SEMIOTIC REMEDIATION AND COMPOSING IN AN ENVIRONMENTAL NONPROFIT

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ABSTRACT

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This project examines the public-facing communication products and processes of the West Michigan Environmental Action Council (WMEAC), an environmental advocacy group located in Grand Rapids, Michigan. Using a social constructivist and transformative approach, this project involved an artifact analysis of digital products surrounding two environmental cases: Per- and Polyfluoroalkyl Substance (PFAS) contamination and the Enbridge Line 5 pipeline, two major environmental issues impacting citizens of West Michigan. This project also entailed an interview with a full-time communications professional working for WMEAC. This project analyzed the success of these products and processes using a semiotic remediation framework, which allows one to understand how artifacts travel to different audiences and contexts.

It was found that the organization, while using an ad hoc approach to digital communications, successfully served as a trusted source for information regarding the environment and public health. The organization accomplished this by using a subtle, yet present employment of semiotic remediation to create an important chain of information between original sources of information and citizens. However, this project suggests that, while the nonprofit organization was active and keen to provide routine digital content for their audiences, citizen engagement was oftentimes overlooked. This project is an important contribution to scholarship in technical and professional communication, where scholarship examining the rhetorical practices of nonprofit

organizations is relatively scarce. The outcomes of this project are also useful to instructors preparing communicators for future roles and to nonprofit communicators seeking insight on their own digital, public-facing communication practices.

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CHAPTER ONE: INTRODUCTION

“To love a place is not enough. We must find ways to heal it.”

— Robin Wall Kimmerer, Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge, and the Teachings of Plants

Nonprofit Communication as Advocacy

On the southeastern shores of Lake Michigan, bright sandy beaches extend for hundreds of miles. With pure white sand beaches and towering, grass-dotted dunes unrivaled in beauty, this land has been sacred to indigenous people like the Potowatomi for thousands of years. The arrival of French traders in the 17th century marked the beginning of a new era for these shores, which have experienced a long and contentious history of ownership and use.

After the arrival of French and later British and American settlers, conflicts displaced the Potowatomi to lands far away from these shores. The Indian Removal treaties marked a devastating exodus for the Potowatomi from the lower Great Lakes, with many of them being relocated to land in faraway Oklahoma. Also during the 19th century, rampant industrialization shaped the southeastern shores of Lake Michigan in ways never before seen. Financiers from the East, motivated by money and not love, sought to capitalize on the great natural resources of the region. Sawmills were established along these shores to transport lumber to growing Great Lakes cities like Chicago and Milwaukee.

Today, this land is prized for its pristine sandy beaches, iconic lighthouses, and sweeping views of one of the fifth-largest lakes in the world by surface area. Images of

the eastern shores of Lake Michigan are synonymous with the state of Michigan itself, and summertime tourists flock to area beaches to experience towering dunes and ocean-like waters. This area is dotted with public beaches and state parks, such as the picturesque Sleeping Bear Dunes National Lakeshore and Saugatuck Dunes State Park. The area is also home to several population centers, such as Muskegon, Grand Haven, Holland, and Saugatuck. As one might guess, the lakefront property in this region is prized and comes at a premium.

Born and raised in Minnesota, I spent the majority of my upbringing on or near *mni*, the Dakota word for water. The big open waters of Red Lake, Lake Winnibigoshish, Leech Lake, and Mille Lacs always scared me with their rocky shores and turbulent waves. Lake Superior was like an ominous entity in itself, with its basalt cliffs leading more than 200 feet to the water. Many names of lakes and rivers are a reminder of our thriving indigenous history and culture. Other names are a reminder that, when you have so many lakes and rivers to name, you just run out of ideas (I'm looking at you, Fish Lake and Green Lake). The smaller, inland lakes provided a different kind of comfort and solitude. Glassy water framed by spruce and Norwegian pine, the shallow water coated in lily pads, the scene warmed by the wind blowing through cattails and the occasional, far away call of a Common Loon. The water has an important connection for me.

Needless to say, when I moved to Michigan to begin my graduate studies, I was excited to once again be surrounded by water. Pick any direction (well, other than South) and you'll arrive at a Great Lake. I made a point of seeing each one. Lansing, however, is one place that tested my patience to be near water. The Grand River

offered some reprieve, but it wasn't until I visited the sandy beaches near Holland, Michigan that I truly understood the grandeur of Lake Michigan water. This was a place that seemed so much more like an ocean. The water seemed sun-baked, calm and welcoming, not the harrowing rocky shores of Lake Superior that I knew. I understood from my first visit that this place was special. Looking out at flocks of people recreating on and near the water, it was clear that this place is special to other people, too. There is, however, one distinct portion of these shores that represents a microcosm of land conflict.

Figure 1: Aerial view of the canal separating the Saugatuck Dunes area into north and south sections. Image courtesy of WMEAC. A historical map of the Saugatuck Dunes area.

The site of this story lies in the sandy dunes just north of Saugatuck, Michigan, at the confluence of Lake Michigan and the Kalamazoo River. This area, now known as the Saugatuck Dunes (Figure 1), was established as a lumber outpost called Singapore

in the 1830s. During Singapore's heyday, it provided lumber to rebuild Chicago after the great Chicago fire of 1871. After about 45 years of success, the main mill in Singapore relocated to St. Ignace, Michigan, leaving many question marks about the future of the outpost. Approximately 30 years later in the early 20th century, the Army Corps of Engineers elected to dredge a channel for the Kalamazoo River, which effectively sliced the dune property roughly in half leaving 260 acres of dunes north of the river and 160 acres to the south. Figure 2 shows a map of how the canal separates the Dunes into two north and south sections.

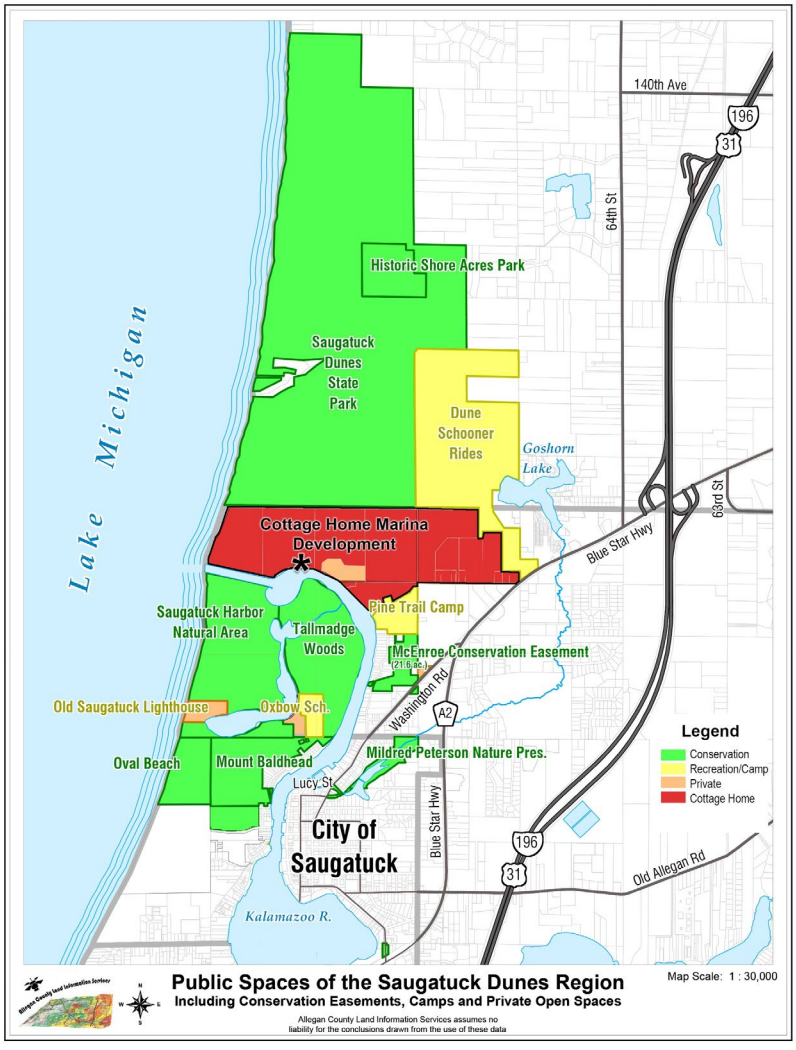

Figure 2: Public Spaces of the Saugatuck Dunes. Image courtesy of Allegan County Land Information Services.

For most of the 20th century, the property would be held in private ownership and thus closed to the public. After a failed attempt to turn the property into a Michigan state park, Franklin and Gertrude Denison purchased the property in the 1950s and turned it into a yacht manufacturing facility, where vessels were constructed from roughly 1982 until 1991.

Ken Denison, the son of Franklin and Gertrude Denison, constructed a sprawling mansion on the property in 1989. Located adjacent to the shore of Lake Michigan, it was built just before the Sand Dunes Protection and Management Act, which includes strict restrictions on building permanent structures in dune habitat, was passed in 1994. The mansion, which includes a guest house, remains one of the largest and most valuable homes in the state of Michigan.

Sadly in 2000, Franklin Denison passed away, and the Denison estate went up for sale to the public for the first time. During the 1990s, Franklin Denison made it clear that he wanted the estate to be turned into a public park, but disagreements within the Denison family prevented this transformation from happening. The city of Saugatuck as well as the State of Michigan began negotiations to purchase the Denison estate in hopes of turning the property into a state park. Ultimately in 2006, the property was sold to Oklahoma billionaire Aubrey McClendon for the hefty price of $39.5 million. McClendon had fallen in love with the property while snowmobiling along the shores of Lake Michigan. Ecstatic to have acquired the land, he quickly made it clear that he intended to transform the north section of the property into a personal resort complete with a marina, stable, shooting range, and a golf course. It would later become clear that his plans for development would be marred by a series of roadblocks.

During the transition of ownership, local activists and conservationists held onto their hope that at least some of this precious shoreline would become protected. Specifically, conservationists were hopeful that McClendon would be willing to sell the south portion of the property. Thankfully in 2009, McClendon dropped the price of the south property to $19 million to enable the Land Conservancy of West Michigan to acquire the property. After successful purchase of the property, the south portion would later become the Saugatuck Harbor Natural Area in 2011.

Over the years, it became clear to the public eye that McClendon and his family never once spent a night in the Denison mansion. To many, it seemed that McClendon viewed the north property as a future real estate investment opportunity. In 2006, reflecting the views of local citizens and a conservation group entitled the Saugatuck Dunes Coastal Alliance, a five-member township board representing Saugatuck unanimously voted to rezone the property, making it difficult for McClendon to develop the land. Thereafter, McClendon's proposals to transform the north property were routinely denied. However, to the chagrin of conservationists, in 2014 the government eventually granted McClendon approval to build a road to 18 future home sites on the north property.

In March 2016, McClendon was indicted for widespread oil and natural gas bidding schemes. Less than 48 hours after the indictment, Aubrey McClendon died in a single-occupant vehicle crash when his 2013 Chevrolet Tahoe slammed into a concrete wall supporting a highway overpass. According the authorities, his vehicle had been travelling at 88 miles an hour and he was not wearing a seatbelt. Two months after the

tragedy, the medical examiner found that there wasn't sufficient evidence to rule McClendon's death as an accident or a suicide.

Despite the hopes of many local residents that this site would become a protected park, another group of investors promptly purchased McClendon's property (sans the mansion) for $40 million. By April 2017, the North Shores of Saugatuck, a limited liability company registered to investor Jeff Padnos, had learned that their special proposal to build boat slips was approved. They also learned that their preliminary requests for zoning to build condominiums were granted by the Saugatuck Township planning commission. The planning and development process of the North Shores of Saugatuck continues.

After years of disagreement and turmoil over this land's ownership and use, it's clear that the battle over protecting the Saugatuck Dunes is far from over. Local environmental groups such as the Saugatuck Dunes Coastal Alliance and the West Michigan Environmental Action Council continue to relay important information about this site's delicate environmental value to the residents of Saugatuck, West Michigan, and beyond.

Lake Michigan and the Great Lakes have faced a series of environmental challenges since the Industrial Age. As of 2017, the Environmental Protection Agency states that 30 million people live in the Great Lakes basin (10% of U.S. residents and 30% of Canadian residents). Lake Michigan is by far the most developed and populated of all Great Lakes. Development along Lake Michigan is a particular issue as critical dunes and habitats remain in close proximity to developed areas and appear to be prime real estate to some, making this location as relevant as any to understand how

NPOs communicate crucial information to the public. Conservation groups hope that these shores will be protected and open to the public so that future generations can love and appreciate the dunes and their delicate ecology. However, these groups do so much more than find ways to heal land and water. These Conservation groups advocate for many causes that impact everyday lives of people in West Michigan. Their work is vital in preserving and protecting both the environment and public health in the region.

Environmental Nonprofit Communication

I began writing this dissertation in Lansing before taking a position to teach Business Communication in Duluth, Minnesota. Much of this project was created when I was in close proximity to shores of some body of water. However, I have since taken a position to serve as a Communication Specialist at a wastewater district in landlocked Denver, Colorado, where water is a scarce and contested commodity. Writing in this area has encouraged me to revisit my connection to water and the important role it has played throughout my life. While I miss being near the water itself, I know that the work I'm doing now is vital. The communication work I do is dedicated to helping people understand water treatment systems and their important role in protecting public health and the environment. This work has given me keen insight on the work that other communication specialists do every day, especially those that work in environmentally focused organizations. Environmental nonprofit organizations work tirelessly to protect land and water that is so prized throughout North America and the world. The communication work they do is vital to achieve their mission.

Organizations like the Saugatuck Dunes Coastal Alliance and the West Michigan Environmental Action Council are more than organized groups of concerned citizens

working toward a cause. These groups are often referred to as nonprofit or not-for-profit organizations, often abbreviated as NPOs. In the United States, NPOs are registered as non-profit entities with the Internal Revenue Service because their revenue directly fund their mission or social cause. Primarily in the U.S., NPOs have the privilege of organizing advocacy organizations and groups without facing political oppression or violence. NPOs are frequently demonstrations of citizen action in a democracy. According to Mike Allison and Jude Kaye, consultants for CompassPoint Nonprofit Services, a nonprofit is characterized by eight key elements:

1. Passion for mission
2. Atmosphere of scarcity
3. Bias toward informality, participation and consensus
4. Dual bottom lines: financial and mission
5. Program outcomes are difficult to assess
6. Governing board has both oversight and supporting roles
7. Mixed skill levels of staff
8. Participation of volunteers

These elements identified by Allison and Kaye most certainly apply to any NPO. While all members of an NPO hold a shared overall mission, they must work under difficult conditions where time, funding, and other resources are a constraint. As opposed to most for-profit groups, nonprofits tend to be more informal in both culture and policy. Staff and volunteers often represent a breadth of different experiences and backgrounds, from experts with decades of professional experience to volunteers and interns looking to learn the ropes. Nevertheless, board members or other oversight is

often necessary for nonprofit groups so that sound decisions are made to guide the respective organizations to success. Lastly, and most importantly, Allison and Kaye note that volunteer participation is key to the success of any NPO. Nonprofits spend much time recruiting and retaining volunteers, who not only help the NPO succeed in an atmosphere of scarcity, but who also help enrich the culture and lifeblood of the organization.

What Allison and Kaye do not note, however, is that communication plays an enormous role in any nonprofit. Communication serves as both the heartbeat of the inner workings of a nonprofit as well as its survival in recruiting input from stakeholders from the public, whether they be volunteers, voters, or even potential funding sources. Nonprofit communication can involve both internal (or communications between members of a nonprofit) or external (communications to outside members of a nonprofit, such as volunteers, citizens, and potential donors/supporters in the public). The external communication practices of nonprofits are of particular interest to this study. Communicators working on behalf of nonprofit groups serve a critical role in telling stories, engaging stakeholders, and persuading their audiences to take action. NPOs and activist groups engage in crucial, multivariate rhetorical work. These roles of NPOs can very, but often include 1) identifying stakeholders, 2) soliciting input from citizens (stakeholders), 3) organizing citizens to make change, 4) educating citizens and the community at large, and 5) even enabling citizens by offering tools, ideas, resources, or toolkits that allow citizens to engage in productive work (Grabill, 2007). Frequently, nonprofit literature uses terms and phrases such as “stakeholder engagement”, “brand reputation and management”, “measurement”, “support,”

“advocate,” and “defend” (Durham, 2019; Patterson & Radtke, 2009). Of course, it should be noted that leaders of NPOs are concerned citizens themselves. In order to perform these roles, officials working for NPOs and advocacy groups work with an astounding amount of information from a range of sources. NPOs must also maintain and organize that information before remediating that information for different purposes and audiences.

Nonprofit organizations (NPOs) are often public-facing, and many have the mission of advocacy. Likewise, communicating with the public is a key practice for any NPO, regardless of their focus or mission. Given the public-facing orientation of NPOs—not to mention their frequent commitment to advocacy and social justice—technical and professional communication (TPC) is a field situated to research and understand NPO communication practices. While TPC has examined nonprofit communication as a subject of research, the field has historically concerned itself with corporate communication contexts (Hopton & Walton, 2018). Nonprofit and nongovernmental organizations, especially those with a human rights or humanitarian focus, have not received much attention from technical and professional communication scholars at all. The field, however, has demonstrated a range of research topics that undermine the “corporate communication focus” that seemed to plague it’s identity for far too long. Agboka (2012), for instance, challenges dominant, “large culture” ideologies by suggesting that culture is created discursively. Haas (2012) also uses a decolonial framework to survey the status of cultural and critical race studies in technical communication scholarship. This important work has cleared the path for research on

communications in nonprofit contexts, especially those where human rights and environmentalism is the focus.

Due to the low volume of studies focusing on nonprofit communication from the lens of TPC, there are few studies that investigate how NPOs remediate information intended for public audiences. Studies that investigated NPOs in professional and technical communication have primarily done so in relation to service learning (McEachern, 2001; Sapp & Crabtree, 2002; Ghetto, 2013; Kimme Hea & Shah, 2016) and, less frequently, in action research (Clark, 2004) and genre production (Khadka, 2014). Interestingly, while researchers in technical and professional communication (TPC) have investigated how citizens gather, maintain, and remediate information needed in order to act on local issues, little is known about the processes that administrators from NPOs and activist groups engage in as they remediate and perform their complex, multivariate roles. Despite the fact that many professional writing programs at the undergraduate and graduate level often prepare students to become communication specialists in NPOs, there is more work that can be done to understand how NPOs find, make, remediate, and deliver content to the public.

A research study that examines the remediating, public-facing communication practices of NPOs would be of interest to students of TPC, teachers of this topic, and even leaders of NPOs. This project intends to fill this research need. There are rich opportunities for work that seeks to understand the processes that NPO communicators engage in as they gather and remediate information for their target audiences.

Project Overview

This dissertation project engages in a qualitative study of how the West Michigan Environmental Action Council has remediated information to the public about ongoing proposed development in the Saugatuck Dunes along the southeastern shores of Lake Michigan. This study will examine how the theory of semiotic remediation—a theory that helps understand how information travels and is remediated from one source and author to another—can be used to analyze the communication practices of the Action Council (hereafter referred to as WMEAC) during discussions related to the proposed development of dunes adjacent to Saugatuck Dunes State Park.

To focus this project, I selected an NPO that has an identified mission of environmental justice in the Great Lakes region with an emphasis on preserving the ecological integrity of the Great Lakes and the southeastern shores of Lake Michigan in particular. I engage in a rhetorical analysis of their public-facing communication artifacts—most notably the organization's website and social media writing produced and distributed from November 2018 through February 2019—relating to information regarding two environmental issues facing West Michigan citizens. I then share findings from an in-depth interview with the Communications and Community Engagement Coordinator at the West Michigan Environmental Action Council (WMEAC).

Specifically, this project focuses on WMEAC's past practices of finding information about environmental issues, how they change/remediate that information, and where and how they deliver that information for their audiences. Because rhetorical analysis can only offer so much about the story of documents, an interview was necessary to help me learn more about the writer processes and decisions.

A study of how NPO communicators gather, maintain, and remediate information offers many benefits to both the field of TPC and NPOs. For the field of technical and professional communication, this study could demonstrate how semiotic remediation can be used as a guiding framework to understand the communication practices of NPO communicators. For NPOs, this study could help leaders and communicators understand how they can better perform their work of remediating and connecting with their audiences. This information would allow the leaders of NPOs to have data on how information typically travels throughout environmental organizations, not to mention how they can best perform this work for their own, localized needs.

Perhaps most importantly, this study is of interest to the broader field of rhetoric and writing because it offers a needed perspective—from the lens of TPC—on NPOs and the information they produce. It will hopefully serve as a thoughtful demonstration of how technical communicators are ideally situated to initiate academic studies that leave a positive impact on communities. The following research questions provide the basis for this project:

- How does the West Michigan Environmental Action Council (WMEAC) gather information about environmental issues in the area? What are their information sources?
- How does WMEAC manage and maintain the information they gather?
- What communication channels does WMAC use and why?
- Does WMEAC remediate information about environmental issues, and if so, to whom do they remediate it for?
- Do the author(s) utilize multimedia in their social media posts, and if so, how?

As I hope for these questions to suggest, this project is especially interested in how information is gathered and remediated for public audiences. As such, this project is of primary interest to technical communicators, however, my goal is that NPOs will greatly benefit from these findings. This research does not have the mission of reinventing community-focused research. Instead, this project is a thoughtful demonstration of how a research project can promote reciprocity and collaborative knowledge construction (Grabill, 2000). Ideally, this project will have a positive impact on NPOs, shedding light on how information is gathered, transferred, remediated, and used to promote agency and participation in environmental issues. I see this project benefiting the WMEAC—and organizations with similar missions—in that the conclusions and implications might be illustrative, actionable, and implementable in future cases.

In chapter 2, I discuss my research questions and methods in more detail. Specifically, I employ a semiotic remediation approach to understand how communication artifacts travel to different audiences and contexts. In chapter 3, I use a semiotic remediation approach to analyze numerous communication artifacts, namely the WMEAC website and social media posts, produced by WMEAC surrounding two environmental cases in West Michigan: Per- and Polyfluoroalkyl Substance (PFAS) contamination and the Enbridge Line 5 pipeline. In chapter 4, I present my findings from an in-depth interview with Ericka Popovich, a communications professional at WMEAC. This chapter presents insight into the communication processes behind WMEAC's major channels. In chapter 5, I highlight the implications of this study for future research in TPC as well as outcomes for nonprofit organizations.

