



A Journal of Student Research

VOLUME 14 | 2024



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*Scientia et Humanitas:
A Journal of Student Research*

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SUBMISSION GUIDELINES

We accept articles from every academic discipline offered by MTSU: the natural sciences, the social sciences, and the humanities. Eligible contributors are all MTSU students and recent graduates, either as independent authors or with a faculty member. Articles should be 10 to 30 typed double-spaced pages and may include revisions of papers presented for classes, conferences, Scholars Week, or the Social Science Symposium. Articles adapted from Honors or M.A. theses are especially encouraged. Papers should include a brief abstract of no more than 250 words stating the purpose, methods, results, and conclusion. For submission guidelines and additional information, e-mail the editor at scientia@mtsu.edu or visit <http://libjournals.mtsu.edu/index.php/scientia/index>.

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ISSN 2470-8127 (print)

ISSN 2470-8178 (online)

[email:scientia@mtsu.edu](mailto:scientia@mtsu.edu)

<http://libjournals.mtsu.edu/index.php/scientia>

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LETTER FROM THE EDITOR IN CHIEF

Scientia et Humanitas incorporates a diverse range of interdisciplinary work, and the incorporation of research from different disciplines is a hallmark of the journal. Despite these seemingly disparate disciplines, all of the research herein is underpinned by the same sentiments: concerns with the human condition and human connection. The journal provides graduate and undergraduate scholars from a diverse range of fields with the opportunity to publish their research and, as evidenced by the works in this volume, showcase the myriad ways in which research navigates the human condition.

The sequence of the works in this volume of *Scientia* is loosely based on individual disciplines. The first two pieces embrace themes of pedagogy and how instructors and students can better engage in and outside of the classroom. In “Say ‘Ahhh!’: Looking into Open Educational Resources at Middle Tennessee State University,” Caroline LaPlue examines the significance, creation, and challenges of Open Educational Resources. Thereafter, Nicholas Krause explores embodied cognition in his piece, “Finding the Mind: A Defense of Embodied Cognition in the Classroom,” throughout which he recognizes the importance of acknowledging the physical body inside the classroom environment.

The humanities are on display in the next five articles. Rebecca Price’s “The Edge of the World: An Exploration of the Fringes of the Psalter World Map,” transports us to medieval times and investigates how medieval people navigated their environments and relationships through the use of *mappaemundi*. We remain in the medieval realm throughout Kat Kolby’s piece, “Powerful Words: Wealhtheow’s Use of Imperatives in *Beowulf*.” Ms. Kolby adopts an innovative argument in which she delves into the importance of the female character Wealhtheow and her impact on other characters in the Old English epic poem *Beowulf*. As we chronologically make our way forward, we find ourselves beguiled by Matthew Hutton’s article “Poe’s Art of Seduction: Montresor as Author in ‘The Cask of Amontillado.’” Mr. Hutton scrutinizes the correlation between Edgar Allan Poe’s conception of the author, theory of unity of effect, and his fictional work, while recognizing the importance of the reader as well. In, “Maisie’s Moral Sense: Aestheticism in *What Maisie Knew*,” Rebekah Lawler invites us to consider Henry James’ novel, *What Maisie Knew*, as an aesthetic text by drawing comparisons between Henry James and Oscar Wilde, a leader of the aesthetic movement. Ms. Lawler also traverses questions of morality amongst the aesthetic movement. Remaining in the humanities, yet taking a turn toward popular culture, readers will be delighted to engage with Briley Welch’s article, “Vampires, Werewolves, and the Racialized Other,” in which she analyzes

the lack of racial representation in Stephanie Meyers' *Twilight* series.

Our journey continues as we reach the social sciences in the next two articles. Scott Coble's "LGBTQ Rights Policy Analysis" implores us to recognize the struggles that LGBTQ Americans face daily and focuses on the crucial enactment of the Equality Act. Sophia Roberts tackles the environmental repercussions of The Willow Project and its engagement with social media in her article, "Stopping the Willow Project on Social Media: An Exploration of the Social Problems Process in a Sub-Environmental Issue." The culminating work in the volume is from the natural sciences. In Hunter Brady's article, "Evaluating Chlorine Dioxide Gas as an Antiviral Agent: Insights from the Development, Optimization, and Application of a MS2 Bacteriophage Model System," he researches chlorine dioxide gas and its effectiveness as an antiviral agent in a post-COVID era, proving that even the most scientific of pieces in the volume acknowledges the underlying theme of humanity.

At *Scientia et Humanitas*, we understand the critical importance of peer review and rigorous revision in maintaining the integrity and quality of academic research. Each submission underwent a double-blind peer review process, during which authors were given feedback, helping to refine their ideas and enhance the clarity and coherence of their research. The peer review process offers invaluable learning opportunities for both authors and reviewers, fostering a culture of continuous improvement. It is not only the pieces in this volume that embody the motif of human connection; the process of creating the volume itself is also an exercise in human relations.

I am honored to have been selected as the Editor-in-Chief for this edition of *Scientia*. I would like to extend my sincerest thanks to Dr. Philip Phillips, Associate Dean of the MTSU Honors College, not only for the opportunity and help with this volume of *Scientia*, but also for his continued mentorship throughout my graduate career. A tremendous amount of thanks is also due to Honors College Dean John R. Vile and Strategic Communication Specialist Ms. Robin E. Lee, both of whom extended invaluable advice.

This volume of *Scientia* would not have been possible without the extraordinary efforts of the editorial team. I could not have asked for a better staff of reviewers and associate editors, all of whom dedicated themselves to patient reading, considerate feedback, and thoughtful recommendation of the articles featured in this volume. I wish to extend an enormous amount of gratitude to Brittney Norton, Kat Kolby, Rebekah Lawler, Angela Benninghoff, Rebecca Price, Matthew Hutton, Briley Welch, Hannah Antrican, Eilidh Hancock, and Courtney Martin. Your dedication to advancing interdisciplinary scholarship and upholding the principles of *Scientia et Humanitas* is

truly commendable, and it is an honor to have been part of such a dynamic team. Each member of the editorial team made me a better editor by offering their wisdom and expertise.

I invite you to explore the rich tapestry of interdisciplinary research featured in Volume 14 of *Scientia et Humanitas* and join us in celebrating the inspiring nature of the works showcased here.

Kylie Petrovich

Editor in Chief

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Say 'Ahhh!': Looking into Open Educational Resources at Middle Tennessee State University

Caroline LaPlue

ABSTRACT

This essay delves into the role and potential future impact of Open Education Resources (OER) at Middle Tennessee State University (MTSU) amidst the changing landscape of U.S. higher education. The discussion highlights national examples of engagement with OER, emphasizing its importance in creating accessible and equitable educational experiences. This sheds light on the practicalities of OER projects at MTSU and suggests ideas for institutional change.

