

I N T R O D U C T I O N

Writing is an act that can report on facts, share new knowledge, describe phenomena, develop interpretations, or argue a position. But in the act of writing, students also shape new identities. They become scholars, researchers, reporters, memoirists, and agents for change. College writing assignments can seem like they're designed to lock students in place: Are you an A student or a C student? A scientist or a humanist? A creative writer or an analytical one? But this year's First Year Writing Prize finalists understand that college writing also has the potential to be a space of becoming, a chance to try on new identities, genres, arguments, or sentence patterns. The finalists wrote beautifully in their cover letters about the joys and challenges of returning to a treasured piece of writing months after its completion, to revise once more for this prize. Just as the writing process is never truly over, neither is the process of becoming a writer. The First Year Writing Prize celebrates that process of becoming by recognizing promising student writers in their first year.

Of course, all writers know that our writing identities are not made alone. Our writing selves are shaped by the texts we read, the experiences we observe, and the lives we share with others. The cover letters submitted by writing-prize finalists acknowledge the support they received from peers, Writing Colleagues, Writing Fellows, and professors in the process of becoming college writers. Indeed, this prize celebrates not only the accomplishments of individual writers, but also the community of writers who support, challenge, and learn from them. It celebrates professors who ask students to write about things that matter; peers who help one another brainstorm, revise, and edit late into the night; and the Writing Fellows and Writing Colleagues, who through patience, perseverance, and skill, demonstrate the value of collaboration and revision. Together, these constituencies help shape a brilliant, collaborative, intellectually curious, and socially engaged culture of writing and Hobart and William Smith Colleges.

Many writers were involved in the process of discussing and selecting the prize-winning essays. Lara Blanchard, Matt Crow, and Audrey Roberson were careful and insightful readers of the nominated essays. Additional thanks go to the

Writing and Rhetoric Program, the Center for Teaching and Learning, and the First Year Seminar Program for their support of this event and commitment to creating a vibrant culture of writing at HWS. We'd especially like to thank Will Hochman '74 whose celebratory spirit inspired this prize and Suzanne Rutstein '95 whose generous gift makes this prize possible.

We are equally grateful to the many students who submitted essays for the First Year Writing Prize. It was a pleasure to read such stunning examples of first year writing and learn from the challenging questions, intellectual energy, creativity, and dedication that our students bring to the page. We hope that you will gain as much pleasure as we have from reading the writing of these exceptional first-year students.

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Winner of the 2015 First Year Writing Prize

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Professor Scott MacPhail

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Professor Don Spector

P R I Z E W I N N E R S

BRITTA GONCAROVS

*"The Influence of Climate Change on Diversity of Microbial
Communities and Litter Decomposition"*

ENV 110: Topics in Environmental Studies

Nominated by Professor Ellie Andrews

BETHANY KHARRAZI

"Objects in Mirror are Closer than they Appear"

FSEM 144: Parched - The Past, Present, and Future of Water

Nominated by Professor Tara Curtin

GRACE RUBLE

*"Pioneers or Prisoners? Restrictions on Actresses in Spanish
Golden Age Theatre"*

THTR 220: Theatre History I

Nominated by Professor Chris Woodworth

BRITTA GONCAROV'S

ENV 110: GLOBAL CLIMATE CHANGE

PROFESSOR ELLIE ANDREWS

Prompt

Synthesize the literature review, background, research questions, and methods into a coherent research proposal. The proposal should be synthesized so that no information is repeated, and that every part of the question is explained in the background or lit review. It should flow in a logical progression. This may require a great deal of revision and probably new sources, based on the feedback from me and your peers; indeed, a portion of the grade is based on evidence of this revision. In the end, some writing will be new, some will be revised, and some will be recycled.

Cover Letter

My inspiration for writing this research proposal, “The Influence of Climate Change on Diversity of Microbial Communities and Litter Decomposition,” is partially rooted in spending countless hours in the forest as a child. As I grew older, I noticed that the health of the forests were declining. Poison ivy vines carpeted soil previously supporting more diverse fauna and hikers began finding numerous ticks on themselves, more than a few carrying Lyme disease. I saw the streams and the soil next to my house gleaming with gasoline residue. Examining the soil more closely in the recent years pushed me to conclude that the health of Northeast forest ecosystems are negatively affected by climate change and changing rapidly. I hope to bring awareness to the issues facing Northeast forest ecosystems, illuminating this issue. We, citizens, need to be proactive and caretakers of the land we live on and use.

By week three of Introduction to Environmental Studies, I was brainstorming a topic that involved my long-term goal for the amelioration of society and the environment. I completed an annotated bibliography which included ten sources supporting my core arguments. Using the bibliography, I embarked on a semester-long project with three parts: background and literature review, question and hypothesis, and methods. I delved into research that fully engaged me and felt personal.

I also became creative and a bit more assertive with my methods. Due to the specific subject that I was researching, I asked my professor if I could cite my sources in CSE instead of APA, since my research was based on biological sciences rather than social sciences. I also added a figure to my proposal even though it wasn't required. A flow chart of the connections between microbial communities, litter decomposition, ecosystems, and climate change seemed necessary to facilitate the reader's understanding.

It's a great honor to have my work be considered as a part of the academic conversation at Hobart and William Smith Colleges. This intellectual community amongst excellent writers deepens, fosters, and connects each of us with passion and disciplined thinking. As part of my revision, I met with a writing colleague who presented me with a refreshed lens and an opportunity to share a productive discussion. I found myself responding to this challenge while developing a great fondness and satisfaction with the work I was creating. Every phrase resonates with my thinking and passion for microbiology. I felt great fondness and significant satisfaction with the work I was creating. As I labored on this project, I developed empirical ways of thinking through research, vastly improving my scientific acumen. I am delighted to have received another chance to revise and reflect on my research proposal and remind myself what it means to be a writer.

Essay

THE INFLUENCE OF CLIMATE CHANGE ON DIVERSITY OF MICROBIAL COMMUNITIES AND LITTER DECOMPOSITION

Background

Climate change has largely affected the biodiversity on earth, but more specifically the most vital species of the Whittaker's kingdom scheme: *eubacteria* and *archaeobacteria*. Increase of anthropogenic carbon and nitrogen levels accompanied by warming temperatures have negatively influenced the life in Northeastern forests changing the biota and the function of the ecosystem as a whole. American beech and sugar maple mesic forests specifically are a co-dominant hardwood forests that are sensitive to changing soil conditions and dependent on moisture properties (Lovett and Mitchell 2004). In the Northeast United States, sugar maple and American beech forests are common due to their moisture dependence and preference to grow together as part of their co-dominant relationship. In previous studies on ecosystem health, American beech and sugar maple forests have shown to become quantita-

tively imbalanced as a direct result from a more basic or acidic soil due to warming temperatures (Lovett and Mitchell 2004). These patterns over the past decade have shown how degrading health of co-dominant forest ecosystems are often associated with an abundance of sugar maples and a loss of American beech (Lovett and Mitchell 2004). An imbalanced ecosystem typically causes a change in functioning indicating an underlying problem. The frequencies in nutrients and microorganisms present in soil have been studied to contribute largely to how the macro aspects of an ecosystem functions.