CHAPTER TWO: METHODS, METHODOLOGIES, AND INTRODUCTION TO WMEAC

Introduction

Waddell, in his seminal 1995 article “Defining Sustainable Development,” noted that environmental communication had become one of the fastest growing areas in TPC. 25 years after Waddell’s article, environmental communication has remained a healthy and active topic within the realm of scientific and TPC scholarship. In this chapter, I first survey the landscape of environmental communication today, a realm where citizens, nonprofit organizations, and influencers participate in a complex rhetorical web of practice. Second, I suggest that while environmental communication has seen a healthy thread of scholarship over the past 25 years, semiotic remediation can provide a conceptual framework to evaluate communication practices in an environmental nonprofit. Third, I introduce the West Michigan Environmental Action Council, the participating organization for this project. I provide an overview of the organization as well as their history, structure, mission, and general communication practices. Lastly, I describe the methods and methodologies that guided the work of this project.

Review of Literature

In 1995, Waddell responded to a surge in TPC scholarship interested in environmental issues. Likewise, at the time there was a noted increase of environmental communicators in both the public and private sectors. Of note, Waddell presented a public participation typology that remains remarkably relevant in today’s context of

connected, informed citizens taking action with digital tools. Waddell presents four important models of public participation:

1. **Technocratic model:** technical decisions should be left to "experts" in science, engineering, industry, and government and allows no role for public participation or oversight (p. 7)
2. **One-way Jeffersonian model**: one-way transfer of expert knowledge to the public, however, the public has a right to participate in decisions that affect its well-being (p. 9)
3. **Interactive Jeffersonian model**: A more charitable interpretation of the one-way Jeffersonian in which technical experts communicate their expertise to the public and the public communicates its values, beliefs, and emotions to technical experts (p. 9)
4. **Social constructionist model**: expands on the Interactive Jeffersonian by acknowledging the values, beliefs, and emotions also play a role in risk communication and environmental policy formation. Furthermore, technical information flows in both directions, blurring the distinctions between "expert" and "nonexpert." All participants communicate, appeal to, and engage values, beliefs, & emotions. Public policy decisions are socially constructed under this model (p. 9)

Waddell suggests that the social constructionist model, above all others he outlines, is in line with interactive-generative conceptions of rhetoric (pg. 10). In terms of theory, Waddell heavily leans on rhetoric for a foundation (leaning on scholars like Wayne Booth and Donald Bryant) as a means to connect with the values of TPC researchers.

His use of the concept “social constructionism” and its ideologies are also familiar to teachers, researchers, and practitioners in technical communication. Waddell stresses that policies should never be constructed arhetorically so that those policies can be imposed on the public. Instead, rhetoric—the social constructionist model specifically—“encourages us to value the communication process as much as the outcome; it suggests that the nature of the outcome is, in fact, largely defined by the process” (pg. 10). Waddell’s participation models, then, were designed thoughtfully to connect with the values of his main audience: TPC scholars and practitioners who were trained in the rhetorical tradition. His models are particularly concerned with empowering citizen involvement and engagement in processes that involve experts and so-called “non-experts.”

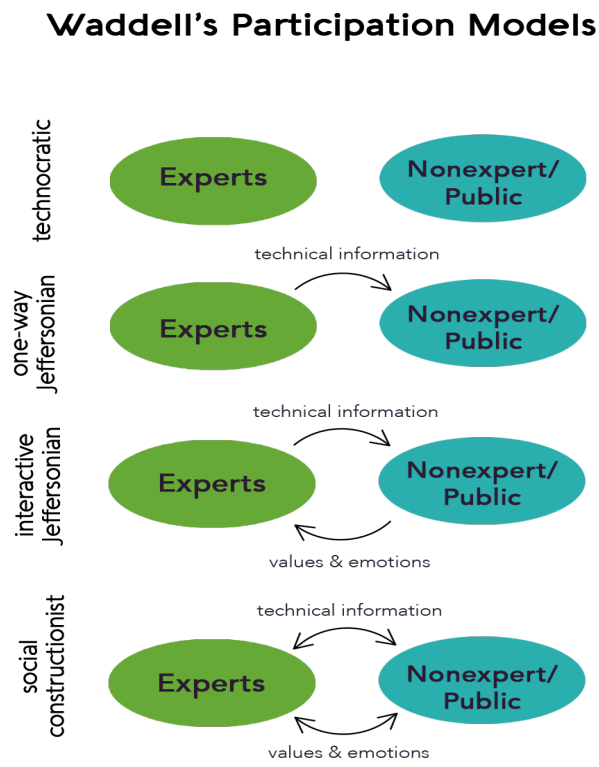

Figure 3: Waddell’s Participation Models

Today, it is clear that the delineation between experts and nonexperts is blurred more than ever before. The public can easily access reliable information about the environment. Further, the public has the ability to discuss, share, and even project facts scientific facts to both local and global audiences. The public even has the ability to generate data that helps scientists produce vital research to understand humanity's war on the environment and how we can mitigate our impact. Waddell's typology shown above -- and the social constructionist model in particular -- is further complicated by our modern world. It is no longer a give-and-take between experts and the public. Instead, it is a complex process where both experts and the public are working together toward a common goal of creating visibility to environmental challenges facing our planet.

Simply stated, environmental communication has been on the radar of technical and professional communication scholars for quite a while. Despite this, and as I argued in the introduction of this dissertation, research in the field has not deliberately focused on the communication practices of nonprofit organizations much less the communication practices of individuals who represent nonprofit organizations. In fact, the communication practices within nonprofit organizations has been a rare omission from the literature in the field. While it is common for researchers in TPC to focus on nonprofit organizations and groups as the site of their research, it is rare to see work that directly focuses on the communication practices of nonprofits themselves. Some outliers that do in fact explore this area include an investigation into the research and writing practices of a PhD-level researcher working for a conservation group (Lindeman, 2012). The study, which used discourse analysis to understand how a

conservation researcher produced written products for both scholarship and advocacy, was an important contribution to the discussion of grey literature[1]. According to Lindeman, large non-governmental organizations—especially those that employ PhD-level researchers that produce documents that feature environmental data and analysis—are increasingly seen as legitimate and credible sources for policymakers (pg. 433). Along with this trend, the producers of these documents have expanded to spaces beyond traditional academic research (academic books and journals) to include reports, white papers, newsletters, and other documents distributed by their respective NGOs "on the front lines of conservation" (pg. 433).

Some key points arise out of Lindeman's conversation relating to grey literature. His study was conducted in 2006 and published in 2012, some time before citizen scientists and advocates had widespread access to the technological means to discuss environmental topics publicly online. Over the past twelve years, NGOs of all sizes and areas of focus have also been able to establish themselves online, reaching local and global audiences with instant publishing tools like Facebook and Twitter. Over the past twelve years, governmental organizations that once served as authoritative resources on the environment have been subject to a new kind of public transparency. Social media platforms allow issues and discussion to be publicly visible in ways never before seen.

Selfe and Selfe (1996) noted that technical communication, with its long history of research and practice serving corporate and public interests, has certainly

[1] Grey literature refers to materials and research produced by organizations (and occasionally citizen groups) outside of the traditional commercial or academic publishing and distribution channels. Common grey literature publication types include reports, working papers, government documents, and white papers.

experienced tensions. On the one hand, the corporate (private) realm has long been the source of our interest in understanding how complex, technical communication processes work. This realm has also helped us understand how to approach pedagogy for future rhetoricians who will in turn work in this private realm. On the other hand, teacher–scholars of writing have long exercised the drive to help foster generations of rhetorically equipped writers who can, in turn, become active informed citizens poised to engage in a democratic society. This public realm has also been the focus of our research, serving as both the site and the benefactor of our work. TPC has, as Selfe and Selfe (1996) noted more than two decades ago, continued to experience this balancing act of serving private and public realms.

Within the public realm, TPC teacher–scholars, as one might guess, have examined nonprofit groups as sites for both teaching and research. The focus of research relating to nonprofits has spanned three general areas: action research, service learning, and genre.

A writing scholar taking a stance in their research is relatively new in the field of TPC, and is a key facet of action research. Grabill (2000) noted that TPC scholarship, with the introduction of postmodern theories into the conversation, had begun to take a critical turn. Along with this critical turn, it became apparent that writing researchers in the field would become more critical of their research stance (Grabill, 2000). Along with this trend, Ellen Cushman (1996) also suggested that rhetoricians more broadly beyond rhetoric and writing should become involved in civic life beyond the social activism ingrained in their teaching. Cushman introduces the differences between missionary activism, using certain literacies to promote an ideology, and scholarly activism, which

facilitates literate activities that already take place in a community. Presently, the concept of teacher scholar as activist is not uncommon within the broader field of rhetoric and writing. TPC scholarship may once have focused research efforts on writing sites that represented institutions of power and control, yet with the critical turn recognized by Grabill (2000), we now recognize that those institutions are inherently rhetorical. Whether a research site is a large corporation or a small activist organization, a researcher in TPC has the responsibility to offer reflective commentary on not only the power within that site but also their own impact on that research site.

As service learning continues to remain a healthy thread of rhetoric and writing research, it perhaps comes as no surprise that nonprofits would be involved in this endeavor. McEchern (2001) introduced a perspective from nonprofit management can help teachers and students engaging in service learning work with nonprofits. According to McEchern, service learning in nonprofits is inherently messy and problems are commonplace. Using some ideas from nonprofit management can help solve these problems and avoid issues in service learning settings. Expanding on the literature on service learning and TPC, Bourelle (2014) suggests a model in which technical communication students first engage in a service learning project with a nonprofit before serving as interns with that nonprofit. These pragmatic topics to service learning have helped guide the practice of TPC pedagogies that engage with community stakeholders.

Finally, it remains worth noting that research in TPC has also explored how NPOs engage with and produce different genres. Santosh Khadka (2014) examined the genre features of grant proposals in two nonprofit contexts: Nepal and the United States. Khadka was able to find both similarities and differences between these

proposals even though they were produced within very different cultures and contexts. Most notably, the author found that the “uniformities” of the grant proposals had much to do with the global circulation of Western genre forms to the rest of the world. Khadka noted that he was responding to a gap in the research noted by Connor and Wagner that “little research has been done on grant proposal writing in nonprofits.” Further, Dush (2017) explored the common practice of nonprofits posting personal experience narratives that share the stories of clients, staff, and stakeholders in their organizations. Though small, this sample of TPC researchers engaging with NPOs and genre point to many possibilities for future exploration.

Scholars in TPC have clearly demonstrated an interest in nonprofit communication. Past research, however, has often included nonprofit groups as sites for research but not as valuable sites of rich rhetorical work. While work encompassing the above themes of action research, service learning, and genre has created a foundation of work to build upon, more research is needed to demonstrate the valuable communication practices that representatives from nonprofits engage in every day. Further, there is presently no research that examines the digital and social media presence of NPOs. This study seeks to build on the existing literature that engages with NPOs while also examining the routine digital communication practices of a nonprofit organization.

Just as social media has facilitated a new era of public participation, so too has it made environmental topics, news, and issues more visible than ever. Waddell’s 1995 work has done a great service to the discussion on how the public engages with environmental discourse today. Waddell’s vision of environmental communication as an

ever-growing area has held true and has even expanded to an even broader realm. Environmental issues now have more exposure and visibility thanks to social media and a growing concerned public. Along with this exposure, readers have broken through the barrier and are now able to discuss, comment, and share their thoughts on issues.

Citizen Participation and The Environment

In 2021, the landscape of environmental communication is vastly different from the mid-1990s when Waddell's article was published. We now see an era in which citizens can digitally participate, discuss, and engage in environmental topics like never before. Public participation is facilitated by social media platforms like Twitter and Facebook, where users can share and deliberate on any number of topics, including climate change, land use and land policies, and even flora and fauna identification. From trained citizens providing essential survey information about endangered species to digital labor and online petitions, there are numerous ways in which citizens can participate and shape the future of our planet.

Numerous environmental organizations have launched citizen science programs to encourage concerned citizens to help solve some of the most pressing issues facing the planet. There are numerous examples of environmental projects through which researchers are leveraging the power of humans. Climate change is putting entire ecosystems at risk. In Colorado, fragile high alpine tundra is especially vulnerable. Pikas call this landscape home. These small, rabbit-like creatures dwell in scree fields above the tree line. By looking at pika populations, environmental scientists understand how climate change is impacting sensitive ecosystems like the alpine. Since 2010, the

Front Range Pika Project has encouraged citizen scientists to survey and record pika data in three separate regions of the Southern Rocky Mountains.

Penguins are another vulnerable population. Similar to pika data, looking at penguin populations can help researchers understand how climate change is affecting arctic regions. The Penguin Watch program allows citizens to view and count penguins in Antarctica and the Southern Ocean from home. Users log on and view an image of a penguin breeding or nesting area. They then count and record how many penguins are visible in each image. While machines are very good at calculating big data, the human eye is more accurate for determining what is a penguin (and what is not). This powerful program has already seen participation from more than 19,000 volunteers who have made more than 365,000 classifications.

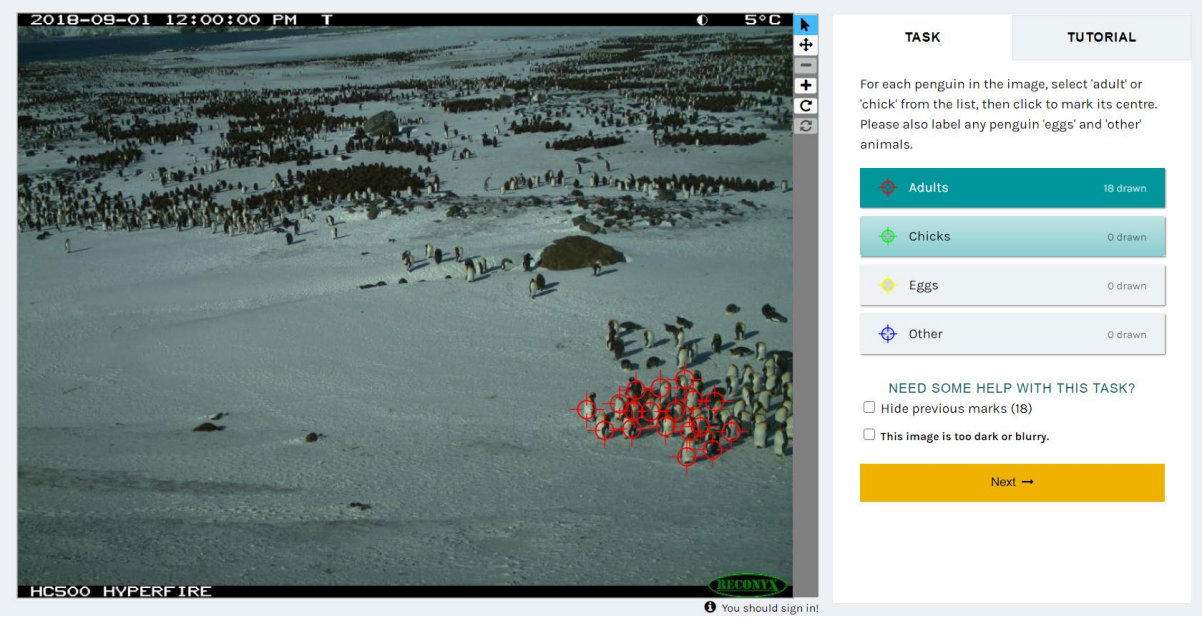

Figure 4: Penguin Watch Identification in Progress. While most people can easily identify adult penguins in the photo, this kind of classification is currently not possible to achieve with artificial intelligence.

Orcasound is a citizen science project that allows users to listen to hydrophones—live recordings of marine activity—in the San Juan Islands. Listening for orca calls, clicks, and whistles, citizens can help classify orcas. This data is especially powerful because algorithms are not yet sophisticated enough to classify orcas from other whales. Further, the hydrophone method is helping researchers monitor the Southern Resident Killer Whale (SRKW) population (currently only 73 orcas remain) regardless of weather conditions, such as when sight surveys are not possible.

Many citizens have also begun to actively track and address the cost of their own carbon footprint. Carbon pricing may well be the future of mitigating climate change, and organizations like Protect Our Winters (POW) have created simple tools to encourage citizens to trace their carbon footprint, connect with organizations that are working to curb climate change, and invest in renewable energy credits (RECs) offset their footprint.

These citizen science tools and programs are easily sharable on social media as images, stories, and links. However, online petitions have proven to be another important tool for citizens to act and make real policy change on environmental issues. Wild Earth Guardians, an environmental nonprofit, orchestrated an online petition to retain the endangered species protection for Grizzly bears in the Greater Yellowstone region. Despite an appeal from the State of Wyoming and the Trump administration, the petition -- with its 13,000 signatures -- helped solidify the public opinion that endangered grizzlies should not become big game trophies. These petitions are made even more powerful by their ease of sharability on social platforms.

Social media campaigns continue to make waves in protecting the environment. In 2018, the #OnePlasticFreeDay campaign was launched by Plastic Planet in the UK. Promoting consumers to avoid plastic use for one day, the campaign inspired a handful of spin-off plastic campaigns, such as #PassOnPlastic and subsequently #PassOnPlasticEmoji, both led by Sky Ocean Rescue. The latter campaign called on Unicode to remove their single-use plastic cup emoji from their keyboard, which normalizes the use of single-use plastic. Featuring active participation as well as an open petition (16,700 signatures as of September 2020), the campaign has yet to convince Unicode to remove the emoji. However, these movements have a massive impact on social media and even consumer activity. 2018 will be known to many as “the summer of the straw ban.” Campaigns such as Lonely Whale’s #StopSucking were making a relatively minimal impact on popular opinion. That summer, Kim Kardashian announced to her 115 million followers that straws were being banned in her house, and the war on single-use plastic straws truly became a legitimate public issue.

Regardless of who may popularize them eventually, environmental social media campaigns are often initiated by nonprofit organizations. Using a grassroots approach, they begin the lead effort and connect with their members and followers. Citizens can then take these posts, hashtags, and more and repurpose them, share them, and interact with others on social media platforms. This kind of digital citizen engagement has the potential for widespread rhetorical power, especially at the hyperlocalized level that is often our small network of followers. Local knowledge is shaped by the individuals and opinions shared on our social networks. Social media platforms make these networks -- and their rhetorical power -- visible.

Environmental communication is broader and more relevant than ever before. We can understand environmental communication as a realm that includes many types of authors with different goals and purposes. Some of these authors work as professional communication specialists for nonprofit, governmental and for-profit organizations, while some of these authors are concerned citizens and activists (traditionally referred to as nonexperts) who now have greater power through authorship tools like social media platforms. Yet another type of author is the scientist or oftentimes referred to as the expert. The authority of experts and nonexperts was once understood as a distinct binary. With the introduction of accessible authoring tools such as social media, a concerned citizen (traditionally understood as a nonexpert) can post environmental information and opinions to the public and may gain the same credibility of a trained expert. Likewise, a trained scientist can use the authorship power of social media to become an advocate or even a public figure for environmental causes. Authors who work as professional communication specialists seem to serve a unique role in this blurring of expert and nonexpert authority in authorship. A public-facing communicator representing a local environmental NPO, for instance, may consult the expertise of scientific resources. That author may also consult the expertise of concerned citizens and even other environmental nonprofits before making a post on behalf of their organization. Public-facing communication specialists, then, can serve as intermediaries between so-called experts and nonexperts. In doing so, they may even begin to build credibility of their organization as one holding a great deal of expertise on environmental topics.

The field of TPC continues to engage in environmental topics in a range of studies, and for good reason. Scholars in the field are especially keen to do this work because of their ability to analyze discourse, understand broader rhetorical ecologies at play, and use their mission of community involvement and social justice to remain a core outcome of their work. This is especially imperative as environmental topics will continue to be relevant to everyday life of global citizens in the 21st century.

Semiotic Remediation

This project attempts to fill a needed gap in technical communication scholarship that focuses on nonprofit communication. Specifically, I use semiotic remediation as a conceptual framework to understand composing in an environmental nonprofit. Though seldom used in the field, I hope to demonstrate that semiotic remediation is an important lens to understand the complex communication work of an environmental nonprofit.

Semiotic remediation, in fact, once had momentum in the field of rhetoric and writing. In 1999, Jay David Bolter and Richard Grusin published their book Remediation: Understanding New Media. The text explored the core concept of remediation and its nuances. To Bolter and Grusin, remediation is the incorporation or representation of one medium in another medium. Further, the authors also note that remediation operates as a work of culture. Like most texts published more than 20 years ago, Bolter and Grusin's book includes numerous examples that remind us how much the landscape of digital writing and remediation have transformed to date. Nonetheless, their book presents the solid groundwork of remediation that would be picked up and built on by writing studies scholars in the years to come.

Over the years, concepts like multimodal, multimedia, and new media have been used frequently in writing studies scholarship and in composing studies in particular. In 2006, Paul Prior, Julie Hengst, Kevin Roozen, and Jody Shipka suggested that semiotic is a more suitable term than say multimodal because of their interest in "signs across modes, media, channels, and so on" (p. 740). Likewise, the authors selected remediation because of their interest in how content is repurposed and recontextualized in new rhetorical situations, which often involve new audiences. When used together, the terms semiotic and remediation are therefore selected for their rhetorical utility. Beyond their use, these terms also suggest an orientation to an intellectual history and approach to scholarship. While multimodal seems to be a more product-focused term to refer to rhetorical artifacts, selecting semiotic allows scholars to unpack the broader rhetorical work of signs across numerous modes, media, and more. Likewise, remediation is a term that helps scholars explain the constant recontextualization of signs as they move across modes and media. Further, the lens of remediation provides scholars with the tools to understand the broader cultural context and impact of signs.

In 2010, Prior and Hengst continued the momentum by curating an edited collection dedicated to the very topic of the terms *semiotic* and *remediation* together. Tethering the concepts of semiotic remediation and discourse practice, the authors sought to build a coherent framework for these terms to avoid the risk of creating a "fairly random mosaic; even if the painted tiles are beautiful, they tend to not add up to much or to be well designed for creating a more coherent picture" (p. 17). The collection attempts to create a coherent stance on remediation by featuring original research where theory is truly tied to methodology and where research is truly reflexive. Several

chapters execute this vision brilliantly, suggesting numerous ways in which interested researchers can use this collection as an inspiration and a guide for future work. Two chapters in particular demonstrate how researchers using semiotic remediation must consider both textual artifacts and discourse practice as data.

