activists and covered by journalists; from doctors who were alarmed by what was happening to their patients and the health crisis level results they were seeing from the lab work;

from researchers who ran tests and mapped out the crisis in the city's water system. Every person touched by the Flint Water Crisis has stories, but only some had stories that were able to reach connections, platforms, networks, and venues beyond those of the governance of the State of Michigan to bring different stories to a wider audience and call into question the validity of the story being told by those in power in the Michigan governance. This story of the Flint Water Crisis shows just how 'wonderous' and 'dangerous' stories can be. It also shows how our social structures and organizations, systems of power, limitations of access, and inequity are a part of these 'dangers' or 'wonders'—depending on the perspective or story of those who tell and listen to the story.

"Perhaps we shouldn't be displeased with the 'environmental ethics' we have or the 'business ethics' or the 'political ethics' or any of the myriad of other codes of conduct suggested by our actions. After all, we've created them. We've created the stories that allow them to exist and flourish. They didn't come out of nowhere. They didn't arrive from another planet."
― Thomas King (*The truth about stories: A Native narrative*, 2005)

Environmental theory and the emergence of environmental humanities:

Though this is a dissertation in writing and rhetoric, this topic cannot be discussed without the theoretical context of environmental theory (primarily from the social sciences) and the emergence of the environmental humanities. Likewise, decolonization is a key process to frame my analysis, and I address it as part of the discussion that follows.

Let's start with the first point, more inclusion of researchers of color. Given the limitations of this dissertation, I will limit this focus on Indigenous researchers. While Henry (2022) connects a direct line from environmental sociology to the emergence of environmental humanities that is often signaled by Carson's book *Silent spring*, this connection is often a part of my own work with others, including the work I have been and still am doing with environmental

sociologist, Dr. Stephen Gasteyer. My own background in the study of the social sciences to the

humanities has informed my research in writing & rhetoric and cultural studies—have formed

my understanding of how the social sciences and the humanities enhance each other; they are, in

my mind, as interdependent as qualitative and quantitative research are to each other to see

connections and relationships between these ideas.

But, sometimes there is very little cross-over between areas of research and this means

that ideas can be devalued as a result—like we sometimes see with qualitative researchers doing

qualitative research. Likewise, outside of Indigenous studies and rhetorics, it is rare to see the

inclusion of Indigenous work intertwined with environmental humanities and social sciences

beyond the inclusion of one or two sources. In the forthcoming chapter, "Resisting extraction of

the Sacred: Indigenous-based grassroots resistance to frontier capitalism"[3] in the book

Grassroots activisms: Public rhetorics in localized contexts, we demonstrate how the social

sciences, humanities, and Indigenous work can intersect:

> Using a comparative analysis, we discuss the underlying rationale for takings and
>
> extraction – the treatment of land and water as a resource to facilitate accumulation of
>
> financial assets and territory. Through these stories, we build on a growing literature that
>
> describes frontier capitalism as a process that threatens life itself (Bacon, 2016; Dunlap,
>
> 2020). We are in agreement with Mohanty (2003) that "An anticapitalist critique
>
> fundamentally entails a critique of the operation, discourse, and values of capitalism and
>
> of their naturalization through neoliberal ideology and corporate culture" (p. 9). By using

---

[3] Frontier capitalism is partially defined in the following quote. However, while multiple environmental sociologists and some Indigenous researchers use this term in reference to a development of the idea of 'commodity frontier' Moore (2000), the idea of frontier capitalism is focused on the profitability of 'undeveloped' lands, the lands that are often neighboring or the lands of Indigenous communities—through removals, ceded and unceded lands, and the remote locations of Indigenous communities. Given the finite nature of frontiers that are unexploited at this point in time, in addition to that over 80% of the Earth's bio-diversity is located in Indigenous lands (World Bank), there is more awareness of the push of exploitation of these lands and 'resources' for capitalistic use and profit.

an anticapitalist critique of frontier capitalism, we center local resistance to exploitation

of lands, bodies, and waters. We then weave in activists who have mobilized as water and

land protectors in multiple contexts – recognized and unrecognized Indigenous

communities, urban communities, and displaced peoples. We discuss not only the

strategies and tactics employed, but the use of ceremony both to facilitate local and

international solidarity. (p. 1, "Resisting Extraction of the Sacred")

Through this act of weaving together specific Indigenous values and approaches to

decolonization with researchers who are calling for decolonization, we are meeting on the

common ground—the ground we share—the Native land on which we live.

As we see inclusive approaches in the work discussed in Chapter 2, particularly that of

York University and 4Rs Youth Movement. Much like Brookes (2009) addresses, we all share a

common pot and we all have to work to find balance within it. Whitebear, Gasteyer, and I argue:

Increased extractive activities and violation of the sacred connection between land, water

and people has heightened the need for the honoring and protection of those who are on

the frontlines of resistance to these violences. This chapter focuses on localized projects

while connecting them to global issues related to extractive capitalism. Specifically, we

look at examples from the record number of global murders of water and land activists by

cartels, corporations, and governments (Global Witness, 2020) to expulsions of peoples

from their homelands by government actors' non-governmental interests. These examples

show how frontier capitalism (Patel and Moore, 2017; Laungaramsri, 2012) is conducted

by multiple players, as well as resisted by multiple communities. (p. 1)

While the violence of extractive capitalism is harmful and the governmental role within it is not a

new argument to make in the environmental social sciences or humanities, it is not always

accepted that there is a community or public role in the institutional structures around environmental rhetorics. It is debated, as we will see in the next section of this dissertation chapter.

Additionally, we continue by establishing the path for this to happen through the 4Rs as a way to move forward together and move away from our shared history of the violences of frontier capitalism:

> By using ceremonies and community building activities to bridge place and space, we explore how relationship, respect, reciprocity, and responsibility on the grassroots level in communities can push back on frontier capitalism. We rely on the 4 R's – respect, reciprocity, relevance, and responsibility – as a guide to bring these stories together (Kirkness & Barnhardt, 2001; Pidgeon et al., 2014; Cull et al. 2018; 4rsyouth.ca, 2020). Additionally, we discuss how the breakage of the 4 R's carry on the lineage of violences through frontier capitalism…(p. 1, "Resisting Extraction of the Sacred")

If we continue to let our histories (including our theoretical histories) be limited, our stories will remain limited. Likewise, if we limit these stories, as has been done in the past, the 4Rs are broken—by removing respect for our different relationships and the responsibility we have toward building a reciprocal future.

Environmental studies is often researcher-, rather than community-, driven, so it sometimes fails to translate into policy development and implementation. This is true, as Henry (2022) addresses, with "Just transition frameworks that animate the U.S. environmental justice movement…outline a more capacious social justice-centric vision to emphasize the importance of countering structural inequalities *as a basis* for action." Henry goes on to argue that, the narrative methods accommodate participatory processes and are thus more conducive to justice

and equity. He refers to the Climate Justice Alliance (CJA) as "a coalition of seventy grassroots environmental justice organizations" including the Indigenous Environmental Network (IEN). As a part of their definition of just transition, they specifically state that it needs to be place-based (in principles, processes, and practices), wholistic, and "redressing past harms and creating new relationships of power for the future through reparations." (p. 10, Henry). The input of the IEN is extremely clear in this 2013 statement of just transition by the CJA. As summed up by Henry, "Key to these processes is an emphasis on redress and reparations. In this framework policy paths necessary to ensure an equitable transition are highly contingent on geographical and cultural context and require community buy-in, agency, and empowerment." (p. 10). While it is clear that IEN is working off of a variation of the 4Rs, with their input in the statement of just transition, Henry concludes this section of the "Introduction" by stating "The IEN outlines a markedly decolonial vision for a just transition, viewing it as a process that 'affirms the need for restoring indigenous lifeways' by recognizing cultural sovereignty and Indigenous knowledges." (p. 10-11). While Indigenous work is not key in Henry's work, it is clearly acknowledged and provides clear nods to a part of the 4Rs in this work, albeit not directly.

It is also important to acknowledge that the CJA also addresses the idea that efforts in a just transition "must actively work against and transform historic social inequities based on race, class, gender, immigrant status, and other forms of oppression." (p. 10) While 'other forms of oppression' is vague—it is inclusive to share the umbrella term. Specifically, it shares the umbrella term in a way to include all of the categories of cultural rhetorics. And, more specifically, it does address the often-silenced voices of the people of Flint. As we will discuss later, Flint has a large immigrant population, is a city of color that is often connected to working-class status and poverty, has a large single-parent population, and so forth. And, as discussed in

71

the last chapter and earlier in this chapter, the 4Rs is a community-centered, inclusive, decolonizing methodology and practice that is being shown to work in diverse communities like Flint. Therefore, this scope of voices is essential as we move forward to discuss the idea of narrative, inclusion, decolonization, environmental equity, the 4Rs, and a just transition in the upcoming sections and chapters.

Moving forward together:
     In order to understand the direction this dissertation takes, it is important to observe the context provided by the constellation of the fields of environmental sociology, environmental rhetorics, and technical communication. Together, they point us toward the 4Rs. In the following, I trace this constellation and link the 4Rs approach to explain why an Indigenous rhetorics approach contributes to cultural rhetorics, decolonization, and Indigenous qualitative and quantitative methodologies to the larger discussion of Flint and "just" transitions in general.

     The social and institutional construction and enforcement of colonization of the past and the present which has been argued by many in the humanities and the social sciences.[4] As discussed,

> The role of capitalism in settler colonialism is a tool of colonization. While colonization
>
> exists in other empires (i.e. socialist, communist), capitalism is a primary tool to further

---

[4] I realize this is a glancing statement. However, I given the length of the dissertation, there are some things I do not have the space to develop. Many decolonial writers from the humanities and the social sciences—which includes many Indigenous researchers as well—such as Fanon, Césaire, Mignolo, Daca, Escobar, Gramsci and so forth. Some of these writers appear throughout this chapter in citations and references These decolonial academics discuss and debate the world of coloniality and how to develop a framework of decolonial options. In the spirit of this work, this dissertation shows a potential path of one decolonial option to heal the wound of colonization through Indigenous methodology.

colonization. Settler colonialism completely disrupts existing systems and relationships

with lands and waters. It is through ongoing occupation that "settlers make Indigenous

land their new home and source of capital," causing "the disruption of Indigenous

relationships to land [which] represents a profound epistemic, ontological, cosmological

violence" (Tuck and Yang 2012, p.5). This violence, as the following examples

demonstrate, is felt daily by Indigenous people and is a threat to lands, water, and people.

(p. 3, Whitebear, Pebbles, and Gasteyer, 2024)

This take is nothing new for those who do work in Indigenous studies, but it is new for many of

those who do environmental work. While many people who do environmental rhetorics, or the

larger scope of environmental humanities or social sciences, their inclusion or even focus being

placed on the work of Indigenous researchers and practitioners is different. While many in these

fields call for the inclusion of different narratives and counternarratives, most of the work

referred to in these arguments are not by those who actually work with, sometimes exclusively,

these counter narratives. In the quest to find a new way, a decolonized way, it is best to actively

integrate these researchers into our work and put them into the conversation if not allow them to

dominate the conversation to find a new way forward.

By connecting settler capitalism and frontier capitalism to the violence of the capitalistic

structures that these systems and institutions reinforce, we recognize the reciprocal relationship

we have with our environment(s). These structures are closely intertwined with colonial

structures that have used people, land, and water as commodities. These concepts that are

developed in environmental sociology are closely related to the violation of sacred land that was

colonized, and all Native land is sacred—as explained in Chapter 2, and the genocide of Native

peoples and the cost of human life and all our relations. In "Resisting Extraction of the Sacred," by Whitebear, Gasteyer, and I argue:

> Settler capitalism is a system in which Indigenous lands, bodies, and waters are exploited for capital gain. Alexander Dunlap (2020) describes this capitalism as part of the "Genocide Machine[i]" (p. 1) which situates capitalism "as a structure of perpetual conquest" (p. 7). Capitalism constantly expands in search of new resources to exploit… Laungaramsri (2012) asserts that the location of land and water capitalization is not a coincidence, but rather a strategic choice of a frontier in which existing land practices are viewed as backwards to progress. When coupled with Smith's (2012) argument that the tension created by the "denial of humanity" to Indigenous people by settler states that "demonstrate[s] palpably the enormous lack of respect which has marked the relations of [I]ndigenous and non-[I]ndigenous peoples" (p. 125), we find that the strategic choice is also based in violence.. … Frontier capitalism is violent and a continual cycle in which new spaces are sought for capital gain. Patel and Moore (2017) describe the capital gain as made possible by cheapening, which is "a strategy, a practice, a violence that mobilizes all kinds of work—human and animal, botanical and geological—with as little compensation as possible" (p. 22). It is through the severing of relationships and continual, resulting cycles that settler capitalism continues to expand toward new, albeit increasingly limited, frontiers.
>
> (p.4-5, Whitebear, Pebbles, and Gasteyer)

It is clear that part of the violence of capitalism is the devaluation of the essentials for life and the breaking of the sacred connections of the 4Rs. It is this same violence and breakage that we see happening in the Flint Water Crisis—and the lack of action by the institutional tools of

capitalism and the reinforcement of the violence capitalism uses to continue these systemic structures.

As I was working on my exams, I was working how to explain how the Indigenous use of the 4Rs (relationship, respect, responsibility, and reciprocity) creates and maintains the circular nature of how we connect and relate from story, understanding, action, and making, I led a discussion as a guest lecturer in a Nature and Writing course at R1 in Fall 2019. I posed a couple of questions to the students prior to moving into our discussion and application of the concepts within two readings given to them before the class session.

*I asked students two questions, "Based on your experience in this class, **what** would you say environmental writing is?" and "Based on your experience in this class, what would you say the **purpose** of environmental writing is?" The importance of seeing the scope of their definitions of environmental writing and the purpose of environmental writing was essential before we moved into discussion of the 4Rs and how their perspectives and understandings of how this Indigenous concept will shift their self-definitions and the purposes of environmental writing.*

*While their definitions of **what** environmental rhetoric and writing is ranged from human-centered metaphorical understanding [i.e."Using the environment to understand ourselves and how human relationships personal and interpersonal can be reflected with nature (metaphor)"] and an extension of self to how environmental rhetoric can be used in the sciences and humanities [i.e. "Scientific vs. non-scientific environmental rhetoric (ER)--both have a good purpose (good intentionality and purpose)"]. Further discussions focused on how ER can engage our senses, utilize and develop our observational skills, increase our ability to reflect and connect, be therapeutic, and help us connect to the natural world as well as promote goals (i.e.*

sustainability). Their answers tended to center on the author and be inclusive of their audience to some degree, especially if using etic to persuade or influence their audience. There was very little about connection and interdependence to shared environments or the acknowledgment of place and space and how these interact.

*In turn, when I asked about what the **purpose** of environmental writing is based on their class experiences, their responses to all of these centered around the very human experience and did very little to move beyond it, from focusing on their own interest and curiosity, to their leisure and pleasure, to helping their future careers--while other responses wanted to connect to nature in some way--be it through their roles in nature, how to relate to the world around us and nature, or to connecting to nature itself. Others saw environmental writing as a tool: a way to connect their lives and personal experiences to more genres (and, interestingly, the students saw this type of writing as less formulated and applicable than other genres, allowing them more flexibility to express their ideas); a tool used to persuade others to actions like conservation; a genre that will disperse information, express emotion, and increase awareness: it is a means to connect parts of personal lives and experiences in both the persuasive and reflective (in a way of metacognitive connections), even to the level where it allowed connection to nature on an instinctive level. They often connected it as a writing practice that allowed for more personal connection and allowed them to create a personal connection and focus on a topic as well as seeing it as a way of educating, learning, and teaching. In general, it was perceived as a newer, broader rhetorical strategy or tool for them to use.*

I went on to break down the 4Rs for this class and while there was some silence after the lesson, I was told it was an idea that re-emerged multiple times in class discussion after our session. One of the key things I got from this class were the responses from the students. Their

perception that environmental writing is a newer genre which elicits a mixed response from me; it is a combined response of yes and no. It is one of those responses that requires some thought and can vary depending on whose perspective is being referenced and what parameters are put on it.

The same can be said on the way environmental writing is used, how we do or do not center ourselves in it, who you are communicating with, and how it is used in education, learning, and teaching—in short communication within these parameters and genre expectations.

As we see from this, there are certain expectations the students have about environmental writing, what is it, how it is used, and who/what is at the center of the writing. This is a common idea discussed in narratives and stories. The same can be said of the narratives around Flint, the communities of the city, and the Flint Water Crisis. As we look at these narratives in the last chapter, we may repeat some of the ideas that the students discussed in the Environmental Writing course they were taking.

Why cultural rhetorics and Indigenous rhetorics?

The narrative above is part of the reason we need to think about cultural rhetorics and, more specifically, Indigenous rhetorics. As Henry (2022) addresses in his argument for the importance of both qualitative data and narrative to be included in the quest to find a road to a 'just' transition; While tools such as narrative analysis, chi squares, linguistic analysis, textual analysis, interviews, focus groups, surveys, and so forth can give us quantitative and qualitative data of the stories collected by researchers, Henry (2022) states:

The use of narrative theory in climate adaptation research can yield insight into

seemingly disparate socio-cultural dynamics impacting a communities' adaptive capacity.

Moreover, storytelling can be viewed as data itself, rather than just a means to collect

data, and because research is privilege the enactment of narrative over the passive

reception of storytelling, narrative methods can foster a more coproductive process

wherein community values drive action… (p. 15)

It is very clear that beyond the qualitative data collection of storytelling must be done by the

community, and these community values must be determined by the community—not the

researchers. Not only that, but the data needs to be collected by a cross-section of the community

or communities involved within an environment. It is essential that the researchers do not

exercise 'privilege' over this data but that they are creating a 'coproductive process' that

involves both the community and the differences within the community itself—exactly as we

discussed with the 4Rs in relation to both the Indigenization and decolonial work in the previous

chapter and the start of this chapter.

However, Henry (2022) also incorporates other ideas we discussed with the 4Rs in

Chapter 2. He incorporates the idea of storytelling (which we will develop more later in this

chapter with Indigenous rhetorics and cultural rhetorics) and policy development and

implementation (which we saw being done in the examples of the 4Rs and Indigenous practice

that connects us to the land and each other through relationality in Chapter 2 and we will see in

the continued development of the 4Rs in Chapters 4 and 5). Henry (2022) continues to argue the

importance of storytelling as quantitative data "garnered through participatory research can

counter more 'extractive' research methods, prompting a community-driven approach to policy

development and implementation this represents a significant departure from policy studies,

which tend to view narrative as subjective, unreliable, and untranslatable into usable data." This argument is not new, it is one that is used in cultural rhetorics. The discounting of story is a way of silencing disenfranchised voices. It is a way of perpetuating the colonial system that policy often supports and perpetuates the colonial structure of institutions. This is also part of the reason that the first chapter explained the 4Rs as a way that institutions can start making changes to decolonize their policies and structures. Henry (2022) continues his argument with, "Again, this resonates with environmental humanities research, which considers how human values, beliefs, thought systems, and even the imagination serve as obstacles to or opportunities for collective change." (p. 15). This push in the social sciences and humanities, and more specifically in the environmental social sciences and humanities, to include storytelling and narrative is a way of pushing back on the colonial structures that discount voices that are often disenfranchised by researchers who reinforce colonial structures, sometimes unknowingly, and through research practices that are not community-centered (which are centered in Indigenous practice and the 4Rs, as discussed in Chapter 2). We will explore these ideas more in the following sections of this chapter, particularly as we move into cultural inclusion. Because, as Henry (2022) states,

> Cultural representations play an important role in changing dominant narratives and are well-positioned to support the planning and implementation of just transition programs and policies by recognizing histories of erasure and exclusion and elevating diverse ways of knowing often omitted by policy design. (p. 15)

This act of disenfranchisement (which will be discussed more in this chapter and Chapter 4) is directly related to the importance of the 4Rs and why it should be used on Native land to combat the act of erasure and exclusion and to move toward changing a broken system, which were discussed earlier in this Chapter and in Chapter 2. Policy will never be inclusive, be wholistic, or

'just' until *all* voices are included, including those that push on the dominant narratives. Justice cannot be achieved until equitable representation happens and the needs of *all* are met by policies on the local to federal levels, by all the institutions that serve the communities, and *all* the community voices are included in the design of the institutions to move this inclusion, equity, and justice.

In these different quotes, Henry (2022) highlights a couple of very important issues with the data that many researchers have discounted and that policy researchers continue to discount in their studies and points out how this perpetuates inequities in the research and systemic design of institutions, their design and structure, and policies made in our government that are enacted by these institutions on multiple levels. While Henry (2022) states "the cultural representations I consider throughout this book [are] not merely diagnostic or critical but also generative. They offer epistemological roadmaps for community-driven visions of a just transition." (p. 16) and that "Methodologically, *Hydronarratives* is in part inspired by the energy humanities, an interdisciplinary subfield that attends to the contemporary environmental problems by considering energy through the prism of culture." (p. 16). But, as we move forward through this section, it may become clearer that this is moving into another area of the humanities, one that is culturally-centered and does give voice beyond what was considered in the western-centric areas of environmental study early on in the humanities and social sciences—as ethnologies and narratives. In the following sections of this dissertation, we will look at how these institutions, their design and construction, the work they conduct, and their communication are strongly influenced by incomplete and biased data and—in turn—have unjust responses and policy enactments.

It's all about the rhetorics:

So, let's start discussing environmental rhetoric which, formally, has a short history. The story of it officially starts shortly after environmental humanities and environmental sociology. Environmental rhetoric is a fairly new field--but it has a range as broad as environment and environmental issues spread. As a result, environmental rhetorics is a field that is expanding, changing, and growing. It is a field that has a range of potential and ability to be modified and adapted as needed.

For the purpose of this section of the paper, we will be looking at a sample of three key books in environmental rhetorics which both outlines some of the goals of environmental rhetorics and provides a historical lineage of the emerging field, to help understand the sequencing and development of environmental rhetorics which can help the reader understand how environmental rhetorics, narrative, and cultural rhetorics (and, more specifically, Indigenous rhetorics) plays a role as we move forward. This purpose of this section of the chapter is to: (1) understand a short history of the field that shows the scope and range of the field, including how the breadth of fields within it can cause siloing of environmental rhetorics, bringing forward the need to work across and bridge between multiple fields and genres; (2) explore the ever-broadening movement toward a wholistic approach within environmental rhetoric to better understand variations within ontological and epistemological approaches and the stories that reflect these approaches; (3) apply a heuristic for environmental rhetoric based on a wholistic, ontological epistemological approach that will encourage a more inclusive, global understanding and discussion of environmental issues; and, (4) explore how this wholistic approach and heuristic can help environmental rhetorics be inclusive to more epistemological and ontological perspectives and applications through story. This, in turn, connects environmental rhetorics to

cultural rhetorics in the developing environmental conversation, opening it for public involvement, personal connection, embodiment, and to encourage more diversity in the voices in the ever-pressing environmental conversations we are having in our communities, states, nations, and globe.

While addressing these key points, I will be examining the need for a wholistic approach to connect the silos of the diverse subjects that are connected by environmental rhetorics by creating a heuristic that mirrors this Native wholistic approach we will be exploring and discussing throughout the paper. The approach I am taking in this dissertation will address the other issues surrounding the inclusion of marginalized voices and perspectives to answer the call to make environmental writing more 'democratic' and open to a broader audience of global 'citizens' by including voices and perspectives that are currently excluded or minimized in academic and professional discussions in environmental rhetorics. This heuristic will allow for more personal and community connections to be made, thus increasing ways of knowing and environmental experiences that will, in turn, allow a more embodied experience and sympathy, or even empathy, in the diverse experiences by the inclusion of marginalized voices.

However, before I can do that, let us look at a short history of environmental writing and what these rhetoricians see as areas of concern in the field, the potential for future research, and the gaps that are present in the field.

Understanding a short history of the field of environmental rhetorics:

This section will show the scope and range of the emerging field of environmental rhetorics. In this process of trying to be inclusive of multiple fields within environmental rhetorics siloing has occurred.

These different fields are all connected to environmental issues, but they are not connected well to each other, creating divisions, separations, and hierarchies. While environmental rhetorics is trying to broaden itself as field, to be inclusive of all of these siloed fields, institutions, and perspectives, it has yet to reach a place that is diverse enough and broad enough to connect to an broader public, creating a field that is both ontologically and epistemologically inclusive within the interdisciplinary field of rhetoric. To be brief, environmental rhetorics is working, step by step, to become a field that is diverse in many ways: connecting multiple fields, open to multiple genres, and accepting to the multitude of cultural ways of knowing and being in this world we share.

In this discussion, I focus on *Landmark essays: On rhetoric and the environment*, *Ecospeak*, and *Ecosee.* These three books are bound by the issues they each try to address, the gaps they see in the field, and the limitations that emerge with each new stage they bring to the field. In this process, these books are moving forward, but never resolving the persistent issues of cultural inclusion, diversity, a broad audience, or creating a space between the siloed fields that need to stand together equally and without hierarchy. In short, it struggles with moving past the senses and into an all-inclusive ecobeing.

Landmark essays: On rhetoric and the environment

The first of these texts is *Landmark essays: On rhetoric and the environment* edited by Waddell (1998). This text was selected to give a clear overview of the interdisciplinary use of rhetoric and to appeal to rhetoric in a broad sense. Additionally, the different essays in this collection established the interdisciplinary nature of environmental rhetoric. It is a collection of essays spanning fourteen years (from 1981-1995), however all but three of the eleven articles were published after 1991. This is very important for two reasons. First, it is establishing the

significance in the field as emerging in the 1990s. This is not to say that the field did not start before this time--this text clearly establishes that it did--it just marks the 1990s as the decade when the field started to really emerge as one that was clearly interdisciplinary. Second, at the time that Waddell published this collection, he saw it appealing "to an interdisciplinary audience, including those interested in rhetoric (especially rhetorics of science and rhetoric and the environment), environmental studies, and modern American history/American studies" (1998, p. xi).

Waddell (1998) acknowledged that canonical 'classic' rhetoric "was fundamentally concerned with public deliberation about matters of policy." and that it is public discourse and 'rhetoric of citizenship' (p. xi) that lies at the heart of this concept of 'classic' rhetorics. Waddell (1998) continued by stating, "... a literature on rhetoric and the environment has only recently begun to emerge." (p. xi). Given this focus on rhetoric as both public and as an extension of citizenship, it is not surprising that Waddell's purpose for this collection was to present "some of the best essays yet published on rhetoric and the environmental" for a decade and a half to "appeal to an interdisciplinary audience, including those interested in rhetoric" (p. xi).

One of the things Waddell (1998) does not address is the narrative used in the essays. As mentioned earlier, many of the included essays focused on historical information or current events that utilize historical events. Of particular note are the historical pieces that told the reader a story through documents: Oravec's (1984) "Conservationism vs. preservationism: The 'public interest' in the Hetch Hetchy controversy." Likewise, the pieces that told stories of current events from different perspectives were exploring the use of story and of perspectives and different ways of perceiving and understanding the situation, like Lange's (1993) "The logic of competing information campaigns - Conflict over old growth and the spotted owl" and Moore's (1995)

"Rooted in the soil: How understanding the perspectives of landowners can enhance the management of environmental disputes." These pieces stood out, because they were diligent in covering their topic, but they were clearly incorporating story and differing opinions in a responsible and respectful way.

While this collection was focused on third person narrative structures, stories were central to many of these pieces. Given this unstated focus in the collection, it is not recognized in the calls for possible work to be done in environmental rhetoric, either.