High concentrations of carbon have reduced the quality of health in a variety of ecosystems in litter decomposition and microbial communities but the long term effects are still widely unknown. By studying Northeast forest areas with highly sensitive species, the implications are clearer. The efficiency in litter decomposition has decreased due to limitations of microbial community compositions (Allison 2014). **Litter decomposition** is the decomposing process of dead organic material constituent of CO₂, H₂O, and other mineral compounds (Allison et al. 2013). This process is necessary in ecosystems for vegetative cell growth and to revive the soil (Allison et al. 2013). A crucial component in litter decomposition are **microbial communities**, which are microorganism populations that share the same area (Martiny and Reed 2013). These microbial communities help absorb and digest the nutrients found in soil in order for biota to absorb these nutrients. ATP is a high energy molecule that consists of adenosine, sugars, and phosphates, found in every cell to provide energy for cell processes and microorganisms require ATP to survive, grow, and replicate (Zimmerman et al. 2014). **ATP** allows for the digestive process to occur involving litter decomposition. **Chemoautotroph** is an organism that derives their energy from the release of energy produced by inorganic compounds. **Heterotroph** is an organism that derives their energy from absorption of organic compounds. *Chemoautotrophs* and *heterotrophs* categorize with microbial species (Allison 2014). These microbial communities are altered by change in nitrogen and carbon dioxide concentrations and pH in soil. Higher concentrations of nitrogen and carbon levels in the atmosphere sink down into the soils and alter the chemistry and the variety of microbial communities. Many scientists have arrived at the conclusion that if litter decomposition efficiency is affected by climate change, then microbial communities in soil will be unable to support vital vegetation in ecosystems. Since Northeast forest ecosystems are a soil dominant ecosystem, a deficiency in litter decomposition is harmful for the overall function and health.

Microbiologists in the early 20th century have discovered that *eubacteria* and *archaebacteria* are constantly in a symbiotic relationship without knowing the exact biological dynamics (Zimmerman et al. 2014). The microbacterial communities interact with multicellular organisms like plantae and animalia, including humans.

Without these species, ecosystems will lack their ability to function and become unable to provide oxygen for humans. In 1977, a method to sequence the DNA was found to be beneficial in understanding the connection between multicellular species. By 1983, the polymerase chain reaction, improved the efficiency and identification of microbial communities. In 1995, the first microbial genomic sequence of an *influenza* virus was published (Zimmerman et al. 2014). The quick progression of methods to differentiate between microbes in the late 20th century has made research possible in other microbial fields of biota and ecosystem ecology. With the advancement of complexity in current microbial research, there is further leeway to grow and learn from microorganisms. Microbial communities are supported by a stable pH but can be easily lowered by higher carbon and nitrogen concentrations (Ganzert et al. 2014).

Increasing microbial community diversity in green spaces would support many ecosystems and their litter decomposition rates. The samples of microbial communities in soil have been collected and studied throughout other continents (Mhuireach et al. 2016), while there has been lack of data obtained from Northeast forest ecosystems. Examining Northeast forest ecosystems would create a new realm of research where green spaces are imperative. Another main focus in these studies is to understand the digestion of nitrogen and carbon while generating oxygen (Zeng et al. 2016). Analyzing the role nitrogen and carbon dioxide play in this cycle requires the knowledge of cellular respiration. When the source of ATP for energy for *chemoautotrophs* and *heterotrophs* is overstimulated, it slows the process of digesting organic and inorganic compounds. Climate change, defined by increasing atmospheric carbon dioxide and nitrogen concentrations, has decreased efficiency in these organisms and altered soil pH, universally affecting the other kingdoms (Matulitch et al. 2015). Examining Northeastern forest regions particularly maple-beech areas in their current state will be beneficial in understanding the connection of carbon dioxide and nitrogen levels to climate change. The easy accessibility to the locations will also aid the ability to research. If the overall health and diversity of microbial communities in soil of Northeastern forest ecosystems decrease, multicellular terrestrial species will become unfit to acclimate or adapt to higher atmospheric carbon and nitrogen levels. This research will help scientists and locals in the area universally understand the implications of atmospheric carbon dioxide and nitrogen on ecosystem health.

Literature Review

The ability to design narrowed research in microbiology has created the possibility to link climate change, ecosystems, microbial diversity, and litter decomposition. Multiple studies in scholarly journals have concluded that microbial community diversity in soil use nitrogen and carbon dioxide to facilitate litter decomposition.

It is also important to examine the types of microbial communities associated with litter decomposition. *Acidobacteria*, *Actinobacteria*, *Alphaproteobacteria*, *Bacteroidetes*, *Chloroflexi*, *Firmicutes*, and *Proteobacteria* are commonly sampled microbial communities in soil.

Anthropogenic Carbon dioxide and Excess Nitrogen Influence on Terrestrial Ecosystems

The 2014 IPCC report stated a predicted 3C warming by 2050 correlated with an expected increase in atmospheric carbon dioxide and nitrogen levels. These higher nutrients have detrimental impacts on the quality of life in ecosystems including vegetation specie growth and microbial community diversity. The concentrated increase is predicted to have its own set of impacts on Northeastern forest ecosystems including diversity and interactions between organisms.

Diversity has a strong link to overall health of an ecosystem and is important to connect the relationship between the effects of temperature and growth of specific species (Davis et al. 2009). A study of toxic or non-toxic strains of *Microcystis* during cyanobacterial blooms, was found to be influenced by temperature associated with an increase of carbon dioxide. The higher temperatures associated with anthropogenic carbon dioxide levels increased growth of the toxic strains of *Microcystis* and invaded non-toxic strains (Davis et al. 2009). This study shows that rising temperatures are correlated with invasive microbial strains. On the opposite end of the spectrum, an experiment in estuarine sediments in Nonesuch River, Maine, United States, was found to improve the health of the ecosystem when soil cores from forests and grasslands were transplanted (Martiny and Reed 2013). Similar to transplantation, conservation of ecosystems and green spaces around urban areas affect the sustainment of biota diversity (Mhuireach et al. 2016). More specifically, Northeastern forest ecosystems may experience similar effects from higher concentrations of carbon and nitrogen levels. The functions of Northeast forest ecosystems are capable of small acclimation but with higher atmospheric carbon and nitrogen levels, conservation of ecosystems are unable to remain without constant caretaking and observation (Mhuireach et al. 2016). It is still unknown on how these researched ecosystems will be altered by high carbon and nitrogen levels long term.

Carbon dioxide and Nitrogen Levels Influence on Microbial Community Diversity

Increasing levels of atmospheric carbon dioxide and nitrogen deposits in soil decrease microbial community diversity (Matulitch et al. 2015). In Northeastern forest ecosystems, soil and the microbial diversity within are drivers of ecosystem functioning. Carbon dioxide and nitrogen levels will have a more detrimental impact on forest ecosystems and microbial diversity because of near city proximity producing

large masses of carbon. Microbial communities can be decreased by high amounts of nitrogen deposits in soil by lowering the pH. A more acidic environment is unsuitable for microbial communities because it destroys the proteins on the capsule or cell wall (Zeng et al. 2016). If the microbial communities are *chemoautotrophs*, they may be more efficient in absorbing inorganic and organic carbon rather than *heterotrophs*, that only have the ability to absorb organic carbon for ATP generation. Bacterial community compositions from five different permafrost-affected soils in Greenland display that these communities are pH dependent. When large amounts of nitrogen and carbon dioxide were added to the samples, their ability to survive was weakened (Ganzert et al. 2014). A study on leaf growth and microbial diversity in an agroecosystem in California, United States, confirms the significant impact of higher atmospheric by exhibiting decrease and increase with seasonal carbon dioxide level fluctuations (Rastogi et al. 2012). Another aspect to analyze is the adaptation of carbon use in microbial communities. Increasing atmospheric carbon dioxide concentrations accompanied by warming temperatures decrease the efficiency of ATP generation (Allison 2014). The microorganisms are overstimulated and slow in attempt to acclimate to the environment (Allison et al. 2013).