The author uses an ecological framework to examine how OER integrates within the educational ecosystem, emphasizing the need for robust support structures for sustainability. The advantages of OER are also addressed, such as cost reduction and more customized teaching materials, while acknowledging challenges like maintaining resource quality.

Tennessee, MTSU, and the local student body would benefit from stronger institutional and statewide commitments to supporting OER, an initiative that is crucial to making education more inclusive and responsive to future needs, thus contributing to a more equitable learning environment.

In February of 2021, Middle Tennessee State University (MTSU) received a \$100,000 grant from the Tennessee Board of Regents (TBR) with the express purpose of promoting “widespread faculty use of free or low-cost open digital course content that could result in significant savings for students,” and the idea of using Open Educational Resources (OER) and creating free and accessible textbook options for General Education courses quickly made its way into the MTSU English Department (Hart). In 2022, I joined a team that took on the expansive task of creating a new OER housing MTSU faculty resources to streamline important information and explore whether OER could work for the General Education English program. A few months later, I joined a team funded by a second TBR grant whose mission was to create a third English OER textbook, this time for our primary first-year composition course. Throughout these experiences at MTSU, I have regularly engaged in conversations about OER’s function, working to situate OER’s role in our local programmatic and departmental perspectives, and education more generally. Many of these conversations have been fundamentally structured around if adopting OER will holistically improve students’ educational experiences, and consequently whether we should make official programmatic changes or retreat honorably to the traditional route of expensive print textbooks.

As the reputation of higher education in the United States declines and it becomes increasingly difficult to push the narrative that “college is for everyone,” the pursuit and adoption of OER is an essential step for institutions to adapt to current needs and to render their offered content and skills more palatable, equitable, and accessible to students. The statistical decline in undergraduate enrollment, the improved equity campaigns making college a more realistic option for students of all backgrounds, and the COVID-induced acceleration of online education—each has contributed to the societal need for open, affordable, accessible education and resources. Exploration, creation, and use of Open Educational Resources has slowly proliferated alongside the use of the internet for more than two decades across academic departments and institutions, and even more broadly around the world in an array of humanitarian, academic, and governmental capacities. With a few localized exceptions, though, the state of Tennessee did not (for the most part) actively pursue OER in K12 or higher education until 2015 when the Tennessee Board of Regents (TBR) began to offer grants to institutions for the express purpose of improving OER use across the state. Though not quite on the cutting edge, Middle Tennessee State University has, as of 2021, finally begun to “dip its toes” into the world of OER, to explore, to question, and make positive changes to more equitably support the student body—and it is not a minute too soon. Though the startup costs in terms of both the time investment and faculty buy-in are steep and arduous, and

maintenance will be an ongoing need, the ultimate benefits to our student body and the enhancement of our ability to keep our materials updated and aligned with current best practices make the effort required to pursue OER at MTSU a relevant, viable, equitable, and just choice. OER is still in its fledgling stage with plenty of room for improvement, but MTSU would both *be* well-served and *serve well* our student body by committing to make education more accessible and beneficial through the widespread use of Open Educational Resources.

Definitions & Terms

The William and Flora Hewlett Foundation—perhaps the most significant financial contributor to OER use and research to date—has defined Open Educational Resources as:

Teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge.¹

The key distinction of OER, as opposed to Open Access materials, is “the 5 Rs,” which are Retain, Reuse, Revise, Remix, and Redistribute (Levin). Though many educational resources are free and accessible on the internet, from TEDtalks to government reports, Allen and Seaman note that some people “confuse ‘open’ with ‘free’ and assume all free resources are OER” (9). But not everything that is free will stay free, and even Open Access resources that are and will remain free are often not remixable. Open Educational Resources are unique in their explicit permission and approval for viewers to take and alter their materials, as long as alterations fit within the bounds of whatever Creative Commons license is being used.

Creative Commons is a non-profit organization whose mission is to provide a free, simple, and standardized way to grant copyright permissions for creative and academic works; ensure proper attribution; and allow others to copy, distribute, and make use of those works” (“What We Do”). Creative Commons is fundamental to the successful publication and distribution of OER and has developed a bevy of different

1. Notably, it seems that the Hewlett Foundation once provided a definition of OER, which then became part of OER canon and is now quoted in nearly every public overview page explaining OER (whether government, humanitarian organizations, or educational institutions). But it appears that the Hewlett Foundation subsequently altered or removed their definition and, thus, the original source for the most widely-referenced definition of OER is essentially untraceable

licenses that provide the legal backup needed for any level of protection desired by creators of OER. These range from the most permissive—“Attribution”—which requires nothing in the sharing and remixing except for attribution the original creator, all the way to “Attribution-NonCommercial-NoDerivs,” which prohibits commercial use and remixing of any kind (“About the Licenses”).

Ecological Framework

To situate my work, I use an ecological framework that considers pedagogical practices in a web-like context of related practices and values, as well as the necessary supportive structures required to keep a “biome” of sustainable practices in a healthy system. Rivers and Weber explain that approaching a conversation ecologically draws attention not only to the final product but also to the invisible structures and systems required for the product to survive and proliferate (188). Rivers and Weber further explain that “highlighting this mundane, ecological approach” helps to emphasize the fact “that most changes proposed by advocates occur through concrete modifications to the institutional structures of government offices, courts, schools, corporations, and religious and community organizations” (188). True transformation and an accompanying stability can only be fully realized when OER are worked throughout the whole system, from legislator to student, and no longer pose intimidating risks of shadowy uncertainties.

In the case of OER specifically, the importance of establishing a healthy ecosystem becomes apparent when considering the time and money costs of maintaining accessible educational materials that are both high quality and free to students. The end goal is, of course, students—particularly low-income students—who are now able to complete their assigned homework from the first day of class as a direct result of OER, while not suffering additional financial strain because of textbook costs. The necessary invisible root system of this “free” product, though, must include substantial financial and structural support. For any given teacher to effectively understand and use OER in a classroom, the resources must first have been compiled, evaluated, and typically gathered into a cohesive “book.” Then those resources must be consistently maintained and updated due to changing information, strategies, or technical difficulties, which take time, effort, and money—resources which, as most teachers can enthusiastically affirm, are often in short supply for instructors at any level of education.

Throughout this project, I draw attention to places where the sustainability of OER, and thus its ecology, comes forcibly into play. The need is great, but there is hope that such sustainability is possible. Like the Beatles, advocates for open education can get by with a little help from our friends.