In "'On the Many Forms it Took throughout': Engineering a Multipart, Multiple Site Rhetorical Event," Jody Shipka suggests that the study of texts alone can ignore the complex processes needed to produce those texts. To Shipka, the privileging of textual artifacts can ignore "the complex cycles of activity that link the production, distribution, exchange, consumption, and valuation of writing" (Shipka quoting Trimbur, 2000). Writing studies must consider composing as a practice that can and often does occur in pieces, over time, and with (or at least influenced by) numerous writers. Composing is so determined by our contexts that the individual writer composing with a quill pen, removed from the distractions of society, is mythical indeed. Writing is also a messy endeavor, its processes different and varied. Shipka explains, "texts, -- like objects, events, conversations, performances or parties -- have a history and are connected to, *and informed by*, other processes and systems of activity" (p. 54, her emphasis). In her chapter, Shipka details the semiotic remediation practices of three students collaborating on a assignment that resulted in "the production of a multimodal, multipart, multiple site rhetorical event" that featured original music, handwritten text, images, a live performance, and a "cross-campus learning tour" (p. 55). Instead of referring to these students as writers, which she finds limiting, she calls them *composers* of complex production practices. These composers orchestrate complex signs, which move across multiple modes and media. After being shared with their

audiences and contexts, these signs can then be repurposed and reshaped for new audiences and new purposes.

Shipka's method is insightful. She begins by building theory, follows by describing the student assignment, and then describes the work of the students as they moved through the project. In doing so, she provides snapshots of student work as her data. She also uses direct quotes from students as evidence to illuminate her presentation of the activity. While doing this, her writing is descriptive and objective. In her analysis, she suggests that merely looking at the live coffee house performance -- the final, culminating moment of the project -- would render a very different read of the composing that actually took place. Though brief, in her analysis Shipka uses terms like *activity* and *action* to analyse the semiotic remediation present throughout the student project. Overall, Shipka demonstrates the application of semiotic remediation through the analysis of textual artifacts and the observation of composers in action.She presents how signs and their distribution are cyclical, using pedagogy to illustrate the complex, cultural work of repurposing those signs for new audiences.

In "Citizens Doing Science in Public Spaces: Rhetorical Invention, Semiotic Remediation, and Simple Little Texts," Jeffrey Grabill and Stuart Blythe offer another approach to semiotic remediation and discourse practice, using Prior and Hengst's conceptual framework as a guide. Focusing on the public discourse of an environmental problem in the Great Lakes region, Grabill and Blythe adopt Prior and Hengst's terminology to examine complex rhetorical practices in the community of Harbor. Because the rhetorical situation was large and complicated, the authors borrowed Bruno Latour's terminology of gatherings, assemblies, and groups to help narrow their

approach and discussion. Similar to Shikpa, the authors use both practice and textual artifacts as their data. To understand communication practice, they use diagramming to help visualise the semiotic remediation at play during public meetings as well as the relationships between group members. They then selected issue reports and a flyer as their data. When presenting these units for analysis, they use careful detail to describe where and how the remediation is taking place. Little texts and low-tech, ad hoc distribution practices were found to be powerful approaches used in this case. Their analysis points to the broader context of a communication situation as well as the actions and collaboration needed amongst individuals. Of all the cases and chapters in the book, this one presents the most compelling case for writing as a collaborative, multimodal and multivariate activity that relies on many different actors. They also present how important and powerful textual artifacts can be in illuminating the power of semiotic remediation.

Semiotic remediation provides a sound conceptual framework for composing studies. While semiotic remediation has not seen much use in the field over the past decade, this framework presents a sound foundation both for the theory and methodology of writing studies. Semiotic remediation may not be considered a full-fledged theory. However, it offers this project with a guiding set of principles to understand both textual artifacts and composing practices. Semiotic remediation is most richly demonstrated when looking at the composing processes of groups or by analysing the artifacts that have been produced and rehashed by more than one author.

Although semiotic remediation provides the guiding framework for this project, I find it important to highlight the key terms that I will use frequently throughout these

chapters. Highlighting these terms offers much more than mere definitions. Instead, these terms represent my orientation and approach to the project itself. They also provide a useful framing for the discussion of composing in an environmental nonprofit. Raymond Willaims' *Keywords: A Vocabulary of Culture and Society* (1976) presents a useful framing for this project. In Keywords, Williams surveys hundreds of terms that have come to be part of scholarly discourse. Many of these terms are often used, yet seldom interrogated on their own (i.e., bureaucracy, community, hegemony, society). Using a cultural lens instead of an etymological one, Williams has provided a truly valuable resource and approach to understanding key terms that form a foundation for rhetorical work.

In the spirit of Williams' *Keywords*, I identify several key words that are foundational and recurring, offer definitions and some background information for each, and suggest how they relate to this project. This approach, one of defining guiding terms, provides a shared understanding of some very complex concepts and, taken together, help inform my approach to this project. Some of the definitions that I offer for these terms are refined for the purposes of this project, creating a more focused discussion throughout the dissertation.

It is imperative to note that not all scholars may agree on the act of defining. Creating a definition may appear as though one is laying a claim. Some suggest that defining in this manner could, in fact, seem colonizing. Of course, this is not my intent, nor do I suggest that defining is inherently a colonizing practice. A focused academic conversation using complex rhetorical concepts and key terms deserves a place of shared understanding (see Heilker and Vandenburg's *Keywords in Writing Studies*). In

fact, works in the humanities such as Williams' *Keywords: A Vocabulary of Culture and Society* have demonstrated that the art of defining reveals the deeply cultural nature of words and their meanings. Williams' method in *Keywords* is indeed extensive. For instance, Williams reviews the origin and development of more than 100 words along with their historical and current meanings with each, ranging from *communication* to *organic* and *revolution* to *work*.

I am drawn to Williams' keyword method because of its focus on unpacking the cultural meaning deeply embedded in frequently-used terms. This approach allows me to identify select words and use those words as a core for my analysis of communication artifacts and practices. My approach is inspired by Williams but does not follow the same pattern. In offering descriptions of the key words below, I attempt to honor the original scholars' voices and their contexts. I also offer explanations that connect these terms to the context of this study. Following these keywords, I then outline the core methods and methodologies that guide this project, including semiotic remediation as a conceptual framework. I also introduce the case study that offers a rich demonstration of these complex theories and keywords at work.

Keyword: Community

Community is at first a simple concept. Yet according to Williams, the word *community* can relate to "(i) the commons or common people, as distinguished from those of rank, (ii) a state or organized society, (iii) the people of a district, (iv) the quality of holding something in common, and (v) a sense of common identity and characteristics" (pg. 75). As one can tell from the meanings outlined by Williams, the

word *community* is truly a complex concept. The term itself clearly takes meaning from *common* or the *commons*, something that is ordinary or shared.

In *Community Literacy and the Rhetoric of Local Publics*, Elenore Long offers an important clarification on *community*. Instead of understanding community as a reference to geographic locales, Long (2008) refers to *community* as a "symbolic construct enacted in time and space around shared exigencies—in other words, local publics. People construct these communities—at once discursive and physical entities—around distinct rhetorical agendas" (pg. 15). Indeed, there are many communities formed around the shared rhetorical agenda of protecting the environment and preserving public health of people. However, when considering the environment, there are both symbolic communities and communities of people tied to physical space. This makes the term community especially unique to the case of an environmental organization like WMEAC.

There are many communities at play when looking at an environmental group like WMEAC. One could argue that WMEAC is itself a community of employees, board members, volunteers, and citizens. The WMEAC community is tied together both by their place and their concern for the environment. In fact, the WMEAC mission is to "Inform, engage, and nurture an inclusive *community* acting together to protect natural resources, mitigate climate impacts and build a resilient West Michigan" (About page on WMEAC website, my emphasis). Their group, as a community, seeks to enrich their local environment for the benefit of everyone residing in, travelling to, or having some stake in the environmental resources of the region. As such, the WMEAC community addresses the needs of many West Michigan communities through advocacy,

education, and programming. WMEAC ties many communities together in a shared interest and concern for the environment and how to protect and preserve the environment in a sustainable manner. The WMEAC community seeks to preserve and protect natural resources as a commons.

Keyword: Public

Interestingly, Williams does not offer a definition of the word *public*. Though ambiguous, the term *public* has, however, been theorized and defined by many scholars. According to Michael Warner (2002), there is a very important distinction between *the public* and *a public*. When referring to *the public*, Warner states that this is a sort of "social totality" used to refer to people in general (pg. 413). Conversely, *a public* has a more concrete sense where a crowd can witness itself in visible space (Warner, pg. 413). For instance, to Warner a crowd at a sports event or protest "knows itself" because it is bound by a common shared activity or common action. This awareness, visibility, and shared activity thus makes a public. This visible space to illustrate *a public* need not be physical space, though. Members of *a public* can network and engage in both physical and digital spaces, sometimes simultaneously. Take, for instance, the example of environmental activists protesting the construction of a proposed mine near a wilderness area. These activists are participating in a physical demonstration in a physical place, *a public* brought together by their concern for protecting the environment. These activists are also recording live video and sharing the protest on platforms like Twitter, Instagram, and Facebook. They are using digital platforms to extend the reach and visibility of their cause. This can be referred to as a

networked public. This networked public then extends to users who are not present at the protest, who can then participate in the event digitally.

Keyword: Semiotic Remediation

The terms *semiotic* and *remediation* each have their own critical purposes for my approach to this project. Semiotic relates to the broad system of signs across modes, media, and channels (Prior and Hengst, pg. 1). While semiotic remediation is a guiding concept in this project, it is not my intent to provide an in-depth history of semiotics and the nuances of this complicated idea. Instead, semiotic helps identify the process of remediation at play.

Bolter and Grusin (1999) describe remediation as the incorporation or representation of one medium in another medium. Remediation offers a means to describe ways that activities are remediated, taking existing materials and applying them to use in a new context, therefore altering possibilities for future action. To Bolter and Grusin, media is constantly changing and affecting other types of media, therefore leading to the creation of other types of media. Bolter and Grusin also suggest remediation is a defining characteristic of digital media because media is constantly remediating its predecessors, such as in television, radio, and print journalism. Remediation can be both visible and invisible. When visible, clear acknowledgement is given to the original medium. When invisible, the original source is taken out of context with no acknowledgement of the original work. Indeed, the claims made by Bolter and Grusin have held true since the publication of their aptly titled book *Remediation*.

However, now more than 20 years since its publication, we are seeing a different kind of remediation at play. Instead of a model where consumers are provided with

information from mass media channels from the top down, people are their own content creators with their own social media channels and platforms with large public audiences of their own. Instead of using novel to film adaptations as examples, we can now look to internet memes as ongoing examples of taking an image from one context, transforming that image with a new message, and sending that image to a new audience for a new purpose. In fact, the remediation of a single meme shared on social media--where it came from originally, where it has been shared over time--reveals the complexity of the layered, digital world we live in.

Together, semiotic remediation refers to the process of taking signs from their origin--across modes, media, and/or channels--to a new context and audience. Semiotic remediation helps *describe* the process of a communicator working for an NPO. In this approach, semiotic remediation is not a prescribed method to guide one's work as a communicator. In fact, many communicators engage in semiotic remediation during their everyday interactions and work products. Semiotic remediation is a means to describe the intricate and complex knowledge work that many people engage in routinely, either for work or play.

Semiotic remediation is not intended to serve as a major theory that all writing and rhetoric researchers should begin subscribing to. It is, however, a theory that allows for the description of complex writing practices that emerge when a communicator takes the information from one source, possibly alters that information, and publishes it in a new context for a new audience. This complex process is best illustrated when looking at a timeline of remediation, where one can see where a message originates, where it travels, and who it travels to on a path. Semiotic remediation is a conceptual approach

that emerges when a researcher begins to understand that a communicator is engaging in work where she takes information in one form, transforms it, and shares it with a new audience. It is an approach that helps illustrate the careful, rhetorical choices that a communicator makes when transforming information into a new form for a new, unique audience.

Keyword: Invention

According to Covino and Jollife (1995), classical Greek rhetoric as represented by Aristotle describes invention as congruent to the overall function of rhetoric. Invention occurs when a rhetor evaluates the available "means of persuasion in each case" (Aristotle). To Covino and Jollife, the rhetor invents these "means" according to "situational variables" that may inform a speech situation (pg. 60). Two key concepts are important to understanding invention from a classical perspective: topoi and enthymeme. Topoi is described as the survey of relational perspectives, whereas enthymeme is the act of constructing rhetorical syllogisms. Using tools such as topoi and enthymeme, a rhetor can construct an argument that may lead to psychological engagement and possibly persuasion of the audience. In classical rhetoric (i.e., Plato and Augustine), invention was also a term used synonymously with inspiration.

Invention later evolved to focus on invention as amplification. As illustrated in Erasmus' textbook *On Copia*, amplification is described as the use of tropes and figures to ornament an expression. To Covino and Jollife, the focus on Copia during the Renaissance conflated style and invention as terms one in the same. Invention was then left to the wayside as style remained a key component of the rhetorical process. To Covino and Jollife, Peter Ramus launched a wholescale focus on style which therefore

vilified invention for centuries. Under Ramus' vilification of style, invention was presented as an "arhetorical procedure that must conform to the rules of logic." However, the pedagogical focus of rhetoric in the 1960s and 1970s emphasized the use of invention as key to a creative, "epistemological and rhetorical process." The postmodern approach to rhetoric presented knowledge as an inventional process in itself, one where cultural, psychological, and ideological elements are all considered.

Invention has led an interesting history of use, but it has come full circle as a rhetorical cannon to help describe, understand, and employ the art of rhetoric. Invention is immensely powerful as a rhetorical concept to understand how communicators, whether scientists, professional communicators, or citizens, are transforming and transmitting information about the environment.

Semiotic Remediation and Invention

Two theoretical concepts, semiotic remediation and invention, share a number of similarities. As stated above, Aristotle's sense of invention occurs when a rhetor evaluates the available means of persuasion in each case. As the rhetor engages in this process, they invent these means according to the situation. Invention, then, is guided by context or the rhetorical situation at hand. That said, the rhetor uses invention as a guiding rhetorical process for specific contexts. Employing invention, a rhetor evaluates the rhetorical tools they wish to utilize to achieve their goal. All that said, invention relates to the rhetorical process.

Semiotic remediation, on the other hand, relates to the careful, rhetorical choices that a rhetor makes when transforming information and ideas into a new form for a new audience. Remediation relates to the way in which activities are remediated, taking

existing materials and applying them to use in a new context, therefore altering possibilities for future action. Semiotic remediation also allows for a greater understanding of remediation that occurs over a time period. All that said, both semiotic remediation and invention are useful terms to describe rhetorical phenomena and processes. These two crucial concepts that help illustrate the process in which a rhetor engages to achieve their purpose. Both concepts help identify that every rhetorical situation is different and based on a unique context. Further, both concepts allow for the illustration of a very abstract idea: that a rhetor is keen to employ rhetorical tools based on the situation and their audience. Sharing the mission of describing a rhetorical process and phenomenon, both concepts are useful tools for examining the 21st century work of a communication specialist. As I hope to demonstrate in this project, the terms community, public, semiotic remediation, and invention serve as a useful guiding approach for understanding the rhetoricity of the products and processes of routine communication at an NPO.

Methodologies and Methods Used

Cresswell's (2003) philosophical worldviews help guide an entire approach to a study. Using the term synonymously with paradigms, epistemologies, and ontologies, Cresswell describes a worldview as a "general philosophical orientation about the world and the nature of research that a researcher brings to a study" (p. 35). The worldview(s) of a researcher informs—and is informed by—the design and research methods employed in a study.

This project is guided by several worldviews. The influence of philosophical ideas, according to John Cresswell, often remain hidden in research (p. 35). However, it

is important to identify philosophical ideas because they can impact nearly every aspect of a study. Cresswell outlines a framework for research that is founded on an interconnection of worldviews, design, and research methods.

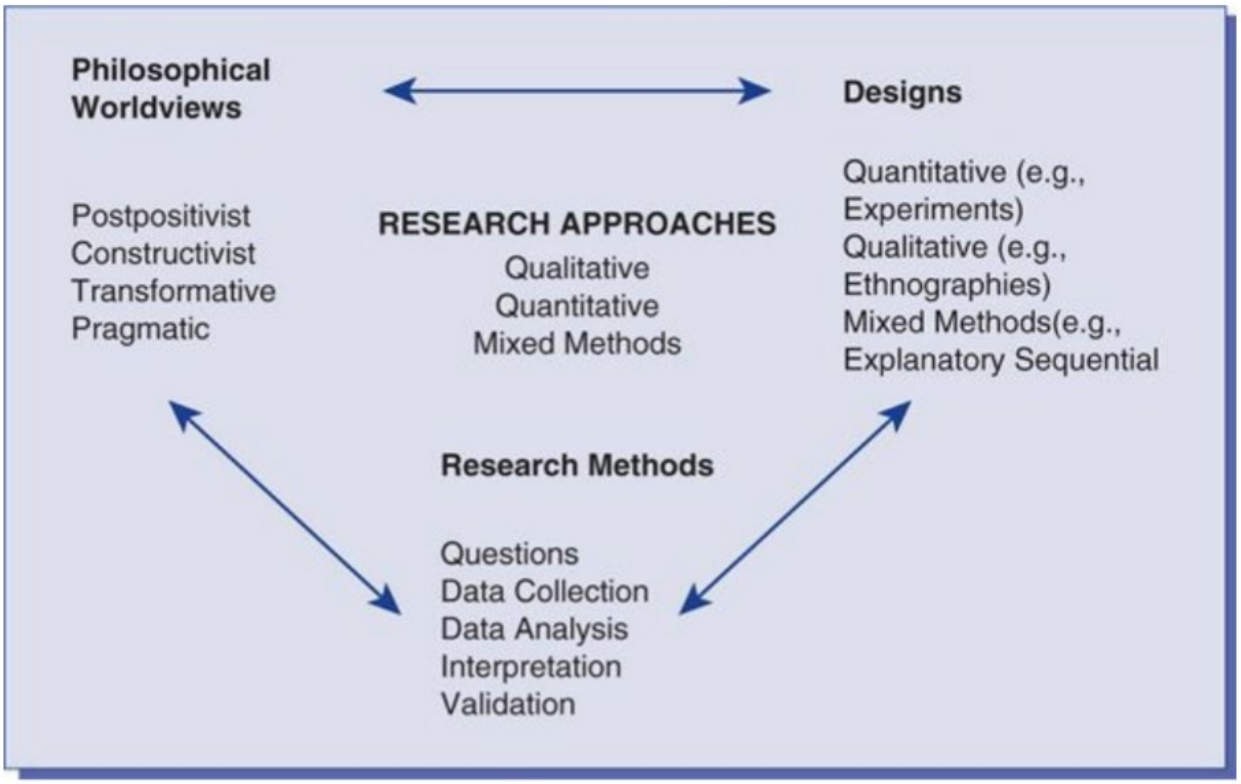

Figure 5: Cresswell's Research Approaches to Worldviews

While there are many more worldviews, Cresswell selects four that are quite useful for most researchers: postpositivist, constructivist, transformative, and pragmatic. Instead of attempting to define each of these terms, I have chosen to include a graphic from *Research Design* for the sake of brevity and illustration.

Table 1: Cresswell's Four Key Worldviews

Postpositivism	Constructivism
• Determination • Reductionism • Empirical observation and measurement • Theory verification	• Understanding • Multiple participant meanings • Social and historical constructio • Theory generation

Table 1 (cont'd)

Transformative	Pragmatism
• Political • Power and justice oriented • Collaborative • Change-oriented	• Consequences of actions • Problem-centered • Pluralistic • Real-world practice oriented

Upon first glance, it would seem that a researcher would need to select just one of these worldviews. However, in reality a researcher is often under the influence of multiple worldviews simultaneously; that is the case for this study. Seen as an approach to qualitative research, social constructivism describes individuals who "seek understanding of the world in which they live and work" (Cresswell, pg. 37). Though general, this understanding of social constructivism can easily be seen in a great deal of writing studies research. This project is no different.

For this project, I selected a working nonprofit organization, focusing on remediation practices as a communicator composes messages to public audiences. Through this project, I seek to understand the practices of people working in the world. The project also values the perspectives of participants as a major source of data. This may well lead to a complexity of views instead of narrowing meaning, yet that is one tenet of a social constructivist researcher (Cresswell, pg. 37). Of course, there are many other aspects of a social constructivist researcher that may not apply to this study at all. However, it is clear that the major influence of that epistemology is present here. Pragmatism is also a guiding worldview that influenced this study. However, I do not suggest that this study is guided by scholars such as Dewey or Peirce. Nor is it concerned with presenting applications as solutions to problems. Instead, this study is pragmatic in that it is real-world practice oriented. The pragmatic worldview in this sense

clearly influences this project that is focused on the communication practices of a professional in a nonprofit environment. My very selection of this topic and subject was guided by a pragmatic worldview.

The transformative worldview, to Cresswell, describes those who believe that the postpositivists and their theories did not fit marginalized individuals, issues of power and justice, and oppression (Cresswell, pg. 38). Along these lines, the transformative view also suggests that the constructivist stance does not do enough to address issues of power and justice. I do not suggest that this project is transformative in its major thrust. However, this project was influenced by this worldview. For instance, many organizations could have served as suitable sites to understand remediation practices. Yet I selected an organization that is change-oriented in its mission and their work seeks to help preserve the environmental health of diverse communities.

My approach to this project was to help my participant see value in participating in the project itself. For instance, I crafted interview questions to encourage my research participant to reflect on her work practices, in turn offering a constructive moment for the subject. This project is also transformative in the sense that trust was vital to the entire project. Great effort and care was taken to ensure that the research participant had an opportunity to know me personally and as a fellow concerned citizen with a passion for the environment. I believe it was this trust that encouraged her to reflect on her work practices with honesty.

Methodology

In *Research Design*, Cresswell provides a survey of characteristics often found in qualitative research studies. First, qualitative researchers collect data in the field, or the

natural setting. They gather information by talking directly to people where they live and work, seeing how they behave in their context. Second, in a qualitative study the researcher serves as the key instrument. Instead of using questionnaires or instruments developed by other researchers, the qualitative researcher is the one who examines, observes, and interviews. Third, qualitative researchers gather multiple sources of data, such as interviews, documents, and more. They the review all of the data, make sense of it, and organize that data into themes that thread across those data sources (Cresswell). Fourth, qualitative research is emergent and reflexive. A research design cannot be prescribed because a researcher may need to change or shift their plan once they go into the field to collect or observe data. Further, a qualitative researcher is reflexive in that they reflect on how their role, personal background, experiences, and culture impact the study and the meanings they pull from their data.