Past research has shown that nitrogen is necessary for soil but was left unspecified to what degree the concentration is crucial to the soil pH (Zeng et al. 2016). This is contradicting compared to other studies about nitrogen deposits because most stated that high amounts of nitrogen in soil decreases microbial diversity. It is still inconclusive whether nitrogen deposits have a direct or indirect effect on microbial communities. Microbiologists have yet to discover more species by taxonomic DNA gene sequencing and polymerase chain reaction methods. Identifying more species within *eubacteria* and *archaeobacteria* would be beneficial to understanding the link between carbon dioxide and nitrogen levels and the relationship with vegetation. If more microbial species can be identified in Northeastern forest ecosystems, the potential for understanding the effects of higher atmospheric carbon and nitrogen levels on ecosystems in general will improve.

Microbial Diversity and Sources of Litter Decomposition Efficiency

Microbial diversity and litter decomposition efficiency in ecosystems are distinctly linked. Many studies verify that litter decomposition can not occur without the assistance of microbial diversity (Allison et al. 2013). In Northeastern forest ecosystems, the decrease in microbial diversity would harshly affect the efficiency in litter decomposition and the production of soil. Carbon dioxide concentrations have a direct effect on microbial communities and an indirect effect on litter decomposition in ecosystems (Allison et al. 2013). Leaf litter decomposition efficiency was found to be dependent on the microbial diversity of the soil. When nitrogen deposits were

added, the rate of leaf litter decomposition decreased due to less microbial diversity (Matulitch et al. 2015). Litter decomposition rates also decreased by soil absorption of anthropogenic carbon by chemistry composition alteration in grasslands of California, United States (Allison 2014). The microbial communities in the soil samples had improved leaf litter quality and bacterial cell density when neutral pH and nitrogen level soil were transplanted (Allison et al. 2013).

The long term effects of decreased litter decomposition efficiency on ecosystems is still unknown. Much of the research has been completed and sampled from different countries but seem to be lacking in Northeast United States forest ecosystems. Forest ecosystems are easy to access and provide areas that are untouched by humans. Beech-maple forest ecosystems in Northeast United States have potential capacity for research and would be beneficial in understanding the symbiotic relationship of microbacterial diversity, multicellular biota, and ecosystem health.

Research Questions

Examining the aspects of Northeast forests stated in this section will help understand the implications of climate change on ecosystem health in general. Since Northeast forest ecosystems are under researched for climate change's effect on microorganisms, more questions are needed. The next few questions are important to consider before moving forward with the research questions. If climate change due to higher concentrations of carbon dioxide and nitrogen deposits is decreasing litter decomposition and influencing a decline in microbial diversity in other types of ecosystems (Martiny and Read 2013), then how drastic of an impact will climate change affect a soil dominant ecosystem? Are litter decomposition efficiency, widespread microbial diversity, and a neutral pH indicators of a healthy ecosystem? How will the understanding of the connection between soil, microbial diversity, and litter decomposition in Northeast forest ecosystems, aid the knowledge of other ecosystems? If litter decomposition efficiency and a neutral pH facilitated by microbial community diversity are a part of a healthy ecosystem, then it can be argued that all ecosystems require microbial diversity in order to function properly. The questions stated above are necessary to keep in mind when examining the research questions and hypothesis.

1. If carbon dioxide concentrations and nitrogen deposits in the soil continue to rise in a two year period, how will the litter decomposition rates in Northeast beech-maple forest ecosystems in the United States react to a decrease in microbial diversity?

Hypothesis: It is important to consider the connection between carbon dioxide concentrations and the effect of nitrogen deposits in soil on micro-

bial community diversity. The higher the concentrations of carbon dioxide and nitrogen deposits are present in soil, the diversity of microbial species decrease (Zeng et al. 2016). If carbon dioxide concentrations and nitrogen deposits continue to rise over a two-year period, microbial diversity will continue to decrease and slow litter decomposition rates in Northeast forest ecosystems and cause delay in vegetative growth and seasonal transitions. Vegetative growth and seasonal transitions are factors to consider because they rely on nutrients available in the soil created by litter decomposition.

2. How will a change in pH in soil affect microbial community diversity in Northeastern forest regions? And are both a decrease and increase of pH from a neutral pH detrimental to microbial communities?

Hypothesis: If a change in pH in soil decreases microbial community diversity, then Northeastern forest regions will be harshly influenced by a microbial community diversity decline since temperate ecosystems rely on the health of the soil. An increase of pH to more basic soil will decrease microbial community diversity if a basic pH prevents availability of crucial nutrients for microbial community survival. A decrease of pH to a more acidic soil will create a decline in microbial community diversity if acidic soil deteriorates the proteins of microbes. If nitrogen deposits have a direct effect on pH in soil, microbial community diversity will decrease for both a more acidic or basic soil pH.

3. Why does the lack of microbial community diversity decrease the efficiency in litter decomposition? What are some of the indicators in microbial communities that litter decomposition is lacking in efficiency?

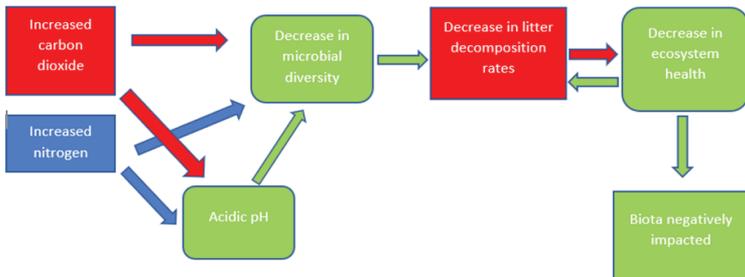
Hypothesis: Microbial community diversity and the rate of litter decomposition are inevitably linked, but it is still uncertain why this is. If a lack of microbial community diversity decreases available nutrients in soil, efficiency of litter decomposition will slow. If a decline in microbial community diversity and pH change are part of a positive feedback cycle, litter decomposition efficiency will decrease. A predicted indicator litter decomposition deficiency has decreased, is the lack of present microbial community diversity, specifically the disappearance of *eubacteria* because their cell walls are more sensitive to pH change (Zeng et al. 2016). Another predicted indicator of litter decomposition deficiency is excess nitrogen deposited in soil because it will encourage the soil to become more acidic and destroy

the proteins of most microbial species within *archaeobacteria* and *eubacteria*.

4. How will the lack of microbial community diversity affect other multicellular biota and the symbiotic relationship?

Hypothesis: Research explains that microbial communities are in a constant symbiotic relationship with animalia and plantae (Rastogi et al. 2012). All kingdom species require other species to survive and microbes provide a very specific facilitation for animals immune systems as well as plant growth by absorbing nutrients and controlling the litter decomposition process (Rastogi et al. 2012). In Northeastern forest regions, outcomes could take many directions. If microbial community diversity continues to decline, there will be a decrease in plantae and animalia species by creating deficiencies in litter decomposition and other nutrient absorbing processes necessary for multicellular organisms. If more species are identified under *archaeobacteria* and *eubacteria*, understanding the symbiotic relationship between multicellular organisms and microbes will be more accessible.

Figure 2. Influences of increased atmospheric carbon dioxide and nitrogen on soil pH, microbial diversity, and litter decomposition efficiency to function of ecosystem



This figure shows the link between increased carbon dioxide and nitrogen deposits to soil pH and microbial diversity. The decrease in microbial diversity is predicted to decrease the litter decomposition efficiency as a part of a positive feedback where a decrease in ecosystem health will continue to slow litter decomposition rates.