While Waddell (1998) makes suggestions for areas of further research to be done to benefit environmental rhetoric, five of these calls are important for the purpose of this paper:

- Studies... that broaden the audience for the rhetorical analyses of environmental discourse
- Studies that further enchance [sic] the already transdisciplinary nature of the rhetorical analyses of environmental discourse by drawing upon (among other fields) rhetoric, philosophy/ethics, history, political science, psychology, law, and environmental sciences.
- Studies that examine visual/graphic aspects of environmental communication.
- International and cross-cultural studies
- Work that abstracts from diverse studies of environmental rhetoric in a new rhetoric, a general theory of public deliberation in a democratic culture (Waddell, p. xviii-xiv)

This book establishes environmental rhetoric as an interdisciplinary field (albeit in a limited way) that was just starting to emerge as a field unto itself outside of the individual disciplines that were included within this collection. It also establishes the need to be even more inclusive of other fields, for the field to develop itself, to broaden its audience and contributors, to examine

85

other modes of communication, to become more diverse, and to develop into something different than it already was. The selection of this text is important, not only for the content of the essays and authors to show the breadth of the importance of rhetoric in the field of environmental writing, but because of the time the collection was made. While it was published in 1998, after the second book highlighted in this section of the chapter, it has a call for future research that is essential in understanding the selection of the next two books and the argument being made in this paper.

Ecospeak

      Ecospeak, by M. Jimmie Killingsworth and Jacqueline S. Palmer (1992), is the second environmental rhetorics book to be used in this brief history for this paper. This text does three things, mirroring Waddell's (1998) work. First, there was an expansion of the siloed subject areas that environmental rhetoric pulls from to include in its range and scope of work-- including governmental work and policy, as well as practices like agriculture. To be more direct, it makes the field of environmental rhetoric more interdisciplinary, but does not unify it as a field much beyond expanding the number of academic and professional fields that add to the field of environmental rhetoric. Secondly, Killingsworth and Palmer (1992) are equally concerned about diversity of audience and reaching a broader audience for the field of environmental rhetoric; not much changes this diversity of audience except the first point of including more fields of study and practice to bring about that diversity. Finally, there is a use of narrative, and a recognition of this narrative that did not happen in Waddell's (1998) collection of essays.

      In context of rhetoric interdisciplinary focus of the field of environmental rhetorics, Killingsworth and Palmer (1992) "want to delineate the patterns of rhetoric typically used in written discourse on environmental politics" and are focusing on "...two audiences, one

motivated by scholarly interests, the other guided by personal and political interests"

(Killingsworth and Palmer, 1992, p. 1). Much like Waddell (1998), the authors acknowledge

their interest in "The first audience [which] is composed of students of public rhetoric, to whom

we offer a work of *rhetorica utens*, a study of rhetoric in use" in order to "restore balance in the

field by making a practical contribution to the art of rhetorical criticism" (Killingsworth and

Palmer, 1992, p. 1). Additionally, like Waddell (1998), Killingsworth and Palmer (1992) want to

"appeal to an interdisciplinary audience" (Waddell, 1998, p. xi); the second

audience Killingsworth and Palmer (1992) are seeking to reach are "...people engaged in the

effort to adjust thought and action to the changing conditions of human life--scientists,

government officials, investigators, managers, workers, farmers, environmental activists, nature

mystics, and anyone else who puts thought on paper with the intention of changing the way

others think and act in the world." (p. 2). Additionally, Killingsworth and Palmer (1992), in their

work (like Waddell's), are trying to show the interdisciplinary range of environmental rhetoric

(which will become even more apparent in the visual representation that will be explored in the

next section of this paper) and are clearly addressing two of Waddell's calls (1998) to "broaden

the audience" and "draw[…] upon (among other fields) rhetoric, philosophy/ethics, history,

political science, psychology, law, and environmental sciences" (Waddell, 1998, p. xix).

  While *Ecospeak* came out prior to *Landmark essays*, some of the essays in *Landmark*

essays are older than *Ecospeak*. Because of that, I would argue that *Ecospeak* is one stage further

along in the development of the field of environmental rhetoric. *Ecospeak* overlaps and expands

on the historical focus (therefore, narrative), in its call for interdisciplinary inclusion in the field

of environmental rhetoric (while, as developed in the next section, keeping and expanding the

silos of the different fields and practices). Additionally, it has two of the same goals of including

a broader audience and being more inclusive of all peoples--as we are all affected by local and

global environments (despite neither book moving past a Eurocentric, 'classical' canon).

Ecosee

    Ecosee, edited by Dobrin & Morey (2009), is a collection of environmental essays that

use rhetorical analysis, exploring many aspects of visual rhetorics--through writing and/or

images. This book addresses these same ranges of environmental rhetoric, but it expands on both

of the previous works to include visual rhetoric alongside written rhetoric, expands on the

interdisciplinary areas of study within environmental rhetoric, introduces a strong pattern of

personal story into the narrative structure, and hints at addressing a more multicultural audience

and inclusion into the discussion--leaving the reader with just glimpses of what could be.

    As far as rhetorical analysis applies, Killingsworth & Palmer (1992) stated "as much as

the environmental dilemma is a problem of ethics and epistemology, it is also a problem of

discourse" (p. 6), while Dobrin and Morey (2009) respond that "For ecosee [sic], though, the

environmental dilemma is not just a political/ecological crisis about the protection of the

environment but a dilemma of representation, a dilemma of rhetorical and visual-rhetorical

choice." (p. 3) The "environmental dilemma" that Dobrin and Morey (2009) refer to is

commonly referred to as the climate crisis now. They see the climate crisis not just as a

political/ecological event, but a crisis of inclusion of representation. This representation of the

crisis is inclusive of more than one rhetorical method. Inclusion in the environmental discussion

is an issue on which all three texts agree. They also want to see bridging occur--whether it be

across fields, genres, modes--to open the audience of environmental rhetoric. In short, they want

the narrative of the field to be even more inclusive.

This was in the context of the history of environmental scholarship they outlined, including "environmental rhetoric, environmental discourse, or, more recently, ecocomposition. These subject areas, usually housed in departments of history, political science, the natural sciences, communications, and English, focus on the language used by both environmentalists and anti-environmentalists." (p. 3) Thus, they stress the importance of looking at environmental rhetoric and taking a longer historical view of its development. This is why this collection is so important, as it answers the third of Waddell's calls (1992), to "examine visual/graphic aspects" in the field of environmental "communications" --not rhetorics--showing some of the shift of focus in this collection of essays from the previous two works (p. xix). The hope is that inclusion of more modes will help bridge different siloed fields and subjects. However, in the process, they combine narrative and storytelling through language and visuals. In many ways, Morey and Dobrin are not just referring back to Waddell's calls (1992), they were addressing Killingsworth and Palmer's (1998) concerns, below, of unifying the rhetoric used in their collection to include more than one mode to tell the various writers' narratives and stories:

> With this image of an emerging discourse that brings a plurality of knowledges cogently and coherently to bear on a problem affecting the world public, we conclude on a hopeful, if cautious, note. Even if we find ourselves in a Babel of discourse communities, each with its own characteristic language, epistemological outlook, and agenda for action, there remains in rhetorical inquiry a need, a mission, and a hope for a generally accessible narrative, the story of how human action reconciles conflicting demands in the search for the good life. Even while stressing caution about claims over the accessibility of the information, rhetorical criticism urges continued development of the story of human cooperation. (p. 201)

This clear objective of creating an accessible narrative is important to inclusivity; we all have stories. More importantly, we all have stories of how we connect and relate to our environments. Because of this, is a more wholistic, interdisciplinary approach also needed to connect these fields with different genres, modes of communication, and rhetorical expectations? There is a consensus among these sources that there needs to be a more inclusive and unifying method to connect environmental rhetorics across all of these fields to address the climate crisis that threatens all life on the earth. I would argue that story is the way to do it.

There was one piece that stood out in this collection: the way it incorporated respect to its subject, the responsibility it took on to the fate of the essential actor in the story, the understanding of the act of reciprocity between actors and the environment, and clarity of the relationship and the connection made between the author and the primary actor in this story made Morgan's "Connecting with animals: The aquarium and the dreamer fish" stand out. It was an extremely well written piece that was beautifully balanced in its approach and reflection. While using a clear narrative voice—as many of the pieces did in this collection—it connected to readers in a way the other stories did not. I would argue it is because of the unflinching responsibility the author, Morgan, took and the understanding of the complexity of the reciprocal relationship Morgan had with the dreamer fish. And, Morgan did all of this with grace and respect for those connections. This piece pulled all of these concepts together and unified them in a way that is rare to see in environmental rhetoric.

This unification and need for a more inclusive rhetoric and diverse audience is echoed in the ongoing crises that are addressed in numerous environmental texts. According to Killingsworth & Palmer (1992), "Our analysis reveals a tendency of political identities to develop in response to the experience of actual physical crises" (p. 23) and that "each effort to

solve one crisis seems to clash with the solution of the others-pollution control reduces energy

supplies; energy conservation costs jobs" (p. 3). Given this division between people and of

crises, a more wholistic approach is important to minimize this division and increase adaptability

and expression of multiple perspectives and how it affects the lives of diverse peoples. In other

words, a wholistic approach would focus on unifying connections instead of creating

and focusing on divisions.

So, I will use the last two of Waddell's (1998) calls--one for "International and cross-

cultural studies" and a second to have a rhetoric emerge that reflects the diversity of the society--

to do two things that need to be done in the field, that are not done in these three texts. I will

develop and explore how cultural rhetorics and Native American rhetorics--a key influence in

cultural rhetorics-- can be applied in order to help environmental rhetorics to include diverse

studies as well as international and a variety of cultural voices and perspectives in this discussion

of environment, rhetoric, and a more open 'deliberation.'

One of the things I want to make clear here is that while many who take an ontological

approach to environmental rhetorics call for inclusion, it is not done in the same way that cultural

rhetorics, or the more specific work of Native American rhetorics, decolonizing work, or

Indigenization addresses the idea of inclusion. The work of *Landmark essays: On rhetoric and

the environment*, *Ecospeak*, and *Ecosee* talk about inclusion in a way that is a part of the

dominant narrative—that "inclusion is good" and "multicultural narratives should be included"

however, when push comes to shove they have minimal inclusion (as we will see below with the

work of technical communication and the visuals in the next section of this chapter). There is an

understanding that it is good, but it is not really included. There were only a few stories in all

three books that acknowledged the complexity of our history in the Americas—the colonization,

capitalization of our relations, our environment, and our bodies in a way that the environmental

sociology and humanities did earlier in this chapter. Without acknowledging this history, it is a

white washing of the events that has created the dominant narrative. This is why working with

Native American and Indigenous rhetorics and the use of the 4Rs and story is responsible and

responsive to settler colonial logics. This is why Indigenization and decolonization are so

important to this discussion. It grounds the work of the 4Rs and Native land from Chapter 2 and

is continued in this Chapter.

How can a holistic approach create a heuristic to create more inclusion in environmental
rhetorics?
        Now that a narrative of the history, and how it is trying to be inclusive of different fields

and different audiences, has been introduced, we need to look at how each of these texts use

story. As Morey and Dobrin (2009) state:

> From the perspective of *Ecosee*, the issue here is not a matter of competing images or
>
> who has the most compelling image but rather what the picture leaves out. Does it tell the
>
> whole story, or tell a story at all, and if not, who gets to say what the picture means or
>
> narrate the story it illustrates? Is the story a past event with no tangible connection to
>
> current or future human actions? (p. 300).

Story is used in all three of these texts (*Landmark Essays*, *Ecospeak*, and *Ecosee)*. However,

while narrative is acknowledged and used in all three texts, it is only in *Ecosee* that personal

narratives and connections are used in many essays in the collection. Cultural rhetorics--which

uses story, embodiment, decolonial practice, and constellation/relationality--often uses personal

story to help achieve all four aspects of the cultural rhetorics framework. According to Powell et

al, (2014), two key aspects of cultural rhetoric are borrowed from Native American rhetoric: the

importance of story and relationality. Together, story and relationality weave together to create

half of the basis of the key concepts within cultural rhetorics. This is the first way that Native rhetoric will be used as a bridge between environmental rhetorics and cultural rhetorics.

To understand relationality and the connection between cultural rhetorics and Native and Indigenous rhetorics, we will go back to Powell et al. (2014). In cultural rhetorics, relationality is a complex idea: "A cultural rhetorics orientation requires an investment in a methodological frame that values the relation among history, practice, and knowledge" (*Act II*). So, the history-- as a form of narrative and as a way of placing oneself in relation to others within a field or practice (constellation of sources, references, and materials used within a field of study or practice)--is connected to the epistemological and ontological work done. Powell et al. (2014) go on to explain how this relates to Native American/Indigenous studies and rhetorics:

> In *Research is Ceremony*, Wilson builds an indigenous research paradigm using indigenous practices such as relationality and relational accountability. For Wilson, to enact relationality means to understand one's relationship: to land, people, space, ideas, and the universe as interconnected and fluid. Relational accountability is *how* one is respectful and accountable to those relationships (i.e.: practices). Under an Indigenous research paradigm, Wilson understands epistemology, ontology, axiology, and methodology as relational concepts that are stronger as a whole and not the sum of its parts. (*Act II*)

Through these definitions we can see that the idea of relationality is complex in both cultural rhetorics and Native American rhetorics--which is no surprise as the former heavily relies on the latter to help define this concept. One of the issues is the complexity of this concept of relationality. It is abstract and hard to make concrete. In Native American and Indigenous studies and rhetorics, the only time this is defined is in story. It is never simply nor directly defined. We

will explore this issue later in this chapter and the next. Cultural rhetorics looks at how we, as writers and rhetoricians, position and layer our stories, "as these stories are always positioned within and among other stories" and "rhetoric (…) to be seen and heard as a series of stories, none of which can really be heard without listening for other stories, and all of which impact and are impacted by the relationships between them" (Powell et al., 2014). More specifically, in the relationality between us and our environment, we seek a connection, a connection that can only come if respect is present and reciprocity is established that enacts the connection of a healthy relationship between ourselves and our environments. This connection is reflected in story, the story of our relationalities. We are in bodies; "bodies are always in relation to the world around them" (Powell et al., 2014). It is through the use of our bodies and our relationship to the world around us that we construct our stories.

Our stories share that relationality, and "Of course, these stories—these practices will look different depending on the community—on the relationships formed between participants and on your relationships to the material [rhetoric] and the people who make it" (Powell et al., 2014). Multiple Native American scholars are used to the teach Native American rhetorics, as the relationship and practices between the two overlap and intertwine. It is through the stories that the rhetorical connections between relationality, respect, responsibility, and reciprocity (the 4Rs) emerge and are connected over and over again, as seen in the discussion in Powell et al. (2014) of Wilson's work (2008)--sometimes these use these specific terms and sometimes the concepts are referred to in other ways, but they are always present and interconnect with each other. This practice within the stories is so widely used and integrated into Native American rhetorics, as into its more inclusive Indigenous rhetorics, the 4Rs are used as a basis for multiple frameworks, theoretical approaches, and pedagogies and methods that use Native American and/or Indigenous

rhetorics and studies for the basis of their work. As we will explore in the next section of this chapter and developed in more detail in the next chapter, there is a wholistic design that more clearly defines the 4Rs in a way to make the definitions and applications of them more concise and clear, making it possible for us, as rhetoricians to see if our work is meeting this heuristic to create a more wholistic outcome to our work.

This inclusion of Native American and Indigenous thought is also lacking in these three texts. As Powell et al. (2014) mentioned *Research is ceremony* by Wilson (2008), which explains ceremony as a way to expand and strengthen a relationship or to build one, he relies on story to convey many of the ideas at the heart of this book. At the center of the book is a philosophy explaining this is how it is, here are the reasons why it is the way it is—and it all is because of colonialism and western perspective. And, this is what Henry (2022) is pushing to hear—other perspectives than those in the mainstream and these are the ones that Killingsworth and Palmer (1992) say they want to hear, but yet exclude within their structural representations that are expanding on the Enlightenment (which is the time of Western expansion and colonization) visual as shown in Figures 3 and 4 (below).

I propose that by using story, as discussed above, and the framework of the 4Rs as outlined by Pidgeon et al. (2014) and Kirkness and Barnhardt's (1991), a new application of the Indigenous wholistic framework can be used within the field of environmental rhetoric. By pulling from Smith (1999), Wilson (2008) the research methods that are used within cultural rhetorics are mirrored by the Indigenous framework of the 4Rs. This will explore how, where, when, and why is story present in three key texts of environmental rhetorics. This exploration will focus on how relationality, respect, responsibility, and reciprocity (the 4Rs) are conveyed through story in these texts.

> **"You know what they say. If at first you don't succeed, try the same thing again. Sometimes the effort is called persistence and is the mark of a strong will. Sometimes it's called perseveration and is a sign of immaturity. For an individual, one of the definitions of insanity is doing the same thing over and over again in the same way and expecting different results. For a government, such behavior is called... policy."**
> — Thomas King (*The inconvenient Indian: A curious account of Native people in North America*, 2012)

Focus: The Flint Water Crisis narratives in environmental writing

The fear and concern my mother felt for my safety when I moved to Flint to go to college in 1987 were dwarfed by the horrific events that are still ongoing in my adopted hometown of Flint. Her concerns were with the rate of violence and drug-related crime. However, those concerns, while related to poverty and many inner-city struggles—especially in border cities—were related to the concerns of white flight. The concerns now are of something that is not random or taking extra precautions: it is one that is related to the silent dangers of environmental racism. One of the dangers that Flint originally contended with was socio-economic voyeurism (i.e. finding the beautiful in the decay of a once financially-thriving city, the visual indication of job blight and white flight as a symbol of our throw-away society) diminishing a city to the images and flattening the presentation of the people of Flint to fit a narrative. (It is this narrative that Chapter 4 and 5 will enhance, develop, and complicate as we looked at multiple narratives of this specific space and place intertwined across time and different perspectives.) This is a narrative many cities in the rust belt share and understand—creating a common experience and shared story, standing with the communities of Flint on the shared 'common ground.'

Since the Flint Water Crisis, Flint (and, in many ways, Detroit) became a poster child of environmental voyeurism (i.e., a place of environmental disaster that becomes part of spotlighted news cycle where celebrities and politicians make their one-stop to promote themselves, using
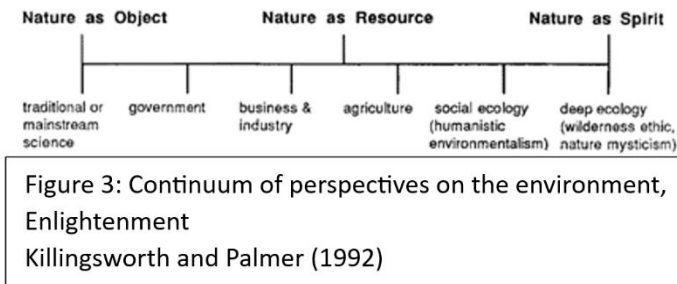
the voyeurism to their advantage never to be seen again after the news stories move on, leaving the people who live there with the unchanged environmental aftermath). It is a dystopian story that others tell as a cautionary tale, a moment of national rubber-necking at the wreck of Flint. The creation of this type of narrative manifests a power differential and a barrier between the viewer and the viewed that is, in and of itself, a rhetorical tool that removes the power of the city and the people who live there.

Constructing the system and institutions in America and Flint

The one thing both narratives of Flint have in common is power. There is power in constructing, controlling, and silencing voices that contradict or challenge a narrative. There is a power differential in the narrative of Flint, and we will first look at how this power differential comes into play through environmental rhetorics. The breakdown of how the story is communicated from different sources on how the dominant narrative of the ongoing Flint Water Crisis is constructed, presented, and dispersed is needed to analyze the power dynamics. These power dynamics change the rhetorics, the cultural interpretation of the dynamics, and the media representation of the Crisis. To help process how these power dynamics can be interpreted in Environmental rhetorics, we will turn back to a key text, *Ecospeak*, and look at how Killingsworth and Palmer (1992) visually map rhetorical connections that indicate what and who is included and not. It is through these visual maps we will see the point I made earlier that we can see what is included and excluded in the narratives of this book, and the contrast between their visual constructions and those of the 4Rs and the visuals of the decolonizing representations made by York University and 4Rs Canada Movement will become more obvious.

Killingsworth and Palmer (1992) write about the hierarchical structures within environmental rhetorics; they place traditional science, government, and business/industry above agriculture, social ecology (also described as humanism or eco-humanism), and deep ecology

97

(*Ecospeak* p. 10-18). This perspective is graphed out in *Ecospeak* and it starts with the depiction of "Enlightenment continuum" (p.14) which called Figure 3 in this text, and—using historical examples—explains this flat visualization of the field. Figure 3 is flat in construct; it

Figure 3: Continuum of perspectives on the environment, Enlightenment
Killingsworth and Palmer (1992)

sees diversity in the siloing of function and purpose in each of the classifications and separation of fields and perspectives on a flat line that divides the fields of research and practice under three larger, limited, and divisionary concepts (Nature as: object, resource, or spirit). Killingsworth and Palmer (1992) juxtapose Figure 3 against Figure 4 (see below) as a visualization of this updated depiction of this continuum and bend it to show the hierarchical structure of some areas of study and practice over others--based on societal and cultural values--and adds how it functions by showing the "direction of rhetorical appeals… by arrows in the figure." (p.14).

Figure 4 shows what Killingsworth and Palmer (1992) challenge when they state that this figure shows a view of science has been encapsulated and rigidified in government and industry in the form of 'scientific management.' At the opposite pole is 'deep ecology,' which departs from both objectivity and anthropocentricity, asserting a mythic involvement with nature, an identity in which the spirit of creation wraps the human and the nonhuman in an indissoluble unity with definite
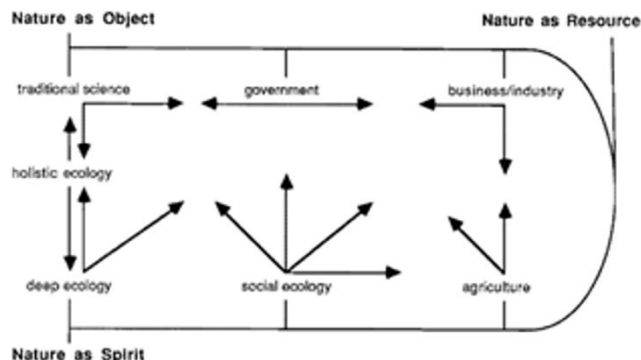
Figure 4: Horseshoe configuration of perspectives, current
Killingsworth and Palmer (1992)

ethical consequences. From the anthropocentric perspective at the center of the continuum, which holds that nature is a bounty of resources for human use and enjoyment, both the scientific and the deep ecological outlooks could prove threatening. And indeed history has joined the two ends against the middle, as I will show… (p. 14)

The adaptation that we see in Figure 4 is more inclusive to the points discussed above; and, in addition to showing the directions of rhetorical appeals with the arrows, it includes three other concepts they see as very important: "hegemony, opposition, and tension" (p. 14). Additionally, it shows the hierarchy of power in Western societies, focusing on American (Western/Colonial) culture and society—placing business/industry over agriculture, traditional science over wholistic ecology and deep ecology, and so forth.

This hierarchy can be used to isolate and locate players within this power dynamic. They write: "It is not surprising that in America, a nation founded on Enlightenment principles, science has drawn a wide range of appeals. It seems somewhat odd, however, that appeals for government intervention have become so common and so widespread in writings on the environment." (p. 17) and that "… government, especially the federal government, has become (for better or worse) the key player in the environmental dispute, the institution with the power to regulate ecological research, environmental action, and development of the resources." (p. 16). Given this, two dynamic forces within the construction of the environmental crisis that happened in the city of Flint, science and government need to be considered within this narrative construction.

In Figure 3 or 4, there is no place for community, but there is a place for community activists and the subsequent organizations they build within their definition of social ecology. The Flint Water Crisis created a city filled with activists (from individuals participating in the

99

town halls, protests, letter writing campaigns, calling elected officials to task, participating in water ceremonies, helping their neighbors access clean water, and so forth), made of Flint residents and their outreaching connections and affiliations. As a result, there was growth of organizations created (i.e. Bottles for the Babies, Flint Rising), but there were many people who remained unaffiliated but were activists for the city of Flint. Given this, the community voices needed to have more presence in this conversation and action--from prior to the crisis, when the fourth emergency manager made the call to sell the water lines from Detroit to Flint to Nestlé and pull the city's water from the 'dead river' that ran through the city limits--the Flint River.

There are three key concepts in Figure 4 by Killingsworth and Palmer (1992) that are important for this dissertation's focus and scope. First, the act of siloing is a part of this construct. Second, cross-communication is done, but there are issues within this cross-communication and the hierarchical structure because it does not allow for inclusive, multi-directional communication to occur between the constructed silos. Finally, there is a clear exclusion of community—particularly a place for community members who are not organized or affiliated to an organization within or outside of the community. Given these gaps, it is important to construct a study that includes analysis of these three key concepts.

This depiction also raises additional questions that are even more difficult to answer: where are non-western perspectives? How are non-Western ontologies and epistemologies within this depiction AND discussion? The discussion around quantitative work is focused on Western quantitative work, it does not include an adaptive structure nor does it include community like we saw in Figure 1 (p. 37) of the 4Rs, Figure 2 of York's DEDI design (p. 43), or Appendix 1 that is used by 4Rs Youth Movement. The same could be said of the lack of adaptability of the single category of science, "traditional science." There are no other direct connections to other

100

ways of knowing or cultural adaptability. Native American ways of knowing, any other

Indigenous ways of knowing, or non-Western ways of knowing are not tied to either of Figures 3

or 4. In fact, they are not really connected to any of the groups in Figure 4; these diagrams leave

out *all* non-Western ways of knowing and being—and this exclusion is typical in colonial settler

structure and representation in a text on environment that states the importance of inclusion,

diversity of perspectives and audience. In short, Figures 3 and 4 are colonial understandings and

representations of colonial structures and systems. As a result, this is addressing the inclusion

that Waddell (1998) directly called for in *Landmark essays* and the broader calls for inclusion in

environmental rhetoric by *Landmark essays*, *Ecospeak*, and *Ecosee*. However, inclusion is an

issue that presents itself within Figures 3 and 4 despite the 'call for inclusion.'

So, how does this relate to cultural rhetorics? Much like the focus of visuals in *Ecosee*,

these visuals are ways of exploring these concepts in a more complete way, a way of

communicating understanding by using visual rhetorics. These particular visuals will show how

siloing affects the narrative of environmental rhetoric, and how this narrative—through

relationality and constellation that is strongly influenced by the 'Enlightenment' is limited and

exclusionary. Then, through a diagram created by Killingworth and Palmer (1992) that

represents the structure of *Ecospeak*, we will see how environmental rhetoric is moving towards

a more wholistic approach (but one which includes hierarchical, siloed visual narrative instead of

a balanced, diverse narrative). This horseshoe construct includes a "theoretical trend among

scientists toward ecological holism, which is surprisingly sympathetic to views of nature as

spirit" (p. 14). However, this is a clear contrast to the wholistic, circular structure in Figure 1 (p.

37) from Pidgeon et al. (2014).

Narrative is crucial in the expression of ontology and epistemology, as established earlier in Powell et al. (2014). However, this is more complex when it is supposed to be inclusive of many fields that are often siloed and differentiated by genres and the expectations of the fields. Because of that, it can be extremely helpful to see how the field of environmental rhetoric can create a visual representation of the structure and organization that can be applied to the field of environmental rhetoric and all of the overlapping fields that use it and provide research that connects to this unifying, overlapping field of rhetoric. This is particularly true if the goal is to create a more diverse audience and pull from a more inclusive, cultural construction and contribution (in short, it needs to use a more global and broader constellation and relation in its work—connections, stories, sources, and so forth).