Based on these four foundational elements of qualitative research, this study is firmly in the territory of qualitative research. The natural setting -- the environmental organization -- served as the context of the study itself where the research participant works. As the researcher, I served as the key instrument as I developed and conducted an in-depth interview, gathered data, and examined the data. On that note, this project involved multiple sources of data, such as interview data and social media posts. Lastly, this project is qualitative because of its need to be emergent. For instance, while I had planned multiple interviews with my research participant, due to her limited time we focused on using a single interview to learn about her work. Lastly, in multiple areas, I reflect on how my background has shaped my vision for the project and the meanings I gather from the data.

Methods

Guided by a dual approach, this study uses the aforementioned key words as guiding methodological principles. Using the key words as a conceptual understanding, the methods of this study are composed of two major items: 1) gathering and analyzing public-facing artifacts and 2) interviewing a communications professional. That said, two data collection methods were used during this study: interviews and artifact analysis. The interview was semi-structured and conducted via Zoom. I prepared questions for my research participant that would allow her to reflect on her daily work practices and her process of composing and posting information to public channels (see appendix for question list). During the conversation, I used my phone to record an .mp3 file of our conversation. The interview was then transcribed on a Google Document, and both this document and the .mp3 were shared with the interview participant for her verification. She was welcome to make corrections and changes to the document itself.

Artifacts were gathered after the interview. I began by conducting a macro-level audit of the participating organization's public-facing media channels. I also learned about the channels that, based on our interview, were considered to have the most reach for the organization. Unsurprisingly, the channels considered the most important were digital: Twitter and Facebook. Based on the interview, my research participant informed me that two issues were major concerns to the organization: PFAS and a pipeline called Line 5.

I then visited the participating organization's Twitter and Facebook profiles and captured images of posts relating to these issues between November 2018 and January

2019. I then removed any identifying information from these images, such as usernames and profile pictures.

The interview was conducted via videoconference over the course of an hour and a half. Audio from the interview was recorded and stored securely on Michigan State University's Google Drive service. Follow-up questions after the interview were relayed via email.

As mentioned above, the analysis of both public-facing artifacts and an interview form the bulk of this project. These data have provided rich opportunities for discussion about how semiotic remediation and invention are at play.

The West Michigan Environmental Action Council

The West Michigan Environmental Action Council (WMEAC) was established in Grand Rapids, Michigan more than 50 years ago in 1968. Fighting to protect rivers and streams from pesticides like DDT, the group also led efforts to push for the National Environmental Policy Act (NEPA) or commonly referred to as the Environmental Protection Act of 1970. According to WMEAC, the group was the first large environmental council in the state of Michigan. Originally composed of representatives from area churches, parent-teacher groups, businesses, women's groups, student clubs, labor organizations, and conservation groups, WMEAC mobilized widespread efforts to protect water quality and control harmful pesticides. WMEAC has had numerous successes throughout its 50-year history, such as passing NEPA, passing the Inland Lakes and Streams Act in 1972, developing the Sand Dune Protection Act in the 1980s, and helping pass Public Act 295: The Clean and Renewable Energy and Energy Waste Reduction Act in 2008. Alongside these many achievements, WMEAC

has also offered numerous educational programs for children, local farmers, home gardeners, West Michigan residents, and concerned citizens. In 2012, the group hosted its first Women and the Environment Symposium, a now-annual weekend of speakers and workshops on environmental advocacy and activism.

For a group with such a long and successful history, WMEAC relies on a rather small team of individuals. The group is guided by a 13-member Board of Directors but has only four full-time staff members: an Executive Director, a Director of Development, a Director of Water Programs, and a Communications and Community Engagement Coordinator. At any given moment, the group also employs the work of several interns from area colleges. Their work can range from environmental education, outreach and organizing, policy, ecojournalism, and fund development. During my visits to their Grand Rapids office, I was always impressed by the staff's ability to engage in such high-profile work while also managing to lead a laid-back and comfortable office space. The space itself has ample natural lighting with a number of tables that serve as swing spaces for interns to work and for staff to hold meetings. It's not uncommon to see staff members bringing their dogs to work or commuting by bicycle.

Located in Grand Rapids, WMEAC has served a critical role in protecting and preserving the waters of the Grand River and nearby Lake Michigan, the second largest Great Lake by volume. These waters are at the core of life in West Michigan communities for thousands of years. As the longest river in Michigan, the Grand River makes up the second largest watershed in the state as it flows through the cities of Grand Haven, Grand Rapids, Lansing, and Jackson. Presettlement, the region was covered by oak hardwood forests. Today, while some patches of oak and hickory are

present, farmland has mostly replaced native forests. Fertilizers and chemicals, from both industrial and agricultural practices, make their way into area waters, posing a threat to the local ecology and human health. As one might guess, water protection is a critical goal for groups like WMEAC. The waterways of West Michigan serve as a focus for education and engagement for WMEAC and its audiences. Awareness surrounding water quality issues has been a major focus for the group since its inception. The group provides programs and educator resources specifically for watershed education. The group has also authored a report on stormwater in the area, which is accompanied by tips for citizens to be environmentally friendly to stormwater. Recognizing that the area watershed has enormous potential for travel and tourism, WMEAC has also co-authored a report on water trails in the area. In short, WMEAC is a group poised to work with many different stakeholders who use and engage with West Michigan waterways, from children and citizens to local farmers and business owners.

The organization's official about statement reads: "Founded by a diverse group of concerned citizens and organizational stakeholders, WMEAC is a 501C3 non-profit organization uniquely positioned to respond to emerging issues and new threats to West Michigan's natural and human ecologies, focused on Building Sustainable Communities and Protecting Water Resources." As I hope to demonstrate in this project, this mission is clearly reflected throughout their public-facing communications.

WMEAC was selected as the participating organization for this study because of their local focus on Michigan environmental issues. As an advocate for environmental causes, I had personally followed the organization for at least two years prior to the development of this project. I also selected the organization, at least in part, because of

the fact the WMEAC employed a full-time communications professional. I initially reached out to Ericka Popovich, Communications and Community Engagement Coordinator, to learn more about the organization and to gauge interest in whether the organization would be interested in participating in the study. I was ecstatic to learn that Ericka was interested in participating in the project and sharing her work.

Guiding this project with a helpful cultural frame, semiotic remediation will focus my analysis of routine NPO communication practices and processes, especially digital media. Because the terms community, public, semiotic remediation, and invention are used frequently throughout this analysis, I highlight these terms and how they illustrate rhetorical work. Leaning on the general worldviews of Cresswell, I utilize a social constructivist, pragmatist, and transformative approach to this project. I truly hope that the findings from this study will greatly benefit other communication specialists working in the nonprofit realm. These findings should also be enlightening to the subfield of TPC and the rhetoric and writing discipline at large, especially educators who prepare rhetors to serve in nonprofits, the public sector, and to be engaged citizens. Further, these findings should provide some insight into routine NPO communications, especially social media engagement. In the next chapter, I present my analysis of a series of artifacts, primarily digital, produced by WMEAC in 2018 and 2019.

CHAPTER THREE: ARTIFACT ANALYSIS

Introduction

Two major environmental issues plague the Great Lakes region, and the citizens and environment of Michigan are at risk. Two aging pipelines, commonly referred to as Line 5, carry millions of gallons of petroleum from western Canada and through the Straits of Mackinac on its way to refineries in Michigan, Ohio, and Ontario. In 2018, a tugboat anchor struck the Line 5 pipeline, causing major damage. In June 2020, it was discovered that a screw anchor supporting the pipeline had shifted. As the pipelines were constructed in 1953, tribal leaders and conservationists claim that these pipelines pose a major risk to endangered species and the fragile environmental integrity of the Great Lakes region.

Meanwhile, the citizens of western Michigan are impacted by abnormally high levels of pre and per and polyfluoroalkyl substances (commonly abbreviated as PFAS or PFOS) in drinking water sources. These synthetic compounds are often used in packaging, firefighting foams, and water-resistant coatings. Wolverine World Wide, a major footwear manufacturer located in Rockford, Michigan, has disposed of process waste containing PFAS in 3M Scotchguard, a product used to repel water from penetrating footwear. As a result, this waste contaminated private wells, Plainfield Township municipal water system, and the Rogue River with PFAS.

These two issues, though separate, adversely impact Michigan's environment and public health. Both Line 5 and PFAS are complex topics, and even news sources sometimes fail at accurately portraying the details. While organizations like the Pipeline and Hazardous Materials Safety Administration and the Environmental Protection

Agency serve the public and their interests, their communication materials and methods have failed to offer citizens with accessible, intelligible, and useful information about environmental decisions that impact Michigan communities. As a result, organizations like the West Michigan Environmental Action Council (WMEAC) perform crucial communication work for Michigan communities. WMEAC does the work of vetting, compiling, restating, and sharing reliable information to citizens. WMEAC uses science and trusted sources to take stances on environmental issues of concern, using the power of communication to raise awareness to protect human health and the environment in western Michigan.

In this chapter, I outline the communication channels and artifacts that WMEAC produces for their audiences in response to both Line 5 and PFAS. While the organization uses many different methods, I highlight three major touchpoints the organization uses to connect with their public audiences: the WMEAC website, posts to their Facebook account, and posts to their Twitter account. Specifically, I analyze these products using a semiotic remediation approach that traces these communication products over time. Using this semiotic remediation approach, I attempt to unpack the rhetorical power of these communication products, showing how these artifacts allow WMEAC to inspire citizens to engage and take action.

Communications Audit and Process

An artifact may be described as a collection of symbols that has cultural meaning and significance. Artifacts are inherently rhetorical in that the symbols they possess motivate their audience(s) to feel, think, or take action. In that sense, all artifacts are cultural, and all artifacts hold significance. Environmental nonprofits, organizations that

are inherently action-oriented, produce a great deal of artifacts to motivate their audiences to learn, discuss, and take action. While nonprofit organizations once focused on grassroots approaches such as door-to-door canvassing, cold-calling, printing and mailing newsletters and flyers, setting up informational booths, and picketing, the internet has allowed organizations to accelerate their action-oriented goals. Organizations can now produce, publish, and distribute information to large networks of followers through their websites, electronic newsletters, social media, and even online petitions. These digital outreach communications are faster to create and have more potential to reach larger audiences in a shorter amount of time. The shareability of these digital artifacts means that their networks of concerned citizens can grow using not merely the reach of their own communication channels, but also using the power of citizens to share information on their behalf.

As stated previously in Chapter 2, the public is important when discussing WMEAC's artifacts. Overall, the organization's orientation is public-facing, and WMEAC plays an important role in informing and educating the public. A very important tension between public and private is important to mention here. WMEAC often plays a vital role in informing and educating the public about environmental health concerns because of the decisions made by private enterprise. For instance, a footwear manufacturer uses non-stick coatings for waterproofing of their products. The chemical used for waterproofing contains perfluorinated compounds (PFCs or sometimes called PFAS), which are a public health concern. These chemicals used in the manufacturing process then leaks into runoff and the water table, and this water is then used to irrigate crops in

the area. WMEAC must then play the role of educator; the group must collect all the available facts and share those facts with the public in an accessible way.

Selecting public-facing artifacts for this project proved to be more difficult than I expected. Because WMEAC uses so many channels to communicate to their stakeholders, I began by creating a table to map the communication channels the organization uses.

Table 2: WMEAC Communication Channels

Channel	Description	Frequency
Official website (wmeac.org)	The WMEAC website is the official channel for the organization. The site communicates their position on issues of concern, provides resources, and encourages visitors to take action through volunteerism, donations, and more.	As with most living documents, pages and information is updated on an as-needed basis.
Blog (wmeac.org/blog)	The organization maintains a blog section on the site (called News), where they post stories of local interest.	It appears that WMEAC attempts to publish blog posts every two weeks, however, sometimes they publish them more frequently.
WMEAC Twitter (@wmeac)	WMEAC uses their Twitter account to cross-post content shared on Facebook and vice versa. The purposes of these posts are varied, from promoting events to sharing vetted articles from Michigan newspapers about environmental issues.	Frequency varies from posting once a day to several times a day.

Table 2 (cont'd)

WMEAC Facebook (https://www.facebook.com/WMEAC/)	As noted above, all content posted to Facebook is the exact same content posted to the Twitter account. While more engagement seems to occur on Facebook in the form of user comments and likes, the organization rarely responds to user comments and questions.	Just like their Twitter account, frequency varies from posting once a day to several times a day.
WMEAC electronic newsletter	WMEAC uses their newsletter to promote events, promote resources and their blog posts, and to encourage interest in volunteering.	Newsletters are distributed weekly. Occasionally, newsletters are more frequent during months when the organization is leading campaigns for donations or other forms of citizen participation.
WMEAC volunteer newsletter	WMEAC uses this newsletter to connect with existing and future volunteers. Primarily, the newsletters are used to promote volunteer events and opportunities, but occasionally the newsletters contain stories that highlight the work and successes of their volunteer projects.	The newsletter appears to have a monthly cadence, but the organization also sends these out on an as-needed basis when they are seeking volunteers for events.
WMEAC hosted and sponsored events	WMEAC hosts and sponsors numerous events for the public, such as an annual symposium for women and the environment, volunteer events, book clubs, and more.	Events occur throughout the year. Leading up to each event, the organization uses multiple channels to promote and cross-promote them, using social posts, banners, their newsletters, links to registration systems, and more.

This table was produced by conducting a big-picture survey of the organization's channels. For the sake of this table, the channels are major forms of communication to

reach the organization's audiences. While the audiences of the channels identified above can vary, all of these channels are accessible to the general public. For instance, the majority of these channels are catered to audiences that have a concern for the environment. However, meetings such as the Annual Symposium and the environmental book club have a focus on individuals who identify as environmental activists and/or community leaders. For the sake of gathering artifacts, however, I have chosen to focus on electronic posts that have reach to the general public, such as Facebook and Twitter posts as well as the organization's electronic newsletter. I have decided to focus on these artifacts because of their incredible reach. The WMEAC Facebook page, for instance, has roughly 15,500 likes and more than 16,000 followers (as of April 2021). The WMEAC Twitter account has approximately 2,400 followers (also as of April 2021). Considering there are more users who read and engage with content on these platforms but do not follow the organization officially, the organization's digital reach is significant. WMEAC also produces two separate newsletters, one general and one for volunteers. While the exact number of subscribers to these newsletters was not provided to me during this project, I think it's safe to assume that WMEAC reaches at least 20,000 or more followers through their digital platforms alone.

As mentioned in the table above, WMEAC often posts the same--if not similar--content to both Facebook and Twitter. This allows their organization to reach as many readers as possible. Further, though, it allows their group to create an ecosystem of public communication. When Ericka, WMEAC's Communication and Community Engagement Coordinator, creates a weekly newsletter, she uses the platform Mailchimp. She then shares the newsletter to their subscribers via email. Lastly, she

creates posts on both Facebook and Twitter that highlight the newsletter and provides a link for readers to view the newsletter in their browser. All of these touchpoints, when working together, ensure that followers and subscribers do not miss original content produced by WMEAC. This approach also ensures that new members of their audience and those stumbling on their public communication channels will not miss this original content produced by the organization.

The digital reach of WMEAC is significant, and the organization excels at engaging the public with digital tools. Not surprisingly, the posts shared on their digital platforms are crafted with a great deal of care and carry immense value for the purposes of this analysis (I further explore these processes of care and communication in my next chapter, where I present findings based on an in-depth interview with Ericka). I gathered numerous social media posts, website screenshots, and electronic newsletters shared digitally between June 2018 and January 2019. I then analyze those artifacts using semiotic remediation as a conceptual framework. This process helps illustrate the complex rhetorical work at play between WMEAC and their audiences. However, these articles only tell one part of the story. They do not account for the rhetorical process that Ericka engaged in to produce these artifacts, which I address in the next data chapter.

Website as an Official Channel

While social media has become a vital approach to reach audiences, websites are just as important. WMEAC uses their website to provide official information coming directly from the organization itself, such as events, documents, fact sheets, and information about their initiatives and programs. As a result, the website is the

organization's official mode for communicating their mission. The site has a welcoming appearance with a simple and streamlined approach. The site has held a consistent appearance since at least 2018, but the site has stood the test of time and has not required significant changes to keep up with the graphical appeal of websites today.

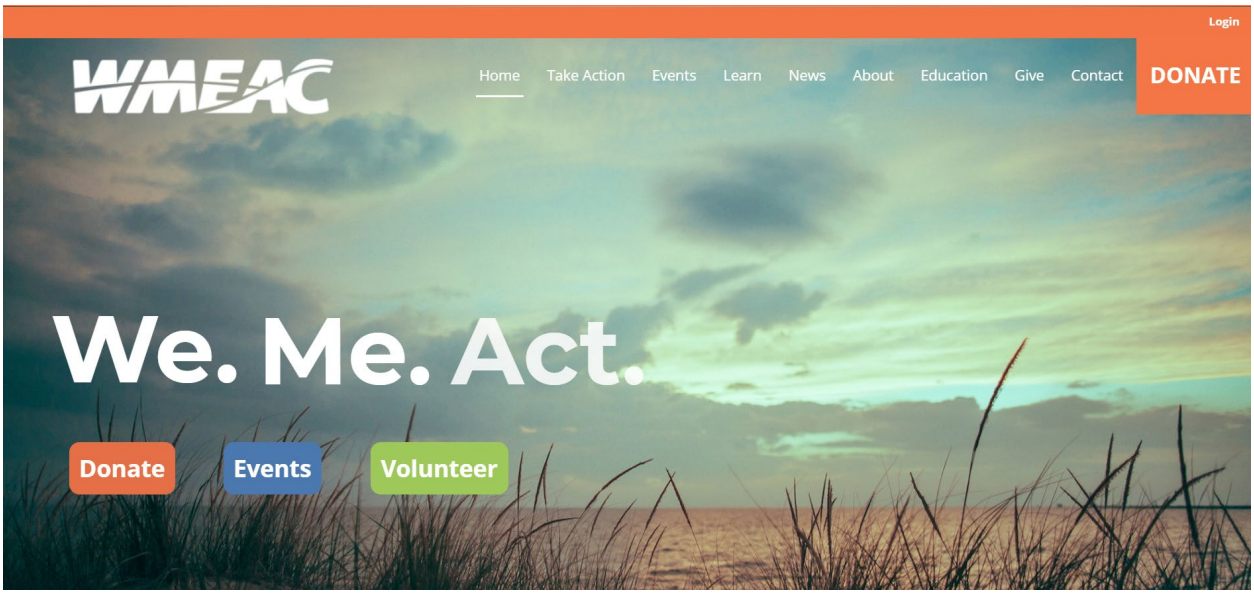

Figure 6: Screenshot of WMEAC Homepage

The WMEAC website uses a graphical approach to their website. The site's home page uses a slider with hero images of Lake Michigan. The website also features a standard navigation menu beside the organization's logo. However, perhaps the most successful aspect of the website is its citizen focus. Every aspect of the site is action-oriented for citizens to access, engage, and act. The resources on the site, for instance, are easy to find. The site also guides citizens to taking action in several ways, such as "advocate", "volunteer," and "become a member." These active verbs are more effective in encouraging visitors to click and take action. For instance, in the home screen shown above, visitors can act, donate, learn how to volunteer, or access resources directly from the home screen.

The site appears to be carefully designed and catered to issues that concern citizens in West Michigan. For instance, WMEAC even provides an online form for people to suggest how to improve the website. The site offers a blog as well, which seems to be relatively active (approximately two posts per month). WMEAC uses these posts to offer in-depth information and analysis on issues impacting west Michigan communities. Resources, such as fact sheets and resource pages, are available to help citizens learn about various issues that impact their community (PFAS, water programs, and environmental justice).

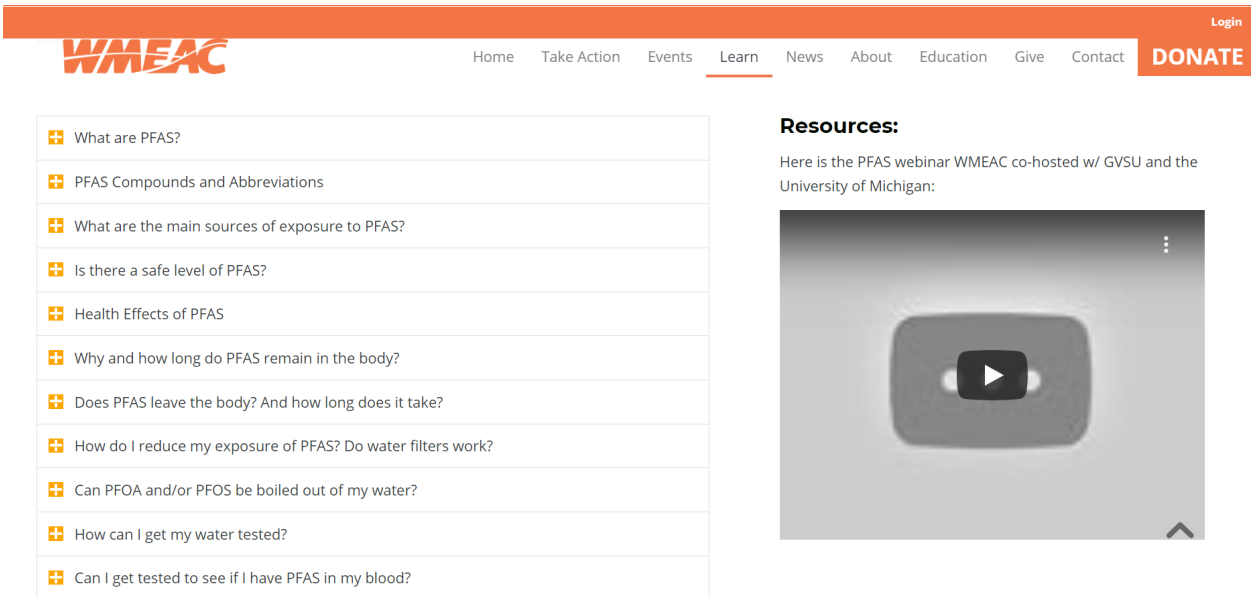

Figure 7: Screenshot of WMEAC Resources

Figure 7 shows the WMEAC resource page on PFAS. The page provides an FAQ section along with citations (including links) to original sources. On the right-hand side of the page, a video from a PFAS webinar is embedded in the page. Unfortunately, the video is no longer available. Nonetheless, it is these pages that demonstrate WMEAC's citizen focus and their keen attention to citizen needs. The EPA, for instance, offers their own fact sheets and information designed for the public on topics like PFAS.