Overall, the decrease in ecosystem health will negatively impact biota. The arrows are indicated to show what factors will have a direct effect on the outcome. Arrows facing both directions specifies a positive feedback cycle.

Methods

1. If carbon dioxide concentrations and nitrogen deposits in the soil continue to rise in a two year period, how will the litter decomposition rates in Northeast beech-maple forest ecosystems in the United States react to a decrease in microbial diversity?

Litter decomposition rates will be observed over two years and to discover if there is an overall increase or decrease in efficiency to determine a correlation with carbon dioxide concentrations and nitrogen deposits in the soil. This will also require constant evaluation of the concentration of carbon dioxide and nitrogen in the atmosphere and how much is absorbed by soil. To determine litter decomposition rates, temperature and precipitation readings will be taken. Each month, carbon dioxide and nitrogen readings in soil will be compared to litter decomposition readings and then averaged for each season in order to compare the difference between the two years.

2. How will a change in pH in soil affect microbial community diversity in Northeastern forest regions? And are both a decrease and increase of pH from a neutral pH detrimental to microbial communities?

Four neutral (7) pH soil samples for Northeast forest regions will be used to answer this question. In addition, a sample with a pH value below 5 will be compared against more acidic soil samples and a sample pH value above 9 will be compared against more basic soil samples. Each sample, will be manipulated to determine the presence of microbial community diversity.

Before manipulation can begin, microbial communities need to be identified through the collected soil samples. Through the method of 16S rRNA gene, Acidobacteria, Actinobacteria, Alphaproteobacteria, Bacteroidetes, Chloroflexi, Firmicutes, and Proteobacteria can be identified (Zimmerman et al. 2014). Once these microbial communities are identified, the quantity of cultures will be observed before and after the placement of microbial communities in the manipulated soils. The other soil samples will continue to be observed and collected in their original state. To understand the why behind the decrease in microbial communities, testing the nutrients available in each soil sample and protein deterioration on cell walls before and after manipulation will determine if a pH change in general will have an effect

on microbial community diversity.

3. Why does the lack of microbial community diversity decrease the efficiency in litter decomposition? What are some of the indicators in microbial communities that litter decomposition is lacking in efficiency?

Samples will be taken to test the nutrients available. Using 16S rRNA gene, microbial communities will be identified in samples (Zimmerman et al. 2014). In soils with less nutrients available will be manipulated by adding more nutrients to observe if microbial communities will incline. The samples with more nutrients available will be manipulated to decrease nutrients content to observe if microbial communities decline in presence of less nutrient dense soil.

Litter decomposition rates will also be observed. By focusing on *eubacterial* species present in soil samples before and after manipulation of nutrients, the quantity will be compared to the temperature and precipitation readings to analyze the rate of litter decomposition. Nitrogen deposits in soil samples will be manipulated to compare to the presence of *eubacterial* species between a normal quantity of nitrogen, nitrogen absent, and excess nitrogen soil. This can be translated into pH conditions since nitrogen influences acidity.

To understand the overall pattern, the data collected will be compared to each other. Nutrient sample data and nitrogen soil sample data will be compared to discover which soil condition influences the loss of *eubacteria*. After observing the patterns of these soil conditions, indicative values of nutrient quantity and nitrogen deposits will determine when microbial diversity starts to decline and when litter decomposition rates start to slow.

4. How will the lack of microbial community diversity affect other multicellular biota and the symbiotic relationship?

To begin, more species will need to be classified under *archaeobacteria* and *eubacteria* using the PCR amplification method and compared to the 16S rRNA gene from collected soil samples. This will determine if overall microbial community diversity is decreasing. Once sampling and comparison of data collected is completed at a micro level, the results can be compared to multicellular indicator species in beech-maple forests. Since the methods will be strictly focused on beech-maple forests, the quantity of trees available will be compared to the micro level data. If there is a fluctuation in beech-maple forests quantity observed by GIS (Geographic Information System) and microbial community diversity has decreased in soil during the data collection time frame, then data will be indicative of a symbiotic relationship.

A method by proxy, will observe white-tailed deer who receive nutrients from beech-maple forests. If there is a pattern of decline of white-tailed deer in beech-maple forests, their absence may be indicative of decreased health of these trees. The overall patterns will be compared to the presence of microbial community diversity. White-tailed deer populations in each soil observed area will be recorded.

Delimitations:

This research is strictly bounded to Northeast regions of beech-maple regions. Using GIS (Geographic Information System), these specific forests will be mapped throughout the Northeast United States and the top five best representations of the forests will be sampled from to answer each question. Best representations will include optimal moisture, peak month for particular region for deciduous trees, and at least three locations a mile away from roadside. In soil samples, microbial communities within archaeobacteria and eubacteria, are the only microorganisms that will be analyzed for the purpose of their relation to litter decomposition.

Limitations:

A few limitations regard seasonal weather. Beginning from peak foliage of mid-October through budding season of late March in the Northeast United States will prevent effective research in deciduous tree regions. These measures still need to be taken to ensure sampling methods are effective and that environment has not changed drastically. The rationale behind this limitation is that deciduous trees are at their prime condition to be influenced by litter decomposition during warmer months while their leaves fall during colder months and litter decomposition rates can change. Forests act as carbon sinks and when the leaves fall, the carbon dioxide will be released back into the atmosphere (Lovett and Mitchell 2004).

Another limitation is due to the lack of microbial species classified under archaeobacteria and eubacteria. There are many species that have yet to be identified and would improve the results of this project to show how most microbial communities are affected by climate change.

Sampling Strategy:

To answer questions 1-3, the desired amount of soil samples will be taken from 20m x 30m plots and in 5cm depth during hours 8:00-12:00 to avoid diurnal changes. Samples will be taken every day for a week during each month from May through January. A litter free soil sample will be needed to be a constant variable to compare the other samples to (Xiao 2014). Samples need to be kept at a constant temperature to prevent any environmental factors denaturing contents within soil. This project will observe patterns over two years.

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BETHANY KHARRAZI

FSEM 114: PARCHED: THE PAST, PRESENT, AND
FUTURE OF WATER

PROFESSOR TARA CURTIN

Prompt

Henry David Thoreau and Edward Abbey kept detailed, handwritten journals that chronicled their observations around Walden Pond, Massachusetts and Arches National Park, Utah, respectively. These field journals formed the basis of their works we have read, such as *Walden* and *Desert Solitaire*. We will follow in their footsteps by keeping our own field journal where we record our observations about one body of water on campus over the course of the fall semester. We will record observations and scientific measurements during the first week of September, October, November, and December. Like Thoreau and Abbey, we will use the precise observations of the scientist and then the rhetorical considerations of the writer. As Betsy Hilbert noted in her essay published in 1985, “at its heart, a nature book is a work of science—precise observation and clear explication. In form, it is of course a work of art—the carefully worked-out selection and presentation of material, the planning toward a certain kind of effect.” Using your field journal as a basis, you will then compose a “nature” essay that explores the relationship between people and natural places that also delves into how we come to know ourselves within the context of our natural surroundings.

Cover Letter

My submission, “Objects in Mirror Are Closer Than They Appear” is a compilation of four nature essays written for my First-Year Seminar, “Parched: The Past, Present and Future of Water” each month of the fall semester in attempt to mimic methods from Thoreau and other nature writers. Stringing these essays together gives a holistic understanding of the ebb and flow presented by my personal introspection and reflection. The pieces provide a general theme of perspective where I engage my audience by putting them into my shoes. In this case, “shoes” could refer

to looking through the lenses of my glasses, out my dorm room window, or even just understanding my point of view as caregiver and an environmentalist. I want you to put on my glasses and see what is true to me. *My perspective* involves looking forward and looking back, and even looking down at my own reflection in the waters of Seneca Lake. Can you see yours, too?