History of Open Educational Resources

In 2001, the new Council on Educational Technology at the Massachusetts Institute of Technology (MIT) was tasked with “[reaching] beyond boundaries” and developing a plan to respond to the changes in academia brought on by the existence of the internet. That council developed OpenCourseWare (OCW), an initiative in which one of the most prestigious universities in the world still shares research, pedagogical resources, and entire courses on the internet for anyone to freely access. OCW includes “courses from every MIT department and degree program, and ranging from the introductory to the most advanced graduate level” (“Get Started”). Since 2001, MIT has continually added and updated courses in its repository, and OCW has not only become popular, but has also been able to respond to and meet great needs, such as educational deficits caused by the COVID-19 pandemic.

The William and Flora Hewlett Foundation also began pursuing open education in 2001. The Hewlett Foundation is, by its own report, a “nonpartisan, private charitable foundation that advances ideas and supports institutions to promote a better world” (“About Us”). Established in 1966 by the Hewlett family (though “wholly independent of the Hewlett Packard Company”), the Hewlett Foundation awards hundreds of millions of dollars each year to philanthropic initiatives around the world. The foundation hosts programs focused “on education, environment, gender equity and governance, performing arts, and effective philanthropy, as well as support for disadvantaged communities in the San Francisco Bay Area,” “special projects,” and “other timely problems, such as challenges related to cybersecurity and U.S. democracy” (“About Us”). In 2021 alone, the Hewlett Foundation awarded over \$516 million, with \$20 million of that going towards forty-nine discrete open education projects across the United States and the globe (“Open Education”).

As early as July of 2002, the Hewlett Foundation began funneling money into open education research, and the term “Open Educational Resource” was officially introduced at forum they sponsored with the United Nations Educational, Scientific and Cultural Organization (UNESCO).² Since 2002, the Hewlett Foundation’s active financial support—combined with the work being done with MIT OCW, Massive Open Online Courses (MOOCs), and OER databases like the Multimedia Educational Resource for Learning and Online Teaching (MERLOT)—has resulted in OER reaching into an impressive range of academic fields and international locations. The

2. The term “open educational resource” had been published in 1999 in the *British Medical Journal* in reference to available online resources, but the term was not popularized or “official” until the 2002 UNESCO determination (Gray).

ecology of Open Educational Resources cannot be comprehensively discussed without acknowledging the importance of the Hewlett Foundation. The foundation not only helped to kickstart OER research, but has maintained regular, massive contributions into the sustainable ecosystem required for long-term OER use.

Current Position of Open Educational Resources

As Open Educational Resources continue to reach across political and social borders, improved OER awareness leads to a complementing increase of OER data, experimentation, troubleshooting, and innovation. Within higher education, two-year colleges lead the way in use of OER, arguably because the demographic of students attending community colleges consists of higher ratios of non-traditional students, returning students, and students from low-income backgrounds, to say nothing of the trend of rising textbook costs (Doan). In a 2014 survey of over two-thousand faculty from different departments in universities all over the country, Allen and Seaman observe that “Faculty at two-year institutions report consistently higher level of awareness of OER than faculty at four-year institutions. [. . .] Faculty at two-year institutions, in general, seem to see greater potential for OER in their courses than do faculty at four-year institutions” (Allen 13). Community colleges have overall lower measures of faculty autonomy for choosing a curriculum within a given course, with administrators predetermining instructional content more frequently than at four-year institutions (Allen 2). The likelihood of having more administrators devoted to instructional design and updating curricula could help explain the expanded use of OER at two-year-colleges over four-year institutions.

Regardless of institution type, funding from grants like those from the Hewlett Foundation provides significant financial impetus behind the production of OER. In addition to the Hewlett Foundation’s millions of dollars-worth of grants, the Institute of Museum and Library Services as well as the North Carolina State University Foundation, the states of New York and Virginia, and the Tennessee Board of Regents (which has itself received and redistributed nearly \$2 million from the Hewlett Foundation) are just some examples of organizations that have funded the development and distribution of OER (Doan; “Alt-Textbook;” “Open Education Resources;” Hart).

In New York City particularly, building upon ground-breaking Open Admissions work of Mina P. Shaughnessy in the 1970s, the City University of New York (CUNY) and the State University of New York system (SUNY) together have annually received \$8 million from the state of New York for furthering OER use across their eighty-nine campuses. That first year, “SUNY and CUNY, respectively, re-engineered roughly 3,700 and 1,500 course sections that served roughly 56,000 and 40,000 students.

By using OER instead of traditional textbooks, officials say, students in the sections were estimated to have saved about \$12 million” (Lederman). In some ways, the support of OER by the State of New York functions as a useful case study that demonstrates to the rest of the country how OER proliferation could look. In the CUNY Four Year Report of 2022, the authors emphasize that,

Prior to the allocation of \$4 million to CUNY [. . .] OER adoption was for the most part sporadic and uncoordinated across the University. The State funds helped to leverage an Achieving the Dream grant awarded in 2016 and propel systemwide OER adoption, with an eye towards scalability, sustainability, and student success. (*New York State Open Educational Resources Funds: CUNY Four Year Report 3*)

While the phrase “sporadic and uncoordinated” likewise describes the 2024 OER situation in Tennessee, CUNY’s report plainly highlights the importance of engaging the New York state legislators in the endeavor to “propel systemwide OER adoption,” and which became for them an essential component to CUNY’s ability to sustain their OER ecosystem.

Though the foundational principles for New York’s progress in open education were established fifty years ago with Shaughnessy, and Tennessee has been slow to promote OER in state institutions, the Tennessee Board of Regents (TBR) is beginning to move in that direction. Since 2021, TBR has provided three discrete cycles of grants for Tennessee institutions to expand OER in the state, and Middle Tennessee State University received grants from two of those cycles in order “to increase student success and equity by assisting underrepresented student populations” (Hart).

Open Educational Resources themselves come in various modes and do not look a particular way, unless prompted by an institution. This customizability assists individual programs, departments, and professors in gathering or creating the materials best suited for their specific needs, but it simultaneously creates difficulties in the widespread conceptions of what OER are. In their 2014 review, the Babson Survey Research Group reported that, of over two-thousand surveyed faculty, “only about one-third of faculty members claim to be aware of open educational resources,” but that there were “some faculty who said that they were not at all aware of OER who report that they have used it once the concept is explained for them” (Allen and Seaman 19). At MTSU, one administrator confirmed that “some people are doing OER and don’t even know they’re doing OER because it’s just not labeled. They’ve always kind of cultivated their

own materials and not really relied on the textbook” (Smith)³. In addition to a limited understanding of OER in general, Allen and Seaman’s study further found that part of the situation could be explained rather problematically by “the fact that faculty often make resource choices without any consideration to the licensing of that resource” (19). Though the impetus behind OER has always been equity and access for students, which aligns nicely with using freely available materials, Creative Commons licensing ensures that this free material is shared legally and does not involve unethical appropriation of intellectual property.