However, these WMEAC resources are designed to be more localized for the needs of west Michigan residents.

As a public-facing organization, WMEAC's website emphasizes topics of concern and how citizens can take action. The website serves as an important living document that helps their audiences feel like they are part of a community, one where the environment is truly valued. Aristotle's sense of invention is useful to note here. To Aristotle, invention occurs when a rhetor evaluates the available means of persuasion. The rhetor, in this case the WMEAC organization as a whole, has crafted a persuasive and engaging website. It uses visual design to appeal to audiences (environmental images and scenes), convincing and clever writing ("We. Me. Act.", a play on the pronunciation of the organization which is "we me ack"), and a channel that is clearly successful at reaching citizens today (the internet).

While WMEAC uses their website as an official channel to communicate their mission and to reach concerned citizens, the organization also successfully uses secondary channels to great effect. WMEAC's social media channels are successful examples of connecting and engaging with the public on important topics that impact West Michigan residents, such as PFAS and the Line 5 pipeline.

Subtle Invention on Social Media

WMEAC's primary social account seems to be Facebook, where not only do they seem to post the most content, but they also appear to experience the most engagement with their posts (comments, shares, and likes). The Twitter account is used as a supplemental account that often mirrors the posts originally shared on Facebook. However, this means that the character count needs to be revised in order to suit the

character limitations of posting on Twitter. By observing the number of shares and likes on their social accounts, iIt appears that WMEAC's tweets attract less engagement from their audience in comparison to their Facebook posts. On Facebook, for instance, it is rare for a post to have zero likes, shares, or comments. However, it is rare for their tweets to have any form of engagement from their audience. Regardless, it is important that the organization uses Twitter to ensure that they reach as many followers as possible. For instance, it is likely that some of their followers on Twitter will not also follow the WMEAC Facebook account.

Since November 2018, the two primary environmental issues that WMEAC has focused its attention on their social media accounts are those I introduced at the start of this chapter: PFAS contamination and the Enbridge Line 5 pipeline. On both the WMEAC Facebook and Twitter accounts, there are numerous posts related to these topics. Some posts feature online articles related to said topics, some highlight events of interest, and others pointing to scientific reports and toolkits.

On Twitter, the common method WMEAC utilizes is sharing an article or link, with the text of the Tweet highlighting a quote from the original article being shared. When this method is employed, a featured image from the original article is highlighted on the tweet. Sometimes, perhaps when a quote is not suitable or if the article being shared needs more context, an original description is made that provides more context for the audience so that they can understand the scope and topic of the article being shared.

As one might guess, a similar approach is employed on Facebook. Posts mainly consist of sharing articles of interest, with the text of the post usually highlighting a quote from the article being shared. A situation where this differs is when WMEAC shares an event hosted by the EPA or the DEQ. In these situations, it seems that Ericka pays careful attention to clearly provide when, where, and for what purpose an official event is being held. This approach may indeed be taken due to the fact that governmental organizations often do not provide this vital information with clarity.

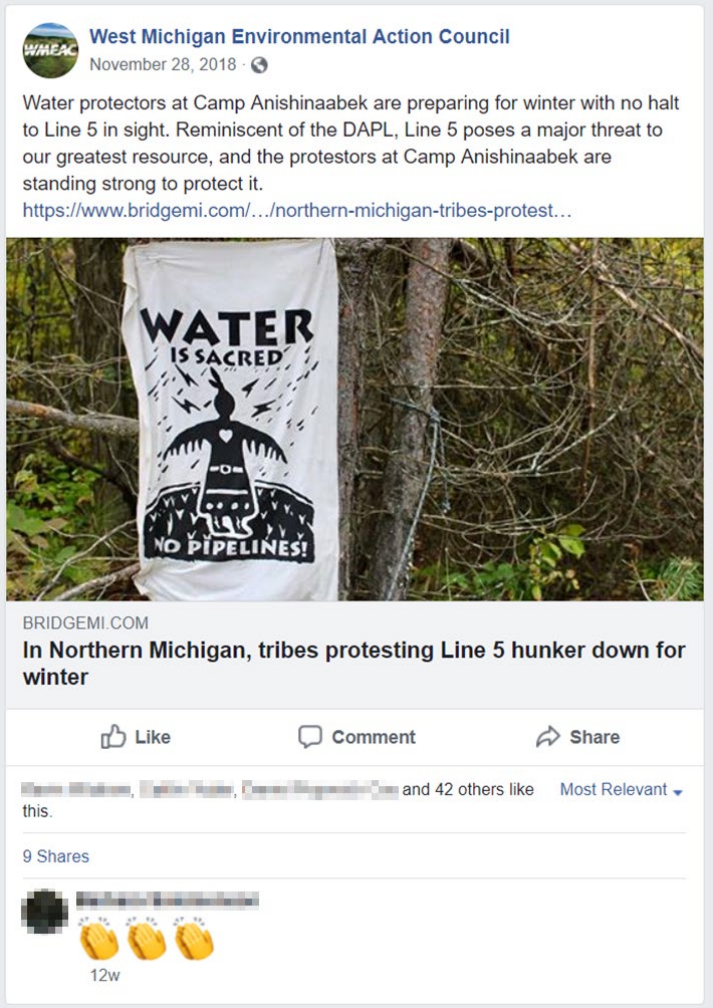

Figure 8: Screenshot of WMEAC Post: Tribes Protesting Line 5

Figure 8 illustrates a typical post to the WMEAC organization's Facebook account. The post features a link to an article about tribes protesting the proposed Line

5 pipeline at Camp Anishinaabek. A number of indigenous activists formed a makeshift camp roughly 15 miles south of the Straits of the Mackinac in northern Michigan, vowing to stay in the camp all winter to protest construction of the pipeline. The story itself is moving and inspirational, and a demonstration of the power of peaceful protest.

The post itself is more than simply the sharing of a news article, however. The post features a description that provides some context for the situation at hand. But in this description, a clear stance is taken. WMEAC clearly sides with the work of the protesters, citing that Line 5 is a major threat to “our greatest resource.” One can infer that this resource is in fact the pristine waters of Lake Michigan and Lake Huron.

It is in this written portion of the post where we can also see remediation at work. Taking one article and simply sharing it to another audience would still be powerful, but that would not necessarily demonstrate remediation. However, in this instance we can see how Ericka not only shared the article, but she also provided a written portion that has its own rhetorical power. In this written portion, it is mentioned that Line 5 is a threat to “our greatest resource,” likely the waters of Michigan. In statements like these, which are not found in the original article, we can see an appeal to WMEAC’s audience and their values. Additional written context is added to the post, which allows the post to have more rhetorical thrust.

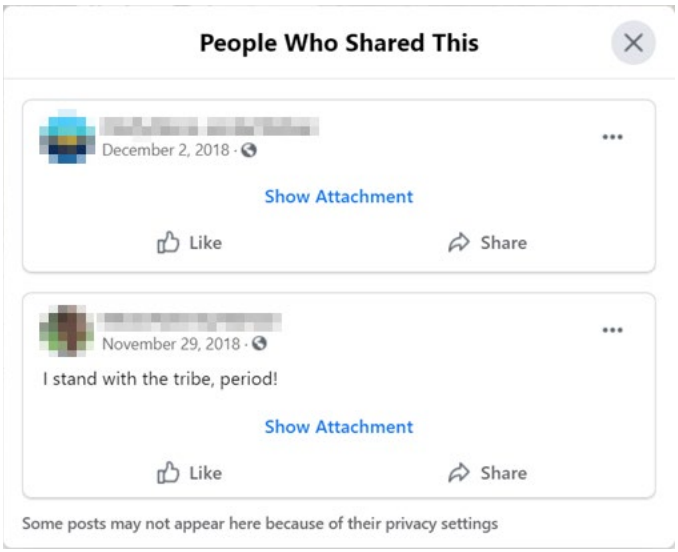

Figure 9: Screenshot of Users Sharing WMEAC Content

In this instance (Figure 9) semiotic remediation at play is rather subtle. However, it is in routine posts like these where we can see how subtle moves can have great results in relaying persuasive information for localized audiences. The Facebook post, at least at the time of this screen shot, had received more than 40 likes. What cannot be seen from this screen shot is how many Facebook users decided to share the same article with their own networks.

Visually, the post is impactful. The image displays a banner featuring an Anishinaabe figure with the words “Water is sacred. No pipelines.” The banner appears to be hanging in the forest where the protesters have set up their camp. During our interview, Ericka mentioned that many news articles will have preset images that will appear when articles are shared on Facebook. While this is likely the case for this image, the visuals certainly work in WMEAC’s favor.

As a framework for analysis, semiotic remediation can offer the tools to evaluate the rhetorical power of a communication artifact over time. In this instance, the timeline begins with an article published in Bridge Michigan, described as a “nonpartisan,

nonprofit news source." Published on November 2, 2018 in the site's Michigan Environmental Watch section, the article begins its remediation journey there. Using a simple tool called Google Alerts, which allows users to trace emerging articles and content surrounding key topics and key words, Ericka is able to see the article appear on her Google Alert feed. Once she had a chance to read and review the article, she then reshares the article to the WMEAC Facebook page 8 days later on November 28th. This then prompts a series of interactions from WMEAC followers, such as 45 likes, a comment with clapping emojis, and even 9 reshares to private personal networks. At this point, it's clear that at least one WMEAC follower offered their own message upon resharing the post to their own personal networks. For instance, one user exclaims, "I stand with the tribe, period!" to their timeline upon sharing the post on November 29th. Another user reshared the post to their private network on December 2nd. For the other users who shared the post to their personal networks, it is unknown where and when the post travelled next. It is likely that it continued on a line of sharing, resharing, and offering messages of support.

This post demonstrates how WEMAC uses the power of their online network to highlight the efforts of environmental activists. Through this post, it is clear that WMEAC often takes a clear stance on issues that impact the people and environment of Michigan. In this post especially, WMEAC helps establish a strong sense of community by connecting to audience concerns and helping their audiences understand how indigenous activists are working to preserve community. The group works as an intermediary between activists on the ground, in this case Camp Anishinaabek, and concerned citizens who follow WMEAC on Facebook.

Ericka took care to select a news article that is directly relevant to the Line 5 discussion, highlight an impactful and informative quote from that article, and share it via a channel where most members of the public can see, read, and engage. This form of invention, though subtle, is still impactful in creating a shared sense of community. In this instance, semiotic remediation is also subtle yet present. Ericka takes a source from one place (i.e., a news article geared toward the general public) and shares it to another space where there is a more specialized audience (i.e., WMEAC followers on Facebook).

Figure 10: Screenshot of WMEAC Post: Michigan Radio Article

Figure 10 showcases a screen capture of a Facebook post shared by WMEAC on December 13, 2018. The post features a link to an article from Michigan Radio about water protectors protesting the Line 5 legislation in Petoskey. The post includes a featured image from the news article, where a member of the Grand Traverse Band of Ottawa and Chippewa Indians holds a protest sign. Ericka has also added her own contextual information to introduce the post. In fact, this addition of original text is rare for any post on the WMEAC social media channels. Similar to the Facebook post above, the written information that Ericka adds to the post is much more than descriptive information borrowed from the article.

Upon first glance, the written portion that Ericka provides with the post seems like a routine description of the situation being reported. However, upon closer look at her rhetorical moves, the written portion presents subtle moves to appeal to her audience. The written portion makes an attempt to appeal to her audience's emotions by helping them understand the conditions the protesters braved to fight the pipeline. It attempts to highlight the number of protesters present, creating a heightened sense of urgency for this situation. Lastly, the written portion mentions the weakness of a "three person commission" making decisions about a massive pipeline project.

Semiotic remediation is again at work when looking at this communication artifact. The artifact's timeline begins on December 9, 2018, just a few days after WMEAC shared the Line 5 article from Bridge Michigan discussed above. The article is originally published on Michigan Radio's website, where reporter Kaye Lafond interviewed a native activist protesting the pipeline. Again we see the power of Google Alerts in helping communication professionals like Ericka find emerging information

about important environmental topics. Once Ericka sees the article on her Alerts feed, she reads and reviews the article before posting it to the WMEAC Facebook page with a summary of the situation along with the post on December 13th. This then prompts a series of reactions from their followers, such as 12 likes and one share to a private account.

Again, WMEAC creates a shared sense of community through posting issues that impact and appeal to their followers. We begin to see a theme here with a post that originates on a public news website to another public, the community of followers on WMEAC's channels. A series of rhetorical moves must be made in order to create an impactful post like this one. Many protesters fighting for the environment are not featured in the news, so creating visibility for this story is a must. The written statement Ericka includes with the post helps provide context for those who do not click and read the article itself. This careful attention to audience needs is not unusual for WMEAC posts.

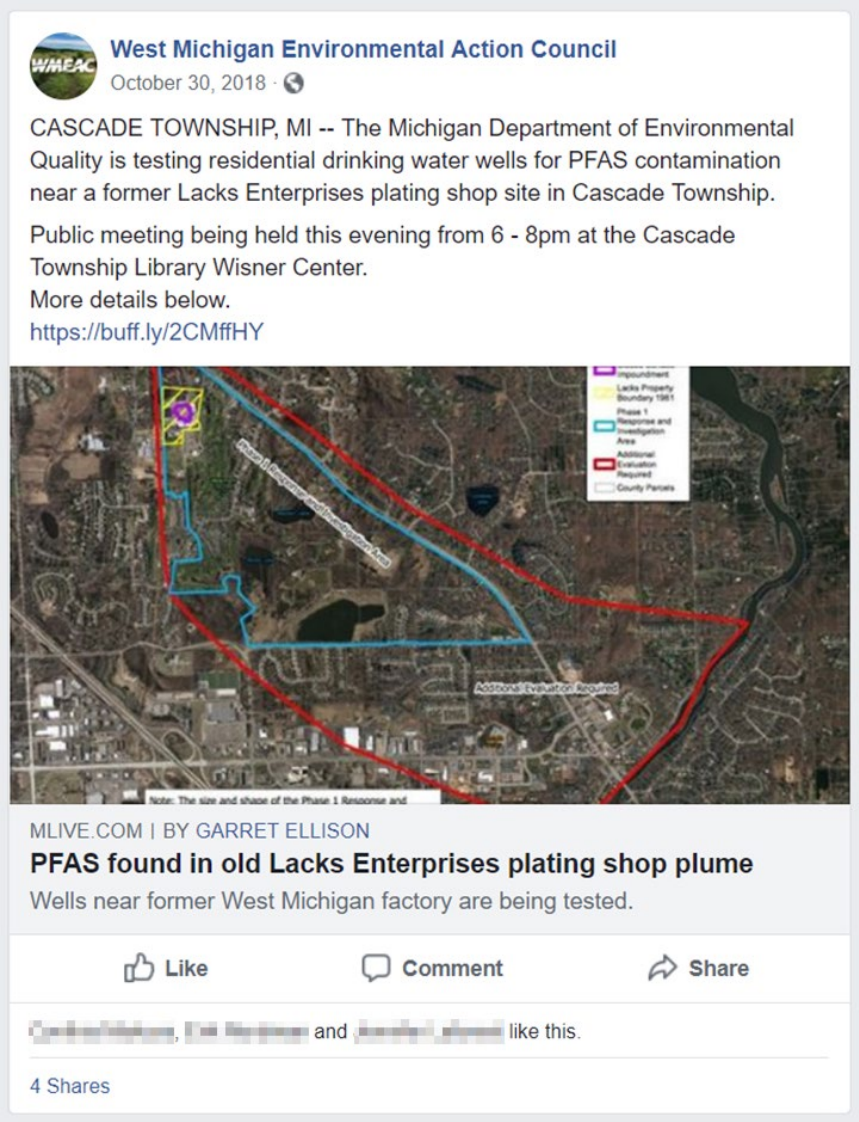

Figure 11: Screenshot of WMEAC Promoting Public Events

Figure 11 is an example of how Ericka often uses the WMEAC social media channels to promote public events. While there are public meetings advertised by agencies such as the Michigan Department of Environmental Quality (MDEQ) and the EPA, these meetings are often buried on agency websites and are not promoted widely. As a result, it has become a mission of WMEAC to promote public events and listening sessions about environmental concerns. As a result, the group serves as a vital force in the community, promoting opportunities for citizens to actively offer their voice and learn

about issues that impact their communities. In this particular post, it appears that Ericka has taken the language provided by a press release from the MLive news source. Here, it is published on the WMEAC account verbatim, followed by a link to learn more on MLive.

In fact, WMEAC promoted this public meeting in three separate posts to their Facebook account: the first on October 25th, the second on October 27th, and the third on October 30th. Each post was identical. Similar to the communication artifacts above, we can best understand the semiotic remediation of these artifacts on a timeline. The timeline begins on October 19, 2018 when the Michigan Department of Environmental Quality issued an announcement about the situation, advertised a public meeting on the matter, and outlined their plan to begin testing residential well water for PFAS contamination. Following the announcement, the news source MLive published an article on October 19th – the same day as the MDEQ announcement – about the situation as well as information on how citizens can participate. Again utilizing the Google Alerts tool, Ericka was able to find this information on her Alerts feed. After reviewing the information, she then shared the meeting information on the WMEAC Facebook page just a few days later. Similar to the communication artifacts described above, WMEAC's followers engaged with the post. Overall, the post earned 21 reactions, 9 comments, and 4 reshares to personal Facebook feeds.

In this example, information was more than just reposted by different groups. The information in the press release was generated by an environmental agency, sent to major news outlets, and finally, picked up by environmental groups like WMEAC who then promote the information as widely as possible. There is no direct connection

between MDEQ and WMEAC. An information chain needed to travel to WMEAC, and finally, travel to audiences of WMEAC. Using tools like Google Alerts and manual searching, citizens and communication professionals like Ericka can more easily find moments where the artifact has been shared in the chain. It should be noted that a citizen can likely learn about this information at any point in the chain: a posting on the MDEQ website, reading MLive articles, or following WMEAC's social accounts. As this information travels through the chain, it is shared with a new audience at every step. Once it arrives on the WMEAC Facebook page, the information is shared with a concerned group, a community, of citizens who may well attend or reshare this important meeting information.

When reviewing the comments on one of the posts shared to WMEAC's Facebook page, I was stunned by the stories shared by their followers. It would seem that at least one resident has had experience with the offending company and that they possessed knowledge of PFAS contamination for years before the MDEQ announcement. There are also numerous users who want to know more information about PFAS and the meeting information in general. WMEAC was prompt in responding to these questions and providing the information their followers needed.

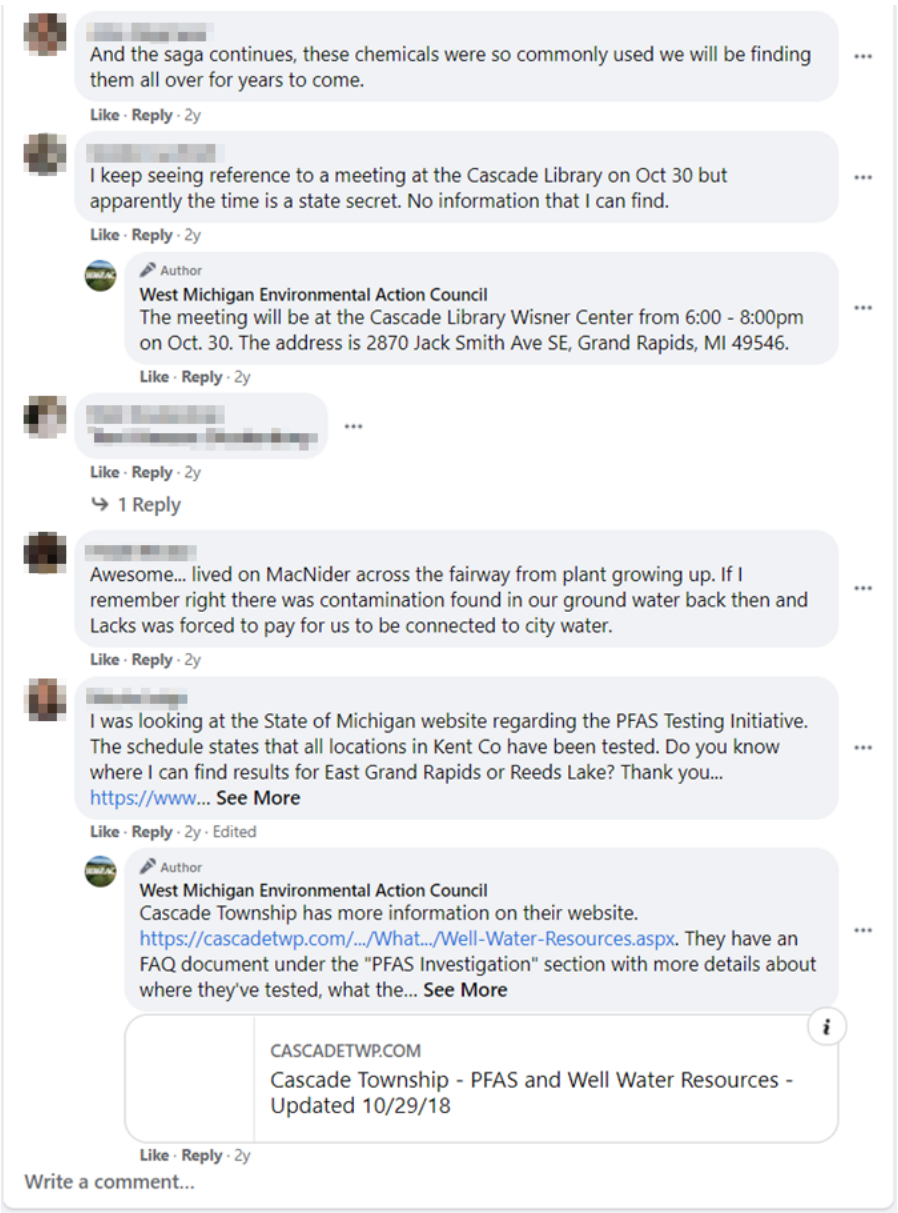

Figure 12: Screenshot of User Engagement

WMEAC creates visibility to environmental issues and helps ease access to information that impacts citizens. There is also a concern that many citizens may not be aware of agencies like MDEQ and that they post information that impacts them. Citizens may also be unaware of how to navigate government websites, may not be literate in the English language, or may not understand that issues discussed on government sites have an impact on them locally. WMEAC, then, helps become a mediator in the

information chain. The organization helps provide access to information that citizens may not be able to access readily, or have the time to find for themselves. Similar to previous examples, the semiotic remediation is subtle here. While it is difficult to tell what writing is original and what writing is borrowed, considering the fact that WMEAC served as a major link in an information chain from the MDEQ to citizens is important. Posts like these help the WMEAC audience see the great importance of following the organization on their social media channels.