These monthly check-ins gave me an opportunity to process my perspective on how things were going at college in New York and back home in California. In April of 2017, I was visiting Hobart and William Smith Colleges with my parents for Scholar Day when my father had a seizure in our hotel room. He was diagnosed with brain cancer in the emergency room at Geneva General Hospital. In California, he had surgery to remove most of the tumor, and to attack the remains, he has been ascribed to chemotherapy and radiation ever since. Unfortunately, this situation wasn't too unfamiliar for me. My mother was diagnosed with breast cancer when I was eleven years old. Most of my siblings were at college at this point so I took on a role as a caregiver, waiting in the lobby for my mom to complete radiation appointments and accompanying her when she was strapped to machines. In a way, my father's diagnosis enacted my muscle memory from middle school...but that being said, things were never easy. His illness was a difficult event to come to terms with during my senior year of high school, a time when there were decisions to be made about my desire to move back east for college: how could I leave when my family was unstable and needed help? Having watched my four older siblings partake in the transition to college on the east coast and watch my oldest sister defer a year of graduate school to stay home and take care of my mother, I knew I could no longer be trapped by sickness. Growing up in this environment, my perspective was unlike my peers. I had tougher experiences that caused me to mature faster than them. Even in college I have insight that my peers do not, so I had to turn to something other than my new friends in the effort to release tensions I was experiencing or explain how I'm constantly reminded of the ghosts that saunter through my living room flaunting, taunting, haunting.

The journal entries were an outlet for me to explore my development through my first semester at college, but in the hands of the Earth: sometimes seeping through the cracks between its fingers, and other times sitting pretty in its palm, blinking my eyes innocently at the world. The words inscribed on those pages reflect a rollercoaster of emotions. From the changes in seasons to the acclimation of college life across the country, the journal entries have recorded a short, yet significant sliver of transformation of my body and soul. Through periodic waves of gaining control and being consumed by the uncontrollable, the waters have been rough and still.

Returning to these essays several months later, I was taken back to a mental place that was difficult to revisit not because of the emotion associated with these essays, but because you really had to be there on the dock to truly experience the environment. In my revisions—besides stringing the four essays together to resemble the significance and style of the original journal entries I completed before writing each individual essay—I attempted to bridge the gap between the reader and the writer, so my audience could also undergo the emotions involved. I enhanced the poetic nature of the pieces by adding more descriptive details to my perspective as well as creating more coherent flow between the essays to make more sense of my personal transitions.

So, what did you see in your reflection in Seneca Lake? Perhaps the ice has frozen over those memories of your past. Nevertheless, I presume you will find something to be hopeful for on the dock like I have. You may want to put on your sunglasses for this one: the images you see in the reflection may burn bigger and brighter than you expected.

Essay

OBJECTS IN MIRROR ARE CLOSER THAN THEY
APPEAR

Flow-bia

September 2017

Looking both ways before I cross the railroad tracks to the lake, I seek a seat on the dock and take my glasses off to reveal the true blues and greens of the warping waves. It's like my eyes have opened for the first time. My spectacles have a yellow tint that reflects blue-light—great for working on the computer—but it can sometimes limit the world around me. It is a relief to take them off and absorb the world for what it truly is...

Reflecting my uneasy expression, the abysmal darkness tornados up to clutch my dangling feet, circling my toes, and travelling up to envelop my calves, and then my waist. Claustrophobia hooks me by my ankles, biting at every corner of my skin as an invitation for my body to enter the uncertain depths beneath me. The slow-motion current drunkenly flows toward the dock, whispering my name and luring me in like

a Siren's sexy song. Drawn in by every splash and spray that comes closer...

Closer.

With every physical wave of water comes an emotional wave of panic, suffocation—

Breathe.

The liquid mystery has wrapped itself tight around my neck now and I'm finding it quite difficult to breathe, even though the air is oh, so much fresher out here—fishier, but fresher nonetheless.

Yet, it is so open and freeing on the dock: no walls caving in or crowds squeezing me into myself. In fact, Seneca Lake is so endless that it can trigger an Agoraphobic reaction. The southern end of the lake is uncertain from here, the distance exceeds my vision's reach, challenging my ability to differentiate the horizon from the water's surface. My presence on the shore of this vast basin seems small, insignificant, subtle. And as the clouds look down on me, they cannot make out my face, let alone the tears that fall down my cheek and make their way through the dock's chipped paint into the lapping water beneath.

Loneliness.

These two opposites come together to terrorize my emotions. On the smaller scale, when I look closely at every drip, drop, plop of water I feel bigger and stronger than it, more important because of it. But, when I look at the whole lake in its entirety (well—as much of the lake as I can see), I'm confronted with feeling unknown. It's like being part of a big or small school: you either have everyone's eyes on you, or no one knowing the first letter of your name:

"You're Emelia, right?"

Solitude can cause me to overthink and overreact. The buzzing of the bees and ticking of the crickets vibrate through my ears, amplifying the sound so intensely that my body quivers and cringes. All I have to do is shut my eyes to eliminate the pressures of the environment closing in or expanding outward. As my top eyelashes meet their bottom equivalents, peace begins to rise over concerns of Claustrophobia and Agoraphobia. These intensities begin to settle into dust and dissolve into the outgoing tide. The lake is not so scary and intimidating when you cannot see it. And a meditative state washes over me...

The fifteen minutes of Thoreau Zen is up—it's time to return to real life outside of my head and my journal. I put my sepia glasses back on and pick up my things. The lake is nineteen degrees Celsius today and I want to go swimming. But if I sink into the mystery, won't it swallow me whole?

It's raining fire in California. Embers the size of basketballs are suffocating the environment and choking souls. My friends back home wear masks to school because nature—yet again—has overruled. But here, Seneca Lake reflects these red-hot threats, disguising them as cotton candy clouds charmingly painted in the sky above.

It's been six months.

Six months of hell, twenty-six weeks with no control. One hundred and eighty-two days of navigating an upside-down, inside-out, unearthly dimension. Four thousand, three hundred and sixty-eight hours of agonizing cycles of treatment and recovery, healing and rebuilding strength. I can see my father's seizure vividly in the white-capping waves. I can hear my mom's shaky cries in the howling wind.

Still, I remain calm and collected.

I can still remember the early morning sun as we drove my father to his daily radiation treatments like it was yesterday: the promising summer sky opened up inviting the golden rays to break through the fog. It was basically yesterday. A twenty-five-minute drive round trip for a five-minute radiation appointment: the brain is sensitive, it cannot handle too much all at once. I can still remember calculating how every gram of carbohydrates he plans to consume converts into the amount of insulin he shoots into his thick-skinned constitution. I can make out the bruises clearly now—like the figures you see when your eyelids close after looking at the sun for too long: those oblong dark spots that you try to blink away, but you eventually have to trust they will leave on their own.

I can still remember the crisp scar on my mother's right breast, charred from her extensive radiation...she never wanted me to see it. I would sometimes catch a glimpse of it through the mirrors in her bathroom. I often positioned myself on a golden-brown circular ottoman, where I would chat with her, debriefing my day to distract her from her daily struggles. Giving her company as she got ready for work every day, I would gaze at her beautiful salt-and-pepper hair, but tucking my head to my chest and quickly sending my hand to cover my face as she painfully stretches up to comb her lovely locks. I don't believe she ever noticed my indirect stare through the spaces between my chubby fingers. She never wanted to see the ghostly incision for herself. She would let my father rub soothing cream over it at night before they went to bed. The favor has been recently returned as my she massages my father's Franken-

stein scar with clear, aromatic serum. It seems to be working—it is either the chemistry of the serum or my mother’s touch that does the trick. I believe it to be her soft, gentle fingers that gracefully calm us of our worries, our fears. I long for that touch.