Popular Benefits of Using Open Educational Resources

The most celebrated exigency behind the advocacy of OER is simply equity (Doan; Smith). Not paying for a stack of \$60-\$200 textbooks provides relief to students who are struggling financially, and one study of students in statistics courses demonstrated lower measurable stress found in students using OER as opposed to students who had been required to purchase statistics textbooks (Lin). Unsurprisingly, reducing financial strain can have direct and immediate positive implications in student lives.

A second significant benefit is the draw of new students who are attracted by the low-cost options. Smith explains, “some of the community colleges have what they call Z-degrees, so it’s zero cost to the students. So, the students know coming in there’s zero textbook costs for the duration of their program, which—that’s a good selling point.” According to Smith, that “Z-degree” (which is unavailable at MTSU yet) can often lead to students deciding to continue and get a four-year degree after completing their free two-year degree—and that will “be a way to attract students when the enrollment cliff that everyone’s dreading gets here.”

Then there is customizability. Whether an organization wishes to establish a particular approach, or a specific department, or even a single instructor, OER textbooks are as customizable as the resources they use. Even within the constraints of Creative Commons licenses, customization options are almost endless.

Instructors are drawn to the concept of OER by the appeal of first-day access and avoiding textbook hassle and cost conversations with students at the beginning of each term. North Carolina State University’s Director of the Copyright and Digital Scholarship Center, Will Cross, explains that “Some [faculty] are moved by the cost issue, but I find we get a lot more traction when we talk about more students able to participate in class instruction or giving them back control of the classroom” (Doan). If a faculty

3. Personal interviews conducted for this project have been anonymized and use the pseudonyms “Smith,” “Jones,” and “Walker” because this project was conducted without approval from the Institutional Review Board (IRB).

member can see direct benefit to their own pedagogical process and a reduction to their own teaching difficulties, considering switching to OER becomes more palatable.

Finally, not only are OER textbooks available anywhere that has internet and thus accessible to students on the first day of class (at least on campus, even if they struggle with internet accessibility at home), but they are also more accessible to students needing accommodations and can help instructors stay compliant with the Americans with Disabilities Act (ADA). Digitized textbooks inherently allow for significant student customization as well, whether magnified text for reading, volume adjustment, screen readers, and other assistive technology.

Open Educational Resources: Drawbacks & Solutions

Obstacles to making the initial switch and then maintaining OER regularly emerge, but for each problem, a counterpoint with a potential solution has been suggested. During OER trainings and pitches, a common response to hearing the full process of discovering, modifying, and maintaining OER materials is weariness and uninterest. As creatures who tend to appreciate settling into comfortable routines, one of the greatest initial difficulties is simply inertia. As Cross notes, “The status quo is easy, and the cost issues feel remote enough that it just doesn’t move the needle for a lot of faculty members” (Doan). One administrator from CUNY adds that he sometimes hears responses from faculty of, “do I care about whether or not the students have to pay for it?” There’s often that, ‘Well, I had to pay for my books. They should pay for their books” (Jones). Convincing faculty members with decades of experience that they need to upend tried-and-true methods and materials is difficult, but even more so when that upending requires significant time and effort.

Depending on individual faculty goodwill is not the only way to effect widespread buy-in. Cross calls out institutions as the primary actors in this particular fight, arguing, “If we want to see major change we need to look at institutional incentives, which today often focus more on research than instruction” (Doan). Cross suggests incorporating widespread credit for “student success” as a metric for achieving promotion and tenure, or at least offering awards or classifications that could appear on a CV. He concludes that “faculty need something that spurs them to take action to change, and we haven’t really done that at scale yet” (Doan). Cross’s colleague Mira Waller suggests the profound value that can stem from an institution’s choice actively to hire faculty who are already knowledgeable and passionate about promoting OER while helping to educate and support interested faculty (Doan). When the institutions proactively support faculty, who then support students, who in turn bring prestige, money, and accolades to the university, the result is a functional, healthy ecosystem.

When the conversation moves past that first phase, one frequently referenced concern revolves around the relative quality of OER (Jones). For many faculty members and administrators, the idea of a rigorous, reliable, cutting-edge piece of scholarship being provided free to students and readers is intuitively too much of a stretch—no doubt connected, at least in part, to the capitalistic mindsets of many Americans who have heard “you get what you pay for” and “there’s no such thing as a free lunch” for their entire lives. Fortunately, this concern is easily addressed, as a close look at the available resources (and there are a lot) shows that “it’s just as rigorous, that the scholarship is just as refined” (Jones). In the early days, Smith qualifies, finding excellent resources was more difficult, but now, “with more universities considering OER contributions along the same lines as they would any other research or scholarly activity, then that’s helped with the quality.” Even in 2014, Allen and Seaman’s survey results showed that “three-quarters [of those who offered an opinion] rank OER as the same as or better than traditional resources” (2). As awareness and OER development has continued to expand in the interim decade, OER quality has likely continued to improve.

A more persistent OER concern is the question of discoverability. Discoverability refers to the ease (or, more frequently, the difficulty) of discovering any given OER, which often leaves OER pioneers feeling as though they must forge new trails where, in fact, one had already been established but not noticed. Though one of the touted benefits is how readily available OER are, Otto and Kerres observe, “[i]f a resource exists, but its existence is not detectable by search engines or portals, it is not available for potential users as such.” Allen and Seaman further explain, “The lack of a catalog and the difficulty of finding what is needed are the most often cited barriers. All three of the most mentioned barriers are related to the ease of finding appropriate material” (27). Once an institution or department has done the initial labor of gathering and publishing a functional OER textbook, the accompanying workload of interested faculty eases dramatically, but the initial ask would be difficult for anyone to look forward to. It could be akin to asking faculty members to look through all the resources in MERLOT and OCW and every resource published by Creative Commons to find the best and most appropriate resources for their program or course—in other words, too much.

Once again, though, developing an institutional ecology to support OER provides a solution to this problem. If institutions designate employees whose roles explicitly include familiarizing themselves with OER and supporting faculty users, those OER advocates can then “lead the way in creating more high-quality open educational resources and making existing OER easier to find by improving metadata, providing better labeling, tagging, or coding to improve retrieval of information” (Doan).