"There are 'hiccups' with Flint drinking water, But it's not like an imminent threat to public health."
--MDEQ (now known as EGLE)
(*Mlive*, 2017)
"Michigan Department of Environmental Quality Staff 'made a mistake while working with the city of Flint. Simply stated, staff employed a federal (corrosion control) treatment protocol they believed was appropriate, it was not.'"
--MDEQ (now known as EGLE) Director, Dan Wyant
(*Mlive*, 2017)

The continuation of colonization and the institutions it built: Discussion of the gaps in siloing, cross-communication, and exclusion of community

One of the threads through the last chapter and this one is how do we apply the 4Rs to institutions, whether it is through Indigenization or decolonization, and how integral community is to this process. The difference of these policy changing actions to these institutions which are applying the 4Rs, are making these changes because the institutions are responding to the stories collected in the data, like Henry (2022) is recommending, in order to make policy changes. However, this navigation of the cultural rhetorics of their community in response to the

structures that exist in the institutions we explored in Chapter 2 differ from those who hold to the

hierarchical structures and colonial values and norms that exclude or minimize community input,

reflecting the diagrams by Killingsworth and Palmer (1992).The exclusion of community and the

action of siloing in institutional design and construction, as depicted in Killingsworth and

Palmer's (1992) figures above, show how the cross-communication occurs and functions in the

Enlightenment influenced construction of the American systems and institutions. The

construction creates a specific flow of communication that is not always present or bidirectional

between these institutional silos, creating and reinforcing communication issues.

This communication issue is furthered by the genre and language constructions within the

silos. And the current structures of informational flow, particularly the centering of governmental

communications, create both information segregation and isolation. Simmons (2005) addresses

this concept of siloing in relation to rhetoric and genre being an integral part of the

communication being constructed when professionals "…who have been thoroughly ensconced

in their discipline, their primary and secondary discourses may have merged such that their

disciplinary discourse (which had been their secondary) has largely become their primary

discourse that they use both inside and outside their academic environment." (p. 304). And, when

dealing with those outside of their practice—or silo—can create communication barriers "As

insiders in a community of practice, …may find it difficult to see their disciplinary practices as

anything but natural—the 'way things are'—since this discourse has largely become primary." (p

304). This is problematic if those in a field do not acknowledge "..the disciplinary discourse as

constructed and dialogic and discipline-specific, the seasoned member of the community risks

implying to ..[those outside of the field]…that this is *the* … discourse instead of *an* …

discourse." (p. 304). This isolation creates siloing, informational isolation, structures of privilege and power (on the need-to-know basis), and a need for cross-communication.

Communication issues between those in a specific field and those outside of that specific field are created, this structure is creating siloed strongholds where some information never leaves that specific institutional structure. (This was perhaps most infamously highlighted by 9-11, where communication issues across governmental institutional powers highlighted these silo barriers that isolate information and do not share essential, pertinent information with other branches--read as silos--of the institution.) However, it is not the only kind of communication issue that can arise when this specialized rhetoric is not recognized as discipline-specific or as a construct, but rather wield it as a tool against those who have learned different rhetorics.

Given the construction of learned rhetorics, Killingsworth and Palmer (1992) state "It is not surprising that in America, a nation founded on Enlightenment principles, science has drawn a wide range of appeals. It seems somewhat odd, however, that appeals for government intervention have become so common and so widespread in writings on the environment." (p. 17). There is a clear construction of the laws by the government regulating communities and the environment in a way that puts local control (decentralized) in conflict with the centralized government.

This conflict can occur between two cultures as well as between an entity that uses a specialized rhetoric and does not adjust it for those outside of their siloed field—such as the general community. It can play out on a different level; by looking at the relationships Native governments have with the federal government, the tension plays out in a way that can show both hierarchy of power, challenge to that power, and the difference in cultural rhetorics and definitions. Whyte (2017), who specializes in Indigenous science and Indigenous ways of

knowing, addresses the complexities of navigating the relationship between an Indigenous nation and federal government agencies:

> Finally, the political and cultural domination of settler states affects internal affairs in Indigenous governments. Consider tribes in the U.S. Many tribal officials often feel pressure from their electoral constituencies to focus on pressing issues such as unemployment, sexual violence, and diabetes, among other challenges. Governmental units, from environmental services agencies to cultural preservation departments, are often silo-d [siloed]. That is, the units do not communicate or coordinate with one another even though they are responsible for addressing deeply interrelated issues, such as the health and cultural preservation, when, for example, a subsistence and ceremonially-valuable fish population is contaminated with hazardous chemicals. These units are usually severely under-funded and employ staff whose time gets spread thin as workers juggle multiple projects. Unnecessary divisions can also separate tribal lawmakers, bureaucrats, and staff from elders, traditional and subsistence harvesters, gatherers, and spiritual and cultural leaders. (p. 3)

This is a clear difference of navigating cultural rhetorics and structures that differ from those designed and constructed with assumptions of the rhetorics and structural assumptions of Western Enlightenment values and norms, as diagrammed by Killingsworth and Palmer (1992). This can also happen with cities that have communities that can challenge the dominant narrative that can take over cross-communication between different groups with different cultural rhetorics, structures, and norms and how this can affect technical communications.

Developing the possibility of rhetoric being used as a tool and how siloing can create specific meanings with a field, a look at the Sokal Hoax will make this clearer. In 1996, Sokal--a

physics professor—published an article in *Social text*. Sokal used words that had one definition in physics and another meaning in the humanities—both of which are influenced by philosophical schools of thought and pulled similar vocabulary but applied them in different ways—making serious communication issues. In this particular instance, Sokal attacked the humanities for using the same words as physicists do--but with different contextual meaning. The root of this conflict came from the difference in the meaning between the two fields of the same word--definitions that are defined by the field. Simmons (2005) explains this as insiders in a community of practice, scholars in a discipline may find it difficult to see their disciplinary practices as anything but natural—the "way things are"—since this discourse has largely become primary. If the scholar does not expose students to the disciplinary discourse as constructed and dialogic and discipline-specific, the seasoned member of the community risks implying to the student that this is the academic discourse instead of an academic discourse. With limited knowledge of the diversity in disciplinary discourses, the undergraduate student will probably come to see one discourse as "natural" and established instead of dialogic and developing (p. 304).

While siloing can be efficient, it can create cross-communication problems and conflicts, and this is especially true when it moves into realms that are not controlled by academic philosophies and positions but moves into the realm of life and the environment that supports this life. In the case of Flint, the cross-communication issues and problems can include policy makers and legislators who pass public health laws that are interpreted and implemented differently by city and health managers. The removal of elected officials that are accountable to the public who elected them—read the people and community of Flint—and the placement of the emergency managers who are not accountable to the people and community of Flint and are only

responsible to the governor who has placed them into this community and position—this

responsibility and reciprocal relationship is broken between the government management of the

city of the citizens. This is especially true when those who implement policies and legislative

requirements—that may not be constructed with a focus on community. Instead, it focuses on the

outcome or measurable quantifiable results; sometimes these can be resolved through

interpretation and application of the policies and legal application and sometimes there are no

resolutions that can be found that allows for the flexibility the community and community

members need (Kim, 2020; Whyte, 2017; Pigeon et al, 2014; Cull et al, 2018).

"It's ridiculous to have a $214 a month water bill for water you can't use."
—Amber Hasan, Flint Resident
(*Michigan Radio*, 2015)
"I'm afraid that unless things change on all sorts of levels…were going to see more and more of this."
– Laura MacIntyre, Flint Resident
(*Michigan Radio*, 2015)

The challenge of defining a Flint public: The community, publics, and people of Flint

As discussed above, Killingsworth and Palmer's diagrams missed one important part of

the communication groups when addressing the active players in environmental rhetorics: the

community, publics, and the people who comprise them both. Grabill (2014) addresses

Dewey's "publics theory" and why this is challenging when analyzing rhetoric:

But another view hears Dewey asking an empirical question: that there is perhaps no such

thing as "the public," and so we must begin by assembling a public in any given situation

and inquire into the nature of the problems that this assembly wishes to solve. I hold with

this second view, and in line with that view, I'd suggest that the first act of rhetoric is the

assembly of a we and then caring for that assembly (because publics, communities,

107

organizations, groups, and similarly such things are not persistent; they form and fall

apart; they come and go). This work is exceptionally difficult, of course, which is why

Dewey correctly understood it as a critical problem for his time and, I argue, for ours. (p.

255-6)

And, this is exactly what we see happening in Flint. It was a fluid and shifting collection of

entities that consisted of a public that had a problem and that rhetorical assembly 'of a we'

occurred for the citizenry of Flint. While Grabill (2014) argues that the entities being made is the

important thing, it could be argued that the 'we' as a larger community may have more power—

if and when it is constructed. While Grabill (2014) consistently addresses the community as an

entity, it is also minimized unless it is presented as an organized entity. No matter if we are

talking about the community as individuals who share a common problem or as a community

that has organized into various entities, power is involved. Power, an idea that Grabill (2014)

acknowledges the governmental and scientific employees use to confront a problem and avoid

being questioned by the individuals in an affected area when he wrote "These scientists and the

professional communicators who assisted them are highly skilled. They know how to do politics

and rhetoric as well as science." (p. 264). The Flint Water Crisis is an example of where politics,

science, community, and rhetoric all intersect. More specifically, it is an example where it

challenges and tests Gramsci's (Martin, 1998) idea that the conquest of cultural power comes

before political power, and this is elemental in the construction of communication, expression

and media. Gramsci's idea (Martin, 1998) can be applied to the Flint Water Crisis to connect the

loss of political power of the city of Flint by the state-appointed emergency managers--over-

riding the elected officials and the democratic system of the community voices-- as well as the

response by the appointed officials to understand the basic demographics and cultural

communities within the city (unaware of the multilingual and bilingual communities as well as information about the citizens of Flint that was available even in Census data). By the creation of the emergency manager policy, the cultural idea that communities that were once wealthy were mismanaging their funds after white flight impoverished them through de facto segregation the fault of the communities themselves—and viewed as a moral failing was enacted and disrupting the political power of the community, city, and state powers. The enactment of this state policy is exactly the disruption that Gramsci (Martin, 1998) highlighted.

This understanding of the community and its inclusion as a part of this work is essential, as the role of public health in science and the purpose of policy and legislation through the government is the communities they serve. According to Lauren (2016), "To understand the practice of communicating across organizational networks…individuals must 'read' who they are communicating with, why they are communicating with this person, and what the goal is for communicating" (p. 69) and "the social and cultural aspects of communicating are generally established through implicit and explicit means across different organizational networks" (p. 69). However, in this case, the communication between these interest groups needs to be multidirectional for it to be effective. Not only that, but the culture of the community and all the needs of a community need to be understood to serve it. And, the first step to doing this is to recognize the relationship between the community and the institutions who serve it. This relationship is at the root of the existence of these institutions--they exist to serve the communities, not the other way around, and the means of communication needs to serve a purpose. When this does not happen, problems arise. This is when inclusion is something that is acknowledged but not carried through is visible, particularly by those who are being excluded while hearing about inclusion being practiced. In short, this is where we can see the actual

practice of inclusion happening or not. Are the voices of community members who are not part of the dominant narrative being heard *and* are their voices being incorporated into the data and response?

So, much like the challenges faced by Indigenous and Tribal communities in the examples given by Whyte (2017), the citizens of Flint faced similar challenges with the appointed officials. Given that the construct of the environmental system on Western concepts from the Enlightenment and the diagrams mapping out the hierarchy [which is reinforced by the recent examples given by Grabill (2014) and Whyte (2017)] of the players in this system who create the dominant narrative and the voices of people who are excluded by this narrative, we--as academics in environmental and technical communications-- need to think critically about the inclusion of community in a more just and wholistic way and how this can be done.

So, going back to visual representation and rhetorics within this power dynamic that is shown in environmental rhetorics vs. cultural rhetorics and Native American and Indigenous rhetorics, we will explore a visual that is discussed in more depth in the next chapter. Pigeon (2016a) visualization in Figure 1 (p. 37). Now, the visual representation of the 4Rs is very different from the prior two Figures (3 and 4). It expands on the visual representation that Killingsworth and Palmer develop and expand from the 'Enlightenment continuum' of Figure 3, and the horseshoe construction of Figure 4. However, it depicts power dynamics instead of interdependency. If we looked at the need of connection—the individual to the community, the local government to the federal government—we would see a different kind of wholistic structure. In this visual, we see the individual, as Lauren (2016) addressed, the community and public connections that Grabill (2014) questions, and the cross-communication that Simmon's

110

(2005) argues for in response to siloing. So, we can see how this is also a possible solution to some of the debated ideas in technical communications.

The wholistic structure that Pidgeon et al. (2014) present is exactly that. While not a rhetorical structure, it pulls from Native American/Indigenous rhetoric for its base (as will be discussed in the next section of this paper). Because of this, it could be argued that it is using rhetoric as the basis for this purpose—it is wholistic, as discussed earlier with Powell et al. (2014) and their reference to Wilson's work on reciprocity and the complexity of this within Native American and Indigenous epistemologies. In turn, this 'framework' includes government, human connections/relations, and all the different aspects of human needs physical, intellectual, spiritual, and emotional. The all-encompassing outer circle of this particular visual rhetoric piece of the 4Rs focuses on the Native American concepts of relationship, relevance, responsibility, and respect and shows them as intertwined, encompassing, and foundational to this visually rhetorical image of the concept behind the 4Rs.

As a reminder from the last chapter, multiple Native studies writers and Native American rhetorics (Deloria et al., 1999; Johnson, 1990; Smith, 1999; Wilson, 2008), the work of Pigeon et al. (2014) and Kirkness and Barnhardt (1991) explore how the concepts of respect, relevance, responsibility, and reciprocity (the 4Rs) apply to community and environment. Also, York University is using the work of Cull et al., (2018), Pigeon et al. (2014), and Kirkness and Barnhardt (1991) to design wide reaching community outreach programs and there is a grassroots movement, 4Rs Youth Movement, emerging in Ontario that is being designed and built for communities (as discussed in more detail in the last chapter). These programs are being created and growing because they have found that the work is not only beneficial to Indigenous people, but students and community members of color (Pigeon et al., 2014; Kirkness and

Barnhardt, 1991; Pidgeon, 2016a). In short, the flexibility of the structure works to accommodate the "diversity of Indigenous understandings" to a wide breadth of identity and community structures "of place, language, and cultures [and how this] relates to the individual, faculty, and community, both institutional and Indigenous communities within and outside the institution." (Cull et al., 2018) If this is the case, it is logical that this ontological knowledge, when put into practice, can yield inclusion and unity within a diverse 'citizenry.' In other words, the stories that integrate the 4Rs are not only useful in narrative structure, but they are also a useful framework or heuristic to increase participation of a broad audience and inclusion of contribution and participation.

The rhetorics of the 4Rs: How story shows ontology and entomology

Going into this section, it is important to understand that the rhetoric used to explain and show ontological and epistemological understandings varies between authors and fields. It is important to understand that this difference is also present between environmental rhetorics and Native American/ Indigenous rhetorics and studies. Given environmental rhetorics, cultural rhetorics, and Native American rhetorics that I just discussed, we now can add ontological and epistemological understandings in order to understand the 4Rs a bit more.

Ontology

Environmental rhetoric's ontology, approached ecologically, considers *qualities of relations* between entities, not just among humans but to the world around us. Bennett (2010) addresses this well in her book, *Vibrant matter*; she states: "A lot happens to the concept of agency once nonhuman things are figured less as social constructions and more as actors, and once humans themselves are assessed not as autonoms but as vital materialities" (p. 21) and "Agentic capacity is now seen as differentially distributed across a wider range of ontological types" (p. 9). In turn, in this book, Bennett concludes that all humans and nonhumans have "vital

112

materiality" running through all entities. (It is important to note that Bennett also centers queerness, which is another cultural rhetorics approach that has multiple intersections with Indigenous rhetorics.) While this book is centered on what Killingsworth and Palmer (2009) refer to as 'holistic ecology,' it is closer to a Native American or Indigenous understanding of ontology than most of the work in the three other environmental rhetorics books highlighted earlier in this paper (*Landmark Essays: On rhetoric and the environment*, *Ecospeak*, and *Ecosee)*. In many ways, it mirrors the work of Morgan's "Connecting with animals: The aquarium and the dreamer fish"—the lone chapter that stood out in *Ecosee.*

This can be clarified in Bang et al's (2014) statement aligning Native American and Indigenous land-based approaches: "Similarly, we might imagine that ontology of place-based paradigms is something like 'I am, therefore place is,' in contrast, the ontology of land-based pedagogies might be summarized as 'Land is, therefore we are.'" (p. 45) Along this same vein, Tuck et al. (2014) further highlight's Bang et al's argument (2014) by "invoking Burkhart's (2004) revision of Descartes' insistence, 'I think, therefore I am,' to 'We are, therefore I am,' to express the saliency of collectivity in Indigenous life and knowledge systems." (p. 10) It challenges the differences between setter-colonial (to simplify for the purpose of this chapter— Western) to see land as privatized and to be owned and the way Bang et al. (2014) "understands of the land as the *land-we* ontology" (p. 45) as a Native/Indigenous understanding of ontological relationships to the land.

Epistemology

Here we can see that these ontological approaches to understanding can vary. This is the same for epistemological ways of knowing. This is often done in story. So, let us look at some different Native American pieces and ways of knowing in connection to the 4Rs. In this section, I have created a table, using the 4Rs, of how they are defined by Cull et al. (2018) by pulling

from work by Pidgeon et al. (2014) and Kirkness and Barnhart (2001), and how they are

connected to story via Native American and Indigenous rhetorics.

Table 1: 4Rs: Definitions, Cull et al. (2018)	
4Rs	**Definitions** **Cull et al. (2018)**
Respect	*Encompasses an understanding of and practicing community protocols. *Honours community knowledges and ways of being.
Reciprocity	*Shares knowledge throughout the entire educational process. Shared learning embodies the principle of reciprocity. *We are in the learning in process together and gain experience in sharing knowledge in a respectful way.
Responsibility	*Is inclusive one's own connections to various communities, not just your own. * Means understanding the potential impact of one's motives and intentions on oneself, the communities, and environment.
Relationality	*It is responsive to the needs identified by the people, communities and environments most affected *Centers meaningful and sustainable community engagement; placing our relationships to each other and our environments at the center *Includes the communities, people, and environments affected.

Seeing these together makes it easier to see that this the epistemology is shown through story

in the rhetoric. All of the examples in this column contain aspects of story: from creating

relationships with each other and our environments to shared learning and experiences. The 4Rs

as they are explained in this table not only encourage stories, the 4Rs require *sharing* our stories

with each other. Stories explain who we are. According to Smith (1999),

To resist is to retrench in the margins, retrieve what we were and remake ourselves. The

past, our stories local and global, the present, our communities, cultures, languages, and

social practices—all may be spaces of marginalization, but they have also become spaces

of resistance and hope. (p. 4)

Stories have a way of transcending space and time while still encapsulating qualitative research.

They bridge our worlds in a way that is wholistic. It can be wholistic in connection to our

research, like how Wilson (2008) sees epistemology, ontology, axiology, and methodology as

closely related as the 4Rs are. Or, it can be wholistic by encapsulating our "physical, intellectual,

emotional, and spiritual" experiences, like Pidgeon et al. (2014) show in their "A representation

of a wholistic Indigenous framework." And in Pidgeon's (2016a) Figure 1 (p. 37). Stories are

ontological and epistemological; this is why they should be central to environmental rhetoric,

just as the 4Rs should be to open the field for broader, more culturally diverse ways of knowing

and being.

The ability to mix both research and human experience as we fit into the world around

us. The connection between story, ontology, and epistemology becomes clearer in this

example:

When Dolmage says that he "see[s] rhetorical history as the study not of just a selected

archive of static documents or artifacts, but a study *also, always* of the negotiations,

valences, shifting claims and refutations, canons and revisions that orbit any history" (p.

113), we hear him calling attention to how our discipline talks about the history of

rhetoric as static and disembodied. He asks us to use an embodied rhetorical methodology

"to find new ways to circulate these stories in order to generate a new ontology, a new

epistemology, a new rhetoric" (p. 114). (Powell et al., 2014)

115

This is echoing Waddell's call (1998) of creating a new rhetoric, a new way of communicating about rhetoric—and in this case, environmental rhetoric. By embodying our connection to our environment in our writing through story, we can connect to our personal experiences, others, our communities/fields/practices, and our environments if we incorporate the 4Rs in these writings. This change will not be easy, but it is one that should be encouraged. As Stormer and McGreavy (2017) stated,

> Rhetoric's ontology, approached ecologically, considers *qualities of relations* between entities, not just among humans, that enable different modes of rhetoric to emerge, flourish, and dissipate. The most general relational quality is struggle; rhetoric emerges from and for struggle. ecological struggle is striving pursued with, not contesting against, other things. It is struggle in dependence, not between "independents." (p. 4).

Just as cultural rhetorics embraces the diversity of its audiences and its contributors, environmental rhetorics could do the same because of this dependence—or relationality to each other. Likewise, the adaptability of Native American/Indigenous rhetorics is worked into it so that it can be applied and incorporated in the multitude of cultures, languages, communities, societies, and practices. Applying these frameworks would open environmental rhetoric to more stories—sharing different epistemologies and ontologies to more diverse audience and participants, so we can explore what it means to move forward in a way that is more equitable and just. And, as discussed earlier in the previous chapter and at the start of this chapter, decolonizing work using the 4Rs is a way to do this.

Earlier in this chapter, I referred to Henry's (2022) push for in the inclusion of "cultural representations" with the purpose of "changing dominant narratives" specifically in the issue of policy design, which was made by colonizing practices in order to reinforce colonial structures.

While it is clear to anyone who does cultural rhetorics, this is what he is referring to. It is also clear that his nods to the work of Silko, Whyte, and others—that the 4Rs is also a part of this way forward. In the next chapter, we will look at the 4Rs: its design (and the visual rhetorics of the design as inclusive, wholistic, connecting the whole of the person to the whole of their environment), not just inclusion of community—but necessity of community, how it can be used in community and institutional structures, and what each part means and how it (or its breakage) played a role in the Flint Water Crisis.

CHAPTER 4:

WHAT'S THE 4Rs GOTTA DO WITH IT

In the last chapter, the literature review, we walked through a quick overview of environmental sociology, environmental rhetorics, technical communication, cultural rhetorics, Native American rhetorics, and ending with the 4Rs. In this overview, we saw a continuation of the ideas of Native land that were developed in Chapter 2, as well as how the land and community are connected to the 4Rs, specifically relationality and respect. In this chapter, we will explore how the 4Rs are explained by the researchers that use them and how Native American and Indigenous rhetorics use the 4Rs.

In Chapter 2 we also looked at how the 4Rs have already been applied outside of strictly Indigenous contexts by Indigenous researchers to help build cross-community coalitions. Their application of the 4Rs outside of Indigenous communities or in places where there isn't an Indigenous population majority is still applicable because all populations connect and relate to the Native land we all live on and with this relationship should come respect for all the things we are related to (including each other) and the idea that no healthy relationship is without responsibility and reciprocity. In the next chapter, we will explore more about how the 4Rs, as they are defined in this chapter, apply to the stories of Flint.

Until then, it is important to remember three things that we have explored in the previous chapters. First, that this is all Native land. Second, the 4Rs help all populations connect to land and each other as discussed. Finally, that Flint is a real-life case study and that while imagined scenarios that deal with quantitative data (not qualitative) are preferred by policy specialists and makers (Henry, 2022) those of us who work in Indigenous rhetorics and cultural rhetorics take as a given that narrative shapes material reality, but I think that can be stated more clearly. By

building on the definitions and uses of the 4Rs as will be given in this Chapter, we will see the narratives of Flint—whether they are through stories in which we approach crises or of the creation of the crisis-- guide action in Chapter 5. I hope to explain and show just how narratives can guide action in the next chapter and how the 4Rs can distinguish between the narratives we should be promoting if we want to push against the dominant narratives that helped create the crisis and had damaging approaches, from narratives that can help us select the best actions and policies to move forward toward a more just society and world. But, first, let us focus on how to understand how the 4Rs are defined and how understanding this will help us make better choices that encourage respectful, responsible, and reciprocal relationships.

The following sections are an analysis of the 4Rs. Before going into the organization of this section of the dissertation, it is important to understand—just like the variation within Indigenous communities—the selection of the 4Rs can vary. While sometimes relevance is used instead of relationality or reconciliation may be used in place of reciprocity, the underlying meaning remains similar and rooted in the same cultural values and concepts. For example, the difference between relevance and relationality stresses the important of the things we are in relationship with—it just shifts the stress on what is importance in the connection we have with other entities we interact with in our world; in Indigenous cultural rhetorics, this is usually, but not exclusively, referred to as relationality. While the original versions of the 4Rs from Kirkness, Barnhardt, Pidgeon, Archibald, Hawkey, and Cull et al. use 'relevance' instead of 'reciprocity' (their 4Rs are respect, relevance, responsibility, and reciprocity), the meaning is similar—as we will see in the discussion of the differences in the meaning in the reciprocity section of this chapter. Likewise, 4Rs Youth Movement use 'relevance' instead of 'relationship'; however, they do not use 'responsibility' they use 'reconciliation' instead. While this may make people who are not familiar with how the 4Rs work pause, we need to look beyond the surface meaning of the

words: if a respectful 'reconciliation' is to happen or 'responsibility' be made, we need to think about how this is done. For example, if there is a disagreement between partners, a discussion must happen to understand the different perspectives of the partners and unless understanding is reached (and, many times, 'responsibility' is claimed in the disagreement) there is no way to reach reconciliation. So, in many ways, these words are connected in meaning. It is just a difference in outcome: is the goal for 'responsibility' to be taken or 'reconciliation' to be achieved? The choice of words used to establish which 4Rs will be used is made with the end goal of balance and wholistic outcomes by those choosing the words. This adaptability of the structure of the 4Rs starts with the selection of the 4Rs. While, variation can happen to meet the community and cultural needs, the spirit and focus on balance and wholistic outcome must be made. So, while you may see some minor differences in the word choices I have made, and in the examples used in this dissertation made, from others—they are all valid and have a specific outcome in mind.

Since the 4Rs I am using in this dissertation focus on the Flint Water Crisis, I hold that relationality (between individuals, communities, elected officials, governance, government entities, health providers, to water, and so forth) is the essential connection between entities more than relevance. For example, the removal of elected officials in the policy that placed emergency mangers in charge of city management and decisions removes the designed relationships of a democracy; this act and others are all relational in focus and outcome and this policy forcibly broke these relationships leaving citizens from these emergency manager cities without representation—breaking their relationship and representation on a city, county, and state levels. Likewise, there can be arguments made for both reciprocity or reconciliation in the context of the Flint Water Crisis. Both have validity. I chose reciprocity, as reconciliation can be included in the actions of reciprocity; however, reconciliation does not have to be reciprocal. For example, in

the case of Flint, there was an agreed upon payout by the state to the city of Flint; however, the amount the state agreed to pay the city has been very hotly contested by the citizens of Flint as it is not enough money to support community-, health-, environmentally-, infrastructure-, and institutionally-driven programs and supports for the lifetimes of all the community members affected by the crisis, born and unborn, over the expected three-generational reach (it takes 3 generations for lasting effects of the lead poisoning, and only the lead poisoning, to dissipate as lead is passed from mother to a fetus in the womb). So, while the selection of the specific word choices is intended to reflect the values and cultural meanings, there can be difficulty in translating the words used in each Indigenous language and culture into English (where there are sometimes no equivalent words to the Indigenous languages—i.e. water is a living entity and the syntax reflects this in Indigenous languages and there is no equivalent word for birth water, which in languages like Cree, loosely translates to 'the creator's water'). So, in many ways, there may not be a specific word that can encompass all of an idea and teachings of the 4Rs. As a result, this is why the end goal and wholistic outcome must be the focus of choosing the 4Rs that will be used. And, for the purpose of this dissertation, the four this particular dissertation will be focusing on are respect, relationship, responsibility, and reciprocity.