It has been raining fire for as long as I can remember. I have been taking care of sick people for as long as I can remember. And as the wind gusts through my hair and invades my ear drums, my nostrils moisten, my shoulders cave in, and my eyes water: a reaction I am used to giving in response to bad news of bad diagnoses.

I am facing the wind and the world head on—feeling powerful and powerless, determined and defeated, strong and spineless—all at the same time. I feel like a respectable heroine stifled by the fumes of what may seem like invisible embers to my new friends here.

Still, I remain calm and collected.

Bird poop covers the dock. I too, have been shit on quite a bit. As we look ahead of our position on the dock toward our futures, it may seem choppy and uncertain, but as we look behind us toward our past and our foundations, the current slows down by the shore: what we have overcome seems simple now. And here, where we are stationed on this this stable dock, we remain on our two feet no matter what the future holds, no matter how rough the waters may be. In the present moment, we will always be grounded. There is always a clean spot on the dock, you just have to find it. There is always hope in the world, you just have to create it, for yourself and for others.

Every night I tilt my head back to glance up at the stars to note the brightest one I can see. There’s my mother, as brilliant as ever. If she’s doing okay, then so am I.

I’m still, I remain calm and collected despite the fiery rain in California.

Reality Check

November 2017

Gravity took hold of my jaw when it fell to the floor: the once lush-green William Smith Hill was transformed into a snow-white landscape overnight. It makes sense for the hill to represent the colors of William Smith College this way. The first snow—and certainly not the last...

Reality check: we are not in California anymore, folks.

It seems that the seasons are changing at a faster rate than I can keep up with. Time moves forward whether or not I catch the train, for it leaves no one behind. There is no pause button on life and the progression of evolution, growth. I'll indulge climate change critics and claim that the world is constantly changing. You cannot lay stagnant and allow time to pass through you instead of with you. The consequence? Reluctant aging. And anti-aging cream is too commercialized now. You won't be getting your money's worth...

Reality check: 4 in 5 adults will be challenged with at least one chronic condition in their life. This is what they mean when they say to live while you are young.

We must change with the trees. Transitioning colors of green-yellow-orange-red-brown leaves have fallen only to be whitewashed—comparable to colonialism and the flood-like inundation of cultural exploitation. With daylights saving time ending on November 5th, our lifestyles have abruptly shifted from summer festival nights to winter snuggles and cozy storytelling by the fireplace. The sun now dips below the horizon as early as my grandmother goes to bed...

Reality check: 6:00pm feels like 10:00pm.

Invisible to the invisible. In darkness I am unrecognizable, the world is escapable, I can disappear and become completely untraceable. Visuals dissipate, ditching me like a foreigner in a new land: cast under unfamiliar shadows even though I have been to the dock more times than I can count on all my fingers and toes. The breeze creeps through the seams of my sweater and the jagged holes in my jeans, delivering a shiver that transmits through my nose...

Reality check: Post nasal drip is winter's version of an unwanted gift from your distant relative. Thanks, but no thanks for the bright pink socks, Aunt Becky.

We must change with the sun. We rely on the sun's greeting every morning to light up the sky and give us our days. Ones where we make memories which we reminisce upon and trauma we dwell on when the sun fades and our minds race as they hit the pillow for rest. The time we spend absent from the progression of the world during sleep is critical to the conscious usage of time when the sun sits high in the sky every day...

Reality check: I require so much sleep to function. I am like an old machine

that needs constant attention. When one gear doesn't work, nothing will. (Sentences written at 1:30 in the morning.)

But now the shock has subsided, reality has checked in and my jaw needs to be picked up from off the floor. "Holy shit, it's Caucasian outside!" I tell my roommate. It's time to break out the winter coat. There is no turning back from here.

Thanksgiving

December 2017

In the spirit of Thanksgiving (a controversial holiday, but with a good contemporary purpose), I want to extend my gratitude for the Earth. I would like to say, "I love you" because we never say it enough and we always regret having not said it more frequently.

I cannot seem to understand why we continue to hurt the ones we love—the Earth that we sooo adore. This planet is the entity we cannot live without, the one parent with roots that unite us all: our singular connection to our foundation and to each other. The love we have for our home is held in different capacities for different people. Some thrive on its economic opportunity and impressionability, others are vulnerable and extremely sensitive to its detrimental wrath, and some are completely oblivious to its existence and importance. I firmly believe that we cannot all get along if we do not love and respect where we came from and what brings us together: The Earth.

There's beauty in what constitutes the Earth. Like the way flurries of snow fall gently like feathers from the sky, almost as if god has leaned over running its hands through its hair to release dandruff from their shaggy homes. Or the way a storm cloud, built up in weight and energy over time, is seen in the distance ready to interrupt a beautiful sunrise from radiating to greet our rosy cheeks "good morning".

I have gotten to know these types of interruptions well. I have become all too familiar with a great day going bad, like apple slices sitting out in the sun—brown and distasteful. However, the rotten times make happier moments that much more special.

Descending into the clouds, the rain gave the plane a new sparkle, water rushed down the windows—a must-needed shower. Just as we were landing, my father turned to me as he held my hand and said, "let the real Bethany shine" and right then and there, the clouds cleared, allowing the

sun to peer through. This was it: the first few words of a new chapter in a book written by me but cast under a spell by the unpredictable. Nevertheless, I am the author, and this is a book and a life to call mine.

What made this first page so memorable was its association with aspects of nature. The sky intensified our moment by interacting with the emotional intensities. These associations make the Earth so much more powerful to me than any natural disaster or ice age. Personal experiences represent themselves in the current of Seneca Lake.

Initially arriving on campus, I was not expecting to learn that the greatest professor, historian, artist, storyteller and parent is Mother Earth herself—excuse me—themselves. But, here I am learning that there are serious consequences when we manipulate the interworking of our eldest superior. It's ironic how we have always been taught to “respect our elders” when our universal elder is the one we disrespect the most...without this Earth, I would have nothing else to be thankful for.

Dearest Earth, I vow to protect you as much as I can, from the manipulative powers of others and myself. I will treat you as my ultimate role model, inspiration and elder, expressing the utmost respect for your incredible abilities and processes. I encourage you to reach out to those you love and tell them you love them, because you never know when it will be too late.

GRACE RUBLE

THTR 220: THEATRE HISTORY I
PROFESSOR CHRIS WOODWORTH

Prompt

For this paper, you will explore in great detail one specific moment, figure, style, or practice of theatre history that we addressed in class, delving deeply into a narrowly focused topic on the art and/or craft of theatremaking.

Cover Letter

Though today this research paper is something I am extremely proud of, when I started writing it, I had no idea what the process would entail. I've never written a research paper before and I felt completely lost because there isn't a simple template or format into which a research paper fits. Despite this initial confusion, something that I enjoyed about writing this paper was how organically it came into being once I found my own voice.

I picked the topic by chance. I knew I wanted to write about the female experience in early theatre history. Many of my peers were writing about English Restoration actresses, so I decided to choose a different era. The only other time period where actresses were posed as a potential topic was the Spanish Golden Age, so I chose it with no prior knowledge of the period.