Establishing a comprehensive digital catalog, as implied by Allen and Seaman, would be a helpful project to undertake. Similarly, Larson and Murray mention that “branded repositories are one way of effectively identifying, tagging and organizing OER content. Gathering these resources in a trusted repository also provides the capacity to assess their quality, ease of use and effectiveness for teaching and learning” (Larson and Murray 92). Cross further recommends training the campus bookstore employees and librarians to become OER experts because finding resources is already such a significant part of their roles (Doan). But incorporating third-party experts into the search for resources would also help address lingering concerns over the quality of OER simply by having another academic professional’s assessment.

The most consistent challenge with OER, though, is the problem of sustainability, which highlights the importance of a healthy, functioning ecology. For OER advocates, it can be exhilarating to receive that first grant, and to be filled with starry-eyed visions of an equitable future, but once funding runs out, there is often (at least initially) no more, and the process must begin again. Larson and Murray were cautionary on this point: “Many fledgling OER projects make the mistake of focusing on their technical and educational goals without paying adequate attention to issues of financial sustainability” (92). Similarly, Smith strongly argues that “the more successful programs are the ones who figured out the sustainability part on the front end before they even launch the initiatives. [G]iving sustainability the attention that it needs is definitely [one of the main] things that determines successfulness.” If regular funding and support is not woven into the fabric of the institution’s ecology, then it is up to smaller teams or individuals to provide their own funding in their own time. This is most frequently done with grants, but repeatedly writing and submitting grant applications and subsequent grant reports demands significant time and attention that could be used more effectively. Within the General Education English Program at MTSU, for example, countless hours have been dedicated to the production of four separate OER books, but now that grant money has run out, the future of open education in the MTSU English Department and those books is uncertain.

And yet, for all that, there is hope! Though MTSU has not yet achieved the balance of an independently healthy ecosystem, Smith again provides suggestions for a solution: succession. He notes, “There’s not a lot of adequate succession planning, so the knowledge kind of dies when somebody leaves as opposed to knowing who you’re going to pass it off to and that person is willingly accepting it.” Too much reliance on a small number of OER advocates means that if they move on without sharing their knowledge or training a successor, then the sometimes years of OER progress are lost, and the effort

must begin again. But intentionally raising awareness, involving more people, and keeping better records would help momentum continue even as personnel fluctuates. Cross again recommends that librarians be an essential part of this process so that the created knowledge is not exclusive to any one department, but—if properly connected across departments and offices—the whole institution can effectively learn from each other and grow together (Doan). Institutional support is key to maintaining a healthy OER ecosystem.

Conclusion

Middle Tennessee State University has its own individualized factors to consider, but most of the hurdles facing the proliferation of OER at MTSU are non-unique and reflect struggles, strategies, and successes found other institutions, both in and out of Tennessee. Open Educational Resources are still, to a significant degree, a new frontier. Pioneers have been forging paths over, around, and through each new quagmire, and each trailblazer makes the path a little clearer and more accessible for those following behind. OER development can happen at every level, and opportunities abound for a wide range of positions and influences, from bigwig politicians to individual students. Those with significant power and influence can draw from the examples of CUNY, SUNY, TBR, and the Hewlett Foundation and advocate for widescale reform, awareness, and financial support of OER. Administrators and those with influence in an educational system (e.g., a county school board) or an individual institution can research OER development and advocate for providing financial support and training for programs or staff members who are interested. Individual faculty and staff can educate and empower themselves by finding out what OER projects are happening on their campuses or at nearby institutions and joining those teams, or by collecting OER to incorporate in their own courses, thus offsetting student costs even on a small scale. And everyone—even students or people not explicitly a part of any educational system—can make a positive difference by initiating conversations and asking questions of those with more influence, and by writing letters to their congresspeople or school administrators about the importance of OER development and maintenance. The opportunity for making quality education widely accessible has never been better. Now we need support to continue the journey, going where few have gone before.

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Finding Mind: A Defense of Embodied Cognition in the Classroom

Nicholas Krause

ABSTRACT

Recent empirical research offers compelling evidence in favor of incorporating principles of embodiment in the classroom. While engaging the body for the sake of learning has become more accepted for younger learners, embodiment is largely neglected for the teaching of more abstract concepts, including ones related to language acquisition — despite strong evidence that principles of embodiment can help adult learners with abstract ideas as well. This essay will define embodied cognition, contextualize the ways that the American school system has largely adopted “disembodied” and representationalist approaches to cognition, and provide a selection of empirical evidence in favor of adopting embodied principles in classrooms. The final sections of the essay will offer some strategies for adopting these principles in college-level humanities courses and provide some speculation in favor of the philosophical importance of doing so.

Ah, if only mind could float free of its carnal entanglements, thinking pure thoughts of things certain, eternal, and good. *But that is a dysfunctional dream!* It is our organic flesh and blood, our structural bones, the ancient rhythms of our internal organs, and the pulsing flow of our emotions that give us whatever meaning we can find and that shape our very thinking.

— Mark Johnson, *The Meaning of the Body*

In 1988, the American alt-rock band the Pixies released their debut album, which included a song that would prove to be one of their biggest mainstream hits. The song, entitled “Where is My Mind?” repeats this titular question many times over. Black Francis’s ethereal vocals belt out this refrain:

Where is my mind?
Where is my mind?
Where is my mind?
Way out in the water
See it swimming

It is easy to interpret this well-known chorus as being about mental health struggles, especially since the song gained a second life after being featured at the end of David Fincher’s film *Fight Club* (1998).¹ However, this song also raises a very interesting philosophical question. Where, indeed, is anyone’s mind? What even is a mind?

It might seem intuitive enough to equate the mind with the brain. This has, in fact, long been the assumption in Western philosophy and science. The prevailing idea is that all cognitions — thoughts, ideas, emotions, and knowledge — are housed in three pounds of wetware between our ears, independent of our full bodies. This intuition is taken to its logical conclusion through influential philosophical thought experiments, such as the dreamworld posited by Descartes nearly three centuries ago, or the more modern brain-in-the-vat hypothesis (McKinsey 2018). Could it be the case that the world around us is a mere illusion, the by-product of a powerful manipulator? Perhaps our “true” selves are lone brains floating in jars — our sensations, bodies, and environments nothing more than illusions triggered by well-placed electrical impulses.² These thought experiments are meant to pump our epistemological intuitions about whether we can have true knowledge of our waking life, potentially motivating skepticism about the

1. Fincher’s film explores themes of mental health conditions such as dissociative identity disorder.

2. A similar thought experiment was made famous for modern audiences in the sci-fi film *The Matrix* (1999), which imagines a scenario where our experience of reality is nothing more than an illusion being fed to us by robots that have our “true” bodies trapped in energy-capturing vats.

existence of the external world or even our very bodies. Epistemology aside, these thought experiments presume a high degree of localization behind human cognitions; they presume, in other words, that a mind can exist and function *without a body*.