The discussion of the 4Rs in this section of the dissertation will be organized into two parts for each of the 4Rs. First, the meaning of each R will be given in relation to the works of Kirkness, Barnhardt, Pidgeon, Archibald, Hawkey, and Cull et al. Second, each R will be connected to Native American rhetorics and researchers and how each R is understood in cultural contexts, including concrete applications (to provide examples beyond the applications seen in higher education by Kirkness, Barnhardt, Pidgeon, Archibald, Hawkey, and Cull et al. and show how each R can be applied to a different context).

To prepare for the next four sections (Respect, Relationship, Responsibility, and Reciprocity) of this Chapter, I have included the table given at the end of Chapter 3 again for the reader.

Table 2: 4Rs: Definitions from Kirkness, Barnhardt, Pidgeon, Archibald, and Hawkey, as defined by Cull et al. (2018)	
4Rs	**Definitions from Kirkness, Barnhardt, Pidgeon, Archibald, and Hawkey as defined by Cull et al. (2018)**
Respect	*Encompasses an understanding of and practicing community protocols. *Honours community knowledges and ways of being.
Relationality	*It is responsive to the needs identified by the people, communities and environments most affected *Centers meaningful and sustainable community engagement; placing our relationships to each other and our environments at the center *Includes the communities, people, and environments affected.
Responsibility	*Is inclusive one's own connections to various communities, not just your own. * Means understanding the potential impact of one's motives and intentions on oneself, the communities, and environment.
Reciprocity	*Shares knowledge throughout the entire educational process. Shared learning embodies the principle of reciprocity. *We are in the learning in process together and gain experience in sharing knowledge in a respectful way.

And, I have provided a bulleted list of some examples of Native American rhetorics to prepare the reader for some ideas that will start emerging through the next four sections

(Respect, Relationship, Responsibility, and Reciprocity) of this Chapter. The use of the 4Rs are bolded in these quotes and important related concepts in them are underlined to help make the connection between the quotes and the original definitions above more concrete before we move into the discussions of each R. Also, while these particular quotes are not used elsewhere in this dissertation, I hope the realization of how often these words are used in Native American rhetorics will increase an awareness of how many of the other quotes used in this dissertation exemplify how ingrained the 4Rs are in culture, thought, understanding, and practice in Indigenous cultures and communities. Likewise, as a reflection of culture, the use of story, community, land and place, teachings, and culture are prevalent throughout these quotes.

- rhetoric (…) to be seen and heard as a series of stories, none of which can really be heard without listening for other stories, and all of which impact and are impacted by the **relationships** between them. (Powell et al., 2014)

- Of course, these stories—these practices will look different depending on the community—on the **relationships** formed between participants and on your **relationships** to the material [rhetoric] and the people who make it. (Powell et al., 2014)

- Every cultural group established their **relations** to [their place] over time. Whether that place is in the desert, a mountain valley, or along a seashore, it is in the context of natural community, and through that understanding they established an educational process that was practical, ultimately ecological, and spiritual. In this way they sought and found their life. (Cajete 1994, 113, as cited in Lowan 2009, 47)

- Indigenous collective continuance is a way of understanding Indigenous governance as a community's aptitude for making adjustments to current or predicted change in ways that contest settler imposed hardships and other oppressions, establish quality diplomatic

relationships, bolster robust living in the face of change, and observe balanced decision-making processes capable of dealing with difficult tradeoffs (Whyte 2013)....can be achieved when societies have many strong **relationships** in which the parties to the **relationships** (i.e. the **relatives**) see themselves as having **reciprocal responsibilities** to one another. (Whyte, "What Do Indigenous Knowledges Do for Indigenous Peoples?," 2017)

- My sister said, '… It is our **responsibility** to safeguard the water for all of our **relations**.' Being a good mother includes the caretaking of the water. (Kimmerer, 2013, p. 91)

4Rs: Respect

While all four of the Rs are equally important and interdependent on the other 3 Rs, as shown in the visual above, I will be starting this section with Respect; the reason for this is that without it, the other three Rs sections (Relationship, Responsibility, and Reciprocity) will not be balanced and bi- or multi-directional (in other words it will not be circular, interconnected, interdependent, and wholistic).

First, what do the initial and primary researchers and practitioners of the 4Rs in institutions mean when they talked about respect? How do they define this term? It relates to the more current definition given by Cull et al. (2018) in *A Guide for Front-Line Staff, Student Services, and Advisors* where they address the 4Rs well and highlight three key concepts of respect:

- Encompasses an understanding of and practicing community protocols.
- Honours Indigenous knowledges and ways of being.
- Considers in a reflective and non-judgmental way what is being seen and heard. ("Indigenous ways of knowing and being*")*

124

It is clear how this definition of respect which is designed for K-higher education institutions expands on the Cull et al. (2018) definition below from the works of Kirkness, Barnhardt, Pidgeon, Archibald, and Hawkey from Table 2:

Respect   *Encompasses an understanding of and practicing community protocols.

*Honours community knowledges and ways of being.

Going into a space where we actively enter with these three choices and actions outlined by "Indigenous ways of knowing and being" means that we are entering the environment and the interaction with others with respect. These are basic fundamental implementations of being receptive to new ideas and viewpoints that may not be part of your own experience or knowledge base. In turn, it creates openness and receptiveness to these other ideas and perspectives that may be different from yours; and there is equity and balance in all the perspectives, understanding, ideas, and/or viewpoints to be expressed—opening the participants to building healthy responsible, reciprocal relationships.

Secondly, Native American rhetorics expands the understanding of how respect is be connected to Native American rhetorics and how it is understood in cultural context. Shawn Wilson in *Research is ceremony: Indigenous research methods* describes it as "more than just saying please and thank you, and reciprocity is more than giving a gift" (86). There is depth in respect. It moves beyond words and action. This is apparent is the stories of Vine Deloria and Basil Johnston. The idea of respect is often intertwined—as a basic element—in Indigenous stories. As a result, it is often not specifically referred to as respect. (This started emerging with later Indigenous rhetorics—as a way to address these elements that are in the stories in a more concrete and explicit way.) For example, while not directly stated as respect, there is no doubt that Johnston is telling us that we should respect others in the following, "No one is more

125

important than any other. They are all born equal, all have some purpose in furthering creation, Kitchi-Manitou's work." (Johnston, 2010). If we see others as our equals, we will see each other as part of community without judgement and with reflection (respect in the context of the 4Rs) and beyond words and action into equity (in context of the Indigenous rhetorics.

This idea is so integral in Native American concepts and values, there are often part of the teachings (i.e. the Grandfather Teachings) and are an elemental value in Native American law. Mills (2019) uses the 4Rs as a basis for his argument "that Canada's unique form of liberal constitutionalism cannot serve as the constitutional framework within which indigenous law is revitalized without enacting one of settler supremacy's… violence." Mills (2019) goes on to say:

> ..to eliminate colonialism we shall have to advert to the fact that indigenous law was and is generated by unique indigenous legal processes and institutions, which find their authorization in unique indigenous constitutional orders, which are in turn legitimated by indigenous peoples' unique and varied creation stories
>
> The heart of this dissertation is a close examination of one indigenous people's legality. Based on my engagement with the gifts of diverse Anishinaabe writers and orators and on close work with my circle of elders, with aadizookaanan, in community and on the land, I present one view of Anishinaabe legality and explain how it results ultimately in inaakonigewin, an Anishinaabe conception of law.
>
> In so doing I give special emphasis to the earth-centric 'rooted' form of constitutionalism operative within Anishinaabe legality, which is characterized by mutual aid and its correlate structure, kinship. I use the language of rootedness to emphasize that what's critically at stake in my argument is a distinct kind of constitutionalism and not the distinct subject position of those who inhabit it (i.e. not indigeneity per se)… (p.iii)

As Mills (2019) uses the 4Rs as elemental building blocks to breakdown the differences between the application of a colonized liberal law and the constitutional law that is the basis of Indigenous law, which he refers to as rooted constitutionalism—Mills outlines the differences and how to decolonize the legal interpretations and applications by using Indigenous teachings, methodologies, practices, and rhetorics.

> By using these culturally-grounded Indigenous sources—the *cultural rhetorics*—Mills …examine(s) how various commonly proposed models of indigenous-settler relationship fare against the two principles. I conclude that one vision of treaty, treaty mutualism—which is a form of rooted constitutionalism—is non-violent to indigenous peoples, settler peoples and the earth. I invite all to practise it today. (p. iii)

It is clear that to Mills (2019), who utilizes the 4Rs as shown in his use of the cultural rhetorics examples he uses throughout the entirety of his dissertation, that the 4Rs is essential as a way of moving forward that pushes not just on colonized institutional structures and practices in law, it is a path forward out toward justice and decolonization.

Given the argument Henry (2022) presents of the use of narrative (and I would build on his argument and narrow it to cultural rhetorics) as a way to move toward environmental justice, let's look at how Mills develops his argument by using cultural rhetorics and Native American studies as the basis of his argumentation of Indigenous law. As Mills (2019) writes in his dissertation, "Miinigowiziwin: All That Has Been Given for Living Well Together One Vision of Anishinaabe Constitutionalism":

> Justice is sacred from a liberal standpoint. It's enforcement of the social contract, respecting the consent of citizens, respecting the autonomy of rational, moral persons. Justice is a conception of order directly consequent to the liberal ECO-system. In

127

particular, it follows from the liberal notion of desert so essential to promoting, protecting and vindicating the dignity of autonomous persons. This is true in each of justice's applications. (p. 126)

Mills aligns the idea of respect to that autonomy and justice to liberal law—the colonizer law structure used in Canada. He then contrasts this liberal concept of law (Canadian) to that of rooted constitutionalism—Indigenous law. Mills (2019) explains it this way:

Finally, I recognize that indigenous persons writing about indigenous law in the rooted sense often refer to 'justice', but are careful to assign it a novel meaning. Thus Justice Sinclair (as he then was) claimed that "The primary meaning of 'justice' in an Aboriginal society would be that of restoring peace and equilibrium to the community" Aboriginal societies would be relationship-centred". This relationship-centring, harmony-oriented conception of 'justice' differs dramatically from the contractarian conception of justice….

Trish Monture, too, spoke to "Aboriginal notions of justice", explaining, "As I understand this concept, it embraces a knowledge of who I am, an understanding of my responsibilities, which are both individual and collective, and only then a sense of what is fitting, right or fair." On another occasion she sought to understand indigenous conceptions of justice from Shirley O'Connor, an Anishinaabekwe grandmother from Lac Seul Monture noted, "During our conversation, the grandmother repeated many times to me that there really is no word for justice in the Ojibwe language" and thus drew the conclusion, "We are attempting to recover a concept for which there is no word in our own languages to describe!" The final conclusion she drew from O'Connor's teachings very closely mirrors where the RCAP definition ended: "justice initiatives must respect

experiences—the totality of an individual's experience— not just incidents or alleged offences" and further, that "the experiences of women and men cannot presume to be the same."

The conception of justice described in these passages clearly has nothing to do with the enforcement of the terms set out in a social contract, and everything to do with lived relationships. 'Justice', here, bears little or no resemblance to liberal uses of the term, and a remarkable affinity with harmony. (p. 127-129)

While this is a long quote, it is loaded with crucial cultural context and implications: (1) there is a difference in what 'justice' means between the legal applications of Canadian and Indigenous law, (2) that part of the difference is based in language—which is a crucial explanation of why culture and context are essential in this differentiation, (3) cultural rhetorics is central to understanding this differentiation, (4) the individual experiences, not just a predetermined concept of 'incidents' or 'offences' must be taken into account—suggesting the context which is given in narrative is essential, and (5) justice is connected to framework of the 4Rs.

In explaining this conclusion, it is an extension of the stories he pulls from in his dissertation on Native American law—pulling from Native American stories and rhetorics. The concept of respect is woven throughout Native American narratives, practices, and methodologies, from earlier Native rhetoricians like Deloria and Johnston to current ones like Kimmerer and Hernandez.

4Rs: Relationship

First, pulling from relationality (also referred to as relationality or relevance, depending on the source). So, again I will use "Indigenous ways of knowing and being" for the definition. The reason for this is simple. It is because this is a single source that compiles the work of initial and primary researchers and practitioners of the 4Rs in higher education [Kirkness and

Barnhardt,1991; Pidgeon, Archibald and Hawkey, 2014; Pidgeon, 2016a and 2016b; and Cull et al. (2018)] is a single source for educators across Canada to use.

Cull et al. define (2018) relevance in three key concepts:

- Ensures that curricula, services, and programs are responsive to the needs identified by Indigenous students and communities.
- Involves Indigenous communities in the designing of academic curriculum and student services across the institution to ensure Indigenous knowledge is valued and that the curriculum have culturally appropriate outcomes and assessments.
- Centres meaningful and sustainable community engagement.

Again, we can see how the definition above expands and extends the one that came before it from Table 2:

Relevance/ Relationality	*It is responsive to the needs identified by the people, communities and environments most affected
	*Centers meaningful and sustainable community engagement; placing our relationships to each other and our environments at the center
	*Includes the communities, people, and environments affected.

In this case, there is very little difference in the definitions. The most current one, created by Cull et al. (2018) is more specific about building community relationships and connections in the work. In both of these definitions, relationship is specifically addressed as well implied in all three points—making it easier to shift from relevance to relationship as the R used in this dissertation. Additionally, there is a centering of Indigenous knowledge in the definition from Cull et al. (2018), along with 'culturally appropriate outcomes and assessments.' These expanded definitions are clearly outcome-focused and relationship-centered.

130

It is clear, from this definition, that relationships—like we see in the model from Pidgeon (2012, 2016)—encompasses layers from the individual out to the government in our environmental relations. There are also relations with other entities that are not as clear from the model, such as our environments. These environments are institutional to physical environments like the water, soil, air, plants, animals, etc. While this may be lacking in the clarity of that scope, the Indigenous rhetorics are more concrete in that connection.

So, secondly, in Indigenous cultures, we often refer to 'all our relations.' This scope is broad by Western concepts. The first example of Indigenous rhetorics shows our relationship to land and place. Lowan (2009) writes: "Among Indigenous peoples, relationships to land and place are diverse, specific, and un-generalizable" and Tuck, McKenzie & McCoy (2014) in "Land education: Indigenous, post-colonial, and decolonizing perspectives on place and environmental education research" write, "'Land' is imbued with these long relationships and, as we discuss below, the pedagogies and knowledges that have emerged from those relationships." This broad scope is also reinforced by Pidgeon's (2012, 2016) model; the inclusion the states of being of the movement indicated by the arrows showing 'emotional,' 'physical,' 'spiritual,' and 'intellectual' between the concentric circles from institutional structures, to community organizations, to family and the individual shows the movement of these relationships of the individual to others and our environments in many ways on many levels, hence 'all our relations.' Likewise, these two quotes show the connection on all four of those moving states of being that reflects the depth of personal connection. And, this connection is reflected throughout the culture, language, teachings, stories, as well as the practices and makings in Indigenous rhetorics. Cajete (1997) states this same idea in a different way:

> Every cultural group established their relations to [their place] over time. Whether that
> place is in the desert, a mountain valley, or along a seashore, it is in the context of natural

community, and through that understanding they established an educational process that was practical, ultimately ecological, and spiritual. In this way they sought and found their life. (p. 113)

And, Mills (2019) addresses relationship in another way, highlighting the importance of story in these teachings:

…Basil Johnston observes of indigenous peoples generally that "Even more honoured than was courage, resourcefulness, fortitude and other traits was generosity." For many of us, the notion that the more one gives, the more one has, flies in the face of logic; the story seems to require a step back from all reasonable expectation of cause and effect. Umeek's statement that "a generous person is never without the necessities of life" simply makes no sense.

The insight critical to cracking the secret of the ever-full bowl, however, is to realize that the offended logic belongs to another kind of story. In a liberal narrative, it's a zero-sum truth that the more an autonomous person gives, the less he necessarily has. This is why rational actors, the characters in such a story, pursue (and are expected to pursue) their own self-interest. But where persons are radically interdependent, the fact of the recipient is just as vital to the reality of a gift as is its donor. Writing in another context, Kimmerer solves the riddle, drawing on the fact of the bowl's many recipients, which, vitally, include the berries: How do we refill the empty bowl? Is gratitude alone enough? Berries teach us otherwise. When berries spread out their giveaway blanket, offering their sweetness to birds and bears and boys alike, the transaction does not end there.

Something beyond gratitude is asked of us. The berries trust that we will uphold our end of the bargain and disperse their seeds to new places to grow, which is good for

132

berries and for boys. They remind us that all flourishing is mutual. We need the berries

and the berries need us. Their gifts multiply by our care for them, and dwindle from our

neglect. We are bound in a covenant of reciprocity, a pact of mutual responsibility to

sustain those who sustain us. And so the empty bowl is filled. (p. 101)

The stories in each culture varies in the connections and relations it stresses, just as the

Indigenous culture, language, and stories change—Indigenous cultures change just as the land

changes. Also, the intrinsic connection of relationality and land is integral and essential in

relationality teachings. This is why we saw these connections being made to environment by

many of the early 4Rs researcher and we see both York's and 4Rs Youth Movement making

these connections in their visuals and educational materials. However, the basic idea of the

connections and the multidirectional movement of the relations of the individual to others and

our environments on many levels remain consistent in Native American and Indigenous

rhetorics.

4Rs: Responsibility

Again, we can see how responsibility happens when we are respectful of the relationships

we have. Holding to the interconnected circular nature of the 4Rs, it becomes clearer why each R

has to be equally important to maintain the interdependent nature of each R to the other 3 Rs.

Responsibility happens when we are connected. We are responsible for each other's wellbeing in

a relationship—be it in a family, a community, or a society. If a relationship is unhealthy or

broken (as we will explore in Chapter 5), responsibility may not be taken. Responsibility is

something that we have in our environments—be it homework for school or taking care of the

class pet or chores at home like preparing meals or doing laundry. These acts of responsibility

are for ourselves *and* the good of the whole (whether that whole is you and your pet, family,

community, or society). It is apparent that this is an extension beyond our own selfcare in the definitions below. If responsibility is not taken, the whole can be hurt or damaged in some way.

First, Cull et al. (2018) define the key concepts of responsibility as:

- Is inclusive of students, the institution, and Indigenous communities; also recognizes one's own connections to various communities.

- Continually seeks to develop and sustain credible relationships with Indigenous communities. It's important to be seen in the community as both a supporter and a representative of the institution.

- Means understanding the potential impact of one's motives and intentions on oneself and the community.

- Honours that the integrity of Indigenous people and Indigenous communities must not be undermined or disrespected when working with Indigenous people.

Again, we see that these definitions building off of the ones from Kirkness and Barnhardt,1991; Pidgeon, Archibald and Hawkey, 2014; and Pidgeon, 2016a and 2016b from Table 2:

Responsibility	*Is inclusive one's own connections to various communities, not just your own. * Means understanding the potential impact of one's motives and intentions on oneself, the communities, and environment.

While the original definitions included 'environment' this changes by the time Cull et al. (2018) define responsibility. However, the definition from Cull et al. (2018) acknowledges this in a more indirect way by acknowledging the multiple communities to which we are all

connected. Likewise, Cull et al. (2018) develop the idea of community more, as well as emphasizing the work that is needed to 'develop and sustain credible relationships.' This not only brings the emphasis to community, and we know that connects to Native land per discussions in Chapters 2 and 3, and in this Chapter. Also, it stresses the work to go into labor needed to 'develop and sustain' a relationship. In turn, it also clarifies that the relationship needs to be 'credible' focusing the relationship as something more concrete than an acquaintance or association—to focus the work. In other words, it has to be applied to a relationship where there can be respect.

Secondly, we see this concept of responsibility integrated into the rhetorics and the teachings. Wilson (2008) states in *Research is ceremony: Indigenous research methods "*As writers and researchers we have the "[r]esponsibility to act with fidelity in relationship to what has been heard, observed, and learnt" (59). This quote implies obligation but also longevity through the process of passing on knowledge to others. It suggests extending beyond ourselves—much as Cull et al. (2018) acknowledged in their definition of responsibility. But, it also carries the idea of more as Wilson (2008) adds 'fidelity' and action to what responsibility is. It has to do with giving and doing.

Mills (2019) takes this idea even further in the discussion of Johnston's stories in his dissertation. The two stories by Johnston he uses gives us more context and exemplify this concept of responsibility to community, land, giving, and doing even more than Wilson (2008).

One of Basil Johnston's stories culminates in a poignant dialogue between a boy and his grandmother on precisely this point, that needs must be met with a sense of responsibility to share one's gifts. Southwind is a young boy who yearned for a gift. However [sic] he struggled to recognize when his gift (a water lily) came, and how to act responsibly in

respect of it. Amongst other sources of confusion, he expected to be his own gift's

beneficiary. Finally he recognizes the water lily for the gift it is, takes it, uses it, and heals

his grandmother's illness. The story closes with this exchange:

> Some months later Southwind and his grandmother were standing on the knoll
>
> studying the stars. He said to her, "No'okomiss, the flower gift that I received;
>
> it was really meant for you, wasn't it?"
>
>> "In a way it is. But it was meant for everybody. But that's the way all
>>
>> human gifts are." (p. 104)

The concept that responsibility is beyond ourselves and that it is an action—an action of giving.

Also, the idea of fidelity (faith and loyalty) to community is present in this story and teaches the

importance of doing for others as it benefits the whole. Another example by Johnston is given by

Mills (2019):

> Basil Johnston is emphatic in rejecting selfishness, saying that for Anishinaabeg, "at
>
> the root of all wrong-doing is selfishness"; "For our ancestors selfishness is the mother
>
> of all ill will and wrong-doing that besets society", and even that "Men and women,
>
> who think of themselves first to last, are not fit to be part of the community. Outcasts
>
> they deserve to be, deserving of whatever punishment the world pronounces and
>
> inflicts upon them."
>
> Yet apprehending the imperative to share one's gifts with those in need is only a first
>
> step in living responsibly. Responsibility requires not only that one share when able,
>
> but that one enables himself to share. (p.105)

Given this context, it becomes clearer why looking beyond oneself is part of the both of the 4Rs

definitions given in the two higher education examples given at the start of this section on

Reciprocity. This second example by Johnson makes the extension of self into the community more concrete as well. So, just like the 4Rs visual, these two examples by Johnston in Mills work show the action and the fidelity that Wilson (2008) refers to when talking about service to the community and to the whole to share 'heard, observed, and learnt' as a form of respect and relationship.

Mills (2019) also refers to Kimmerer (2013) in his work in defining the concept of 'responsibility.' One of the cultural understandings of responsibility is that it is not a burden or something to be carried, but given and shared—it is more active. And Mills (2019) uses Kimmer (2013) to explain this idea:

> Yet Kimmerer explains how, consistent with co-creativity, the presentation of a need isn't necessarily an imposition. She notes that from a Western standpoint, "Naming responsibility is often understood as accepting a burden, but in the teachings of my ancestors, responsibilities and gifts are understood as two sides of the same coin. The possession of a gift is coupled with a duty to use it for the benefit of all." I recently experienced this in my own life. Before Graydon was born, Meg and I decided we'd like to raise him in a tikinaagan (cradleboard). I asked elder Harry Windigo of Mitaanjigamiing to teach me how to make one. He happily agreed, but explained that once I learn, I become responsible for supporting those who ask me to teach them.
>
> It should be clear enough now that both formulations of the mutual aid analytic connect as halves of a single constitutional logic; the viability of each presumes the viability of the other. It follows that rooted community members don't ordinarily get exercised when presented with a need. The reason, as Kimmerer artfully explains through the example of pow wow, is that:

In a culture of gratitude, everyone knows that gifts will follow the circle of

reciprocity and flow back to you again. This time you give and next time you

receive. Both the honor of giving and the humility of receiving are necessary

halves of the equation. The grass in the ring is trodden down in a path from

gratitude to reciprocity. We dance in a circle, not in a line. (p.105-106)

It is here that Mills (2019) transitions to explain that reciprocity is not linier, but circular. I like to

think of this in use of verbs in English—which is a language many of us function in and does not

carry the same ideas and culture in the language structure. However, despite these differences,

the verbs of give and receive are directional (i.e. only the giver gives and only the receiver

receives).

Now, you can choose to see these verbs as linear: I give to you and you receive my gift.

However, the direction can easily be looped back around: you give to me and I receive your gift.

In short, we can give to each other and we can both receive each other's gifts. So, in that same

idea—we can look at giving and receiving as circular in nature. The start of this quote alludes to

a story I shared earlier in this chapter and this just further connects how the 4Rs are connected as

the idea of circular reciprocity is connected to relationality and our connections to our

environment and Native land even clearer. As Mills (2019) writes:

Finally then, we can return to the critical point of who fills the berry bowl. Kimmerer's

observation that ceremony is shaped as a circle helps to disclose that within the earthway,

beginning meets end. For the rooted, there's no progress. Ours is a life of recurrence; the

direction of growth is a wide arc that finds its way humbly back to itself. A critical

feature of mutual aid, in either of its aspects, is that the reciprocal gift need not return to

the original donor: the interaction need not be one of direct reciprocity. Once I was

expressing my gratitude to nokomis for all I'd received from our community and from her especially. Towards the end of the conversation, I asked if she had any thoughts on how I might give back. She knew immediately what she wanted to say: support the young parents in the community. They have lots of struggles and big ones are drugs and alcohol. They need help to get education. Second, she said I could help community members to know their history.

Neither suggestion calls for a counter-gift; nokomis wanted nothing for herself. She would have me gift folks I haven't necessarily benefited from, and at the very least, whom I haven't benefited from directly. We don't gift in anticipation of having our own immediate or future needs met; we gift to meet the needs of others and we simply trust that they'll reciprocate in turn. Hence Hallowell's observation amongst the Saulteaux that "A spirit of mutual helpfulness is manifest in the sharing of economic goods and there is every evidence of cooperation in all sorts of economically productive tasks." (p. 106)

This ends with a nod to the mutually beneficial and productive way this is to living, alluding to the environmental sociology and economic theories in Chapter 3, giving a nod to the sustainability of a system that existed prior to capitalism and one that supports balance and interconnection with each other and the land. Additionally, the circular nature of this and trust in the system that what you give is returned—not in kind—but in reciprocity. It is a reference to the circular nature of research (Wilson, 2008), of seasons and growing (4Rs Youth Movement), of our life cycles, and of the 4Rs themselves in the visual representation (Cull et al. 2018). However, as this quote and discussion mention, the circle is not complete without reciprocity.

4Rs: Reciprocity

As we enter the section about the last of the 4Rs, reciprocity, let's look at how it is defined in the early work around the 4Rs. First, Cull et al. (2018) describe it as:

- Shares knowledge throughout the entire educational process; staff create interdepartmental learning and succession planning between colleagues to ensure practices and knowledge are continued. Shared learning embodies the principle of reciprocity.