From there I delved into finding sources. Once I found scholars with suitable research for my interests, I began to amass facts. In fact, I discovered so many that my first draft of this paper was essentially a list of facts. Once I realized that fact-listing was not going to suffice for a research paper, my next challenge was finding my own voice in this research paper itself.

Over the course of the semester, my professor encouraged me to tighten my research focus from "actresses in the Spanish Golden Age" to a specific aspect of the female acting experience during this time. Eventually, I narrowed my research to actresses in the Spanish Golden Age with a concentration on the laws that dictated how these women were supposed to act and dress.

I spent my childhood in schools with strict rules and stricter dress codes, so I could relate to the desire to express yourself under constrained circumstances (though my experience was nothing compared to scrutiny the women of the Spanish Golden Age faced). It was this realization that emboldened me to insert my own opinion into my paper - something that was new to me. Before, I'd felt secure presenting a paper full of facts, knowing that I didn't have to take any risks in saying what I thought about them. Something that I struggled with was feeling that any claim I made myself was too unsubstantiated for a research paper, even when many of my claims were supported by facts and therefore remained.

Writing this research paper in my first semester of college is an accomplishment of which I am extremely proud. I spent more time on it than anything I've done for school up until this point. I went from not knowing how to write a research paper at all, to writing a complete paper about a topic that interests me. Most of all, I am thankful that through the process of writing this paper, I learned to express my own thoughts and opinions. I feel the process of writing this paper set me up to write quality research papers with confidence for the rest of my college career and for that I am extremely grateful.

Essay

PIONEERS OR PRISONERS?: RESTRICTIONS ON ACTRESSES IN SPANISH GOLDEN AGE THEATRE

In 1623, Prince Charles of Wales visited Spain. He saw a play at the palace in which actresses played female roles - something to which Charles was unaccustomed. In reflecting on the play he stated "The Men are indifferent Actors, but the Women are very good...to say the truth, they are the only cause their Playes are so much frequented," (qtd. in McKendrick *Theatre in Spain* 203). With the exception of Italy, Spain allowed women to take part in theatre many years before its European counterparts, including Wales. But do not be too quick to see the government of Golden Age Spain as feminist theatrical heroes. Although this female participation had the power to be revolutionary both in Spanish theatre and society, especially for the women who could now see themselves accurately represented onstage, social goals in Spain during this period concentrated on maintaining a religiously homogeneous, controlled society, not on empowering women. Though Spanish women were allowed to participate in theatre as actresses, their presence onstage, especially their physical appearance, was highly legislated in order to prevent powerful women in

theatre from undermining the established gender roles in Spanish society.

Theatre in Spain existed from about the fourth century C.E. to around 1252 without much government interference, but it was always connected to religion. As in England, theatrical tradition in Spain began with plays called *autos*, which depicted religious events outside of mass, much like English cycle plays (Ziomek 9). Eventually, secular plays were produced alongside the religious, though the link between theatre and religion remained because religious and secular plays were written by the same authors. This relationship between Spanish theatre and religion intensified as *autos* were used to encourage Catholicism throughout Spain (Ziomek 10). Spain's attachment to Catholicism during the Spanish Golden Age and the years leading up to it was so strong that it resulted in the Spanish Inquisition, which attempted to drive out Jewish people and Muslims from Spain to create a homogenous Catholic society (Carrión 114). The link between religious and secular theatre, coupled with extreme enforcement of Catholicism in Spain created an environment in which female theatre practitioners were regulated on a basis of preserving the religious values that pervaded Spanish society. Catholic teaching emphasized honor and chastity, modest dress and the preservation of traditional gender roles. These elements of the dogma manifested themselves through gendered theatrical laws.

If religion was the “why” of actresses' restriction in Golden Age Spain, government was the “how.” Spanish theatre scholar, María M. Carrión, describes the Spanish state during the Golden Age as “heavily invested in shaping a unified, orderly culture and society” which as a result “generously sponsored careful scrutiny of certain institutions” (Carrión 80). Theatre was one of these scrutinized institutions. This scrutiny manifested itself as theaters in Madrid gradually lost control over their own management to the government's Council of Castile (McKendrick *Theatre in Spain* 178). Because of this, everyone involved in the theatrical process was subject to government regulation. Arguably, the group that was most affected by this was women. Many of the laws passed by the Spanish government regarding theatre existed specifically to restrict the influence of actresses.

From the day women stepped into Spanish performance spaces their appearance was highly legislated. In 1586, the Council of Castile banned the public appearance of women onstage, though there were no actresses in Spain yet, so this primarily applied to female singers and dancers (McKendrick, *Theatre in Spain* 49). Italy is credited with introducing Spanish theatre to the concept of the actress. On November 18, 1587, an Italian theatre company sought permission for their actresses to perform in Spain and the permission was granted, setting a precedent for Spanish women to perform (Ayán 115). In 1596, actresses were banned again because of a morality campaign by the Jesuits and the Council of Castile (McKendrick *Theatre in Spain* 202). The campaign justified their ban in a 1598 memorandum, which

claimed that actresses had too much power to “[ensnare]...gentlemen, causing public scandal and ruining them financially,” (McKendrick *Theatre in Spain* 202). During this time Spanish *corrales* (open air theatres in Spain) closed because of the lack of actresses, as well as frequent attacks from the Church claiming that theatre spread laziness and immorality, until 1600 when the *corrales* were allowed to reopen (McKendrick *Theatre in Spain* 202-203). At this time, boys were no longer allowed to take on female roles, since women were again allowed onstage (McKendrick *Theatre in Spain* 49). Actresses were also required to work under the supervision of a father or husband until 1670 (Ayán 115). All of these laws and subsequent repeals show that Spain could not enthusiastically commit to allowing women on stage. In fact, allowing women on stage was seen as a “lesser of two evils” to boys appearing onstage playing female roles (McKendrick *Theatre in Spain* 49). It seems that women in Spain were allowed to act out of a wish to maintain the gender binary accepted by Catholic society, rather than for the women themselves.

The enforcement of Catholic values on the theatre also affected actresses offstage. In 1644, Isabel of Bourbon decreed that no unmarried woman or widow could appear onstage and that no men were allowed to visit the same actress more than twice (McKendrick *Women and Society* 34). As evidenced by Isabel’s declaration about visitations, actresses’ offstage behavior was also regulated. According to theatre scholar Carmen Sanz Ayán, “Actresses were automatically stripped of legal rights and their person and assets could be seized” if “rumors of loose sexual behavior could be verified,” (Ayán 120). This perceived promiscuity of actresses was of special concern to the *moralistas*, or “moral arbiters” who disapproved of “the body movements and flirting of women in theatre” and felt that actresses’ behavior was “responsible for the disease [of immorality] of the Republic” (Carrión 102). Aside from royalty, actresses were some of the most visible women in Spanish society because people of all social classes went to the theatre. If actresses behaved in a way that was contrary to social norms, other Spanish women might follow their example, and upset the carefully constructed control that Church and State held over Spanish society.