These presumptions are heartily challenged by a rising school of thought called embodied cognition (EC). According to EC, our minds are not identical to our brains. Our minds are far more complicated and far-reaching than this. For the EC theorist, our minds — and all the cognitive accouterment — are extended and enacted via our bodies and our engagement with our environments. In this view, minds are not static entities, passively receiving sense-data from and creating representations of the external world. Instead, minds are *processes* that arise from complex interactions among brains, bodies, and environments. The line between such entities cannot be neatly drawn.

The rise of embodied cognition has repercussions for numerous and diverse realms of inquiry. This should be unsurprising considering how deeply the hypotheses of EC challenge our inherited intuitions about the nature of cognition. The ways in which EC bears on pedagogy is salient here. My goals are three-fold: first, I will discuss competing conceptions of EC to develop a working definition, which will involve a brief foray into the history and influence of disembodied views of cognition. I will then explore some of the empirical evidence for EC to establish credibility behind its central claims. After providing a working definition of and compelling evidence for EC, I will turn to its relevance in the classroom. This will involve a survey of how EC has been and is being used for educational purposes. This offers compelling reasons for adopting principles of EC in the classroom — from elementary school to graduate school and beyond. I will offer some concrete proposals for how to do this for college humanities courses (e.g., some suggestions for creating a syllabus and some ideas for specific lesson plans). Finally, I will close with some philosophical considerations regarding the benefits of recognizing our embodiment, fundamental continuity, and entanglement with our environments.

I. Defining Embodied Cognition

The central thesis of Mark Johnson's influential 2008 book *The Meaning of the Body: Aesthetics of Human Understanding* is that “what we call ‘mind’ and what we call ‘body’ are not two entities, but rather aspects of one organic process, so that all our meaning, thought, and language emerge from the aesthetic dimensions of this embodied activity” (p. 1). Johnson's framing of his central thesis captures the heart of embodied cognition. Ultimately, advocates of EC take as their theoretical starting point the idea that cognitive processes are deeply rooted in the body's interactions with the world.

While most EC theorists will accept this as a general characterization of embodied cognition, it fails to capture much of the ongoing debate around the details

of such a view. Golonka and Wilson (2013) write that EC offers the “most exciting hypothesis in cognitive science right now” but that “like all good ideas in cognitive science, [...] embodiment immediately came to mean six different things.” There are, for instance, advocates of “strong” or “radical” EC and advocates of “weak” or “graded” EC (Farina, 2020). The latter position requires that cognition entails *some* dynamic engagement of the body’s senses with the environment, what the EC theorists call “sensorimotor activation.” The stronger versions of EC state that cognition cannot occur without sensorimotor activation — that is, embodied engagement with the environment is a necessary condition of cognition (Tirado et. al., 2018). There are many gradations between these two camps of EC.

The ontological status of any particular form (or strength) of EC is not relevant here. This is a largely empirical question, and there are many intriguing studies that help identify the nature and complexities of EC. EC can be taken seriously as a hypothesis, specifically regarding the human ability to think and learn. As Macrine and Fugate (2022) argue, the *only condition* for embodied cognition is that a “cognitive system can spread beyond the brain, incorporating parts of the world as well as the subject’s body” (p. xvii). This use of “can” sets their view apart from the strongest formulations of EC, in that the incorporation of body and world are not necessary conditions for cognition. This more flexible position helps motivate the usefulness of embodied principles in the classroom.³

It is essential to understand EC as the position that cognition (including our capacity to learn) requires more than just the brain; it requires, to some degree, the activation of our bodies (via sensorimotor systems) and engagement with environments. Additionally, understanding how this view contrasts with more traditional views of cognition is essential since they are extraordinarily prevalent in schools and general attitudes about teaching. “Teaching pedagogy and curriculum continue to view learning as abstracted and separate from the body,” writes Macrine and Fugate (2022). “As a result, classroom teaching continues to rely on presenting and learning disembodied concepts, without the engagement of the sensory motor systems or understanding how the body influences internalization of these concepts” (p. 3). While theories of embodied cognition continue to emerge, classrooms today have failed to keep pace.

II. Inherited Representationalist Views of Cognition

As mentioned, the human mind has long been considered the sole source of knowing, thinking, and teaching, with the body considered both separate and inferior.

3. It should be noted that, despite this more liberal and inclusive definition, my argument that embodied learning techniques are more effective and should be adopted in the classroom hinges on the fact that there is powerful evidence in favor of some degree of embodied cognition.

Since classical antiquity (and specifically since the influence of Plato in the 4th-century BCE), the body and mind have been seen as separate and hierarchical in nature. Plato posited an ideal realm divorced from the imperfections and vicissitudes of embodied existence (Kraut, 2004). Additionally, his student Aristotle believed that the mind rules over the body, and reason over the emotions (Barnes, 1995). Domination over the body and emotions was required to free the rational mind from its corporeal chains. Plato and Aristotle, of course, had a major impact on the intellectual trajectory of the Western world. These dichotomous assumptions informed René Descartes' notions of the mind/body split as well (Ryle, 1949). He contended that the mind must be cleared for the foundation of knowledge to be laid. Vestiges of these hugely influential thinkers and ideas can be found in most every modern intellectual tradition today.

In addition to the metaphysical musings of philosophers, certain religious traditions also codified humanity's dichotomous status, deepening people's sense of separateness. Students are exposed to many variations of this story, be it through intellectual or religious traditions, that act to reify an arguably common intuition that some element of human cognition is above, beyond, removed from, or more than nature itself — with minds that float free from the carnal entanglements of the body.