- Means Indigenous and non-Indigenous people are both learning in process together. Within an educational setting, this may mean staff to student; student to student, faculty to staff; each of these relationships honours the knowledge and gifts that each person brings to the classroom, workplace, and institution.

- Results in all involved within the institution, including the broader Indigenous communities, gaining experience in sharing knowledge in a respectful way.

- Views all participants as students and teachers in the process.

This is a bit different and develops the definitions from Kirkness, Barnhardt, Pidgeon, Archibald, and Hawkey from Table 2:

Reciprocity	*Shares knowledge throughout the entire educational process. Shared learning embodies the principle of reciprocity.
	*We are in the learning in process together and gain experience in sharing knowledge in a respectful way.

We can see the circular nature of the connection between the ideas used in respect, responsibility, and reciprocity, while we can see that these definitions are actually calling on many of the points that Mills (2019) and Wilson (2008) use in the responsibility section. We see community, learning, practice, and giving as concepts that are present in these two definitions. But, for us to really make this more concrete and explicit, let's look at Native rhetorics.

The second part of reciprocity section, we need to try to solidify what reciprocity means in the cultural context of Native American rhetorics. Haas (2007) uses reciprocity when talking about the responsibility of carrying wampum strings and belts to community members as they carry this story and the responsibility of keeping it, sharing it, and teaching community members of its meaning in "Wampum as Hypertext: An American Indian Intellectual Tradition of Multimedia Theory and Practice"; she states, "Wampum strings and belts served to engender further diplomatic relations, and their presentation was a gesture that required reciprocity on the part of the recipient. Consequently, accepting a gift of wampum meant that the recipient accepted its implied message and responsibility." Part of the reciprocity is acceptance of responsibility, but this responsibility would not be given without respect and relationship. Reciprocity is a part of the cycle that holds respect, relationship, and responsibility together and makes the circle and connection complete. It is the inclusion of the self and the whole together, unseparated and intrinsically linked.

Mills (2019) writes about reciprocity for over 150 pages in his dissertation. This struggle is real—as it is a hard practice to make concrete. However, as Mills discusses this application in Indigenous law, so there are different aspects and ways of enacting it. However, one of the most concrete examples for my readers is the discussion of treaties:

> While elders often speak of sacred law, they obviously don't speak about the constitutional logic analytic or of mutual aid; these are just ways I find helpful to talk about what I've come to understand—for the most part, from elders. But the understanding that treaty is grounded in Creation's way and that treaty is therefore a relationship of intentional gift-giving and need-meeting is widespread. In the following

comment, Anishinaabe elder Florence Paynter describes all three aspects

(gift→gratitude→reciprocity) of the positive analytic:

> That's the way I understand it: as long as the water flows and as long as the sun
>
> rises. And this is what I mentioned earlier when you give thanks to the
>
> grandfather sun in the morning, he too was put here by the Creator for a purpose.
>
> He was instructed this is what you'll do, you will treat the Anishinaabe and you
>
> will keep him warm with your sun rays. The sun has never forgotten to rise; he
>
> (sun) reminds us of that promise. And in return we too have to give thanks to him
>
> and watch for him as he rises each morning. (p. 235)

This concept is relatable and something that is familiar no matter the cultural framework one is

working from. The idea of a sacred agreement with Creation is one that is easy for many to

connect to and relate. However, not all relationships are with the creator. And, how can

reciprocity be described in these relationships. They can be healthy and respectfully responsible

relationships like we see in Haas's example (2007). But, what can happen when the relationship

is fraught?

Mills (2019) gives us an example of what can happen when a part of the circle is

damaged or broken. There is also a negative framework for this concept as well:

> Elders just as often identify the negative mutual aid analytic
>
> (need→responsibility→reciprocity) in the context of treaty. Thus [sic] Anishinaabe elder
>
> Flora Traverse explains: "For sure, as long as the sun shines and the grass; as long as the
>
> grass grows. Yes, there is countless of grass that grows everywhere and this sun, he still
>
> works to this day. This is what was considered along with the grass. As well if we asked

for something we're supposed to be given it; our resources and everything." Anishinaabe elder Ernest McPherson likewise shares:

> I think about it today, they really secured it so we do not lose the Treaty. The Treaty, they
> call it. That is why they used the sun and they used the water as it now flows and
> in the summer time, again the grass grows. That is how not to lose the Treaty, not
> to disappear. If the sun does not shine, no one will be alive. They were very smart
> when they set that up. But we lost many things that were promised to us. They
> were given fishing nets, tools for gardening every summer whenever they needed
> them. They were given these things. (p. 236)

Here in lies the difficulty of this reciprocity structure and the relationship that is the basis of the treaties between Indigenous peoples and settler colonizers. It is a part of the reciprocity structure that has not gone well. It is a bit fraught in this structure and it shows what can happen when there is something wrong with the respect and relationship sections of the whole in the 4Rs. We will look at how when these constructs are broken or damaged in Chapter 5. However, if the circular structure is not broken and damaged—and left unrepaired—we can see what the result can be in the second example provided by Mills (2019).

As we finish this chapter, it is important to understand that settler colonial relations have broken the 4Rs and that colonial structures function on imbalance and inequity. As Whitebear, Pebbles, and Gasteyer (2024) write:

> In North America, Indigenous communities have faced colonial intrusion to lands and
> waters for over 500 years. While the impact has been felt longer in some areas than
> others, the continual occupation of North America has relied on settler determinations
> of appropriate land and water management that deviate from following the 4Rs. The

breakage of the 4Rs is the underlying cause of conflict between settler colonial actions

and Indigenous resistance to these actions as related to lands and waters. Colonialist

land and water management approaches contrast with Indigenous-based land and water

relationships… This historic process of breaking all 4Rs is relived in current times most

notably through extractive capitalism and the threat to water—the source of all life. (p.

8)

 The current state of conditions for many in the Americans are living on Native lands where the

4Rs have been broken. Their stories are essential in the weaving of a new agreement, a seeking

of balance as these stories push on the dominant narratives. And, these narratives will help us

move forward and signal a willingness to listen and, perhaps, move forward when voices that

have been silenced and/or marginalized are heard. As we write:

We rely on the 4Rs as a guide to bring these stories together (Kirkness & Barnhardt,

2001; Pidgeon et al., 2014; Cull et al. 2018; 4rsyouth.ca, 2020). Additionally, we discuss

how the breakage of the 4Rs carries on the lineage of violences through frontier

capitalism. These attacks on the bodies—water, land, and human—have resulted in

international calls for solidarity through social media (Gilio-Whitaker, 2019; Kino-nda-

niimi Collective, 2014, Duarte 2017). The use of hashtags as a rhetorical tool of

resistance allows frontline activists to call for external support as needed (Alexander, et

al., 2018). While the violence continues beyond these moments of attention and social

sharing, the resistance also continues, even if hidden from public awareness. The moving

in and out of the public consciousness through social media brings people together in

resistance on a global scale while simultaneously creating awareness about the necessity

of holding cartels, corporations, and governments accountable for these violences

(Duarte, 2017). As such, it is critical to hold up Indigenous communities who are fighting

day-in and day-out. (p. 3, Whitebear, Pebbles, and Gasteyer)

The importance of decolonial work at this moment is a recognition that is it not just Indigenous

communities who are fighting now, it is the majority of us who live on Native land. The

violences that the communities of Flint have endured will be made more concrete in Chapter 6.

As we move into the stories of the Flint Water Crisis and see how the 4Rs can be applied

to these narratives, it is important to remember that community and Native land are at the core of

the 4Rs, whether it is explicitly stated or not. In the next chapter we are going to see how

violence of the settler state and exploitation of the sacred created a grassroots activist movement

that can show us how the 4Rs can be a path forward in the narratives of a real case study. And, as

we look at these stories, we should remember that:

> The violence connected to frontier capitalism continues to rely on the exploitation of the
>
> sacred. The 4Rs can continue to serve as a reflection of decolonial efforts to the violence
>
> enacted by the settler state. Since decolonization relies on the return of lands and
>
> relationships with those lands under the guidance of Indigenous ways of knowing, the
>
> 4Rs remain a strong component of decolonization. The impacts of frontier capitalism are
>
> not going away soon, and neither is resistance to its exploitation. (p. 23, Whitebear,
>
> Pebbles, and Gasteyer)

CHAPTER 5

WE DON'T NEED ANOTHER HERO

The focus of Chapter 4 was the breakdown of the definitions of each of the 4Rs and exemplifying the definitions with Native rhetoric and narratives. At the end of the chapter there was a clear connection in how Native law addresses what happens when the 4Rs are not followed and/or are broken. We will explore this more through narrative examples in this chapter as we look at the application of the 4Rs in the Flint Water Crisis.

It is important to preface the chapter with an acknowledgement that many events that helped create the Crisis and the early responses to the Crisis are left out of the examples due to length and detail; the groundwork for the Crisis started before the first city manager was put into place in 2002 (over two decades ago), so the sheer magnitude of examples means that I cannot even cover them in detail in this dissertation. Likewise, the complexity of some of the occurrences (like the court cases of Mark Edwards from Virginia Tech, some of the citizen and government actions of Flint, and so forth) will not be discussed in depth. The focus of this section is to show how the 4Rs are related to the creation and early responses to the Flint Water Crisis—so we can see how this theory and practice applies to the Crisis.

So, how does this apply to the Flint Water Crisis? This chapter will follow the same order as the last one: respect, relationship, responsibility, and reciprocity. Like the previous chapter, the examples and discussion may elude back to previous points of analysis (i.e. a discussion point in relationship may allude back to responsibility) to help make the cyclical interconnection of the 4Rs more apparent and the ideas more complete.

Respect:

First, respect has been a serious issue in the Flint Water Crisis. This is partly due to the

colonialized structures of government as discussed in Chapter 3. Additionally, pulling from the

concepts of what respect is in Chapter 4, as well as how community and Native land are central

to the 4Rs from Chapter 2, we move into the application and analysis of some of the events pre-

Crisis and when it started. This dissertation limits the actors within this application and analysis

to government, community, and science outside of government. So, for this chapter, the

discussions of each of the 4Rs will be organized in a specific way. The analysis and discussion of

how each R applies to the Flint Water Crisis will start with government; however, following the

government example(s) the focus of community and science outside of government may be more

intertwined as many of the scientists (whether it is physicians, water scientists, or urban planners

and mappers) are connected to the community in one way or another. Throughout this chapter,

there will also be personal narratives.

One of the concepts we discussed at the end of Chapter 4 is how colonization through

institutional, governmental, and law/policy responses often breaks the concept of respect— not

only in the sense of justice and autonomy as Mills (2019) lays out for us—but to the point of

broken trust damaging the relationship, responsibility, and reciprocity between actors (in this

discussion—the actors are government on various levels and politicians and elected officials

whose voices are promoted and carried in the media). This breakage of trust is very apparent to

anyone who is familiar with the communities of Flint. The level of distrust of the government

means that trust may never be earned back in our lifetimes. As Henry (2022) states:

It is unsurprising that the activists and residents in Flint remain dissatisfied with the

reparative measures thus far taken, for they represent short-term responses to a long-term

problems like segregation, white flight, deindustrialization, and urban disinvestment that

go back almost a century. (p. 59)

It would be easy to argue for much more than a century given treaties and removals of Native

peoples [as discussed at the end of Chapter 4 with Mills (2019)], but that being said—this is a

history of the place and relationship of the space of the city to that of colonization and the

inequities it brings—these problems here are as old as the city of Flint in this space and place.

Native land has a depth of meaning in this analysis that is long. It carries a history with it that is

one of broken trusts for centuries now.

Given the more recent events of the city—from the depictions of Flint by Michael Moore

in his first movie, *Roger and Me* in 1999—the depiction of the city as a part of the decaying rust

belt has been the norm. Flint has long been connected to crime, drugs, poverty, and white-flight.

We will see how this concept can be perpetuated through both the media and a voyeuristic othering

to the governmental identification of it as a black ghetto in the census and using academic

publications to perpetuate this idea in the next chapter. As I mentioned earlier in this section, I

cannot outline every event of the creation of the Crisis or the early response to the Crisis in this

section of the dissertation. In order to make this easier for my readers to follow, I will break this

down to a triangulation of actions: first, the government—including law and policy—this will

include elected officials and institutions; second, community; and third, science actors outside of

government.

Respect and the actors in the Flint Water Crisis:
Let us start with actors in the government. This perpetuation of the idea of Flint as a

black city, 'plagued' with poverty, crime, and drugs while facing additional municipal financial

shortages due to corporate capitalistic abandonment and white flight perpetuate the funding

issues of the city has been crucial in the actions of GOP governors, Engler and Snyder, in the use

148

of emergency managers in the city of Flint. This very specific act of implementing this law/policy breaks the respect of the people for autonomy, representation through their elected officials, a voice in the governance of their city and their state, and a lack of just governance in ALL aspects of their citizenry and public status. Starting in 2002 when Governor Engler appointed Kathy Keiliszewski as Flint's first emergency manager (an appointment the city fought losing nearly a quarter of a million dollars in the process), Flint went through a cycle of emergency managers (who—openly-- were not accountable to the public in any way, shape, or form in their positions) alienating the people of Flint over and over and over again (Goodin-Smith, 2018). In short, they were not being respected.

So, the governmental role in creating a law and related policies of emergency managers for black cities in the rust belt, like Benton Harbor, and Flint's sister cities on the I-75 corridor (the path of white flight from the now black majority cities of Saginaw, Pontiac, and Detroit) is a way of breaking respect, the respect of the democratic method of voting and having a voice in the governance of one's own community. Since the emergency managers were not accountable to the citizens of the city but to the governor that instated them, there is no place for the citizens of these cities to turn to have representation in the government. This breaks the very element of respect as outlined earlier by the *Guide*—"Indigenous ways of knowing and being"—not only are they not being heard, their collective interests and voices are silenced and made impotent. Additionally, this is a way of alienating the citizens of Flint. This is not something new to the community, as people who have been incarcerated are often stripped of their right to vote and poor communities of color are disproportionately incarcerated. However, while related, it is not the focus of this paper. But, it does speak to the patterns of alienation that are elevated in Black-majority and diverse communities like Flint. And, in the case of the emergency managers that are

a part of the legacy of Michigan cities along the I-75 corridor and other poor, rust-belt, white-flight, majority-black cities like Benton Harbor—we can see this act of placing all the citizens in these communities under emergency manager control and removing elected officials as a way of disenfranchising ALL of the citizens of Flint during the emergency manager periods of time in a very open and explicit way.

Additionally, as the decisions to renovate a long-abandoned water plant (the costs of which were passed onto the taxpayers who were taxed without representation) to use the Flint River as a water source for the city—all of these governmental decisions that were foisted onto the taxpayers of the city of Flint by emergency managers under the guise of cost efficiency cost them multiple times more than if the system had been left alone. The renovation of the water plant alone cost more than the city paid in decades to have the water piped in from Detroit. And, the final cost was the profit of corporations and companies who profited from this shift—and it was at the expense of the citizens of Flint through false cost efficiency. The result? The residents of Flint had some of the most expensive water in the nation—and they paid a much higher price than this.

Many citizens paid $300+ a month for water a month. They paid this amount for poisoned water to flow to their homes. Water that ruined the lining of the pipes in their home, eventually adding to the many out-of-pocket costs the residents of the city had to pay as only city water hubs were replaced by the federal and city governments. But, the issue did not stop there. As residents complained about the taste, sight, and smell of the water, they experience(d) rashes, hair loss, illnesses—diagnosed (like Legionnaire's, lead and other heavy metal poisoning, and various unknown health conditions that were caused and triggered due to exposure to chemicals, stagnant water in the pipes, and heavy metals) and undiagnosed, emotional and mental changes.

But, Flint residents had to pay the water bills. Why? Even after the Crisis was declared, the act of not paying the water bill meant that a person could have their children taken away because there was no running water in the home or they could lose their home due to non-payment of bills; the state denies this was the only reason children were removed from their homes during this the Crisis, but there is a Michigan law stating that it is neglect if there is no running water in the home. As a result of the cost of toxic water to be connected to the home, running through the pipes, and the accountability of the state in the creation of the Crisis, there are two court cases addressing the issues of cost and damages of non-payment of water bills for the residents of Flint.

Additional issues arose with landlords who did not pay their water bills. This was such a widespread issue in the city that there were community organizations that formed specifically to help with this issue—often tied to institutions like Hurley Medical Hospital. If a family found out that their landlord stopped paying the exorbitant water bills, mortgage, or the taxes—they had few options. One was to reach out to one of these community organizations to pay the past due amount(s) to keep a roof over their heads and their children in their home. The breaking of respect is clear in this instance by the water company—as selected and run by the state, the governmental taxation system, and their landlords. What is the only way respect positively correlated to this kind of event? The actions of the community, community organizers, public donations, and the health providers (science outside of government).

The final breaking of respect was the health of the citizens. While the government—from Governor Snyder to governmental organizations who cherry-picked testing locations of water in the city—was busy gaslighting an entire city of residents, companies like Ford changed their water sources for their plants. Citizens could do nothing but organize and talk to anyone who

151

would listen—as the situation could not move forward as there were no elected officials able to declare a state of emergency.

The public was hearing what was going on as the community organized. There were protests being held outside of Flint City Hall. People were reaching out to contacts they had to get news coverage, to bring attention to the situation as their own voices in government were being silenced. This led to community alliances being strengthened and community activism becoming central to response to the needs of the citizens (as mentioned above). It also motivated academics and institutions of higher education to investigate what happened. At this point in time, scientists from outside of the government started listening and hearing the people of Flint and not judging them—harkening back to the definition of respect from "Indigenous ways of knowing and being."

Virginia Tech's Marc Edwards and a team of graduate students came out and started testing the water in people's homes, finding lead levels that were sometimes over 1,000 times higher than what the EPA allows. Dr. Hanna-Attisha decided to release and publish the findings on the elevation of lead levels in the blood of many of her pediatric patients before peer-review because of the dangers of waiting; government officials tried to discredit her work when she did release it prior to review at a Hurley Hospital press conference. Dr. Marty Kaufman worked with his students at University of Michigan-Flint to map out the city pipelines when governmental officials said they were unable to map out the pipelines for testing, monitoring, and repair. In short, it was through the work of community and the public that scientists from outside of the government responded to the people of Flint with respect. In turn, many Flint coalitions of non-profits started at the time, like Flint Cares, the Greater Flint Health Coalition, and the Flint Watershed Coalition—to name a few.

As Black Lives Matter merged into an analogous slogan in the area of Flint Lives Matter, we saw the violence of Flint—from the war on poverty to the war on drugs to the fight for clean water—as acts of violence against human rights in all of its explicitness. In the last chapter, capitalism and colonial practices places the bulk of the people of Flint into the expendable category. And, in a time of ongoing white flight, this meant that aligning with these communities comes with a cost (and a cost that many in Oscoda and Rockport Michigan thought they had escaped but did not as they found they were also expendable through PFAS exposures) if one did not fall into the "cheap" category of the capitalistic evaluation of life. Through this act of voyeurism and othering, we recognize and even watch and discuss the "beauty of the death and decay" while denying the human cost of this damage. But, as Henry (2022) argues the importance of narratives, in his chapter on Flint:

> By humanizing the city and the crisis and testifying to the power of community, each insists that the city is more than an environmental sacrifice zone and, in the words of Flint activists, that "Flint Lives Matter." By considering each within the context of Black radical politics, it becomes clear that storytelling can advance what Robin Kelley calls freedom dreams—visions of emancipatory futures articulated by collective movement led by Black scholars, artists, and activists he describes as the Black radical imagination. (p. 60)

"By humanizing…". Those are powerful words. Not by watching. Not by othering. Not by rubbernecking. But, to humanize the people of Flint is to give them equal value. This is a goal that Basil Johnston would teach us to do. "By humanizing…" we recognize, acknowledge, and respond with respect to an other person. We do this for a simple reason—we do this to

acknowledge our equity—our humanity. Without this, we cannot go on to have a relationship. Or, to clarify—we cannot go on and have a respectful relationship.

Relationship:
Next, how was relationality functioning, or not, in the Flint Water Crisis? In this section, I will follow the same pattern as used in the previous R (respect) section. This will follow the same triangulation of actions by the three groups of actors (the government on various levels, the community, and scientists outside of government).

Relation and the actors in the Flint Water Crisis:
There are many ways relationality applies to the Crisis. The relationality of the local government was broken by the state government each-and-every time an emergency manager was placed by a GOP governor to manage the city of Flint. This broke the relationship so completely that the city could not even declare a state of emergency until the elected officials were reinstated and the emergency manager was removed (this was one part of the delay in any action being made on the federal level of the government). In short, this action broke the relations of the communities, businesses, organizations, and Flint Citizenry with the government and this is proving to not be an easy repair after it being broken for the better part of a decade and damaged for decades prior. To make this even more of a painful break, one city manager made a public announcement that he was not accountable to the people of Flint—as used as an example of respect in the previous section.

Often, if respect is not present—the relationship is non-existent, dysfunctional, or broken because of the lack of respect. I think this is something we can all understand in our own relationship with others, organizations, or even institutions. In the case of the emergency manager—he has no relationship with the people because he does not represent this. In turn, this damages the relationship the people of Flint have with the government—on all levels. It breaks

and removes the relationship of representation, as they had their representation removed by the state government by implementing the string of emergency managers for the city. Likewise, the federal government allowing this to happen damages the relationship with the citizens of Flint, too. The relationship with the government was broken and/or severely damaged by the (forced) inability of the city government to function and do its job of representing the people. It was damaged by the malicious action of the state, and it was damaged by the silence and inaction of the federal government.

While there were forces and voices in the government—particularly the state level—that saw the issues with these actions. For example—there were no emergency managers placed in the City of Flint under the democratic governor, Jennifer Granholm, unlike the two republican governors before and after her. However, they were not the voices and forces that won—as it clearly happened multiple times for well over a decade. The coverage of the politicians and the opinions they voiced were made public, and their intentions were clear—especially as we look back and refresh ourselves on how capitalism and the environment work as outlined early in Chapter 2.

Each time the news covered the voicing of violence, removal, and stripping people of their freedoms, and evoking capitalistic, land-driven illness and death on people of color, the inaction of the public, intentional or not, relationships within the government and beyond were damaged from a lack of more than respect—but of even tolerance. In the case of Flint's Genesee County's southern neighbor along the I-75 corridor, Oakland County, resides a collection of communities of white flight from three of the black-majority cities. Often, the cities of Detroit, Pontiac, Flint, and Saginaw (in a direct line south to north on the I-75 corridor) are likened to each other and face extremely similar challenges (extreme poverty, emergency manager and city

bankruptcy challenges from the state, the dismantling of public services like education and water, failing infrastructure, and so forth). But, in the middle of three of these cities lies one of the richest counties in the U.S.—Oakland County. So, when people speak about any of these cities in sweeping generalizations about the people living in them or the challenges they face, it is—in many ways—about all of them. And, this will be exemplified by my personal narrative that follows this news narrative. There is a specific line of thought that overgeneralizes communities of color in this region and these are some of the voices that represent the institutional thinking within these two examples.

In the news example, an elected politician from the county south of Flint's—Oakland County's L. Brooks Patterson—was reported saying the following:

> Over his shoulder, he said, "Anytime I talk about Detroit, it will not be positive. Therefore, I's called a Detroit basher. The truth hurts, you know? Tough shit."…
>
> When a black Detroit city council woman alleged racism during a business dispute, Patterson publicly declared that he's "rather own a 1947 Buick than own" her…. When I asked him about how Detroit might fix its financial problems, he said, I made a prediction a long time ago, and it's come to pass. I said, 'What we're going to do is turn Detroit into an Indian reservation, where we herd all the Indians into the city, build a fence around it, and then throw in the blankets and corn." "Drop Dead, Detroit!" (Williams, 2014)

Patterson has been re-elected many times and is unabashed about his positions and comments. In addition to his references to America's violent, capitalist, racist, and settler colonial past, he is equating owning a person to owning a car. It is an allusion to the Motor City's racist past as well

156

as direct referral to the human capital that is a part of the settler colonial structures discussed in Chapter 3. The open racism is something that has been continuing to rise in the US and Patterson is not the only outspoken politician who is comfortable saying these comments not once, but over and over again. In this example, we see him openly encouraging removal of people, isolating them, and killing them. In short, he is verbalizing the colonialist attitudes of genocide, racism, sexism, and land grabs in just a few words; his settler colonial attitude merges all the usery of Native American and African American lives in a single moment—and repeating it to an audience of constituents and anyone who is willing to listen every chance he gets. All, in the context of Detroit and linking people of color to Native land and the violent settler colonial structures that developed into the systems and institutions we have now in the US.

And, as this same article states:

He recycles his bits to the point that his constituents can retell them. The first time he made the crack about Indians and corn, he was widely criticized for it, but he does not backpedal. Even if a line is poorly received, he pockets it like a shiv.

I don't work for Detroit—they don't sign my paycheck," he told me. "The residents out here know I'm hardworking and I's honest. Yeah, I sometimes say things that make people cringe." On another occasion, he said, "I can get away with it because me and my team, we're good at what we do. People are gonna forgive me my peccadilloes because we're the best-managed county in America." (Williams, 2014)

This may raise questions about why or how Patterson in office with comments like this is. It may be of note to acknowledge that Governor Engler's (one of the two Republican governors who used emergency managers for cities like Flint, Detroit, Pontiac, Benton Harbor, and other Michigan cities—he was the governor that pushed for the creation of this state law and related

157

policies) wife is from the Oakland Country community where my parents moved when I started

upper elementary school. While Oakland County was Republican leaning when I was growing

up, it only recently started voting blue, not purple, in 2020. As *The New Yorker* article states:

> The Michigan media have called him a "dangerous demagogue" and "the clown prince"
>
> of the state's Republican Party, yet they endorse him. "Oakland County is the economic
>
> engine of a sputtering region," the *Free Press* editorialized, in 2008. The county has not
>
> voted Republican in a presidential election since 1992, but Patterson wins big. "Your
>
> Worship," "Your Honor," "the infamous L. Brooks Patterson," and "the dynamo of
>
> Oakland County" are some of the ways his constituents greet him or introduce hi. Bill
>
> Ballenger, a longtime Analyst of Michigan politics, told me, "He's become such an
>
> iconic figure I don't think anyone perceived that they could beat him." Patterson's
>
> political appeal has its limits though. Three times, he has tried for higher office—
>
> attorney general once, governor twice—but he has never won an election beyond
>
> Oakland's borders. (Williams, 2014)

Patterson's racism is blatant. These quotes show that there is a dysfunctional relationship

between some politicians and voters and the people who live in Detroit (and by default the other

cities— Pontiac, which is in Oakland County; Flint, and Saginaw—all of which are connected to

Detroit by the I-75 corridor that Oakland County encapsulates as an area of White Flight for

Detroit, Pontiac, and Flint), people of color (whether they are from one of these I-75 corridor,

rust-belt cities or not) from the quotes above. While these were not the only callous, intolerant,

disrespectful comments made in this interview by Patterson, it still begs the question of why are

people in Oakland County voting for him?

There are three points here. First, Oakland County is the one county that is financially stable in the area. For decades prior to the rise of Silicon Valley, this county was consistently in the top 10 richest counties in the nation. It was an area that benefited from capitalism and capitalistic structures and institutions. While, recently, Oakland County has had its own issues with environmental waste from the auto industry and others (including multiple superfund sites, cancer-clusters, and—most recently—PFAS in the network of lakes and rivers in the County), landowners moved there for a sense of security and safety that continues to drive white flight. The same things that Patterson is bragging about has made Oakland County as wealthy as it is.