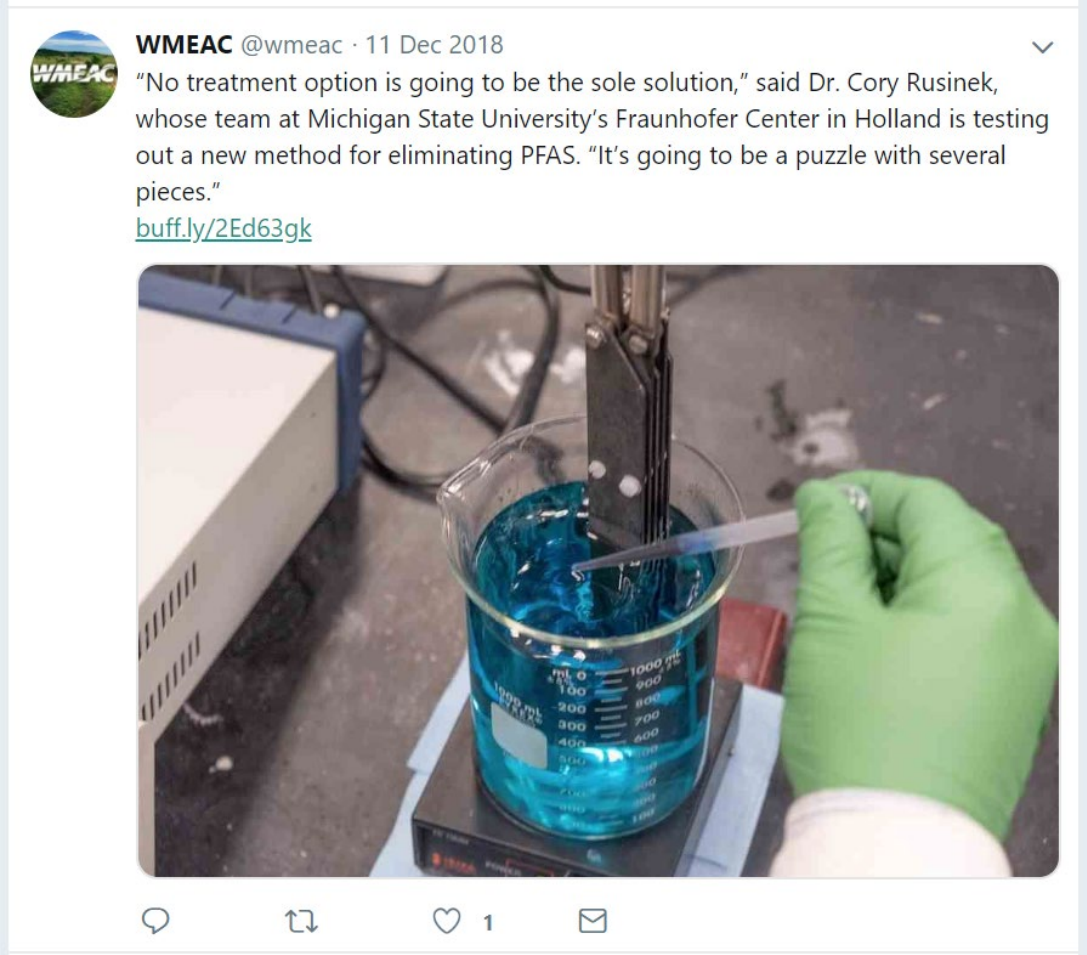

Figure 13: Screenshot of Water Testing Post

PFAS was indeed ramping up as a topic in the state of Michigan, and WMEAC was sure to provide their social media followers with the real-time information they needed about the topic. The Twitter post above is an example of Ericka sharing an

article from a trusted local news source, in this case the Grand Haven Tribune on December 8th, 2018. The article reports on a Michigan State University professor's take on solutions to eliminate PFAS. WMEAC then shares the article on their Twitter feed just 3 days later on December 11th.

While the subject of the article is interesting, what is more interesting is the rhetorical situation of it. The Grand Haven Tribune allows readers to easily share articles directly from the article itself. When a reader does this, they can share any text of their choosing before posting to their account. The image and URL that directs others back to the article are generated automatically and are set by the author or administrator of the site. In this post, Ericka has chosen to highlight a specific section of the article for the text of her tweet. Selecting this section took great care. It required a thorough read of the article, followed by an evaluation of what sentence or group of sentences were best suited to provide context to her audience. The image, on the other hand, is automatically generated. So if that image has a rhetorical impact on her audience, does that then mean she used the image rhetorically? Regardless of her intent, the image has rhetorical appeal. It helps their audience connect to the science and laboratory work required to understand complex compounds like PFAS.

Routine posts like this one are rhetorically rich instances where subtle semiotic remediation is at work. For instance, this post is another example of a chain of information, which I call an information chain. A chain of information relies on a series of actions from at least one, but oftentimes more than one rhetorical actor. Over the course of the information's journey, it reaches numerous audiences and can take the form of different messages and media. In this instance, information was gathered,

written, and published online for a general audience in the region. That information was then selected and relayed to a specific audience by Ericka on behalf of WMEAC. Ericka is also selecting a quote and relaying an image from a previous rhetor's choice. This transferring of information and content, even if unintentional, still has rhetorical power. This alone means that the tweet still has rhetorical power, and whether Ericka is painstakingly selecting images for a rhetorical purpose is irrelevant. The image and the text still has an impact on the audience. Ericka serves as a vital actor in the information chain as she takes existing information, adapts that information, and relays it to new audiences. In brief, she extends and builds on the information chain through these routine posts.

Users can select to share a link only or a link with a feature of the article that includes an image from the article itself. If selecting the latter, users can choose between a series of images that are included with the article. That said, users are afforded with a number of options when sharing posts. These options can be critical in encouraging an audience to click on links or interact with the post through sharing, linking, or commenting. The routine work of a Communication Specialist, such as sharing links to notable articles, may not appear to be rhetorically rich instances for analysis. When evaluating the options users are afforded when making a post, however, it is clear that a series of rhetorical choices are at play when sharing even so-called "routine" posts on social media.

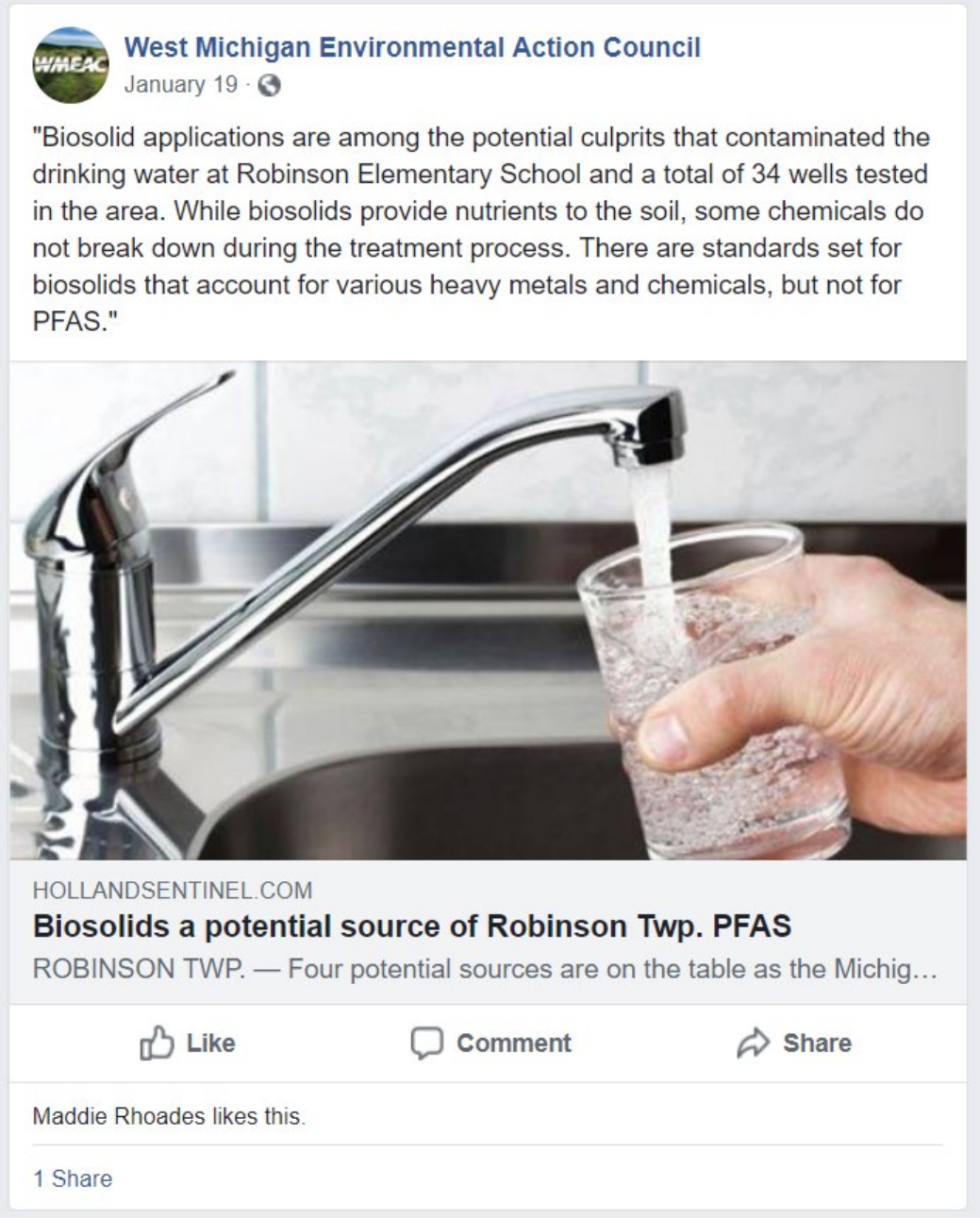

Figure 14: Screenshot of "Routine" Post on Facebook

While there seem to be occasional instances when Ericka provides original statements in social media posts, there are far more examples of posts that feature a direct quote from an article that is linked. This kind of post is common on both WMEAC's Facebook and Twitter accounts. These posts feature a link to a news article

or other online content, a featured image from the original source, and a selected quote from the original source.

In the example above, WMEAC is sharing a news article about a potential source of PFAS contamination in Robinson Township, Michigan. According to the Michigan PFAS Action Response Team, biosolids are the solids that remain after treating wastewater. Many wastewater utilities have pioneered the process of removing solids from wastewater. Instead of dumping those solids in a landfill, these solids go through their own treatment process to become fertilizer to grow crops. Some utilities sell their fertilizer to local farmers, who often claim that biosolids reduce the need for chemical fertilizers. Other utilities, like Metro Wastewater Reclamation District in Denver, Colorado, own and operate their own farms where biosolids are land-applied for growing crops like wheat and corn. The crops grown from these land applications can be sold at commercial markets and are suitable for both human and animal consumption. The article above, then, is speculating on the possibility that PFAS is found in land-applied biosolids, which can then lead to runoff that can impact the quality of drinking water sources. However to be clear, research in resource recovery has since demonstrated that PFAS contamination from land-applied biosolids is extremely low. Water, septage, and biosolids are not sources of PFAS, however, PFAS can sometimes be found in biosolids in trace amounts (“PFAS and Biosolids: Frequently Asked Questions”). There are far more likely causes of PFAS contamination in Robinson Township than biosolids, such as firefighting foams or a local dump site.

This article Ericka shares is attempting to help the public understand potential contamination sources. This Facebook post is an example of how WMEAC serves as

an intermediary between the media and the public. Their social accounts provide an aggregated feed of information about environmental and public health issues that impact people in Western Michigan. Because WMEAC serves this role, they have the responsibility to distribute information to the public so that they can become informed about issues. Instead of reading and evaluating every news article, the organization shares news articles from local and recognized sources that report information about the environment.

Similar to WMEAC's posts highlighted above, this post is an instance of the organization serving as an important link in the information chain on a timeline. Semiotic remediation can be understood when looking at the timeline itself. The timeline begins when Ottawa County published a web page with a timeline about the PFAS situation impacting drinking water in Robinson Township. On January 11th, the timeline continues when the Holland Sentinel publishes an article summarizing the PFAS situation in Robinson. Ericka then learns about the article using Google Alerts set to "PFAS" in Michigan. After reviewing the article, she shares it to the WMEAC Twitter account with a quote directly borrowed from the Holland Sentinel article. As you can see from the communication artifact above, this article only received one like and one share once posted to the WMEAC Twitter account. Regardless, some WMEAC followers may have clicked on the article and accessed the chain of information from there.

WMEAC, though merely sharing a link to an article and a quote selected from the article, is ensuring that their followers are made aware of all resources on this topic so that they can research the issue. PFAS is a contentious topic across the United States. By sharing resources and choosing not to add additional, original writing, WMEAC

seems to be appearing to be neutral in the matter. The organization appears to be playing it safe by merely presenting the resources and reinforcing their link in the information chain.

Conclusion

When WMEAC simply shares an article from a news source and highlights a quote from that article, is that rhetorical work? Does this demonstrate remediation? My response is a resounding yes. The social media posts highlighted above show an organization that takes great care in distributing information that is valuable to their followers. Ericka seems to carefully research and select articles, evaluates them for key quotes and information, and relays them to their social channels. All of these choices were made to generate audience interest, and at least create a community where trusted information can be found, shared, and discussed. The quotes featured by WMEAC appear to be objective as possible, reporting the information that has been published about issues of concern. Sometimes these quotes offer contextual information that help their followers gain a better understanding of the topic at hand. This shifting of one context to another, one audience to another. This is an example of media in movement, and this movement is strategic.

Semiotic remediation may well have degrees. If so, it appears that WMEAC is engaged in communication work that presents subtle, yet rich moves of semiotic remediation. Though subtle, these moves can have a powerful impact on audiences. Due to the diligence of WMEAC, their audiences are more informed about issues like PFAS and the Line 5 pipeline. Most importantly, though, the organization routinely serves as an active link in the information chain between sources of information and

concerned citizens. Using semiotic remediation to present the timeline of these information chains is a powerful method to understand how and when communication artifacts are shared, engaged with, altered, and reshared to form new networks in the chain. The processes behind these communication products are fascinating. In the next chapter, I present the findings from an in-depth interview with Ericka, where I learn more about her processes of gathering, sharing, and engaging with WMEAC's audiences.

CHAPTER FOUR: INTERVIEW ANALYSIS

Introduction

I first met Ericka in 2018 at the WMEAC office in Grand Rapids. Located in the quaint East Hills neighborhood, the WMEAC office is just off Lake Drive. With tree-lined streets, cozy eateries and craft breweries, most patrons visiting the neighborhood may well walk right past the WMEAC office without knowing anything about the important work they do for the community and West Michigan as a whole. The office is large and abundant with natural light. I was immediately stricken by the welcoming atmosphere of the office and the people working there. A large dog roamed the office, interns worked casually alongside full-time employees, and I spotted a vibrant library at one end of the room. It was immediately clear that WMEAC was a warm and calm environment where people were welcomed and worked together for the common good.

I was greeted by Ericka from her office cube. She seemed busy and flustered, not uncommon for many employees who work in nonprofits. Communications professionals, especially in the nonprofit sector, must do so much with very little, must work diligently, and must face the financial challenges of working for a small nonprofit organization. To be brief, it is hard and often thankless work.

However, Ericka was immediately interested in speaking with me once she learned that I was a graduate student learning about how nonprofit organizations like WMEAC are communicating to their audiences. From the get-go, it was clear that we shared the same mission of learning about and improving environmental communication. “I think what you’re doing is really important,” she remarked. “I’m looking forward to seeing something other than what we do now, which is sort of more

haphazard." She expressed how challenging her role was from the beginning, especially since she felt that there were no useful resources or coursework that seemed to prepare her for such a role. Ericka seemed to use our conversation as a means to reflect, to vent, and to explain the complexity -- and occasional madness -- of working as a full-time communicator at a nonprofit organization. Over the course of two years, I engaged in two conversations with Ericka, both digital and face-to-face.

Though we only spoke twice, our conversations were extremely valuable. Not only have they helped me learn about the processes behind WMEAC's communication methods and approaches, but also they helped me understand the nature of working at a nonprofit. Through our conversations, she showed me everything I wanted to know for this project and more. Specifically, I learned more about her role and communication products, the tools and platforms she uses for her day-to-day work, major issues their organization attends to, and her information gathering and delivery practices. In addition, I gained a sense of the workplace and organizational culture of WMEAC, which proved to be an aspect of the organization's work that turned out to be so much more valuable than I ever imagined.

Analyzing artifacts can paint a very important picture in understanding the impact those artifacts can have on their audiences. While the artifacts from the previous chapter tell a very important story of how WMEAC generates communication that is relevant, useful, and important for West Michigan communities, these conversations provided a vital perspective about the *processes* behind those artifacts.

After this initial communication, I approached Ericka to see if she would be interested in helping me with my dissertation project. After receiving IRB approval for

the project, I arranged a virtual interview with Ericka, which was held several months after I visited her at the WMEAC office. The meeting was held via Zoom, and the audio was recorded using my smartphone. While the meeting was scheduled for an hour, we spoke for nearly two hours.

This chapter reviews and analyzes the findings from the in-depth virtual interview with Ericka in 2018. In the interview, Ericka helped provide more information about WMEAC's organizational culture, her motivations and process, and the careful steps she must take to review and post material on their official channels. I prepared a handful of questions prior to the interview. Some of these questions included:

- What kind(s) public-facing writing do you produce every day? This can be anything from newsletters to social media posts and more.
- For what purpose(s) do you write to the public? To gather volunteers, find donors/sponsors, advocate for causes, etc.?
- During your writing process, do you find yourself engaging in research about environmental issues? If so, what sources do you consult when you're looking for reliable information?
- Where do you go to find those sources? In other words, how do you access or find these sources?
- What are the types of "documents" you consult? Are they scientific articles/reports, news or magazine articles, documents from other NPOs, tweets from the public, or something else?
- How do you use information you find from other sources to inspire your own public-facing writing?

- How do you change the information from original sources when you decide to share them to the public in your own words?
- In your writing, do you cite original sources of information? Do you like to link to the original source?
- Do you include media beyond the written word in your public-facing writing?
- If so, what media do you utilize (i.e., images, gifs, videos, memes, links, etc.)? Why?

These questions allowed me to plan a conversation focused on WMEAC in general, the communication channels used by the organization, and Ericka's process in crafting communication artifacts. The questions were designed to be open-ended and opportunities for her to reflect on her work practices. Like most conversations that flow more naturally, we ended up discussing topics that covered these questions and explored other topics in-depth. The findings from the interview were immensely useful in helping me understand the dynamic of her work process and the impact of WMEAC's communications in general.

I used my smartphone to record an .mp3 file of our conversation and produced a transcript of the interview afterward. I then made the transcription available for Ericka to review after the interview. After our conversation, Ericka and I exchanged emails for several weeks, through which I learned more details about her work.

Role and Communication Products

Ericka Popovich is the Communications and Community Engagement Coordinator at WMEAC. She is one of four full-time staff members at the organization. At any given time, there are usually several interns working at WMEAC as well. In fact,

WMEAC hosts numerous interns throughout the year, spanning focus areas from fund developing and environmental education, to policy, eco-journalism, and communications and marketing. There are also internship roles associated with their initiatives, such as zero waste and women, and community and the environment. While Ericka is the only communications professional working full-time for the organization, it is clear that interns contribute much to the organization as a whole. While we did not discuss mentorship or coordination of interns at length, Ericka did mention that they contribute blog posts to the WMEAC website as part of their role. It appears that the interns also gain valuable experience working alongside full-time staff members on larger projects, such as white papers and coordinating events.

Ericka holds an M.S. in Behavior, Education, and Communication from the University of Michigan as well as a B.S. in Wildlife from Purdue University. While Ericka has an academic background in science and education, she was only a few months into her role at WMEAC when I first met her. Prior to coming to WMEAC, she worked as the supervisor of a municipal environmental center in Elkhart, Indiana.

Serving a dual role as a communicator and an educator at WMEAC, Popovich notes that these two assets are integral for their organization. Community education at WMEAC is where concerned adults in the community can have access to resources and tools to take action on environmental issues. Communication is of course integral to achieving that goal.

During our interview, Popovich mentioned that there are several purposes for her public-facing writing, including advocacy and awareness of environmental justice issues, gathering/organizing volunteers, promoting events, and soliciting donations. As

stated in the previous chapter, Popovich crafts a number of public-facing documents, such as emails, a general newsletter, and a volunteer newsletter. She also leads the social media channels for WMEAC, including posts about events, promoting information, and sharing resources from local and regional news sources. Occasionally, the WMEAC social channels are used to distribute information from large agencies like the EPA and the MDEQ.

Ericka also plays an important role in WMEAC's initiative on diversity and inclusion. In fact, she serves on a volunteer inclusion and diversity committee, through which she took part in crafting a white paper on "inclusion and diversity values supporting environmental justice for strategic planning." While this document was internal to WMEAC at the time of the interview, Popovich hopes that this document will be presented to the public at their neighborhood summit, which is a meeting held annually in Grand Rapids. According to her, "It's a tool that can be used by multiple organizations to incorporate environmental justice issues and inclusion issues into the heart of what they do." Beyond the communication artifacts mentioned above, Ericka also helps craft fact sheets on various environmental topics. In short, her communications purposes, artifacts, and audiences are varied.

Tools and Platforms

As one would expect, Ericka balances her workload by using numerous digital tools. WMEAC's primary social media accounts are Facebook and Twitter. However, she is not the only person at WMEAC posting to these accounts. Ericka encourages her staff and interns to post content to the Twitter account, such as photos and moments captured at professional conferences so that the WMEAC channels can stay active and

relevant for their audiences on social media. She also noted that while they have an Instagram account, it's currently not very active. WMEAC also has a Pinterest page, but it's not as active as she would like. While we never discussed the reasons behind why these platforms are not widely used, it would seem that there is not enough time or resources for the organization to effectively manage more than Facebook and Twitter at any given moment. For scheduling social media posts, WMEAC uses a tool called Buffer. Overall, Ericka and WMEAC rely heavily on free, digital tools for crafting messages/documents and sharing those artifacts with the public.