Thus, we have a story of influential philosophical and religious traditions as well as a powerful human intuition that together works to set mind and body apart from one another. Moreover, the body is seen as secondary — an impediment to the mind's expansion and capabilities, “an albatross levying a heavy drag on self-realization” (Macrine & Fugate, 2022, p. 13). In the wake of this, there arose a new and seemingly more empirically supported model of cognition that took these intuitions largely for granted: the computational model of cognition. This is an important perspective to confront due to its outsized and continuing influence.⁴ In short, this is the idea that cognition acts analogously to computer algorithms. Very roughly, a computational process begins with an input of information, proceeds through instruction-guided operations based on this information, and concludes with some sort of output, which is the result of the operations on the input. The human mind, in this model, acts as a functioning hard drive: it passively receives information (via sense-data) that is converted to electrical signals, which in turn builds out a representation of the information. This is the dominant model of cognition and has been since the mid-20th century. Shapiro (2022) writes that “the *core commitment* of traditional cognitive science is that the various cognitive capacities—

4. Mark Johnson (2017) describes this contemporary movement as “the invasion of the body-snatchers,” opening his discussion of this point with the tongue-in-cheek sentence, “When I was a graduate student in philosophy back in the mid-1970s, people did not have bodies” (p. 2).

perception, memory, language use, reasoning, and so on—can all be analyzed in terms of computational processes” (p. xiv, emphasis mine).

Again, this permeates the classroom and our broader understanding of how to best learn. These core commitments can be seen in curricula. Schools, whether conscious of it or not, still work hard to separate mind from body. Macrine & Fugate (2022) state it clearly:

Cartesian dualism is still pervasive throughout school settings. The teacher is seen as a “talking head”—a disembodied and disempowered conduit for core curriculum. These disembodied threats come in the form of rote memorization, mindless drills, and skills in preparation for standardized testing. Even now, the ramifications of our epistemological heritage continue to have quite an effect on how we conceptualize knowing, learning, and teaching. (p. 15)

Such are the traditions and methods of learning that EC aims to challenge. Embodied learning in the classroom requires a profound rethinking of how we understand language, reason, memory, and learning, as well as reconceptualizing how we see ourselves relative to one another and our environments.

III. Empiricizing EC

There has been a great deal of empirical research related to EC, especially within the last two decades. Much of this empirical research has aimed to test various hypotheses that EC entails. There is compelling evidence in favor of at least some form of embodied cognition. It is not, as Farina (2020) puts it, “just a philosophical mantra empty of empirical content” (p. 73). Farina provides a survey of empirical evidence in his article, “Embodied Cognition: Dimensions, Domains and Applications” (2020). Farina’s essay surveys some of the current debate over the validity of EC, including common characterizations of the view. Farina concludes his survey of EC by saying that “there is a substantial body of empirical work showing how embodied activities constitutively shape many aspects of human cognitive life” (p. 84). Farina argues that this substantial body of evidence includes data collected from numerous areas of scientific investigation, including laboratory studies, naturalistic field observations, neuropsychological case studies, research on artificial intelligence, and various phenomenological reports (pp. 77-84).

That said, my focus will be on a limited number of studies examining EC specifically in the context of language learning. Macrine and Fugate explore much of this area (2022). Their anthology includes multiple essays explaining and interrogating recent empirical work on language acquisition as it relates to bodily movement. A contribution from Gomez and Glenberg (2022), for instance, looks at research on language learning in three different domains: vocabulary acquisition, second-language acquisition, and abstract

language comprehension for adults.

Gomez and Glenberg focus on research intended to measure the effectiveness of various embodied classroom activities. For preschool children developing language, Gomez and Glenberg cite a study done by Wall et al. (2021), which investigated whether procedures that ground meaning in embodied sensorimotor activities really help children learn vocabulary. The study looked at children's ability to comprehend vocabulary while using a "dialogic reading" approach. This is, in short, a method where adults and children read together while the adults ask questions related to the text in the service of prompting dialogue. Most uses of dialogic reading are purely verbal.⁵ An embodied approach to dialogic reading, in contrast, will incorporate more than just verbal inquiries and discussion. It will, for instance, provide items for the children to manipulate, directives for the child to move or enact aspects of the story, etc.

For the study, Wall et al. created triplet groups composed of preschool children who were matched on age and vocabulary test scores. One child in each triplet was randomly assigned to one of three conditions: the control condition, the "dialogic-then-combined" condition, and the "combined-then-dialogic" condition.⁶ The control condition approached dialogic reading in a more traditional, purely verbal way by reading from an electronic tablet and engaging in directed dialogue with an adult throughout the sessions. The other two conditions incorporated bodily engagement during the dialogic process, such as manipulating the movements of dolls and getting up and enacting aspects of the

5. Gomez and Glenberg (2022) provide the example of PEER—prompt, evaluate, expand, and repeat—to illustrate traditional (purely verbal) approaches to dialogic reading: "Adults are taught to provide a *Prompt* to the child (e.g., 'What is this?'), *Evaluate* the child's answer (e.g., 'You are right! It is a sheep'), *Expand* on the child's utterance (e.g., 'The sheep has a wooly coat') and ask the child to *Repeat* the longer utterance (e.g., 'Now you say it: The sheep has a wooly coat')" (p. 80).

6. Gomez and Glenberg (2022) explain the details of the three conditions as follows: "[For the control condition] a child and an experimenter listened to a commercially available electronic story presented on an iPad [...] They listened to the story once a day for eight days. The children took tests at three time points: before any listening (pretest), after the fourth listening (midtest), and after the eighth listening (posttest)" They go on to explain that there were two types of tests: "the comprehension test asked questions such as 'What animal does Ahmad take on his trip?'; the other test was of twenty vocabulary words (e.g., the child was asked 'What do you think "startle" means?'). The second condition was called 'dialogic-then-combined.' As in the control condition, the children heard the story eight times and took the pre-, mid-, and post-tests" (pp. 80-81).

story they were reading.⁷ The difference between the combination control conditions was *when* during the study they incorporated principles of embodied cognition. The children in all the groups showed “substantial improvement” overall, in both comprehension and vocabulary acquisition, but the children who received the combined script improved the most (see figures 5.1 & 5.2). As Macrine and Fugate note, adding the embodied activities “appeared to supercharge dialogic reading” (p. 81).

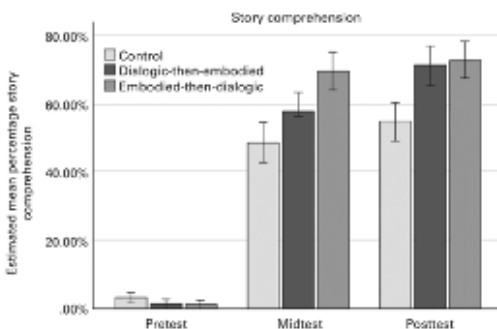


Figure 5.1
Data from the story-comprehension test. Source: Wall et al. (2021).