Secondly, the financial differences Patterson and many Oakland Country residents brag about, in addition to the de facto segregation that is extremely common in these cities and the surrounding cities and counties, highlight the separation of communities. It highlights the inequity and othering that happens by some people in the community and the politicians they elect. This act of othering is a way of breaking respect as laid out in Chapter 4 and makes sharing the common pot, as discussed in Chapter 2 extremely difficult.

The capitalism and racism that is present in the current structure and division of one of the most segregated regions of the United States is a divisive wedge between neighbors— those in neighboring Detroit and Flint, as well as Pontiac which is in Oakland County. How can the people who live and work in these cities reconcile their neighbors' votes for a politician who spouts disrespect and harmful rhetoric that the people of Detroit, Native Americans, isolating them, and giving them blankets (eliciting the eradication of Native American with smallpox blankets)? This is more than just a lack of respect which leads to a broken relationship—it is a violent and dysfunctional one. It acknowledges that there is a relationship, and that this relationship should end with the death or harm to the other part of the party—from Patterson's

perspective as well as some of his supporters. This demise and harm is transparent and open, and this disrespect leads to a very dangerous, dysfunctional relationship.

Thirdly, the issue of gerrymandering in the state of Michigan which was partially addressed before the 2020 election, is a part of the reason Oakland County turned red. This act of disenfranchisement of voters is a part of the dysfunctionality of the system. It is a system that allows voters to be broken into gerrymandered districts, making their votes less important as the system games the elections. When this happens, it is much more likely for politicians like Patterson to get into office and stay there. It is important to recognize that not all voters in Oakland Country support Patterson and the views he espouses. It is also important to recognize that gerrymandering made it easier for Patterson's supporters to have a disproportionate voice in the communities of Oakland County, thus promoting political positions and rhetoric (which, as the article points out, was repeated by his supporters) that furthered this divide and the disenfranchisement of the I-75 corridor cities from Detroit to Saginaw.

The issues of alienation (as discussed in the section of this chapter, "Respect") and disenfranchisement and gerrymandering are aspects of a breaking of the 4Rs that will be developed more in the next section, "Responsibility." It is also important to acknowledge that the state is addressing the issue of gerrymandering, showing the work and willingness to repair the disenfranchisement of the people of Michigan. However, there is more to do to fix this, it is not completed and there are no protections in place to delay or prevent it from being re-introduced in the voting districts across the state, and other issues to make things function in a way that is inclusive, just, and equitable.

The story I have included below is an example of how this narrative that Patterson gave is not an isolated position, argument, or claim—depending on how it is presented. While the R2—

160

which is centered in the next story-- and the people working there are not currently living along the I-75 corridor, there are many Michiganders on staff and these arguments and generalization of the Black-majority cities along the corridor are more widespread than many people from outside the area may realize. In this story, there are parallels. There is an over-generalization of the cities and the people who live in them, a lack of desire to help our fellow Michiganders, and a capitalist, racist, and settler colonial position.

Before I started my PhD program, I was full-time faculty at a regional university. While I was not living there at the time, I was going back to Flint many times a month for weekly allergy treatments and visiting friends. The state of emergency had been declared and I was taking water down on a regular basis. I was specifically donating to a community program headed by community members for mothers, infants, and young children connected to Hurley Hospital called Bottles for the Babies and to the Humane Society, which was on the non-Flint side of a main road which was a Flint border (it was and is the Humane Society for the county and the city).

The company who my business contracted with was donating water bottles every month for me to take down. On the couple of occasions when there were too many pallets of water for me to take, a friend would drive down with me and we would make a day of it.

Since the company I worked with was donating water that I was taking down with me on some of my trips to Flint, I thought I would ask the assistant dean if I could send out an email to the college asking for donations as some people in the college were already giving me cases of water to take down and bringing them to my office or car each week. It did not seem like a big

deal and a minor ask, as I was already driving my station wagon to and from Flint one or two times a week, most of the time with only a couple of cases of water.

So, when the time came for me to meet with him, he was worried there would be too many cases of water and that my office space would not be large enough to hold the water between trips. And, I thought and said, that would be a lovely problem to have and that I had friends who were willing to drive if it came to that and that I was certain there were people who would be willing to give their office space if needed, and I gave him names.

He thought that we should ask the university staff member who was in charge of the Take Back the Tap (an organization campaign to reduce the use of plastic bottles) actions around campus and called him into the meeting.

After restating my offer to the staff member and mentioning the local corporation I worked with already donating water, the staff member said that he did not want to take down water bottles. That we should use something like a tanker for the water dispersion stations in Flint and allow people to fill their own containers of water there. However, he said the problem was that the University did not have a tanker and he could not think of a way to get one. So, I asked if we could pause as I sent a couple of quick texts to see what could be done about finding a tanker.

It was at this time that the staff member started going off topic. As I was finishing three quick texts to friends asking: "Do you know of anyone who would be willing to donate a milk tanker to take water—provided by the University—to Flint for dispersion at the water centers?"

As I copied and pasted the next two texts, he starts going on about how the people in Flint should just be moved to Detroit. There was no reason to fix the water infrastructure there.

Instead, the residents should just be moved… to Detroit. (Detroit is over 68 miles away down the I-75 corridor.)

I was shocked. I sputtered, "Huh? You want to move the business and communities that are connected to Grand Blanc, Clio, Swartz Creek, Holly, and other cities to Detroit?"

He responded with, "No. We just need to move the people in the city there. They will be able to find work in Detroit."

Again, I was flabbergasted and confused. "So, you just want to move the people who live there out of their community and move them to Detroit?"

He responded with "Yes. They already have connections there and they will be fine living in Detroit. It will make it better."

I looked around. The assistant dean just sat there; my friend, who was a secretary in the office who was raising her nieces from Saginaw did not seem to hear what was being said—even though she was literally about 3 or 4 feet away.

I couldn't believe the illogical, insulting comments I was hearing. I was getting annoyed. "So, their jobs and family members who do not live in the city… that doesn't matter."

My phone dinged and he droned on about more illogical rationalizations for his comment.

It looked like we might have a tanker: I let them know that it looked like would have a sterilized, food-safe milk tanker we could use one or two times a week—but it was not confirmed yet.

At that point in time, I was asked to keep them posted on the tanker and they would look into providing the water—but I doubted they would.

I said thank you to the assistant dean and said goodbye to the staff member. And, as I left, I thanked my friend who was the secretary. I also gave her eyes and said we should catch up soon.

By the next day, it was confirmed that we could use two tankers a week—provided the gas was paid for and the water was provided.

I let the dean and the staff member know to update them on the tanker.

Their official response was: "Thank you for looking into this. We will not be doing this at this point in time."

_____

This was a difficult moment for me. I really expected more from my institution, workplace and alma mater. However, at the same time it did not surprise me. I knew they were unlikely to support this as the meeting progressed based on the rhetoric used by the staff member and the lack of response from the assistant dean. But it was disheartening just the same. There were students who attended the University from Flint and the Flint area, but my request and offer were denied. The request required minimal effort on their side (to send an email) and was made more difficult (find a tanker)—and it was still denied. The hardest part was hearing the warped, insensitive and inhumane comments being made by the staff member and the assistant dean sitting in quiet compliance.

The false argument of the pitting of environmental protection (the issues of water bottles) vs the need for clean water is one that is also modeled in this story. The argument made is a zero-sum equation created by capitalism—i.e. Nestle which is profiting by pumping out the same water from the aquifer the R2 uses and resides over. The issue is not an either/or structure of donate bottled water to a community nearby that is primarily black and is one of the most

impoverished cities in the state or stop pollution of the environment by plastic bottles. If that was the case, there would have been a push for actions against Nestle among other socially active events by the staff member and Bring Back the Tap work he was heading. Instead, this became a poorly masked excuse for doing nothing.

On that same note, I was heartened by the actions of community members, like the dairy farmers willing to donate the use of their tankers, the water donated by the members of the international corporation, and my friends who did their best to do what they could for the residents of Flint. Part of the reason it was heartening is because it showed me that there are some people who were still willing to help people they did not know because it is the 'right thing to do.' They were willing to help a neighboring city because they felt they should.

It is the action that makes a difference. It is the sharing of what can be shared. This is what leads to reciprocity.

However, before we move there, there is another way that othering can damage the entering of a respectful relationship. Often when there is a tragedy, we other the people we see. When there is a car accident, 'rubber necking' can slow the traffic as people look at the accident and are reminded of what could happen. It is a reminder to drive safely. But, this is not the only time we participate in these voyeuristic structures of othering.

_____

One night on my long drive from East Lansing to Mount Pleasant, my friend— Q -- called me and we chatted for the duration of the drive. She was dealing with someone adding her name to a presentation on the effects of the Flint Water Crisis without consulting her first. That was a point of irritation with Q who had shared her story with the New York Times *and on the* Steve Harvey Show. It *was not the telling of her personal story to people again, but that the other woman*

had not asked Q prior to submitting her name for the presentation--Q was not asked permission

to share her story and, quite frankly, Q was getting tired of sharing her story.

While Q had done a similar presentation with this person, it was well over a year prior

(and, by the time of the presentation, a couple of years). Q was talking with me and was trying to

explain her frustration on the second other layer—it felt like the role of victim and that she was

replaying it again and again. It felt like a rut.

I felt total empathy with her frustration.

It felt like the way the Crisis was being talked about in the news placed other people were

in a rut, too. And, this was something that had just been irritating me. There seemed to be very

little being done about things, except by certain people. It seemed like the country was fixated on

the victimization and saying what a shame it was this happened. However, there was very little

action happening by the government. And, what was happening was being pulled back (e.g. the

state, after claiming they could not locate all the pipes in Flint, and Dr. Kaufman and his

students at UM-Flint having to do this for the state, replacing the hubs but not all the pipes and

lines, let alone the pipes in people's homes, apartments, businesses, etc…). So, Q's feelings she

was expressing were very similar to those I was also struggling with around the discussions of

Flint.

It felt like it was, in some ways, the romanticization of urban decay—but with human

lives. It was even more disturbing than the quest of urban spelunking (the act of taking ruin porn

pictures of building that were in a state of abandonment and ruin—often taken illegally in

buildings where warnings against trespassing are posted). It seemed to me that there was no

benefit for the city to focus on the harm done—as there were no investors coming in to save the

city (like ruin porn did for the Michigan Central Station and the current renovation of the

166

formerly abandoned train station in Detroit). Instead, it felt voyeuristic. It felt othering. It felt invasive. It felt like a cage.

I mentioned this thought to Q, and she agreed that this was a good explanation to the feeling she was having a hard time describing. It felt like a type of violence that was not the same as the Crisis. It felt like a trap. It is a feeling like this has become the identity of the people who live and work in Flint. It is what the city was to the general public—an exhibit; a warning; a cautionary tale. It was a momentary display and it seemed like it was frozen in a snapshot, never to change.

I felt relief as I was not the only person feeling this way about the conversations about Flint a couple of years after the state of emergency was announced. But, in the relief was also sadness. A kind of grief that can be easily transferred to frustration and fuel anger—the kind of anger that comes from being stereotyped or feeling forced to fit a mold that you do not. It is the anger that comes with being the square peg forced into a round hole: pounding and pounding to force others to be what they are not.

It is a state of confusion. It is a lack of understanding that comes with actions that changed your life and left you damaged and hurt while those who committed those action just walk away like it was nothing and onlookers shake their heads and say, "How awful."

It is shocking as inaction is the action of choice. It is the bewilderment of wondering why nothing is being done—after you have told your story and all you get are people offering their thoughts and prayers.

However, it is not realistic to think that people's lives and the city will be static and stuck in this moment. It is harmful. It is inhumane in a different way than the Crisis, or Patterson and his kind. But, in a way, it is not.

Q and I talked for well over an hour that night, as I sat in the driveway until we finished the conversation. We talked about ways to process these feelings and how to move forward with her situation.

After the call, I had to pause. I am thankful I was not living in Flint at that point in time. I am sad that I was not living in Flint at that point in time. I am sure this is akin to the guilt survivors have, but not as pronounced. I had not lived in Flint for over a decade when the Crisis happened. But, it was once home and in many ways it still is.

As I sat there with the damp cold nearing midnight, I thought about the 4Rs. This was not just about respect. This was more about relationship. But, it was not a healthy relationship. I thought about Louise Erdrich's book The Round House *and the objectification of Sonja—who is a stripper-- by men, even Joe who says he loves her; when she confronts Joe, she lets him know how disappointed she is. And, this feels like it is similar. It seemed to me that there is a parallel between the relationship between Sonja and Joe and Flint and the rest of the world—like Sonja's relationship to men. It is a relationship that is not what it should be. It is a relationship that is damaged and hurt. It is not an equal relationship or a healthy one. Objectification shows the inequity in the relationship.*

I thought, it is the taking of permission when someone shows you something of themselves and it changes it to something else. It removes agency from those who are being objectified. It is about an imbalance of power in the relationship.

And, I sat there in the car and thought about this with a heavy, sad heart. It is the taking of permission and it changes it to something else. It removes agency from those who are being objectified.

_____

I still think on this story at times. In Erdrich's book, when Sonja leaves, she leaves money for Joe to finish college. She leaves Joe something he needs to learn, grow, and change. She leaves him with the means for opportunity. I still wonder, what does Flint give to those who are objectifying the city and the people in it?

One of the hard lessons in Erdrich's story is we can 'other' people we care about, not just strangers. Relationships are complex. And, sometimes we are not always respectful of each other and this can damage the relationship. In turn, the lack of respect damages the cyclical structure of the 4Rs on all levels, including responsibility and reciprocity.

One of the lessons from the conversation with Q that I shared is that we can be stuck in the moment of damage and hurt. When we are placed in a single moment of time and forced to live our lives in that moment, present ourselves in this moment of time to others even when that moment is in the past, or we are feeling trapped by that moment—it is traumatic. In *Ecosee*, one of the environmental rhetorics books used in Chapter 3—the literature review of this dissertation, there were writings on ruin porn and the pornographic nature of animal photography. Even the dreamer fish (which is a piece I focus on in that chapter) is frozen in death. The stagnate state of being freezes the subject in time. There is no moving forward. There is no action. There is no change.

So, when we hold things in place, in a state of stagnation, there is no movement forward. There is no action. There is no change.

When water stagnates, disease and illness are the result.

When the toxic water in the pipes in Flint (and likewise, at the same time period in Detroit due to water shutoffs for a different austerity reason by their emergency manager), disease and illness grew in the water.

Responsibility and Reciprocity:

Illness and disease are among the issues the citizens of Flint will live with for decades, if not a century or more, in the years to come. Beyond that, creating a balanced, healthy cycle of the 4Rs includes the representation of the affected people, the avoidance of stigmatization, building *and* maintaining a healthy relationship, as well as the ability to connect, change, and move forward. In this section of the chapter, we will look at some of the responses to the health issues of the people of Flint as well as who took responsibility and who did not. We will also look at how the data collection of the population of Flint is or is not being done well, and we will focus on the way the Census has conducted this collection.

There are so many areas of research that are not included in this section, but this is due to the limitations of the dissertation. However, these two topics as they are highlighted (but limited in their development) should provide examples that help make the application of the 4Rs to Flint more concrete.

Responsibility and reciprocity and the actors in the Flint Water Crisis:

As many people know, many of the health problems in the City of Flint are connected to the exposure to heavy metals. Lead exposure was the most widely focused on in the media and by medical professionals, while there are issues with silver and copper exposure as well caused by the corrosion of the pipes because of the excessive chemical use to make the water potable. There are many unknowns—such as long-term exposure to the level of the chemicals added to the water. Additionally, there were cases of Legionnaire's Disease. While, at the time of the outbreaks, Detroit saw cases caused by stagnation of the water in the lines due to the emergency manager's policy that water would be cut off to homes in the city with unpaid bills. While this was a different emergency manager appointed by (the then) Governor Snyder, the lack of water flow in the pipes—stagnation—created illness. At an overlapping time, while the City of Flint was no longer using Detroit water due to a string of emergency manager decisions to open a water plant in Flint, sell

off the Detroit water line bringing water to Flint, and run the plant to provide the city of Flint with its own water. This was all done under the claims of austerity when it did not save any money for the city—it cost the city (and state) over $1 billion thus far and came at the cost the health of at least three generations of citizens and their descendants, and an unknown number of lives—especially as this continues over the decades to come. In short, Detroit's water—while from a different source than Flint's—was also stagnating in the pipes due to the lack of flow.

In the case of lead, the Governor, state departments (such as Michigan Department of Health and Human Services), and the emergency manager of Flint did nothing as people complained, organized and held protests, and did everything in their power to get people to take notice (as they did not have elected officials in place due to the emergency manager austerity placements by the Governor). However, it was not until Dr. Marc Edwards and Dr. Mona Hanna-Attisha started speaking to the press about their findings that the government took action. (As a quick reminder, I will not be covering what happened as Dr. Edwards entered the conversation because the lawsuits and the allegations make this part of the story of the Flint Water Crisis more difficult than it already is to follow.)

In the case of Dr. Hanna-Attisha (a pediatrician who is a faculty member at Hurly Pediatric Hospital in Flint and affiliated with Michigan State University) she shared her accounts of the start of the crisis with NPR on *Fresh Air*:

> As Hanna-Attisha began reviewing her patients' medical record, she noticed that the
> percentage of children with elevated lead levels had increased after the water switch. But
> when she shared her data at a hospital press conference, government officials tried to
> discredit her.

171

"The state said that I was an unfortunate researcher, that I was causing near-hysteria, that I was splicing and dicing numbers," Hanna-Attisha says. "It's very difficult when you are presenting science and facts and numbers to have the state say that you are wrong."

But Hanna-Attisha refused to give up. Instead, she spearheaded efforts to publicize and address the water crisis in Flint. (2018)

There are so many accounts of the government not responding and questioning the results of anyone outside of the government, such as what happened in Dr. Hanna-Attisha's press statement; it is clear that the state government and those who were in charge of the welfare of the city (the string of Flint emergency managers and former Governor Snyder) were doing what they could to deny responsibility for what was a growing crisis. The months of inaction, denial, and attacks on those who challenged their denials by the government simply compounded the health problems and effects. But, Dr. Hanna-Attisha was not alone in this push on the media and the government. As she states in the 2018 interview:

"This is a story of resistance, of activism, of citizen action, of waking up and opening your eyes and making a difference in our community," she says. "I wrote this book to share the terrible lessons that happened in Flint, but more importantly, I wrote this book to share the incredible work that we did, hand in hand with our community, to make our community care about our children." (NPR)

As a part of the community of Flint, she was acutely aware of the group effort that was needed for any action or responsibility to be taken by the government actors and institutions that created the situation and denied there was a problem.

After the Crisis was acknowledged, another professor—Dr. Kaufman--this time at UM-F, came forward. When it became clear that the city did not have the records that mapped out where

the pipes were throughout the city, let alone all the lead pipes, Dr. Kaufman and others took action. According the *MLive* article, "A Look at the Flint Water Crisis," on this in 2016:

> Thousands of lead pipes lay beneath the surface of the city, but because of poor record keeping, it was unknown exactly how many and where they were.
>
> In February, a research study by the University of Michigan-Flint revealed that it was still unknown what pipes were running to approximately 13,000 properties in the city, including 11,000 residential properties.
>
> In the study, Dr. Marty Kaufman created an electronic database of maps of known lead pipes based on a 1984 survey by the city, with data filed on handwritten notes, paper maps and scanned images.
>
> At least 4,376 locations with lead pipes were discovered, but the team of researches [sic] estimated at least 4,000 more lead service lines in the city contained lead.
>
> (MLive, 2016)

Again, it is an academic, a member of the Flint community, and a scientist who stepped in for their community when there was a government failing. Likewise, as discussed in the previous paragraph—this would not have happened without community.

These are the gifts of reciprocity, as discussed in Chapter 4. These gifts are used to benefit the person who has them—but it is more than that. These gifts were shared. And, in the case of both of these scientists, Dr. Hanna-Attisha and Dr. Kaufman, they taught others and shared their learning and knowledge—as laid out in the last chapter. Likewise, the gifts of the community members who worked to help their fellow community members through their reciprocal works. However, this was not done on the governmental level the way it should have been in the creation of the Crisis or at the early stages of the Crisis.

Another example of this was in the outbreak of Legionnaire's Disease. This is connected to both the issue of the pipes, and the lack of planning and movement as people stopped using toxic water in their homes. But it was also an issue of acknowledging something was wrong with the water. The work of Dr. Hanna-Attisha pushed to address the lead levels in the water, and thus the children of Flint, to be acknowledged and allowed for research on other illnesses, such as Legionnaire's, related to the water in Flint during the Crisis to come forward. According to the MLive article, "A Look at the Flint Water Crisis," from 2016:

> Then, it was discovered that Genesee County had what Hanna-Attisha says was the nation's largest outbreak of Legionnella in the nation.
>
> A dozen people died from Legionnaires' Disease during the spike in cases in 2014 and 2015, where 91 people were diagnosed, according to MDHHS.
>
> While there was no evidence proving the cause was the Flint water system, it was determined that more than half of the people contracted Legionnaires' at a hospital served by Flint water.
>
> Legionella is a type of bacteria commonly found in warm water. When people are exposed, it causes legionellosis, a respiratory disease that can infect the lungs and cause phnemonia or Pontiac Fever, according to MDHHS. (MLive, 2016)

However, since this article was written more information came out about the Legionnaire's Disease outbreak in the City of Flint. Even people who continue to follow the Flint Water Crisis are not all aware of the more recent findings from 2019 to now that show the numbers of people with non-diagnosed Legionnaire's—the data suggests that total cases may be 1.5 to over 2xs higher than the count given While there were two outbreaks during the Crisis, there are continued issues with Legionella, including one connected to McClaren Hospital in Flint to cases

since 2008, indicating that one of the sources was at one of the hospitals serving the people of Flint and they continued to be a source of Legionnaire's despite the hospital paying out to have their water system cleaned after the 2015 outbreak and continued to have issues for the next few years, speaking to the difficulty of eradicating Legionella after it is established. However, in general, the bulk of the blame for one of the largest Legionnaire's outbreaks ever recorded in the US is because of the lack of response of the Genessee County Health Department (GCHD) and the Michigan Department of Health and Human Services (MDHHS) who did not issue public health warnings in a timely manner, and of communication issues with the Center for Disease Control (CDC).

Again, the issue stemmed from the government on the county and state levels, just as it did with the lead and other heavy metal levels and warnings to the public (e.g. the initial, belated announcements to boil the water for Flint residents and business—compounding the corrosive additives and heavy metals in the water to the eventual declaration of emergency, but only in English and only issued in particular modes of communication); these communications were found lacking in the CDC's investigation of the Crisis and the Flint Water Advisory Task Force (FWATF)--as created after the fact by Former Governor Snyder's Office Both of these sources—CDC and FWATF-- placed the blame on the government. particularly on the State, from the Governor's Office to the emergency managers (the actual managers and the state law/policy that created their positions and purposes) and on the departmental level the MDHHS, to the Department of Environmental Quality (DEQ)—which is now called the Michigan Department of Environment, Great Lakes, and Energy (EGLE)—and county levels (GCHD). "This crisis was entirely preventable..." according to Patrick Breysse, Ph.D., director of CDC's National Center

for Environmental Health. And, FWATF in the 2016 report on the Flint Water Crisis had a series

of findings for then Governor Snyder's office:

F-12. Ultimate accountability for Michigan executive branch decisions rests with the

Governor.

F-13. The Governor's knowledge, and that of Governor's office staff, of various aspects

of the Flint water crisis was compromised by the information—much of it wrong—

provided by MDEQ and MDHHS.

F-14. The Governor's office continued to rely on incorrect information provided by these

departments despite mounting evidence from outside experts and months of citizens'

complaints throughout the Flint water crisis, only changing course in early October 2015

when MDEQ and MDHHS finally acknowledged the extent of the problem of lead in the

public water supply.

F-15. The suggestion made by members of the Governor's executive staff in October

2014 to switch back to DWSD should have resulted, at a minimum, in a full and

comprehensive review of the water situation in Flint, similar to that which accompanied

the earlier decision to switch to KWA. It was disregarded, however, because of cost

considerations and repeated assurances that the water was safe. The need to switch back

to DWSD became even more apparent as water quality and safety issued continued and

lead issues began to surface in 2015, notwithstanding reassurances by MDEQ.

F-16. The Flint water crisis highlights the risks of over-reliance—in fact, almost

exclusive reliance—on a few staff in one or two departments for information on which

key decisions are based.

F-17. Official state public statements and communications about the Flint water situation

have at times been inappropriate and unacceptable. (State of Michigan)

It is important to note, that these findings are all contributing factors in the creation of the

crisis—from limited sources to the lack of inquiry, to "inappropriate and unacceptable" official

public statement and communications. While, this dissertation does not go into the depth of the

multitude of "inappropriate and unacceptable" statements and communications, Chapter 4

skimmed the surface of these with the example of Patterson. There are similar examples from

State employees and elected officials.

While elected officials are a representation (albeit a flawed one, given Michigan's

gerrymandering that was prevalent at the time of the crisis and emergency managers) of the

community opinions and perspectives within government (i.e. Patterson from Oakland County),

the same cannot be said of state officials. One such example of this is when (the then) State

Health Director, Nick Lyon, stated, "They'll have to die of something." in response to the

assigned scientific panel formed to look into the source of Legionnaires' disease in Flint claims

of urgency for the State to respond to the outbreak (*Frontline*, 2018). The obvious othering in the

statement (much like the discussion of respect and relationship explored in Chapter 4) and the

callousness of the response by Lyon, lead to Lyon being charged with nine counts of involuntary

manslaughter and one misdemeanor of willful neglect of duty. Lyon's charges were dropped in

2019—like all the other indictments in the Flint Water Crisis—and recharged in 2021 and this is

still ongoing at the time of writing of this dissertation.

The actions and rhetorics of the Flint Water Crisis are directly in line with the discussions

in Chapter 4 and the definitions and examples of the 4Rs. The inclusion of the clear issues of

actions and choices made by the Governor's office in the creation and the early stages of the

Flint Water Crisis are laid out by FWATF in the 2016 report. Likewise, the recommendations

from the FWATF for Governor Snyder's Office to address the issue include some of the 4Rs and

the ideas within them (Note: these sections have been bolded):

R-15. Expand information flow to the Governor so that **information providing the foundation for key decisions** comes from more than one trusted source—and is **verified**.

R-16. **Create a culture in state government that** is not defensive about concerns and evidence that contradicts official positions, but rather is **receptive and open-minded** toward that FLINT WATER ADVISORY TASK FORCE—FINAL REPORT MARCH 2016 39 information. **View informed opinions—even if critical of state government— as an opportunity for re-assessing state positions**, rather than as a threat.

R-17. Ensure that communications from all state agencies are **respectfu**l, even in the face of criticism, and **sensitive to the concerns of diverse populations**.

R-18. The Governor must assume the leadership of, and **hold state departments accountable** for, long-term implementation of the recommendations in this report, including but not limited to the need for **cultural changes across multiple state agencies**, **the need for health mitigation and LSL replacement** in Flint, and **the need for a funding strategy** to address replacement of LSLs statewide.

R-19. Review budget requests for MDEQ to ensure adequate funding is provided to the ODWMA. **EPA audit and interviews indicate that Michigan's drinking water program might have one of the lowest levels of financial support within EPA Region V while having one of the largest, if not the largest, number of community water systems to regulate**. (p. 38-9, State of Michigan)

The aspects of learning and knowledge in service of community, aspects of respect and the common pot and common good, and the ideas of accountability or being responsible, are contained in these statements. As we know—reciprocity is harder to define per the discussion in Chapter 4—but in many ways the act of planning for the future service of Flint and collaboration is a part of reciprocity, to a degree.