In addition to the social media platforms listed above, WMEAC staff utilize most common platforms for coordination and production, such as email, Microsoft Word, and PowerPoint. Based on our interview, it seems that most of her communications work do not require her to produce unique designs and document layouts. As a result, Adobe Photoshop, InDesign and similar tools are not considered part of her everyday office quiver. Overall, the majority of Ericka's work can be effectively done with a basic computer and access to the internet.

Issues of Concern and Action Committees

Popovich mentioned there are several major environmental concerns that impact WMEAC and residents in Western Michigan: PFAS, vapor intrusion, lead, and the Enbridge Line 5 pipeline. Considering that WMEAC has published white papers, numerous social media posts, and fact sheets on these topics, these issues are not unsurprising to see on her short list.

It is clear that public-facing issues WMEAC takes a stance on are also issues of diversity. For instance, low-income residents were unable to continue living in their

homes when vapor intrusion occurred in their area. Furthermore, due to decades of deeply rooted racism and segregation, many people of color live in neighborhoods where public drinking water contains unsafe levels of contaminants. To address these complex issues, WMEAC has established two separate committees to help drive decision-making and coordinate efforts: a policy committee and an inclusion and diversity committee. Environmental issues that concern the public are considered to be policy issues. According to Ericka, "The policy committee does research that helps us generate our resolutions or our stances that we're going to take and push for as an organization." Their inclusion and diversity committee is dedicated to identifying and forming stances on issues that impact environmental justice. Upon reviewing the WMEAC social media accounts as well as documents and resources available on the official website, the topics covered seem to clearly reflect the organization's position on policy (i.e., endorsement of urban tree canopies and PFAS policies impacting drinking water standards) and social justice (i.e., supporting indigenous groups and their fight against the Line 5 pipeline and honoring local activists). While these topics reflecting in WMEAC's communication channels seem to align with the positioning determined in their committees, there does not appear to be a strategic document, guideline, or communication plan that exists to guide the execution of these communications.

Information Gathering and Distribution

From the onset, I could sense Ericka's deep sense of mistrust in regards to the quality and accuracy of public information about the environment. In an era when fake news articles routinely circulate on social media, her mistrust is certainly warranted. Coupled with this concern about the legitimacy of news sources, Ericka is also

concerned about the tone and style of many news articles. She remarked on how many of them tended to sensationalize environmental issues to earn clicks and page views. Further, Ericka expresses some frustration with how some environmental issues appear to get more exposure and press in media. PFAS, for instance, gets more attention than lead contamination or vapor intrusion despite the fact that these problems can cause people to be displaced from their homes.

In response to these issues, a great deal of Ericka's time is dedicated to reading and vetting news articles online. She has taken on the mission of serving as a trusted source of information about the environment using the WMEAC social channels. Rarely, if ever, will she craft original, unique writing for tweets or Facebook posts. Instead, she will share local and national news stories that she personally reviews for accuracy.

When asked about what sort of research practices she engages in, Popovich noted that she frequently begins with Google. Google searches often yield results with news articles, which are more social media friendly and can be readily shared by her organization. Once she finds a news article to be shared, she then proceeds to "vet" the article and fact-check the sources and claims made. She uses Google for this research practice. According to Ericka, a small percentage of content she finds on Google is even valuable enough to consider. Ericka explains, “We use a lot of Google, and when you’re communicating like 20% of the things you think are going to be useful are like possibly useful and [sighs] I don’t know. Some really bad communication happens sometimes.” When it comes time to share an informative article on behalf of WMEAC, it takes a great deal of time and effort to find one that is informative, substantive, and unbiased. Some of these articles contain all the necessary information, but are not exactly easily

digestible for readers to gather the essential facts quickly, something that Popovich understands is crucial when sharing pieces online.

Popovich notes that when sharing articles on social media, it's important to make careful considerations for readability. Readers need to gather enough context to understand the scope of an environmental problem. Further, the tone of the piece needs to be written in a manner so that a general audience can understand, not something only a scientist can interpret. Popovich notes that it's common for news articles to be sparse and undeveloped. She notes that this may be due to the editors wishing to get news reported quickly as opposed to thoroughly. After searching for over an hour and a half trying to find a suitable source to share on a proposed legislation that would impact urban tree canopies, she couldn't find a single one that she found suitable enough to be shared on behalf of WMEAC.

While Ericka typically finds articles through Google searches, occasionally she will learn about them through colleagues that work for other environmental organizations. For instance, she will frequently receive Microsoft Word documents or PDFs from local environmental organizations. She notes that these documents, which report important and useful information on environmental issues, are simply not suitable for the context of social media. As a result, she needs to take the information she finds in those documents and find the original source. Sometimes the original source is provided on that organization's website, or sometimes the original link to the source is available on their organization's Facebook page. She seems to have some frustration in that some organizations deem it appropriate to send a Word Document for the public to see and interpret on social media. According to Ericka, “You’ll get it [the document] from

a partner organization. It'll be like a word document or a PDF, and I'm like, 'That's not a shareable thing.' And so what I do is I take that information and I go Googling for the actual, whatever it is that they're referencing. And sometimes it's something on their site that is shareable, or on their Facebook page. But what they send you is like *a Word document* [her emphasis]." This is an illustrative example of how Ericka must often go digging for information and original sources that are suitable to be shared on social media channels.

Ericka also notes that some of the Word and PDF documents she receives are "fact sheets." Fact sheets are designed to be quickly digestible sets of information on an environmental problem, issue, or topic. They present researched points on a given problem. Occasionally fact sheets will provide citations and references where people can access the original source, whereas some fact sheets may merely mention original sources. Either way, Popovich often finds the need to go to the original source to verify the information and to also discover if the original source is more "shareable" for social media. She notes that these kinds of documents oftentimes do not have any images or are not image based. It's indeed ironic that fact sheets, while designed for the public to engage with and learn about information quickly, are not a sufficient genre for sharing on social media platforms.

Ericka often asks herself how she would or could share particular items she receives from partner organizations. It is often necessary to even try to repurpose or reformat the information from say a fact sheet in MS Word into a Facebook post with links to resources for readers to learn more.

Ericka claims that, unless images are featured from an original source or article, she does not post images along with content. She avoids this for a number of reasons. The first is that she does not want to take images that were not taken by her or WMEAC and present them on their social media feeds. Followers could mistake these images for being owned by WMEAC, and this could lead to misunderstanding. Followers are frequently confused by who owns content. For instance, if she posts a link to an event hosted by a partner organization, followers on their Facebook page often assume that the event is hosted by WMEAC.

To remedy any confusion, the best option for her is to use articles and content that allow for a featured image in their social media post. This way an image is featured with an article title and more clearly points to the original owner. There is another way she uses images, however. In their newsletter and a partner wishes to share an event or some other information, she will sometimes use their logo, include a brief written section, and say "for more, click here."

Her personal take is that she wouldn't want her own images being used without permission, so she practices her own image sharing approach in accordance to that. According to Ericka:

> I don’t take images. What I prefer is that the link is both content and that they have something associated, a graphic or image, photo. That will be opened in their, you know in that space. I don’t take graphics and use them. Like I don’t take them out of their context. And so when I share them, I usually have options that allow them to pop up within an article that I can use to highlight. Which is

generally how I prefer to do that. Because I don't...it's so easy for people to be confused on social media.

Ericka is keen to craft messages that will provide enough context so that WMEAC's audiences can clearly understand where content originates. She's also very keen to ensure that the original authorship of social media posts are especially clear. Most importantly, she provides any kind of outlet for that information to lead to another source so readers can learn more. This way, her organization's posts and publications are serving a role of providing a critical link between citizens and information for them to learn and take action. Ericka, then, helps provide an important role in this chain of information discovery and engagement.

However, Ericka claims these processes do not restrict her material sharing to simply news articles. The EPA or the Department of Environmental Quality (DEQ) both have resource pages and statements on PFAS. For these pages, at the time of the interview, some updates were made and an event was added, so she shared a post that highlighted when the next public meeting would be held along with a link to the DEQ page. Popovich gets real-time alerts from the DEQ. When she gets these press releases, such as a PFAS fish advisory, there simply are not any other sources available to point people to that are more engaging or substantive. These press releases open as a PDF in a web browser once clicked, which is not an interactive or engaging means to learn about an environmental problem in today's world. Although she is reluctant to share press releases like this from government agencies, sometimes she resorts to sharing them if she cannot find anything else on the topic. It is vital to note that, when news sources publish articles on PFAS contamination, their original

source of information are press releases like these. However, the angle in which news sources decide to share the information from these press releases can vary widely.

Ericka notes that it is preferred if resources do provide a graphic of some kind. However, if nothing graphic is available, it is vital to simply share the information available, even if it's simply text. According to her, "People fishing in the area need to know whether or not there's an advisory or alert." That said, she views her group as serving a critical intermediary between large governmental agencies and the public. Their group may serve this connection due to a number of reasons, but one of them may very well be that agencies like the DEQ and the EPA do not provide alerts and information that is easily digestible for the public, especially online. Ericka notes that if a graphic could be created to support a text-only announcement, she would not do so. "I could, but that would take a lot of time and this is not by any means my primary focus." Due to her many responsibilities at WMEAC, perhaps it is unreasonable to expect Ericka to produce original graphics, such as flyers and infographics, to accompany their social media posts.

With issues like PFAS for instance, Ericka often finds that news articles are published "in the interim while they're building a better article, but they're filling in the space." This often leads to sparse articles with little to no use to WMEAC. Oftentimes, when she discovers articles that contain little to no useful information, they are paired with "clickbait-like," shocking titles such as "PFAS in Kalamazoo." These articles, Ericka notes, almost always need to be vetted for accuracy. She has even noted a pattern in which the same article title and content is reported for PFAS contamination in several different cities.

After vetting these kinds of articles, Ericka notes that the PFAS contamination being reported is usually trace amount and/or is already being treated properly. This finding is significant because it is clear that news sources are aware that most readers do not read and investigate the information reported in stories. Oftentimes, readers on social media will simply glance at an article title and, even more unlikely, open the article and read the first few lines.

As a result, communicators like Ericka are performing a very important service in both environmental awareness and literacy. Articles shared on WMEAC's Facebook and Twitter feeds are vetted for accuracy. Articles shared in their feeds are those deemed to be accurate and concerning to public health and the environment. Without the work of communicators like Ericka, the public may well be led to believe that concerns like PFAS are encroaching on every city in Michigan at dangerous levels.

At a certain point during our interview, I could sense some frustration by Popovich. In particular, she was upset that many people do not fully read or investigate articles they respond to on social media. It's of course frustrating as well that news is being obscured by writers that work for what most people believe to be reputable news sources. When vetting news articles for their accuracy, Ericka sometimes goes straight to the scientific articles and reports that are being mentioned in said news articles. A scientific source isn't necessarily the best kind of article to share on their social media feed or newsletter, however. While in some cases it's the best option to link readers to the scientific source, shorter and more reader-friendly articles are preferred ones to be shared by WMEAC.

I was curious to know what an ideal article looks like for sharing to the WMEAC

channels. An ideal article for Ericka to share on behalf of WMEAC would be one that "captures the information, puts things into context" while also "giving you voices." This more digestible format is preferred for reading online. Further, an ideal article for sharing would be an abbreviated version that includes a link to information where people can read a full report or study.

Ericka mentions that she shares original, scientific sources about 40% of the time depending on the month. For instance, she might share a study or a position paper on climate change in urban communities. After reviewing the PFAS and Line 5 pipeline cases discussed in the previous chapter, it is unclear whether this estimated percentage holds true. However, what remains important is that Ericka consults original sources and uses those sources as pivotal pieces in her information gathering and vetting process. The fact that she does share them occasionally to the public is interesting.

Unfortunately for Ericka, many of those sources are extremely long and dry. She describes a long article about solar energy that she wanted to highlight in some way, but it was so dry and poorly written that she couldn't feel comfortable to even provide a link to the abstract. This is a critical point brought up by Ericka during our conversation. There's a significant gap between the language presenting scientific articles and the accessibility of language that citizens require in order to understand and act on environmental issues. She points out that the Great Lakes Commission, a Canadian-American research authority on the Great Lakes, does not have digestible information suitable to share on behalf of WMEAC. When scanning a potential piece to be shared, she remarks that "I read it because I had to for work, to see if I could find a way to share it. If I wasn't being paid, I would not have tried that hard." To Popovich, state and federal

governments and scientific “watchdog” organizations are failing to provide content that the public can engage in to understand environmental topics.

Audience and Multimodality

It’s not news that images and video have a way of engaging audiences on the internet. Ericka mentions that, in the end, people will usually only click on links that have images, which entice them to learn more about something. The majority of the time she encounters a more scientific article, it will not have pictures of engaging content of any sort. She remarks that the public is not "lazy" or "stupid." The public is simply reading and reacting to content that is relevant, accessible, and engaging. Scientific writing by research authorities and government agencies simply do not provide such engaging content. On that note, Ericka offered some interesting points about multimodality and audience engagement. Ericka offers her perspective on multimodal engagement:

> You need to give people something that gives them context. We are people that are visual. When we start with books, we start with our eyes. That is why we have such a developed cortex right here. Like that is, tactile and eyes. These are the senses that we use to develop...Like *my god*, just put something in there that tells people, that gives them an idea. People digest quicker and better when they have graphics and text. You go to a scientific website and what are you going to find? Nothing but text.

Ericka has a keen sense of how people learn--through multiple modes of visual, audio, and more--and extends that sense to how and what she shares on behalf of WMEAC, whether on a social media feed or in a newsletter. When people do not engage in scientific sources or on government resource pages, it is not because they

cannot. Instead, Ericka states it is because the dry content found on those sources is a chore to digest.

This brings up an interesting point regarding plain language. The Plain Writing Act of 2010 requires federal agencies to write clear government communication that the public can understand and use. This typically extends to official channels of communication, such as documents and web pages. However, social media presents a unique area to execute plain language principles, where It may very well be that many agencies are not upholding their commitment to providing plain language as they strive for a unique tone, identity, and voice.

Popovich notes that her experience and training in education, such as understanding different learning styles and modes, most definitely plays into how and what she shares publicly on behalf of WMEAC. Further, she also tries to ensure that the kinds of content shared by WMEAC are varied. For instance, if she shared a ton of articles on PFAS for some time, the public might get the sense that this is the only issue that concerns their organization or is the major concern for WMEAC.

She attempts to share information in threes, an approach that comes from her experience in environmental psychology. This approach involves a keen sense of the audience and ensuring that topics and themes are present in the environmental information being shared. For WMEAC, this kind of varied information comes in three major categories: community events, volunteer events, and "environmental information that you can trust." In regards to the information shared by WMEAC, she remarks that "You can trust that this is something that’s not just here to get your attention and be a shock."

Trust, in fact, seems to be a key word here for the work that Ericka engages in every day. In today's landscape of the web, it is becoming more and more difficult for readers to know whether or not a source is reputable. The era of "fake news," and the worry about biased news sources, has led many to a distrust in reporting and many information sources. WMEAC, and Ericka's role in particular, attempt to serve as a voice of reason and accurate, unbiased information in this era of mistrust.

It can be difficult to balance this kind of trust-building with the community when Ericka also needs to uphold the identity of the organization. As she notes, "It's not like there's a map of that like 'here's what we share, when we share it, or how we share it.' It doesn't work like that, and you don't know what will happen. You have to look at what's happening, like what you been sharing, what are you looking at sharing, how you're going to balance these things out so that you're kind of sticking with a basic sort of balance in mind with the kinds of content you're sharing." To be brief, Ericka uses a blend of her skills, her intuition, her audience awareness, and her informed approach to information gathering and sharing. In turn, she has helped create an ecosystem of communication on behalf of WMEAC. This ecosystem provides a needed web of information to audiences in the region, audiences who are interested in engaging more deeply in environmental topics that are often covered but hardly explained in mainstream news articles. This ecosystem exists to help citizens understand, learn, and engage in important environmental topics that matter to their community.

Affordances and Limitations of Genre

Of course, the social media channels are not the only place that Ericka shares events and information for WMEAC. There are two e-newsletters that she produces and

distributes, a volunteer newsletter and a general newsletter for members. When working with newsletters, she admits that that genre affords her with more flexibility. The format for an e-newsletter is more standard as it already has a basic format. There are categories and sections that predetermine what kind of content will be on a particular issue. In other words, the genre provides a certain structure for her that provides a map for what to share.

Social media platforms, on the other hand, do not offer the same kind of structure. There are no predetermined categories for what to share and how often, much less when. There are smaller, disconnected pieces shared throughout the day, whereas the newsletter is a more tidy, prepackaged issue. It's easier for Ericka to produce a newsletter because she better understands how her audience will engage with it. Ericka further notes that in their WMEAC newsletters, she is providing context for people to learn about issues and events. If people want to learn more about those things, she provides a link to them so that they can learn more. Providing context allows her audience to carefully understand a topic before clicking on that link.

As noted above, there are numerous documents that Ericka prefers to avoid sharing on social media if she can. These documents, such as PDFs and Microsoft word documents, seem to contrast with the multimodal possibilities of social media. Ironically, she does not produce original graphical content, such as flyers, posters, and infographics, that could appear on social media. Instead, she chooses to share links to online articles as well as selected quotes from those articles. While it’s useful for audiences to review WMEAC’s social posts to see major quotes that provide context for the articles linked, this presents an important problem for social media engagement.

Beyond liking and resharing these posts, audiences often do not appear to know how to engage with these kinds of quote and article link posts. Considering the dynamic possibilities on social media -- the potential to craft messages with a distinct tone and style, the myriad ways that influencers can encourage comments and discussion, the potential to share graphical content -- this kind of posting presents an engagement problem for WMEAC and their social media accounts. I expand on these limitations in the concluding chapter of this project.

Overall, the genres WMEAC uses to engage and connect with their audiences are used appropriately and with routine frequency. While imperfect, the WMEAC ecosystem of communication artifacts do indeed reflect and demonstrate the terms central to this project, including a rich display of semiotic remediation at work.

Takeaways and Conclusion

Semiotic remediation is a powerful framework to understand how communication artifacts travel through networks of people. We have seen how these timelines can illustrate the way this information travels, in pathways that I call information chains. Core terms also help illuminate the rhetorical power of these information chains, helping to understand the communication process Ericka engages in while crafting and managing this communication ecosystem on behalf of WMEAC. Semiotic remediation has proven useful in evaluating the rhetorical power of all communication practice, including the work of Ericka at WMEAC. Indeed, WMEAC has successfully created a web of information of interest to concerned citizens. Using the official website, social media platforms, and electronic newsletters, WMEAC has helped create a visible *community* of information, resources, and people. Ericka has played a key role in both creating this

community and maintaining it. The fact that this community plays an important presence in Grand Rapids and West Michigan is vital. The community WMEAC helped create has important power. Equipped with the information, resources, and events promoted by the organization, the public is more informed to understand environmental problems, take action, and influence others in their own personal networks. The organization has helped reinforce the value of the environment and public health. WMEAC has heightened the public's urgency to do what they can to protect West Michigan's great natural assets and the public health of the great people who call this region home.

From the beginning of this project, I sought to explore invention and semiotic remediation, two terms with curious similarities. As is the case in most projects, I did not find what I expected to see. Ericka's process does not embody what I anticipated in terms of invention. She does not create new genres when those genres are needed to engage her audience. She does not have the capacity to create videos, infographics, and flyers to help connect with WMEAC's visual-hungry followers. Nor does she have a brand or style guide to use that will help facilitate engaging, original messaging on their social media platforms. Instead, her invention process is more nuanced. She uses great care to research and evaluate original sources, and she only shares articles if those articles are suitable for WMEAC's audience. She takes great care when evaluating whether a document or link is truly helping people understand an environmental problem. These genre considerations are indeed a part of the invention process. Further, by serving a critical role in relaying information from news sources to their followers, Ericka provided a vital service in informing citizens about environmental issues that impact West Michigan residents.

Similarly, semiotic remediation was subtle and not at all what I expected. Because Ericka's invention process involved resharing information on social media (along with quotes that appear in the original articles), it does not seem immediately apparent that she is engaging in semiotic remediation at all. Yet similar to invention, semiotic remediation --though subtle -- indeed played a role in her process. While Ericka does not reshape existing news articles into multimodal genres for her audiences, she helps WMEAC serve a critical intermediary between those original sources and WMEAC's audiences. Her social media posts serve a critical role in the chain of information. Instead of being a chain that links news sources to citizens, this chain links news sources to WMEAC and then to citizens. Oftentimes, this chain is more complex. When EPA or DEQ sources are consulted, the chain of information appears much more complicated. Most importantly, though, is WMEAC and Ericka's commitment to vetting and sharing articles and resources that connect with their audiences. Whether aware of this information chain or not, their audiences indeed benefit from WMEAC's important role in the information chain. Because of WMEAC's role in the information chain, as well as Ericka's careful evaluation of sources and her ability to relay those sources to WMEAC's audiences, this subtle form of remediation is important and powerful. Semiotic remediation was most powerfully demonstrated when looking at how communication artifacts travel over time. Those artifacts were then shared, reshared, engaged with, altered, and then reshared again to form more networks. It is my sense that these information chains are present when observing any communication artifact on the internet today. However, the powerful nature of the artifacts outlined in this project set them apart. These information chains supported the travel of vital information that

impacted the public health and wellbeing of many Michigan residents. These chains also supported the travel of information that impacted the environmental integrity of Michigan's land and water.

Stepping into the WMEAC office, with its welcoming warm, bright light, I never expected to find communication processes so nuanced and complex. While the previous chapter presented numerous examples of communication artifacts, our interview helped me understand the reasoning behind Ericka's routine rhetorical choices. Many of these choices are based on a careful concern and consideration of their audiences needs of clarity, clear ownership, and access to original sources. While their committees help identify positions and topics for their content, what became clear from our interview is that the organization does not appear to have an official strategy or plan for communicating information via their social media channels and their website. As a result, the vast majority of WMEAC's communications appear to be created on an ad hoc basis. Further, WMEAC does not appear to have goals or metrics for measuring the success of their communication efforts. The organization, then, appears to create an ecosystem of communication based on intuition and the rhetorical moment of particular issues. While this approach has its successes, it does not seem to reflect the organizational mission of WMEAC to serve as a reputable agency that advocates for environmental and public health in the region.