The theatrical restrictions that most exemplify the actresses’ power to upset social norms were the numerous laws regarding costuming. From the time that women were first allowed onstage, their dress was subject to legislation. When the Italian company whose actresses were given permission to perform in 1587 was licensed, it was with the stipulation that women could not wear men’s clothes onstage (McKendrick *Theatre in Spain* 49). When the 1596 decree banning actresses and subsequent closing of the *corrales* was rescinded in 1600, actresses were again warned not to dress masculinely with the added stipulation that they were also banned from dressing extravagantly outside the theatre (McKendrick *Theatre in Spain* 203). Part of the reason costuming was so highly regulated in this time was because it was very common for

actresses to wear their own clothing on and offstage (McKendrick *Theatre in Spain* 194). These regulations on actresses' costumes could also be regulations on actresses' everyday clothing. For example, some actresses had taken to wearing extravagant clothing all the time. For an actress of low social status to wear extravagant clothing outside the theatre was unacceptable because clothing was not just a matter of taste, it signified social status (Carrión 135). Other women, such as actress Bárbara Coronel in the late 1600s, would take to wearing men's clothing all the time after wearing it onstage (McKendrick *Theatre in Spain* 194). Because of the prevalence of Catholicism and the heteronormativity that the Church encouraged, any type of dressing that crossed the lines of the traditional gender binary would have been seen as immoral and unacceptable by the *moralistas* in Spain's highly religious and stratified culture.

Despite backing from both Church and state, rules about actresses' dress were largely ignored or subverted as evidenced by the widespread appearance of the *mujer varonil* stock character in *Comedias*. The *mujer varonil*, which literally translates to "manly woman," was a popular stock character in Spanish Golden Age Theatre. She was outspoken and upfront and often disguised herself as a man to advance the plot (McKendrick *Women and Society* ix). Because of the popularity of the *mujer varonil* and her storyline, there were some that ignored the regulation on actresses' dress completely. Possibly, Spanish theatres could not resist the spectacle of dressing women in breeches which would have been scandalous clothing for the time (McKendrick *Theatre in Spain* 194).

Another element to the popularity of this costuming choice could have been because it provided additional range of movement (Tigner 173). Others found a loophole in the regulation, which was mainly concerned with women wearing pants onstage, and costumed actresses in men's tops and women's skirts when they were supposed to be disguised as men (McKendrick *Theatre in Spain* 186). This wish to restrict women's dress onstage shows the Church's influence on stage because it reinforced traditional ideas about both gender and Christian morality.

However, there was more to the *mujer varonil* character than how she was costumed. Through the character of the *mujer varonil*, Spanish women were sent the message that if they dressed like and acted like men, they could gain equal footing with men in society. One such woman, whose story highlights the benefits of cross-dressing for Spanish women, was Doña Feliciana Enríquez, a noblewoman who went to university disguised as a man and wrote two plays based on her own life (McKendrick *Women and Society* 19). Another woman who utilized men's clothes to achieve her own goals was Catalina de Erauso. Erauso dressed as a man to become a soldier and ended up settling in Mexico and working as a merchant (Carrión 133). Women such as Enríquez and Erauso were living proof that women could live outside of the

path society prescribed for them if they followed the example of the *mujer varonil*. The *mujer varonil* may have been popular to men because of her scandalous dressing choices, but for women she represented the potential to be more than they were allowed by Spanish society.

It is also relevant to note that all of the legislation that affected actresses in the Spanish Golden Age, either implicitly or explicitly, restricted gender identity for men as well. When women were allowed to act, it became illegal for men to wear makeup or take on female roles (Tigner 171). For every restriction Spanish society placed on women, they also sent an implied message about how men should act in relation to that restriction. For example, if women were not allowed to wear breeches on stage, it was also implied that men could not wear skirts. By not allowing women to wear breeches and not allowing men to wear skirts, Spain created a visual vocabulary for how people of each gender should present themselves. Another way rules restricting women reinforced gendered expectations for men was in the rule stating that actresses had to work under a father or a husband (Ayán 115). This law not only restricted which women could participate in theatre, it also reinforced the paternalistic relationship between men and women, where women were seen as those who had to be supervised and cared for. Because gender in Golden Age Spain was viewed as either male or female, restrictions on actresses were not just restrictions for women, they also reinforced traditional male gender roles, speaking to social behavior in Spain as a whole.

Both socially and legally, Spanish theatre was highly restricted, especially for women. These restrictions stemming from religion, government control of theatre, and established patriarchal expectations and were easily perpetuated because cities such as Madrid held control over theatres. Spain should not be celebrated for allowing women on stage earlier than other European countries such as England or France. Women in Spain were allowed onstage only because it was seen as a more Catholic option than continuing to allow men to play women's roles. Characters such as the *mujer varonil* had the potential to empower the women watching, however, despite the *mujer varonil's* strength throughout her story, she was almost always regulated to marriage at the end of the play, reinforcing traditional domestic expectations for women. The laws regulating actresses' onstage and offstage behavior also served to make sure male theatre practitioners operated within traditional gender roles. The restrictions placed on actresses in the Spanish Golden Age prevented the presence of actresses onstage from being a revolutionary moment in theatre history and ensured that women's presence on stage during this time only served to reinforce existing gendered expectations, not to set women free.

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F I N A L I S T S O N
W R I T I N G . . .

*"My paper was a platform for my voice and the voice of many.
Writing and arguing is my passion."*

- TOLUPE ARASANYIN

"As I started editing my paper again last month, I discovered that the writing process actually never ends and a piece can always be reworked no matter how perfect it may seem. It was very rewarding to read through all seven of my drafts and see how my paper evolved from the start to its current form."

- SARAH BERMAN

"In order to fine-tune my paper, I had to find that equilibrium. It was like writing a song; it needed equal parts melody and harmony."

- ELEANOR BURNS

"For the first time, I doubted my writing. And I wrote like a coward: struggling for the right words to say, typing and deleting and typing and deleting, believing each word I wrote was wrong.

I wanted to find beauty in something horrible. I wanted my words to mean something to the reader. And perhaps most importantly, I wanted the words to mean something to me."

- JILLIAN CROCETTA

"It seemed like eons had passed since I last approached this paper, and I was hesitant to disturb this sleeping dinosaur. Despite my dubiety, I took a deep breath and clicked open the file. As I read, I grew excited. I felt like an archaeologist unearthing an ancient world."

- BAILEY DiSANTO

"I believe writing to be an important means to convey complex ideas, emotional thoughts, and social justice."

- ETHAN DOMOKOS

"Before coming to HWS and writing this paper, I often kept my writing isolated from other people. I preferred to work alone. I was nervous to let others read my writing because I feared criticism. Now, I see that working with other writers is crucial to blossom into the best writer I can be."

- CLAIRE JOSHI

"Being able to say something, anything important, through writing is a gift."

- TERESA KEPES

"I usually know what I want to say, and waiting in my brain, my thoughts feel perfectly articulated and fully formed. My troubles tend to start when I have to make those thoughts take shape on the paper. After watching me struggle for much of my academic life, it was repeatedly suggested to me by my parents that I give up on the notion of getting it "right" the first time, forget about anything being perfect the moment my words hit the paper. They suggested that I just write down whatever I was thinking no matter how much it didn't make sense, information wise or grammatically; that could all be fixed later... It changed everything."

- DANA KORNFELD

"What I learned through this process is a misconception about writing. Many people conceive writing to be merely a reflection of thought: one writes what one thinks ... However, after much writing on this topic and working with my professor, he helped me to realize that the relationship between writing and thinking is not a one-way connection. Rather, it is a circular relationship, one in which writing can inspire thought as much as thought inspires writing. As I constantly wrote and revised, I realized that my thoughts had changed and as a result, I was writing my essay in a completely different direction."

- JACKSON LESURE

"For me, revision is more of a continuous process that starts with the very first draft and ends only when I hand in the final draft."

- OLIVIA ROWLAND

"My voice is an important part in my writing. My unique experiences and individual thoughts do not detract from my argument but add to it. Although I am still guarded in my writing, throughout this experience the walls around my voice have started to crumble."

- CARLY SHIEVER