The FWATF in the 2016 report lays out many other parts of the Crisis responses and the creation of the Crisis. It also did this with the emergency managers. While, they had many of the same concerns as we have already gone through in this dissertation, they highlight the accountability (responsibility) of the emergency managers and their role in the Crisis. Finding F-20 in the report addresses the role the emergency managers:

> The role of the EMs in Flint (in combination with MDEQ's failures) places primary accountability for what happened with state government.
>
> Trying to assign responsibility to an individual EM for the decision to use the Flint River is pointless—and the answer ambiguous. One EM set it in motion, another presided over the actual event, and two EMs did not seriously entertain reversing the decision in the face of public protest. The latter refusals were for simple reasons: they received "expert" advice that the water was safe to drink, and they concluded that switching back to DWSD would be too costly.
>
> We believe the larger issue is one of accountability. Who is accountable for the decisions made by the EMs in Flint? We believe the state must assume that accountability. If the state does not assume that responsibility, given the role the state has in both the appointment of EMs and the line of accountability to the Department of Treasury, then no accountability exists at all. p. 41 (State of Michigan, 2016)

179

This section of the report addresses the issues of responsibility of the State in the appointment of the emergency managers and the law and policies that guided their actions in their creation of the situation. In many ways, the questions raised in this section of the report are because of the lack of responsibility claimed by the state, the governor, the emergency managers, and Michigan departments in the creation of the crisis in the name of austerity and fiscal responsibility—all of which left broken trust, damaged health, death, and a multi-generational cost that we cannot fully assess yet.

Throughout the analysis of the Flint Water Crisis the government (on multiple levels) was held responsible over-and-over again by news sources, but the scathing headlines did not address the system that created the Crisis. However, the issues of broken trust, broken relationships, broken responsibilities, and reciprocity that did not seem to exist permeated the news stories of Flint. Moreover, the news stories did not allow the people of Flint to move out of the role of victim (as discussed in Chapter 4). The narrative shift of the people of Flint is one that was not covered well or often. And, unless the actions that are needed for this narrative shift happen by the different levels of government, there is a limited amount the community can do.

_____

Shortly after the Crisis was declared, my partner and I met our friend, Q, and her kids at the Flint Farmer's Market for breakfast. The market is below the Hurley Children's Hospital extension and sits facing the UM-F park on the south side of campus near the library and dorms as well as sharing a parking lot with the MSU extension campus. It is kitty-corner from the central bus station and just a few blocks away from I-75 and I-69.

We all met for breakfast to touch base and catch up with each other.

We got there before Q and the girls. So, we put our name down on the list for a table in Steady Eddy's and how many of us there would be. There was a deaf family (quite normal in Flint—as it is home for the Michigan School for the Deaf) signing away furiously in conversation. We made sure we did not stand where the conversation would be blocked and ended up grabbing a table in the open community area by Beirut (a Lebanese restaurant that carries Shatila baklavas—voted the best baklava in the Detroit area). So, as we heard Arabic being spoken by a family talking with the owners of Beirut, we waited and watched children who were doing a performance in the common area as a part of the Flint Youth Theater.

All around the market there were written signs in English about what foods to eat for natural chelation (removal of toxins—like heavy metals), not to boil the water, to allow the water to run for 3-minutes before using it, how to use the state issued water filters, and how often to change the filters.

As we sat at the table catching up after our usual amazing meal at Steady Eddy's, I ordered a few plates of strawberries (a natural chelation food) and made sure they were within easy reach of the kids. We sipped on our freshly-made strawberry lemonades and talked about the work Q and her friend, who also joined us for lunch on her work break, were doing with Hurley's community outreach program with mobile care that came into the different neighborhoods for lead testing and information on support services and programs that were available to assist people with access to potable water, housing, transportation, an health issues and concerns, among other things.

Our conversation focused on the blood tests to check lead-levels and how they were being cut off for people over 26. We talked about how this was affecting people who were middle-aged,

women of child-bearing age, and the elderly. Likewise, we were chatting about the rising issues of miscarriages that were rising in the women of Flint.

The conversation shifted to translations and how the messages were getting out to the public. We chatted about how the messaging had to shift from boil the water (which is what we saw signs in English for in Flint for many months prior) to run the water and use the filters or use bottled water. We chatted how one of the mosques had volunteers to translate the posters into Arabic 3 months after the declaration.

I asked about the Spanish-speaking translations I had just heard about in an NPR news piece about needing volunteers in the water drop offs happening door-to-door in the city who speak Spanish or people willing to learn enough Spanish to announce that they were not ICE and that it was not a raid, but a water drop off. Apparently, one of the Catholic churches had volunteers translating the materials and the churches were disseminating the information in Spanish. This happened 4 months after the declaration of the Crisis. Many in the Spanish-speaking community in Flint were still boiling their water—concentrating the lead and other heavy metals in it for consumption. But, this was also a cultural thing as well, as potable water in Latin America is often attained by boiling the water. And, this was a cultural difference that was not being addressed by these materials I was seeing all around the Farmer's Market.

I was horrified and saddened that the government had not bothered to look at the Census information to know what languages they should translate the materials into in order to serve the community. How can you communicate with a city and not put in the basic effort of learning who they are and how to best communicate with them?

As we drank, ate, and chatted on the wonderful work that was happening on the community-level, we were in the bustling energy of the Farmer's Market with lines out the door and a mix of the whole community present.

After we all left to go on to finish our work and errands for the day, my brain was filled with questions that I doubt will ever be answered:

- *How many pregnancies would end with the joy of holding a healthy baby?*

- *How will this change the family dynamics with so many women miscarrying because of the changes to their own health after drinking lead-tainted water?*

- *How many children are growing up in households with parents and grandparents who have long-term issues with their health affecting their ability to parent well and provide for their children the way they want while going untreated?*

- *How many children are going to face additional learning and emotional problems from the lead-exposure?*

- *How will these children be able to have healthy children themselves?*

- *How many households were still boiling the water and drinking it—as they had not gotten the information that was put on the writing-heavy, non-universal-design, materials that were being distributed?*

- *How were the people who were illiterate, spoke other languages, etc… getting the information they needed?*

_____

Cities tend to be diverse by nature. They are social hubs. Flint is no different than any other city. It is diverse in its own ways, including linguistically and culturally. Flint has a fairly large migrant population, Native population, deaf population, and so forth. And, anyone who is

183

familiar with the city knows this. However, this information was lost on the government department and workers who needed to release messages to the population in the city and they did not meet the communication needs of the population (in this case, a lack of multilingual audience needs and universal design of materials for accessibility). This is why so many of the migrant workers—particularly those from Central and South America continued to boil their water even after the warning to not boil the water were released. In other words, the communication lacked linguistic and cultural application and planning. The technical aspects of how to communicate with the community was not enacted in an effective manner to meet the audience of the city's population and communities. This poor communication was a serious shortfall on the part of the government, and it was up to the community members to resolve the issue and do the work of communicating to the communities the government overlooked. And, the Flint Water Crisis has shown which communities are overlooked and suffer from being discounted and disregarded by those who are supposed to serve the public.

It is clear that there was a pattern of incomplete data—from knowing the location of the water pipes in the city—let alone their being mapped—to invalid and incomplete data being collected and used by the Governor, the accountability issues and information gaps with the emergency managers, to a lack of understanding of the various communities that are present in Flint and how to communicate urgent, life-saving information with them.

It seemed like it was up to the community to do this work. And they did. They did not have a voice in the government under the emergency managers. They had no voice in how the government served them or represented them.

Responsibility of service.

Responsibility to each other.

Responsibility of sharing our gifts.

And, if we give respect, build a relationship from that respect, and are responsible to and for each other—we will find our way to reciprocity.

_____

In early 1992, I was working for Dr. George Lord in the UM-F Department of Anthropology and Sociology as a research assistant. It was the first job that was not physical labor (i.e. waitressing or working as a water treatment laborer and driving school bus, backhoes, dump trucks, and such) where I was making substantially more than minimum wage. As Dr. Lord liked to say: "I will believe in a minimum wage when they make a maximum wage."

It was, hands down, the best job I ever had. It was the only work-study job where I studied more than I worked. Some days I would come to work to be given a stack of articles to read by Dr. Lord. The purpose? For me to read, think about, and then discuss the articles with him as he worked on a publication in which these were sources. (In short, I was a sounding board, but I was also a source of information about what ideas needed to be explained more in the article. However, the real purpose was for me to learn and grow academically.)

One day, he sent me to the library annex on campus to get some census information for an article he was writing. It took me a while to get the information written down—as the copier was broken. When I got back, he gave me an article to read: "Ethnographic Evaluation of the Behavioral Causes of Undercount in a Black Ghetto of Flint, Michigan" by Joseph Darden, Linda Jones, and Julianne Price, an "Ethnographic Evaluation of the 1990 Decennial Census Report #24."

This academic writing about the Census in Michigan was a point of conversation. As usual, we discussed the article as I was asked about the issues I had with the writing at the time.

185

First, the title refers to Flint as a "Black Ghetto" (a term I never heard anyone use about the whole of the city before, despite living in the East Village just on the other side of I-475 from the UM-F campus); additionally, while the first case study is about an African-American family, the second is about an Hispanic family—this is more reflective of a diverse community than a "Black Ghetto." Secondly, I was also questioning how the Census workers 'knew' the conclusions they were drawing; it was vague and inconclusive in the article. Thirdly, I had to point out that the people's stories were not so private anymore given the articles conclusions that people who the census takers meet do not always trust them as they "do not believe that information requested by census takers will remain confidential. Those who do believe in census confidentiality may not cooperate because they don't want to risk disclosure and the possible loss of a reliable source of income." (p. 7, U.S. Census, 1992)

And, finally, I questioned how people who do not speak English are supposed to fill out the Census paperwork or how they are supposed to navigate the Census interviews, especially since the second case study was with a Hispanic family.

Quite honestly, I think Dr. Lord was surprised by and a bit unhappy with my feedback and did not respond much to it. And, after that, we talked about some of the things that the writing did well. It is community-centered and education-centered. And, we discussed this in more depth than we did the parts I disagreed with in the piece.

Now, decades later, I was surprised when I went to the Census to look at the Flint data for my dissertation as I started working on the prospectus and thinking about adding qualitative data and methodology to enhance the qualitative work I was doing for it. I am interested in both qualitative and quantitative methodologies, and I wanted to include both in my dissertation to increase my job prospects.

My first search on the Census data in Flint for this dissertation was in 2020. My first

screen on Flint was this writing. I was shocked. I was really, really surprised this piece was still

at the start of the Flint data on the Census site. It was published in 1992 and was a part of the

1990 Census information.

So, I looked at what was on the Census website for 2010 data on Flint. And, this writing

was the first thing the Census website took me to. I searched 2000. The same thing happened. I

know what to expect, but I still searched 1990.

Yep. It was there.

1980? Nope.

So, the Census introduces the data they have from the 1990, 2000, 2010, and 2020

Census data with an "Ethnographic Evaluation of the Behavioral Causes of Undercount in a

Black Ghetto of Flint, Michigan" by Joseph Darden, Linda Jones, and Julianne Price, an

"Ethnographic Evaluation of the 1990 Decennial Census Report #24."

_____

This story highlights some of the problems I still see in this piece. Upon rereading it, I

have the same questions and issues, except now I wonder how can the city communicate

effectively in a crisis with the illiterate population and deaf and mute population in Flint? How

can ALL of us have the relationship we should have with the government that is supposed to

serve and support ALL of its citizens?

As discussed in Chapter 2, Indigenous quantitative data—like Indigenous qualitative

data—is centered on community and community input. I still like the same things about this

piece: that it is community- and education-centered. I did not change much in my understanding

and perspective of the content of the article, but neither did the Census's use of the article—in

four rounds of Census taking now. Unfortunately, the article is outdated and should not be used at this point in time by the Census in the context of the current collections. This addresses, to some extent, how reciprocity is a part of the application of the 4Rs in Flint. Data is incomplete (like in the pipes or state- and county-level decision making), it is not used (like the Census data to find which languages should be used for translations), it is unverified or only from a specific source (like much of the information Governor Snyder used in decisions made during the water crisis as found in reports like the FWATF, CDC, and EPA reports), it is not varied and using a variety of qualitative and quantitative sources, It is the community that was and is recognizing the gaps and filling them the best they can—often through volunteer labor.

In "Ethnographic Evaluation of the Behavioral Causes of Undercount in a Black Ghetto of Flint, Michigan" by Darden, Jones, and Price, the issue of trust is at the heart of Census work. And, 30 decades later, the issue of trust is at the heart of the damaged relationship of Flint and the government, on a variety of levels. The lack of action on the federal, state, and county levels has further damaged a relationship where trust was already lacking. So, how can we move forward toward healing?

> As Wilson (2008) tells us in *Research is ceremony: Indigenous research methods,*
> The purpose of any ceremony is to build stronger relationships or bridge the distance between aspects of our cosmos and ourselves. The research that we do as Indigenous people is a ceremony that allows us a raised level of consciousness and insight into our world. Let us go forward together with open minds and good hearts as we further take part in this ceremony. (p. 6)

This was the goal of the Saginaw Chippewa Indian Tribe along the banks of the Flint River on Earth Day (March 9, 2016) as they and other tribes held a Water Blessing and Unity Ceremony

in Flint for all to join. The purpose was to honor and respect the water of the Flint River—home to the Native nation, ceded lands, and home to many others now. The Water Blessing is a way forward. It is a way to do all that Wilson (2008) states above.

A couple of years ago, my friend, Q, called me to chat. She had settled into her position as the Manager of Public Health for the City of Flint. We were talking about how things were going. She loved the job. It was busy and did not pay enough for what the workload was, but it was serving the community she loves.

As we talked, I found out that the funding for her position was ending and there was no one seeking funding for it. She was working 50-60 hour weeks and seeking continuing funding was not part of the job description. The job she had moved into from all of her community outreach work was ending due to a lack of funding and she was hustling for another job.

She ended up taking the Communications Manager position and was being paid to do both positions for the City of Flint to the best of her ability until the funding was fully depleted for the Manager of Public Health.

While we were chatting, she ran out to help a woman get an envelope into the mailbox outside of the city offices where she worked.

After all that was happening, all that did happen, and all that will happen to the health of the citizens of Flint because of the Water Crisis—it was befuddling to me that the Manager of Public Health position was not a priority and would not be funded. The City was settling on a payment from the State of Michigan in court. The Flint Water Advisory Council was formalized and about to become active. But, there would not be a Manager of Public Health for the City of Flint—let alone an office?

As Q did a job hustle to make sure her family was taken care of as she left her position of Manager of Public Health when the funding ended, it made me wonder how reciprocal was the future of the relationship between the citizens of Flint and the State of Michigan.

_____

This story epitomizes so much of how the Crisis has affected the people of Flint. When the Crisis happened and lead testing was being done, the Michigan Department of Health and Human Services and Genesee County Health Department worked the Flint Hospitals to give blood tests to the community. These tests were administered in the community a few different ways—including mobile units that would go into different neighborhoods on set days for set times and team up with the public schools for 'family nights' and 'school fairs' to encourage families to come to events like "Family Movie Night and Lead Testing" in the community to find out how severe and widespread the lead poisoning really was in the community.

Unfortunately, lead does not stay in the bloodstream. It settles in the bones. It places itself permanently into the body making it next to impossible to remove, affecting a person's physical, emotional, and mental health as well as causing permanent damage to organs, like the brain, in addition to the skeletal system. It takes just a few weeks before the body absorbs the heavy metals that the citizens of Flint were exposed to permanently, making blood tests an invalid measurement of the actual lead levels in a person's body. And, the state would only provide healthcare for those who tested with lead levels above the CDC maximums *and* were 26 years of age and under.

Given the poverty levels in Flint (often in the high 80 and low to mid 90 percentiles over the last four decades according to the census data and the Flint Public Schools free and reduced

lunch data), this means that many adults would be left untreated for lead poisoning—even if their

blood tests were done in the timeframe where their lead exposure showed.

Also, given these poverty rates, it means that the bulk of the citizens in Flint have no

medical insurance or are dependent of Medicare and/or Medicaid—both of which have faced

decades of cuts and more challenges to get enrolled and attain consistent healthcare at an

affordable cost for people earning below, at, or just above the US poverty rate that has not been

updated based on current living costs for decades. In short, this means that most people of Flint

will not be treated for their lead exposure and possible lead poisoning. As a result, many of these

residents will have physical, emotional, and mental damage that will not be treated for the

duration of their lives, as well as permanent cognitive and neurological damage as a result of this

exposure and possible poisoning.

This means that this was a *mass disabling event*.

As a result, this is something that should be explored. People who are disabled are often

discriminated against. Given this occurred in a community where the majority of the city are

people of color, the single parent population is higher than average, are impoverished, are facing

other challenges like language barriers (ASL or ESL speakers), and other populations that are

often discriminated against—the majority of the citizens of Flint are vulnerable to additional

discrimination. Therefore, the research being done in disability studies should be applied to and

utilized to help the citizens of Flint raise their voices in the discussions around disability.

While the community did what it could, such as promotions around the Flint Farmer's

market for foods that promote natural chelation (the removal of toxins such as heavy metals from

the body). It is important to note that most of Flint is a food desert. Access to healthy foods are

191

not easy for the bulk of the citizens of Flint, even the food requirements for school lunches rarely include fresh, unprocessed foods.

Given just some of these issues that the people of Flint have in relation access to healthy foods and health care, it raises the question of is this a respectful and responsible reciprocal relationship between the people of Flint and their basic needs with the State of Michigan and the federal government of the United States? I think it is fairly easy to argue that it is not.

As I reflect back on the last five chapters of this dissertation, I think of how Henry (2022) asked how to find a 'just' way forward in Flint and how Tuck and Yang (2012) offer an important insight in their discussion of how "decolonial" or "decolonization" are often used: "[d]ecolonization is accountable to Indigenous sovereignty and futurity and cannot be supplanted by definitions that simply use decolonization as a metaphor for using Indigenous knowledges or traditions to improve systems or ideas" (p. 35). So, in response to Henry (2022) and the work in this dissertation, Tuck and Yang's (2012) that can be used and act as a reminder that:

> Our goal in this article is to remind readers what is unsettling about decolonization. Decolonization brings about the [rematriation] of Indigenous land and life; it is not a metaphor for other things we want to do to improve our societies and schools. The easy adoption of decolonizing discourse by educational advocacy and scholarship, evidenced by the increasing number of calls to "decolonize our schools," or use "decolonizing methods," or, "decolonize student thinking," turns decolonization into a metaphor. As important as their goals may be, social justice, critical methodologies, or approaches that decenter settler perspectives have objectives that may be incommensurable with decolonization. (p. 1)

And, given that this dissertation looks at 'educational advocacy' and then a societal case study, is is crucial that this work is not presented as a metaphor.

The importance of the work of this dissertation is that it is a real-life application of how the 4Rs apply to the Flint Water Crisis. This is not theoretical.

The circular nature of the work of the dissertation is to show the layers of the application of the 4Rs to Flint by explaining how the 4Rs are applied to communities as a decolonial methodology—not metaphorically, the way that this work fits within a constellation of theory and practice, a breakdown of what the 4Rs mean to Native Americans and in Native Rhetorics, and, finally, through narrative examples, how the 4Rs apply to the Flint Water Crisis and show a path of application and how this *is* a just transition in Indigenous studies.

The events that happened in Flint (and have happened or are happening in other communities) do not need to happen; these events were and are not inevitable. There are alternatives that can change the outcome and/or prevent the events before they happen. This dissertation shows in the analysis of the methodology and the narrative(s) of Flint that there is a path forward; there is a way to change the practice and approach to community governance. As discussed in previous chapters of this dissertation, story leads to policy change; it is not a question of theory, but rather a question of real impact.

In many ways, this dissertation is a response to Henry's question of how to move forward to a 'just' transition. However, it is also an answer to the calls of many other researchers, like Itchuaqiyaq and Matheson (2021) in their call to technical and professional communications specialists doing decolonial work:

As the field works toward inclusivity, we as a field have a responsibility to ensure that

such inclusivity is appropriate and complete, that it doesn't co-opt fragmented ideas from

marginalized bodies and populations and instead considers complete frameworks. We

suggest that scholarship that considers itself as decolonial might reevaluate, in an effort to

understand whether such work is in fact decolonial instead of anticolonial, social justice

oriented, or driven by another related framework. As a result, we urge the field to build

upon the work of many other scholars and lean toward a definition that reinforces the

restoration of sovereignty of Indigenous peoples, lands, and knowledges as central to the

concept of decoloniality. (p. 308)

While the work of this dissertation is inclusive, it is decolonial work (as laid out in Chapters 2

and 3). It is social-justice-oriented, just as it is narrative-focused, like much of cultural rhetorics

work is. It is focused on restoration of Indigenous peoples, lands and knowledges as well. And,

finally, it focusses on a complete framework: the 4Rs. The 4Rs, much like Marshall's (2020)

work on two-eyed seeing, use a whole framework (see Appendix 2); and, as Marshall (2020)

addresses, the framework laid out in this dissertation is much like two-eyed seeing as it helps us

shift from a reactive mode to a more proactive mode.

My hope for this work, is it helps others look at how we can decolonize our approaches to

our world and enter this work with respect for our relationships to each other—understanding

that if there is an issue in the respect and relationship that there is work to be done to mend it. It

can be done with the same patience, care, grace, and intentional meaning as the Japanese practice

of kintsugi (the act of mending an item with gold, silver, or other material(s) in a way that

enhances the beauty of an item while mending the act that damaged with intentional purpose). It

is only then, can we move into a functional balance with responsibility and reciprocity. As

Marshall (2020) explains reciprocity is key to the work of two-eyed seeing because "If you don't

respect yourself, how can your respect nature and everyone else? If you don't take responsibility

upon yourself, how can you expect others to be responsible?" and explains reciprocity as a way "to develop the capacity of actually training yourself to be weaving back and forth between two perspectives or knowledges."

The work forward will require exactly what Marshall (2020) requests: we need to take the best of the Indigenous and Western knowledges and move forward to be able to "LEARN… to see with one eye with the best of Indigenous ways of knowing, and from the other eye with the best of Western (or mainstream) ways of knowing… and LEARN to use both of these eyes together for the benefit of all." And, because of the parallels of the developing work of the both two-eyed seeing and the 4Rs, I would recommend that future research on the Rs connect these two frameworks, as the work Mashall (2020) is doing indicate the strong connections and use of the 4Rs in his work.

CHAPTER 6

CONCLUSION

There are a few things I want to say about this preliminary work I have done before I go into what I learned during the process of this dissertation. First, I want to say that one of the good things in all of this is that it is not too late to do something, to make it better for the people of Flint and to help repair the damage that has been done thus far in the Crisis. As I mentioned at various times in this dissertation, the Crisis is not over and it will not be over for generations to come due to the life duration of the children of the Crisis, their parents, and their grandparents—not to mention to generations to follow as these children grow into adults, have families of their own, and—eventually—grandchildren. The effects of lead poisoning are cross-generational. We know this. Lead poisoning is not something new. However, that does not excuse or lessen our responsibility to our fellow citizens, Michiganders, and Americans.

Second, I want to restate, the application of the 4Rs is not theoretical in nature. This is a real-world application of an Indigenous teachings, framework, methodology, and heuristic. One of the wonderful things about the 4Rs is its circular structure. It goes around, and around, and around, and around. This means we can just jump in where we can. We don't have a set starting point that we missed. We can start with building respect, relationship, responsibility, and reciprocity at any point. We should not keep missing the beat. We should join in the circle and work together and pursue developing all 4Rs as we move forward together.

The Flint Water Crisis is horrid. It is painful. It is awful. But, the only way to improve it is if we work together to make it better. There is time to make it better. It is as resilient as life itself. But, if we stand to the side and observe it happening without doing anything—we are

196

playing the role of voyeurs. And, why would we do this if we could make a change for the better? Better for *all* of us.

Much of this work is already happening. Flint now has a Water Advisory Council. While it is too soon to know what it will do—it just officially started a year ago. (It has been years in the making and creation of this Council, and its formation was bolstered by community activists and organizations as a way to move forward and enacted by local government officials with community input on its design and purpose.) But, there is hope and actions are being taken to move forward in a respectful way to foster responsible relationships and reciprocity between the community and government by using science in a way that benefits all.

May this continue.

May we move forward together using the 4Rs to make sure we are building a coalition that is as resilient and adaptable as the 4Rs.

The second thing I want to address is that this preliminary research opens doors, but doors that we cannot swing open and rush through causing damage to the frame as we push through. The Indigenous framework needs to be seen as that—Indigenous. It cannot be taken out of cultural context—the context of Indigenous learnings and teaching that are from this Indigenous land. The same Indigenous land that Flint is built on. The same Indigenous land *I* live on, that *you* live on. The same Indigenous land that we need to survive. This land is the land that the Creator expanded to give us all the things it does that enable us to live. So, we need to honor it and each other as well as the teachings that give us the road map forward using the 4Rs.

So, as we see the possibilities shown to us on how to do decolonizing work with diverse communities like we see developing at York University and the 4Rs Youth Movement. This dissertation is a preliminary study of how this can be applied on a different scale and in a way to

avoid crises. However, the connections to Indigenous land and Indigenous teachings from that land can never be forgotten, brushed aside, or appropriated. Time and thoughtfulness are needed to implement the 4Rs on a community level and--as all Indigenous research and methodology requires, whether it is qualitative or quantitative—it *must* involve community—including the Indigenous community and the people Indigenous to this land. Whether we are using the 4Rs as a framework, a methodology, a heuristic, or as a teaching—the fact that it is Indigenous *must* be acknowledged and the people who are *native* to this land must lead.

So, this work can be applied to a wide range of work—as shown through the 4Rs Youth Movement, York University, and this dissertation. It raises questions of what can it not be applied to? Given this, it is even more important to stress that *this work* of the 4Rs in communities should not be appropriated!

Application of the 4Rs is clearly relevant to education at all levels, not just higher education, as shown in the literature review. It can be used in community outreach to diverse communities. It can be applied to governmental work and non-profit work. But, I think it needs to be explored in two areas after a more complete study is done—whether it is in Flint or another diverse community dealing with a Crisis that is long-term. The first is looking at how the Indigenous decolonizing work of the 4Rs and two-eyed seeing are related in framework and beyond. I would also like to see this applied to disability studies. The reason for this is simple. The Flint Water Crisis is a mass disabling event. Additionally, disability studies is inclusive as all of us will be disabled at one point in time or another as it is a part of the human condition and life. The scientific work done in both two-eyed seeing and disability studies will each provide insights to how diverse the application of the 4Rs as a decolonizing methodology and heuristic.

But, it should only be done if it is recognized as an Indigenous framework and teaching that should be lead and conducted as such.

Now that I have discussed what I would like to see happen because of this study, I am going to discuss what I planned on doing in my dissertation and what I did. Initially, this was going to be a full study of the discourse of the Flint Water Crisis. Using the 4Rs as a heuristic, I was going to analyze the City's website (which was incomplete due to the lack of functionality of the City government over the course of well over a decade), recordings of the town hall meetings after KWA started supplying the city with water, public announcements from State offices and departments, and local news sources. This would include linguistic counts of the frequency of the 4Rs used in this (respect, relationship, responsibility, and reciprocity) and synonyms of these words as well as actions and responses that showed these 4Rs in action. I was also going to analyze Census data from 1980 to show population changes in the city and analyze which citizens were being represented and which were not (if applicable) in the government responses to the Crisis. I was going to do a qualitative and quantitative analysis as well as digital representations of the results using Flourish (a digital mapping and storytelling tool) and mapping of the locations and data results.