Nonetheless, WMEAC's communication work is vital, and Ericka's expertise helps execute their mission of protecting the public health and environment of West Michigan. While WMEAC's communication approaches are mostly successful, the organization could use the concepts of invention and semiotic remediation to further

engage their audiences and build an even stronger community. In the concluding chapter, I discuss implications and suggest how the findings from this project are valuable to nonprofit communicators as well as the field of rhetoric and writing more broadly.

CHAPTER FIVE: CONCLUSIONS AND IMPLICATIONS

Introduction

When I began this project in 2018, I led a very different life. I was teaching business communication at a comprehensive university in Duluth, Minnesota. In between my teaching responsibilities, I was lucky to live in a true outdoor town. Life was good. I could head out from my office to trail centers like Hartley Park or Piedmont, where I spent countless hours exploring ribbons of singletrack through boreal forest. If I wanted to contemplate, I would walk to the shores of Lake Superior and watch the undulating waves crash onto rock outcroppings. It was in this place that I knew for certain that I wanted to devote my life to protecting our great treasures found in the vast outdoors.

Two years (also one global pandemic) later, I now find myself in Denver, the Mile High City that isn't quite as close to the mountains as I would like. A city in a vast state with incredible outdoor opportunity, yet blanketed in a constant cloud of wildfire smoke. In this place, I serve as a Communications Specialist at a large wastewater district. I was drawn to the water sector because of my ability to connect my passion for the environment and my skills in communication. In addition to managing internal communication efforts, I am now leading a large project dedicated to developing a new website and social media channels for the district. This work has involved many hours evaluating websites and social media accounts maintained by industry peers. As we hope to launch our new website and social media channels in the coming months, this project has offered me perspective on how we hope to reach our audiences and maintain audience engagement for years to come. While I no longer have endless trails

at my doorstep, this setting and especially this role has provided me with a unique perspective on this dissertation project and communication work in general. Though I may play a small role in doing so, I can now dedicate my work to protecting public health and the environment.

To focus my dissertation project on the communication processes of an environmental nonprofit has led me to many threads of knowledge and practice, which I continue to explore in my role as a communication specialist. Ericka and WMEAC as a whole demonstrate a clear commitment to environmental communication that matters. Their work is inspiring and informative, and I continue to admire the work they do to preserve the health and environment of West Michigan and bring a similar commitment to my current role and work.

What WMEAC has built over the years is impressive: an active network of concerned citizens, local symposiums on supporting women and the environment, digital resources to support learning and engagement in local environmental issues, white papers and other resources that guide the public to making informed decisions as citizens in a democracy, and more. Communication professionals like Ericka are doing important work to preserve the legacy of WMEAC. However, like most nonprofit organizations, professionals at WMEAC must do so much with so little.

As Hopton and Walton (2018) note, the field of TPC has historically focused its efforts on understanding the rhetorical dynamics of workplace (i.e., corporate) communication practices. Scholarship in the field, though limited, has indeed investigated the role of NPOs. This scholarship has explored nonprofit communication primarily from the lens of service learning (McEachern, 2001; Sapp & Crabtree, 2002;

Ghetto, 2013; Kimme Hea & Shah, 2016), action research (Clark, 2004), and genre production (Khadka, 2014). Scholarship in recent years has begun to push this focus and truly challenge “large culture” ideologies and even to present decolonial frameworks (Agboka, 2012; Haas, 2012). These scholars have worked to expand the reach of the field, opening opportunities for new research that closely examines communication contexts from a social justice lens. From the onset of this project, I struggled to find research and scholarship that could neatly guide my path. Nonetheless, the field’s orientation to rhetoric, to analysis, and to making sense of complex practice has influenced my approach. While I do not claim that this dissertation is a social justice project, scholars like Goodwin Agboka and Angela Haas have shifted the status quo, illuminating my approach on how NPOs with a social justice mission operate and communicate. As such, I see this project fitting an important need in the field of TPC. The community-based focus of this project, in addition to looking at the communications of an environmentally focused NPO, should offer important insight to scholars of TPC. The pragmatic approach of this project should also appeal to communication professionals who dedicate their work to environmental and social causes. By focusing on terms central to the rhetorical processes of outreach and advocacy, I hope that this approach will inspire NPOs develop and improve their strategic communication efforts.

In this concluding chapter, I highlight the core terms threaded throughout this project -- community, public, invention, and especially semiotic remediation -- to provide a summary of findings, implications drawn from WMEAC’s successes and areas for improvement, and outcomes for future research and practice.

Summary

WMEAC presents numerous successes, both as an organization and as a powerful communication entity. Armed with social media accounts on Twitter and Facebook -- two of the most widely used social platforms -- and a modern, easily accessible website, WMEAC provides all the tools to reach concerned citizens in the region. Ericka leads communication efforts to leverage these platforms for information delivery. Instead of simply disseminating resources and information about the environment, Ericka critically reads and evaluates articles to ensure accuracy, credibility, and the messages within each article. Both social media accounts are tethered, meaning that tweets and Facebook posts are shared simultaneously on both platforms. This allows the organization to reach as many of their followers as possible. Further, due to Ericka's diligent, careful evaluation of sources, the articles she shares to WMEAC's channels are considered vetted and trustworthy for their audiences. As a result, WMEAC serves as a critical link between information about the environment and the citizens impacted by that information. In this project, I attempted to demonstrate how this phenomena can be observed from a semiotic remediation framework, one that shows information travelling along a flow of information. We can understand this flow as an information chain. WMEAC, as a vital organization serving West Michigan communities, serves as a critical link in the information chain that reaches citizens.

Information chains can help describe how information travels from an original source (and original audience) to a new audience (and usually new context). This information can then travel once again to another audience (and usually new context) from the work of a new author (or authors). Oftentimes, this chain of information leads to

dialogue among the many different audiences that engage with the information as it travels from one audience to the next. At any point in this process, audiences can revisit the original source of the information chain. Audiences can also go back to specific points in the information chain. Some audiences may never revisit the original source of the information. Some audiences may never even read the articles they share, discuss, and contribute to the chain.

Information chains became a pivotal concept to understanding the impact of WMEAC's information delivery. The concept of an information chain is rather simple. An information chain relates to how information begins at a source and travels through a network of audiences. Sometimes the information changes as it travels through the network, and while referencing the original source is common, sometimes the original source of the information is not readily available to all audiences in the chain. For instance, a scientific article is published in the journal *Nature* and is made available on an academic database. The original audience of that article is academic within its respective scientific field. That article is discovered by a writer working for a popular news source, such as *The Guardian*. The writer working for *The Guardian* decides to write a popular news article based on the findings in the original scientific article. This article is then read by a much broader, general audience. *The Guardian* writer also includes a link to the original scientific article in case their readers wish to learn more from the original source.

Because of its broad reach, many online readers discover the article from *The Guardian* and decide to tweet about the article. However, these Twitter users don't just share links to *The Guardian* article. Instead, they write a brief interpretation of the article

and why they find it interesting for their own followers. They then may begin engaging in conversation with others on Twitter about the significance of the article itself. Some followers may even retweet or compose their own tweets relating to the information from the article. Many followers may only read the title of an article yet still decide to retweet or discuss the topic with others on Twitter. Even more audiences encounter a reference to the article, which has no link to its original source. Some audiences may encounter erroneous references to the original article or the details that were delivered to them through the chain. In short, this whole process is extremely common. This process is messy. However, the concept of an information chain helps describe how information travels through this messy process. Describing this phenomenon as a chain can help writing researchers like myself trace the chain and the rhetorical choices made throughout that chain.

Overall, WMEAC's communication channels are used to deliver useful and trustworthy information to their audiences. This process is helpful for their followers, who have grown to trust WMEAC as a source for reliable information about environmental and public health concerns that impact them in West Michigan. The organization has established itself as an important link in the information chain. WMEAC and Ericka appear to carefully consider audience needs into account when crafting communication products that support the chain.

Implications

WMEAC presents numerous successes as an organization as a whole and as an influential resource for local environmental advocacy. Like most organizations, however,

there are areas for improvement. In this section, I attempt to highlight both. I conclude by suggesting how other nonprofit organizations can learn from these findings.

As noted above, WMEAC plays a vital role in information chains related to the environment and public health. The organization successfully uses their channels to deliver trusted information. Instead of simply providing facts, Ericka will select a key quote from the original source and provide a link to the source. The sources of these chains seem to vary. While occasional sources are more scientific or affiliated with governmental agencies, the vast majority of sources are in fact local and regional newspapers. Regardless of the source, and regardless of the information WMEAC sends via their channels, their audiences can trust that the information in the WMEAC feed has met a certain standard of quality. Using their major channels -- the website and social accounts -- the organization has effectively created and fostered a community of citizens with shared interests and concerns. In addition to stimulating a community using these channels, WMEAC has created a visible presence to the public in general. Organizations like WMEAC are working to ensure that all information that reaches the public is reliable and can be traced to its original source. This is especially important in today's social media landscape, where our feeds are littered with unreliable headlines and advertisements from sources that cannot be trusted.

WMEAC is highly successful at distributing trusted information to their audiences. The organization is also serving an important role in ensuring that their audiences are receiving credible and reliable information about the environment and public health. As a researcher, however, I must ask critical questions about their practices. What does it mean for an organization to situate themselves as sharers of information that audiences

could otherwise get? What does it mean if their key communication move is to truncate and share information that most people could otherwise access?

While the internet has allowed for an explosion in accessible information, this does not come without its own issues. Popular news articles are abundant and in excess. Fake news articles have become so widespread that fake news has even become its own research area (Arqoub et al. 2020). Even scientific research has increased in recent years. According to bibliometric research, the number of published scientific articles has increased by 8-9% over the past several decades (Landhuis, 2016). Coupled with this phenomenon -- and despite that this problem has been widely criticized -- governmental agencies have done little to improve the intelligibility and accessibility of their communication products designed for the public. In short, readers have a difficult landscape to navigate on the internet. It surely seems that Ericka and WMEAC as a whole are careful to consider the needs of their audiences. WMEAC also ensures that the information they provide is accessible and understandable to a general, non-scientific audience. For instance, she chooses to share popular news articles instead of scientific reports from the EPA or MDEQ.

By providing an organized network of information on the environment, WMEAC creates a community where information and knowledge can be trusted and discussed. WMEAC helps foster a shared community where citizens can digest reliable information and read more from the original sources if they so choose. In an era of information overload, organizations like WMEAC are supporting trusted communities where clear and reliable information can be shared and discussed.

While WMEAC serves as an important and trusted source for information -- even creating an active community of followers -- the organization appears to employ an ad hoc approach to their communications as a whole. Tweets and Facebook posts are sent when an article or resource becomes available, not when WMEAC strategically decides to share these materials. Because the organization is committed to multiple environmental and public health topics at any given moment, navigating the content in their social feed can be a daunting process. While routine posts are useful in demonstrating that the organization is active, I believe their social media feeds can suffer from valuing quantity over quality. Perhaps more strategic timing and more focused topics for their posts could help with these issues.

Upon reviewing screenshots of WMEAC's social media posts related to both PFAS and the Line 5 pipeline, I was struck with a troubling realization. While WMEAC delivers reliable and trustworthy information to their followers on their social media accounts, their method does not invite their audiences to engage. Liking, arguably the easiest way for audiences to interact with posts on social media, appears to be the most common form of audience engagement. Resharing, another relatively easy means to interact with social posts, does occur occasionally when users share and relay these posts to their personal networks. Commenting, perhaps the most involved means to interact with social media posts, appears to be infrequent and uncommon.

I believe there are several reasons for this lack of social media engagement among WMEAC's audiences. First of all, simply delivering information does not mean that audiences will engage with the information being shared. The method WMEAC has used, sharing links to original content and providing snippet-style quotes from the

original article, does not invite audiences to interact with that information on the social posts themselves. To be fair, audiences may well read the quotes WMEAC highlights. Audiences may also click on the articles and read them from the original source. These can be considered forms of engagement, though this engagement was not possible to track or record for this project.

Second, another potential reason for lack of engagement could be WMEAC's lack of voice and style on their social media accounts. While WMEAC's website appears to maintain a particular brand and attitude (i.e., phrases like "We. Me. Act." on their home page banner), their social media posting style does not seem to present a distinct voice or identity. Because the organization chooses to push news articles with direct quotes and no additional commentary, WMEAC is not offering a voice to connect with their audiences. There could be numerous reasons why Ericka chooses to avoid offering original commentary in WMEAC's social media posts. For instance, she could be weary that adding any original commentary could disrupt the trustworthiness of the information chain. Social media is also hard, time-consuming work. Alternatively, Ericka's capacity could very well at, or beyond, her limit. It is not necessarily news that professionals working in nonprofits must wear many different hats, and resources are often slim. It would be expected, in fact, for WMEAC to struggle to find the resourcing needed to maintain an engaging and active social media presence with just one communication professional who must serve many different roles.

The third potential reason for lack of social engagement is how WMEAC does not seem to interact with their audiences in the comment sections. Similar to my reasoning stated above, managing social media accounts is hard work. Social media takes time

and care, and it could very well be that Ericka and WMEAC have far more pressing responsibilities than maintaining their social media accounts.

The fourth potential reason for WMEAC's lack of audience engagement is, unfortunately, the same reason why they are so successful at serving as an important link in the information chain. Because the organization chooses to deliver articles with no additional commentary, style, or voice, perhaps it is difficult for most members of their audience to understand the value of these posts when they can readily find them posted to local and regional media sources. It is true that some, if not many, of their followers may discover news articles for the first time on WMEAC's social media accounts. When this occurs, WMEAC is serving as an important link in the information chain. However when this does not occur, such as when audiences readily find information via news outlets on their own, audiences skip WMEAC's link in the information chain entirely.

Overall, it is challenging to see audience engagement by solely analyzing WMEAC's social media posts. The organization does not appear to routinely interact with citizen voices. The organization does not appear to use interactive content such as online petitions, graphical, multimodal content, or original statements to their feeds. As a result, WMEAC appears to maintain an active, routine social media presence without an established voice. However, I do not mean to detract from the power and influence that this organization has in communicating key information to citizens in West Michigan. Looking closely at their communication channels and efforts, WMEAC presents many successes and areas for improvement. These findings present numerous opportunities

for NPOs to improve their communication efforts and boost engagement. Some of these takeaways include:

- Ad hoc communications are rarely effective. If committees are providing oversight on strategic decisions, communications should follow suit with a detailed plan on how to communicate on specific topics, including platforms, timing, frequency, and even messaging (style, tone, voice).
- Audiences should know and access original sources of information. Audience needs should always be carefully considered, and great care should be taken to help audiences understand the context of complex topics as well as where they can learn more detailed information.
- While audiences can sometimes have a difficult time understanding where information originates, that should not deter communicators from offering original and compelling writing that could help motivate them to take action.
- Audiences respond to engaging and original content, such as original writing as well as unique, crafted digital media (original images, infographics, .gifs, sound files, videos, and more). Since social media is designed for storytelling, audience members will appreciate when these platforms are used for that purpose (as opposed to information delivery all the time).
- Audiences should be invited not just to engage with, but also to contribute to stories and topics. Asking questions, inviting participation through sharing articles and information, encouraging audiences to co-author

documents and submit photographs, and inviting audiences to complete online petitions are just a few examples of encouraging social media audiences to be more engaged.

- Audiences appreciate when they are responded to in comment sections. These responses can be encouraging, corrective, informational, and more.

While there may be more takeaways for NPO communicators, these are those that have derived directly from this project. Many NPOs can use these simple takeaways to refine or improve their communication efforts, at least from a social media perspective.

The concept of an information chain may also aid NPOs with a mission of education, the environment, and public health. Information about the environment is oftentimes urgent; citizens must know about the details that impact their communities and livelihoods, and they have a right to know how they can take action. Understanding every environmental situation as an information chain on a timeline can help organizations work strategically to provide their audiences with the information they need.

Future Research

As I hope this project has shown, much can be learned from the routine communication work of an NPO. There are numerous areas that simply could not be covered in this dissertation, such as the NPO's group dynamic and its influence on communication, evaluating the rhetorical aspects of on the ground organizing work, analyzing the efficacy of communication efforts on specific environmental cases over time, and the list goes on. TPC in particular is positioned to evaluate the concept of

information chains and how those chains can impact the way information travels from scientific sources to citizens. Furthermore, TPC is situated to understand how information chains can originate from citizens and provide valuable information to scientists.

This project also points to important insight on how to best teach students to be more effective when managing NPO communication channels. Preparing writing and communication students for these roles has remained a mission of rhetoric and writing programs for decades, and perhaps more research and pedagogical cases can help guide instruction that can support future NPO communicators for genres and issues that do not exist yet.

Among the numerous opportunities for future research and pedagogy, there is great potential for expanding on this project by creating a guide to aid communicators working for organizations that have little to no resources, such as NPOs, smaller environmental groups, and even activist groups. While practical resources exist to support communicators working for NPOs, these resources seem to be suited to large NPOs that have ample resources, funding, and personnel. This project has already launched me on a professional trajectory where I have the pleasure of protecting the environment and public health through communication. As I continue serving as a communications professional, the findings from this project will surely guide my work. I plan to use the findings from this project to enhance the external communications we hope to implement in the coming months, such as our website and social media. Over time, I hope to use these experiences -- in addition to the findings from this project -- to create a free guide or resources that can aid communication professionals and activists.

Regardless of where this project will take me, one thing will remain true: I will dedicate myself to preserving, protecting, and as Robin Wall Kimmerer states, healing our environment for generations to come.

WORKS CITED

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Abu Arqoub, O., Elega, A. A., Efe Özad, B., Dwikat, H., & Oloyede, F. A. (2020). Mapping the scholarship of fake news research: A systematic review. *Journalism Practice,* 1-31. doi:10.1080/17512786.2020.1805791

Agboka, G. (2012). Liberating intercultural technical communication From “LARGE culture” IDEOLOGIES: Constructing Culture Discursively. *Journal of Technical Writing and Communication, 42*(2), 159-181. doi:10.2190/tw.42.2.e

Allison, M., & Kaye, J. (2015). *Strategic planning for nonprofit organizations: A practical guide for dynamic times*. Hoboken: John Wiley & Sons.

Bolter, J. D., & Grusin, R. (1999). *Remediation: Understanding new media*. Cambridge, Mass: MIT Press.

Bourelle, T. (2014). Adapting service-learning into the online technical communication classroom: A framework and model. *Technical Communication Quarterly, 23*(4), 247-264. doi:10.1080/10572252.2014.941782

Bourelle, T. (2014). New perspectives on the technical communication internship: Professionalism in the workplace. *Journal of Technical Writing and Communication, 44*(2), 171-189. doi:10.2190/tw.44.2.d

Covino, W. A., & Jolliffe, D. A. (1995). *Rhetoric: Concepts, definitions, boundaries*. Boston: Allyn and Bacon.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, CA: SAGE Publications.

Cushman, E. (1996). The rhetorician as an agent of social change. *College Composition and Communication, 47*(1), 7-28. doi:10.2307/358271

Durham, S. (2019). *The nonprofit communications engine: A leader's guide to managing mission-driven marketing and communications*. Brooklyn, NY: Big Duck Studio.

Dush, L. (2016). Nonprofit collections of digital personal experience narratives. *Journal of Business and Technical Communication, 31*(2), 188-221. doi:10.1177/1050651916682287

Getto, G. (2013). Networked knowledges: Student collaborative digital composing as communicative action. *Communication Design Quarterly, 2*(1), 33-58. doi:10.1145/2559866.2559868

Grabill, J. T. (2000). Shaping local HIV/AIDS services policy through activist research: The problem of client involvement. *Technical Communication Quarterly, 9*(1), 29-50. doi:10.1080/10572250009364684

Grabill, J. T. (2007). *Writing community change: Designing technologies for citizen action*. Cresskill, NJ: Hampton Press.

Haas, A. M. (2012). Race, rhetoric, and technology. *Journal of Business and Technical Communication, 26*(3), 277-310. doi:10.1177/1050651912439539

Hopton, S. B., & Walton, R. (2018). One word of heart is worth three of Talent: Professional communication strategies in a Vietnamese nonprofit organization. *Technical Communication Quarterly, 28*(1), 39-53. doi:10.1080/10572252.2018.1530033

Khadka, S. (2014). Geopolitics of Grant writing: Discursive and stylistic features of Nonprofit grant proposals in Nepal and the United States. *Journal of Technical Writing and Communication, 44*(2), 141-170. doi:10.2190/tw.44.2.c

Kimmerer, R. W. (2020). *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis, MN: Milkweed Editions.

Landhuis, E. (2016). Scientific literature: Information overload. *Nature, 535*(7612), 457-458. doi:10.1038/nj7612-457a

Lindeman, N. (2012). Subjectivized Knowledge and Grassroots Advocacy: An Analysis of an Environmental Controversy in Northern California. *Journal of Business and Technical Communication, 27*(1), 62-90. doi:10.1177/1050651912448871

Long, E. (2008). *Community literacy and the rhetoric of local publics*. West Lafayette, IN: Parlor Press.

McEachern, R. W. (2001). Problems in service learning and technical/professional writing: Incorporating the perspective of nonprofit management. *Technical Communication Quarterly, 10*(2), 211-224. doi:10.1207/s15427625tcq1002_6

Michigan PFAS Action Response Team (Department of Environment, Great Lakes, and Energy) (n.d). *PFAS and Biosolids: Frequently Asked Questions.* Retrieved May 05, 2021, from https://www.michigan.gov/pfasresponse/0,9038,7-365-86704_89705---,00.html

Patterson, S. J., & Radtke, J. M. (2009). *Strategic communications for nonprofit organizations: Seven steps to creating a successful plan* (2nd ed.). New York, NY: John Wiley.

Selfe, C.L. & Selfe, Jr., R.J. (1996). Writing as Democratic Social Action in a Technological World: Politicizing and Inhabiting Virtual Landscapes. In *Nonacademic Writing: Social Theory and Technology*. Ed. Ann Hill Duin and Craig J. Hansen. Mahwah, NJ: Lawrence Erlbaum. 325-58.

Waddell, C. (1995). Defining sustainable development: A case study in environmental communication. *Technical Communication Quarterly, 4*(2), 201-216. doi:10.1080/10572259509364597

Warner, M. (2002). Publics and Counterpublics. *Public Culture* 14(1), 49-90.

Williams, R. (1976). *Keywords : a survey of culture and society*. London: Croom Helm.