In short, my research process changed over the course of this dissertation. I thought I would be measuring more of the technical communication for the use (or lack of use) of the 4Rs in the Flint Water Crisis by community and members of the community that used science to serve the community as well as government responses from the local and state levels than I did. I thought there would be more quantitative work in my dissertation, between measurements and use of visual representation of the data as well as more inclusion of data from the Census and analysis of that data than I was able to do in the time frame of my dissertation.

The existing research informed my methodological choices. Since much of the explicit

theoretical groundwork was not done in the area of why the 4Rs should be applied to community

(let alone community communications: technical and crisis communications), I had to build the

argument for the application of the 4Rs and this meant that I did do a preliminary study instead

of a full study. This shifted because there was very little on the explicit application of the 4Rs

framework and situating of the 4Rs in communities in the literature review. Essentially, I had to

make the argument for this work in this dissertation: why should the 4Rs be used in community

work?

In order to make this argument and answer this question, it meant I had to redesign my

study. I had to follow the research on this. I did a preliminary study, as I had to lay the reasoning

behind the creation of the study out as the application to the 4Rs has not been done explicitly

before now. It has been done implicitly prior to this time—as discussed in Native American and

Indigenous rhetoric—but the explicit application of the 4Rs is something that started in higher

education as laid out in my literature review and explanation of the 4Rs. As a result, I had

constraints. The explicit application of the 4Rs to community, as shown in this work, is very new

and the rate of development of community work in the 4Rs was limited by time and the

pandemic (as it affected community-centered work due to the limitations of the response to the

pandemic).

To be more concrete, the pandemic affected this new and emerging work in a very

particular way. There was a surge of interest forming in the 4Rs and community application a

few years before the pandemic, and I was expecting some of the work I was doing to be done by

the time I started my dissertation. However, some of the community work that started in 2016

and 2017 and was in full swing of being developed and applied to communities in 2018 was

slowed to the point that it has only been made public late last year or this year. In short, I expected the essential question (why should the 4Rs be used in community work?) to already be answered before I did my dissertation. But, it was not. I needed this question answered before I did the qualitative and quantitative analysis that I planned on doing. Since I could not find any academic or community work that directly answered this question, I needed to create the groundwork and reasoning for application that was not fully developed yet before I could move into the analysis and application of a full qualitative and quantitative study. I had to answer the question: why should the 4Rs be used in community work? Since I had to do this first, my dissertation focus changed.

As a result, the major shortcomings and limitations made by my design shifted as my research did. Simply put, there is a lack of quantitative data in my work. This goes back to my initial design—I wanted to collect qualitative and quantitative data, but instead I found my focus shifting to be answering the reasoning behind doing this work so I could address the unanswered question of: why should the 4Rs be used in community work? This had to be answered before I applied the 4Rs to community work and used qualitative and quantitative research methods to show how this work can be applied in a full, or at least a more complete study than I could do in the time constraints of my dissertation.

While my preliminary plans for this dissertation were no longer a logical option, I had to lay the groundwork and reasoning for the project I planned to make instead. Now that this work is done, the next move will be to focus on the data collection and analysis that I initially planned to do. Essentially, now that the groundwork is laid in this dissertation, the work planned on doing can now be done.

Given the work I did in this dissertation, there were no findings that surprised me. This is most likely because the reasoning behind my study is that all the explicit 4Rs framework academic research and community application that had been done—focused on Indigenization— all the academic research referred to the benefits to ALL participants, even if they were not Indigenous. Also, the framework, and subsequently the heuristic, is applicable to the diversity of Native American cultures and communities already. The adaptability and benefit of ALL participants is what makes this framework and heuristic adaptable and useful to decolonizing practices and methods.

As a result, I was not surprised that the 4Rs can be used not just within Indigenization but in decolonization. These new community applications at the 4Rs Youth Movement and York University show how the 4Rs can be used as a methodology within decolonizing community work.

As for analyzing the governmental practices and communications in Flint—while this is personal for me—it is well known as an example of spectacular governmental failure by those who are somewhat familiar with the Flint Water Crisis. As I thought of how complete the failure was, I realized the complexity of how to explain and organize the ways in which it failed. So, when planning my proposal, I realized that the 4Rs is itself a method to organize the range and scope of ways the government failed the communities of an entire city. The more I thought about it, the more concrete this application was to me as both a framework, practice, and methodology of how to address the failings of the Flint Water Crisis in a way that makes it explicit and clear. The more direct and concrete the application of the work—the easier it is to address the problems in a way that resolves them and keeps more communities, like Benton Harbor, from developing or—if already developed—becoming the disaster the Flint Water Crisis is. However, it is also

important to keep in mind, this was a preliminary study due to the work that I had to do in this project—i.e. question one had to be developed and answered in this study and this is not what I expected to be developing because I was expecting the explicit research around the 4Rs in community contexts to be a bit further along by the time I did my dissertation.

So, what were my key findings in relation to your research questions? The first one, should the 4Rs be applied to communities like those in the City of Flint? This preliminary work suggests that the 4Rs can be applied to Indigenous communities exclusively or applied inclusively to diverse communities. This can be seen through the community-focused work at York University and the 4Rs Youth Movement.

And, it is all applicable to what happens in Indigenous land.

Secondly, how can the 4Rs be applied to communities like those in Flint? The preliminary research shows there is a need for governmental practice and communication with communities to include the 4Rs in their planning, structure, regulation, and outreach.

Finally, how can we move forward on environmental issues and crisis in a just way? While the first two questions had to be addressed—as they are interconnected—because of the lack of theoretical data and the newness of the two community examples I used (York University and the 4Rs Youth Movement). This question was added—as it was implied in my initial research questions—but it was explicitly posed by the very recently published book *Hydronarratives* by Henry (2022).

At the end of this preliminary research, my findings related to the existing literature. My results are in line with the literature. And, it is, in many ways, in conversation with the very recent research from publications within the last year. My work is an extension of work of other Indigenous frameworks—like two-eyed seeing. Likewise, it is aligned and expands much of

what *Hydronarratives* is raising questions about on how we achieve a just transition. It really answers many of the questions Henry (2022) raises and answers them using Indigenous methodology.

Given the progression of this dissertation, from chapter to chapter, it is essential that we remember the argument of Chapter 2--of why the 4Rs apply to Flint: because it is on Native land and we *all* live on Native land. It is also a response to the theoretical constellating of Chapter 3 as to why and how this changes how we think of our rhetorical discussions around environment and each other; the visuals provided from Figures 1-4 also highlight the differences in understanding and application of environmental thought and practice on the community to governing levels. The breakdown of the 4Rs (what they are and how they apply to the Flint Water Crisis) in Chapters 4 and 5 establishes the decolonizing argument that is essential to Henry's (2002) book, *Hydronarratives*, and helps answer the question: how do we move forward in order to make a just transition?

As I presented my final research, I was asked what my dream list of things to happen in Flint would be. I laughed. The list is long and I am not even sure I can put all of my wishes into words. One of the main things is—healthcare. Healthcare for all of the people working in and/or residing in Flint during the Crisis; I want good healthcare for them, their children, and their grandchildren for the duration of their lives. And, when I say 'healthcare' I mean all of it— including dental, eye, psychiatric. I want them to have the same healthcare options that our congresspeople do. Not only would there be funding for not only a Manager of Public Health for the City of Flint, but for a whole team to help people find the resources they need and to support the City in meeting the Public Health of the community. I want there to be community programs at the YWCA, YMCA, and other community centers and locations, as well as in the public

schools from K-higher education. I want access to community centers that encourage public

health, like the Flint Farmer's Market so that the food deserts that exist in Flint are no more. I

want all the pipes to be replaced in people's homes and for the people in Flint to have stable, safe

work opportunities—as the people of Flint face underemployment rates that affect (with

fluctuations) around 80% of the population. I want there to be safe transportation and affordable

housing where the water bills and the replacement of a home's pipes are not worth more than the

house itself—keeping it from being a location of gentrification that displaces the people of Flint

and prices them out of their home communities.

In short, my dream list would be to ask the people of Flint what is needed. I want

community input on the 4Rs. It goes back to what the 4Rs are and how the community and

government on all levels should interact—like shown in the 4Rs (Figure 1, p. 37). This is never a

fast nor short process, as Indigenous methodologies show and teach.

I want a respectful and responsible future filled with reciprocal relationships between

local businesses and government, as well as state and federal government, where the people have

a voice and control over the decisions of their community and the financial means that are

equitable to those of the surrounding white-flight communities.

Is this a future we will see for the City of Flint, its citizens, and the communities there?

We can if we lead with the 4Rs. It is a real possibility. But, it is up to us, as individuals who

make up communities, to decide and implement on the city, township, county, state, and national

levels.

My primary hope for this work is that is helps Indigenous and diverse communities to

move forward to a more just future. However, while Indigenous communities may lead and

diverse voices that reflect a community must be included in these discussions—we *all* must

participate. We cannot be overwhelmed by what has happened. Instead, we must focus on what

we can do to make it better for *all* in a just and equitable way now and as we move forward.

BIBLIOGRAPHY

4Rs Youth Movement. (n.d.). http://4rsyouth.ca/, retrieved on 17 June 2023.

Bang, M., Curley, L. Kessel, A., Marin, A. Suzukovich III, E. S., & Strack, G. (2014). Muskrat theories, tobacco in the streets, and living Chicago as Indigenous land. *Environmental Education Research*, *20* (1), 37-55. https://doi.org/10.1080/13504622.2013.865113

Basso, K. (1996). *Wisdom sits in places*. University of New Mexico Press.

Benevento, G. (2018 June 9). Who own's America's water?*:* Not you. Not if you're an average American citizen. *Al Jazeera.* https://www.aljazeera.com/opinions/2018/6/9/who-owns-americas-water

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham: Duke University Press.

Brooks, L. (2008). *The common pot: The recovery of native space in the northeast*. University of Minnesota Press.

Cull, I., Hancock, R.L.A., McKeown, S., Pidgeon, M. & Vedan, A. (2018). "Indigenous ways of knowing and being." *Pulling together: A guide for front-line staff, student services, and advisors.* Victoria, BC: BCcampus. Retrieved from https://opentextbc.ca/indigenization

Darden, J., Jones. L., and Price, J. (1992). Ethnographic evaluation of the behavioral causes of undercount in a Black ghetto of Flint, Michigan: Ethnographic evaluation of the 1990 Deccenial Census Report #24. *U.S. Census*.

Deloria, V., Deloria, B., Foehner, K., & Scinta, S. (1999). *Spirit & reason: The Vine Deloria, Jr., reader*. Golden, Colo: Fulcrum Pub.

Deloria V. (2003). *God is red: A Native view of religion*. Fulcrum.

Dobrin, S. I., & Morey, S. (2009). *Ecosee: Image, rhetoric, nature*. Albany: SUNY Press.

Erdrich, L. (2012). *The round house* (First edition.). Harper.

First Nations Development Institute. (2020). Indigenous Californians land stewards, practitioners of kincentric ecology report 2020. *First Nations Development Institute*. https://www.firstnations.org/wp-content/uploads/2020/08/Indigenous-California-Land-Stewards-Practitioners-of-Kincentric-Ecology-Report-2020.pdf

Fresh Air. (2018, June 25). Pediatrician who exposed Flint's Water Crisis shares her story of resistance. *National Public Radio*. https://www.npr.org/sections/health-shots/2018/06/25/623126968/pediatrician-who-exposedflint-water-crisis-shares-her-story-of-resistance

Frontline. (2018, June 4). Amid water crisis Michigan's top health official said Flint residents have to die of something, scientists say. *Public Broadcasting Station*. https://www.pbs.org/wgbh/frontline/article/amid-water-crisis-michigans-top-health-official-said-flint-residents-have-to-die-of-something-scientists-say/

Goodin-Smith, O. (2018, Jan 16). Flint's history of emergency management and how it got to financial freedom. *Mlive*. https://www.mlive.com/news/flint/2018/01/city_of_the_state_flints_histo.html

Grabill, J. (2014). The work of rhetoric in the common places: An essay on rhetorical methodology. *JAC, 34*(1/2), 247-267. Retrieved August 6, 2020, from www.jstor.org/stable/44781861

Graham, L. (2022, Mar 2). Michigan may restrict withdrawals for bottled water like Nestle. *Bridge MI: Michigan Environmental Watch*. https://www.bridgemi.com/michigan-environment-watch/michigan-may-restrict-withdrawals-bottled-water-nestle#:~:text=%E2%80%9CThis%20legislation%20is%20to%20say,a%20different%20company%2C%20Blue%20Triton

Henry, M. S. (2022). *Hydronarratives: Water, environmental justice, and a just transition*. University of Nebraska Press.

Hernandez, J. (2022). *Fresh banana leaves: Healing indigenous landscapes through Indigenous science*. North Atlantic Books.

Itchuaqiyaq C.U. & Matheson, B. (2021). Decolonial dinners: Ethical donsiderations of "decolonial" metaphors in *TPC*, *Technical Communication Quarterly*, *30*:3, 298-310, DOI: 10.1080/10572252.2021.1930180

Johnston, B. (1990). *Ojibway heritage*. University of Nebraska Press.

Johnston, B. (2010). *The gift of the stars / Anangoog meegiwaewinan*. Cape Croker First Nation: Kegedonce Press.

Killingsworth, M. J. & Palmer, J. (1992). *Ecospeak: Rhetoric and environmental politics in America*. Southern Illinois University Press.

King, T. (2012). *The inconvenient Indian: A curious account of Native people in North America*. Doubleday Canada.

King, T. (2005). *The truth about stories: A Native narrative*. University of Minnesota Press.

Kim, T. (2020) What is the meaning of educational leadership in a time of policy engineering?, *International Journal of Leadership in Education*, DOI: 10.1080/13603124.2020.1770865

Kimmerer, R. W. (2013). *Braiding sweetgrass* (First edition.). Milkweed Editions.

Kirkness, V. J. & Barnhardt, R. (1991). First Nations and higher education: The four R's – respect, relevance, reciprocity, responsibility. *Journal of American Indian Education, 30*(3), 1-15.

Lauren, B. (2016). Experiencing sampling as a method for studying Situ organizational communication. *Journal of Organizational Knowledge Communication. 3*(1).

Lowan, G. (2009). Exploring place from an Aboriginal perspective: Considerations for outdoor and environmental education. *Canadian Journal of Environmental Education. 42*(14).

Martin, J. (1998). *Gramsci's political analysis: A critical introduction*. Macmillan Press; St. Martin's Press.

Marshall, A. (2020, Feb 20). "Etuaptmumk two-eyed seeing with Albert Marshall." *Humber College*. Lecture. https://www.youtube.com/watch?v=pJcjf1nUckc

Menominee Tribal Legislature. (2020, January 16). Resolution No. 19-52: Recognition of the rights of the Menominee River. *Citizens for Safe Water around Badger*. Retrieved January 14, 2020, from: Menominee-Tribe-Resolution-19-52-Recognition-of-the-rights-of-the-Menominee-River-16-Jan-2020.pdf (cswab.org)

Michigan Farmers Union. (2020, Oct 12). The Indigenous origins of regenerative agriculture. *Michigan Farmers Union*. https://michiganfarmersunion.org/2020/10/12/the-indigenous-origins-of-regenerative-agriculture/

Michigan Radio. (2015, Oct 12). "Living through the Flint Water Crisis." *Michigan Radio*. https://www.michiganradio.org/families-community/2015-10-12/living-through-the-flint-water-crisis

Mills, A. J. (2019). Miinigowiziwin: All that has been given for living well together one vision of Anishinaabe Constitutionalism. *University of Victoria*. https://dspace.library.uvic.ca/bitstream/handle/1828/10985/Mills_Aaron_PhD_2019.pdf

MLive. (2016, Sept 23). A look at the Flint Water Crisis. *Mlive*. https://www.mlive.com/news/flint/2016/09/a_look_at_the_flint_water_cris.html

MLive. (2017, April 28). Treating river water would not have prevented Flint crisis, DEQ official says. *Mlive*. https://www.mlive.com/news/2017/04/bryce_feighner_mdeq_flint_wate.html#:~:text=The%20report%20called%20Flint%20River,the%20cause%20of%20the%20crisis

Moore, J.W. (2000). Sugar and the expansion of the early modern world-economy: commodity frontiers, ecological transformation, and industrialization. *Review*, *23*(3), 409-433.

National Park Service: Redwood. (n.d.). https://www.nps.gov/redw/learn/historyculture/area-history.htm, retrieved on 14 June 2023.

National Park Service: TEK. (n.d.). https://www.nps.gov/subjects/tek/description.htm, retrieved on 14 June 2023.

Pidgeon, M., Archibald, J., & Hawkey, C. (2014). Relationships matter: Supporting Aboriginal graduate students in British Columbia, Canada. T*he Canadian Journal of Higher Education*, *44*(1), 1.

Pidgeon, M. (2016a). More than a checklist: Meaningful Indigenous inclusion in higher education. *Social Inclusion*, *4*(1), 77-91. DOI: http://dx.doi.org/10.17645/si.v4i1.436

Pidgeon, M. (2016b). Aboriginal student success & Aboriginal student services. In D. Hardy Cox & C. Strange (Eds.), *Serving Diverse Students in Canadian Higher Education: Models and practices for success* (pp. 25-39). Montreal, QC: McGill University Press.

Powell, M., Levy, D., Riley-Mukavetz, A., Brooks-Gillies, M., Novotney, M., and Fisch-Ferguson. (2014). J. Our story begins here: Constellating cultural rhetorics. *Enculturation: A journal of writing, rhetoric, and culture*. University of South Carolina. http://enculturation.net/our-story-begins-here

Saginaw Chippewa Indian Tribe. (2016, March 9). www.sagchip.org. *Saginaw Chippewa Indian Tribe*. http://www.sagchip.org/news.aspx?newsid=735

Simmons, M.H. (2005). Librarians as disciplinary discourse mediators: Using genre theory to move toward critical information literacy. *Portal: Libraries and the Academy 5*(3), 297-311. doi:10.1353/pla.2005.0041

Smith, L.T. (1999). *Decolonizing methodologies. Research and Indigenous peoples*. New York: Zed Books.

State of Michigan. (2016, March 21). FWATF Final Report. *FWATF*. https://www.michigan.gov/-/media/Project/Websites/formergovernors/Folder6/FWATF_FINAL_REPORT_21March2016.pdf?rev=284b9e42c7c840019109eb73aaeedb68

Stormer, N. & McGreavy, B. (2017). Thinking ecologically about rhetoric's ontology: Capacity, vulnerability, and resilience. *Philosophy & Rhetoric*, *50*(1), 1-25.

Sullivan, P. & Porter, J. E. (1993). On theory, practice, and method: Toward a heuristic research methodology for professional writing. In Rachel Spilka (Ed.), *Writing in the Workplace: New research perspectives* (p. 220-237). Carbondale: Southern Illinois Press.

Taylor, K. (2016, Nov 7). People are furious at Nestlé for 'rape' of Michigan water source 120 miles from Flint. *Yahoo Finance*. https://finance.yahoo.com/news/people-furious-nestl-rape-michigan-165536304.html

Tuck, E. McKenzie, M, & McCoy, K. (2014). Land Education: Indigenous, post-colonial, and decolonizing perspectives on place and the environmental education research. *Environmental Education Research*, *20*(1), 1-23. https://doi-org.proxy1.cl.msu.edu/10.1080/13504622.2013.877708

Tuck, E., & Yang, W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education, & Society, 1(*1),1–40.

United Nations. (n.d.) https://sdgs.un.org/partnerships/rights-nature-catalyst-implementation-sustainable-development-agenda-water, retrieved on 17 June 2023.

Waddell, C. (1998). *Landmark essays on rhetoric and the environment*. Mahwah, N.J: Hermagoras Press.

Walter, M. & Anderson, C. (2016). *Indigenous statistics: A quantitative research design*. Routledge.

Williams, P. (2014, Jan 19). Drop dead, Detroit! The suburban kingpin who is thriving off the city's decline. *The New Yorker*. www.newyorker.com/magazine/2014/01/27/drop-dead-detroit

Warrior, R. A. (1995). *Tribal secrets: Recovering American Indian intellectual traditions*. University of Minnesota Press.

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Fernwood Publishing.

Winter, C. (2017, September 21). Nestle makes billions bottling water it pays nearly nothing for. *Bloomberg*. https://www.bloomberg.com/news/features/2017-09-21/nestl-makes-billions-bottling-water-it-pays-nearly-nothing-for#:~:text=Nestl%C3%A9%20alone%20sold%20%247.7%20billion,largest%20food%20and%20beverage%20company

World Bank. (n.d.). https://www.worldbank.org/en/topic/indigenouspeoples, retrieved on 17 June 2023.

White Earth Nation. (2018, Nov 5). *White Earth Nation.* https://whiteearth.com/assets/files/judicial/codes/1855%20Res%20estab%20Rts%20of%20Manoomin%202018%20with%20Resolution.pdf

Whyte, K. (2017). What do Indigenous knowledges do for Indigenous peoples?. *Traditional Ecological Knowledge: Learning from Indigenous Methods for Environmental*

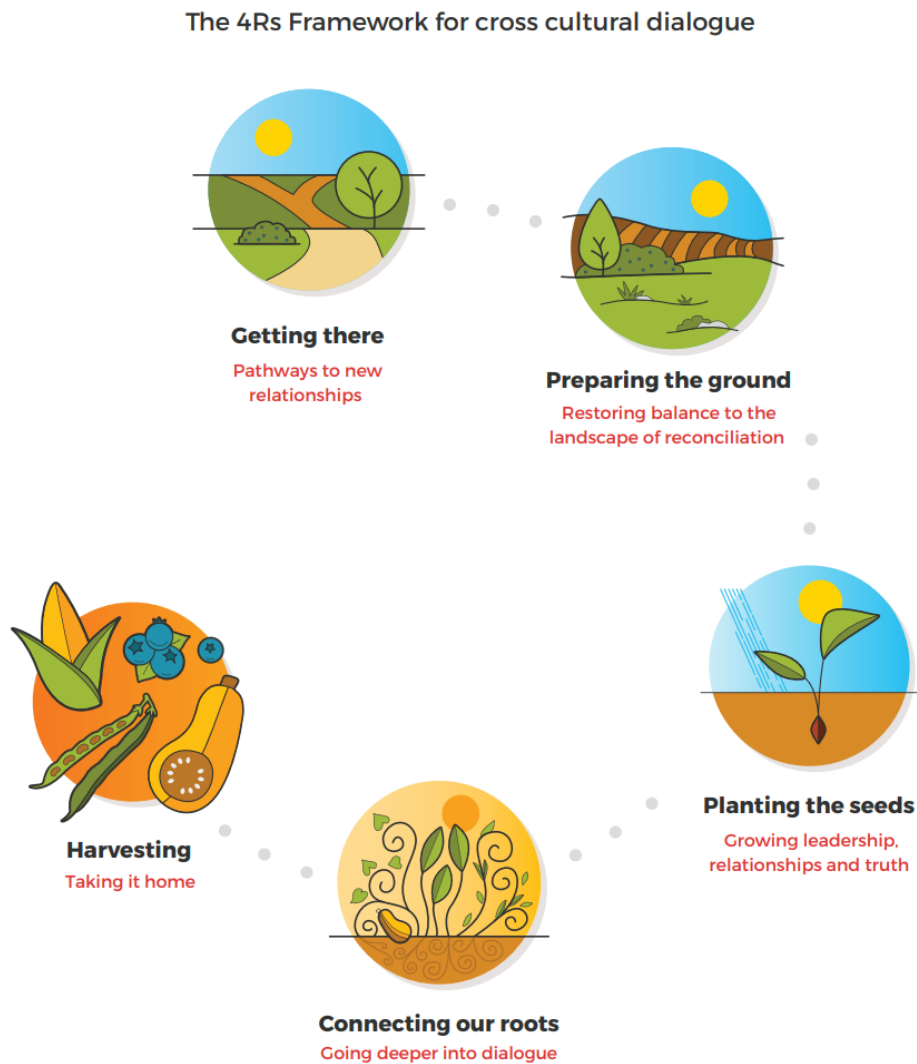*Sustainability*. Edited by Melissa K. Nelson and Dan Shilling. Cambridge University Press.

Yale Environment 360. (n.d.). https://e360.yale.edu/features/how-returning-lands-to-native-tribes-is-helping-protect-nature, retrieved on 17 June 2023.

York University. (n.d.). https://www.yorku.ca/dedi-strategy/, retrieved on 17 June 2023.

Zorthian, J. (2017, June1). Nestle pays only $200 to take 130 million gallons of Michigan's water. *Yahoo Finance*. https://finance.yahoo.com/news/nestl-pays-only-200-130-143901928.html

APPENDIX 1: 4RS YOUTH MOVEMENT

Figure 5: 4Rs Youth Movement

The 4Rs Framework for cross cultural dialogue

Getting there
Pathways to new relationships

Preparing the ground
Restoring balance to the landscape of reconciliation

Planting the seeds
Growing leadership, relationships and truth

Harvesting
Taking it home

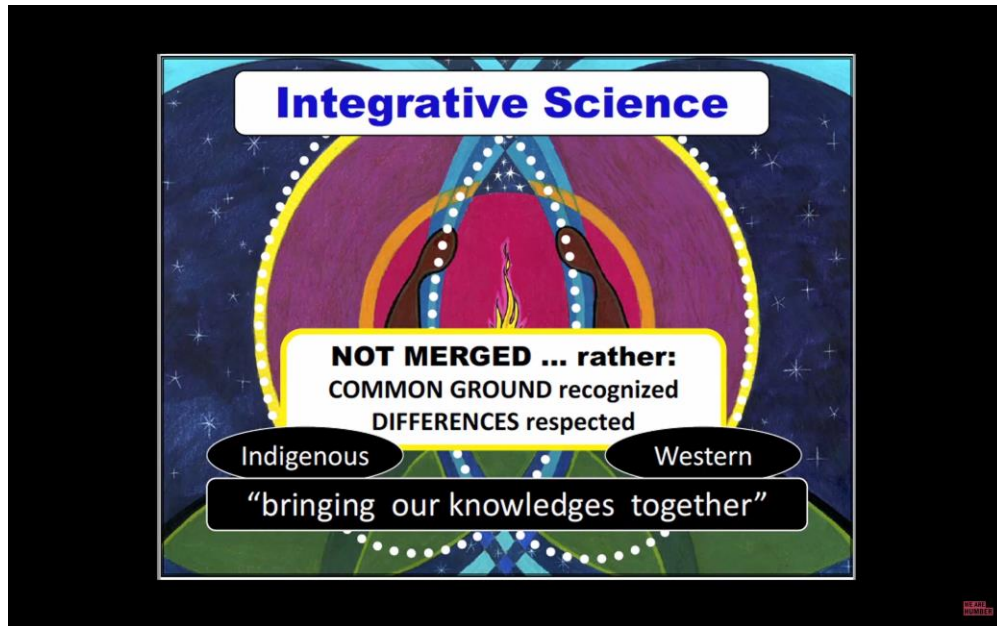**Connecting our roots**
Going deeper into dialogue

APPENDIX 2: TWO-EYED SEEING

Figure 6a: Integrative Science

Figure 6b: Two-eyed Seeing