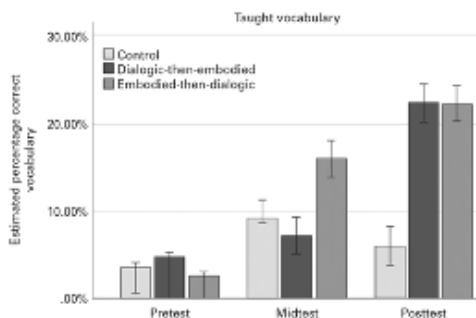


Figure 5.2
Data on acquisition of targeted vocabulary words. Source: Wall et al. (2021).

This study from Wall et al. (2021) is limited in scope due to the small sample size and the possibility for confounding variables. Nonetheless, it offers promising results for the potential applications of embodied learning for language. Gomez and Glenberg provide other promising studies on the effectiveness of EC for learning language, specifically for second- and third-grade students learning physics vocabulary (pp. 81-85) and for adults learning foreign language vocabulary (pp. 86-88). Gomez and Glenberg’s

7. One example of this used the word “startle” to illustrate vocabulary acquisition and story comprehension: “[EC] principles were implemented using manipulatives including a small doll named Ahmad, a bed, and other items. Upon getting to the word ‘startle,’ the script read, ‘Why does Ahmad wake up? He was startled. That means felt frightened or scared. Because he’s startled, he jumps out of bed. Make him jump. Let’s make him startled. [The experimenter shakes the Ahmad doll and hands it to the child to shake.] Can you say startled?’ Thus, the child generates sensorimotor and emotional activity to associate with the word ‘startle’” (Gomez and Glenberg, 2022, p. 81).

research around adult learning of abstract concepts is of particular interest.⁸

For their research, Gomez and Glenberg hosted lectures for adult learners discussing the principles of EC and then used these principles to teach some unrelated abstract concepts. This, they argue, allowed for the lecture to act as proof of concept. That is, “to the extent that the viewer (you!) learns the [abstract concept], it demonstrates the validity of the principles” (Gomez & Glenberg, 2022, p. 86). The goal of these lectures is to clarify abstract concepts primarily using grounding, i.e., building abstract concepts upon more concrete concepts. Grounding is done by engaging activity in the sensorimotor and emotional systems to ground simple concepts and then using extended procedures to ground complex or abstract concepts.

Glenberg (2021) aims to teach readers the highly abstract concept of “regression to the mean.” Glenberg employs concrete experiences like weighing oneself on a scale, along with the concept of measurement errors grounded in these experiences, to clarify this abstract concept. Random error is difficult to ground in one measurement, in one single instance of standing on a scale. Grounding the concept of random error involves *repeatedly* standing on a scale and experiencing changes as a result: factors like the location of the scale, how the person steps on the scale, etc. Thus, grounding the concept of random error requires multiple instances of measurement, what researchers call “extended procedure.” The use of an extended procedure is, according to Gomez & Glenberg (2022), “a common technique for grounding abstract terms” precisely because abstract terms so frequently refer to procedures or processes rather than objects or instances (p. 88). Glenberg (2021) uses several extended procedures (in addition to that used to define random error) to illustrate regression to the mean. As another example, consider teaching the concept of “democracy”:

Children might be introduced to the procedures of having an election by literally having candidates, ballots, and counting ballots. After the procedure is acted out, the child can be taught that in democracies, elections like these are used to choose representatives or decide issues. (Gomez & Glenberg, 2022, pg. 88)

Grounding in this manner has similarities to the ways that Lakoff and Johnson famously initiated the conversation about embodiment as it relates to linguistics (specifically metaphor). Lakoff and Johnson (1980) argue that abstract language is always rooted in some form of bodily engagement with the world. When we use metaphorical language (such as “I clearly see the point of your argument”), we are, ultimately, appealing

8. Gomez and Glenberg provide a video demonstration of their study on adult learning of abstract concepts. For the full video, see Glenberg, 2021; for a description of the video, see Glenberg et al., 2021.

to some deeper and more fundamental way of how creatures like us navigate, manipulate, and make sense of our environments (such as how vision allows us to literally see things clearly). This relationship goes both ways: metaphors are informed by the comportment of bodies, and bodies (including the processes of the brain) function in deeply metaphorical ways. Put another way, bodies inform concepts, and concepts inform bodies. “The concepts that govern our thought are not just matters of the intellect,” write Lakoff and Johnson (1980). “They also govern our everyday functioning, down to the most mundane details. Our concept’s structure is what we perceive, how we get around in the world, and how we relate to other people. Our conceptual system thus plays a central role in defining our everyday realities” (p. 11).

This sample of studies regarding EC and learning acquisition offers compelling reasons for deploying full-bodied, interactive pedagogical techniques in the classroom.

IV. Teaching Using the Techniques of EC

Embodiment research is particularly relevant for incorporating EC into college humanities courses, which often involve abstract concepts like metaphor, exigency, genre, and various literary and linguistic devices. The following proposals for incorporating EC into college classes involve empirical claims and contain testable hypotheses that could prove effective with more research.

Because such abstract concepts are being taught to adult and young adult learners, an important step in this process is meta-discussion. To maximize the positive effects of EC-informed pedagogy, having a higher-order discussion with students about *what* embodiment is, why one is adopting embodied techniques in the classroom, and *how* that will happen could prove useful. It is not unheard of for instructors to have a meta-discussion about their personal approach to teaching (often found in the syllabus). Instructors are more likely to have this type of discussion if they are adopting novel or more radical approaches to teaching. EC in the college classroom could be considered both novel and radical; having time dedicated to discussing embodiment, including why and how it will be incorporated in the lessons, would be an important and effective way to begin EC-informed teaching.

What could starting this process look like? For starters, a definition of EC would be provided directly in the syllabus. An explanation for why it is being incorporated throughout the course would accompany the definition. Finally, each individual lesson on the syllabus could have an “embodied element” that will be brought in to help clarify or reinforce the ideas being explored. As an example, the syllabus could have an “Embodiment in the Classroom” section that lays out the guiding teaching philosophy for the course. This could provide something like the definition provided at the outset of this

essay: “Embodied cognition is the position that thinking, learning, memory, and language use all require more than just the brain; they require, to some degree, the activation of our bodies and engagement with environments.” Then, to help explain why this style is being adopted for the course, this section could provide language about the robust empirical evidence in support of EC: “I will be incorporating principles of embodied cognition throughout this course because there is ample scientific evidence in support of the idea that our thinking and learning occurs using more than just our brains; we learn better when our bodies and environments are more engaged.” The “Embodiment in the Classroom” section of the syllabus can act as a launching point for discussion at the start of the course. Most importantly, there should be an EC element involved in this meta-discussion. What better way to teach the concept of EC than to practice EC? This could look something like the dialogic and embodied activities used in the Wall et al studies mentioned above. Students could participate in interactive activities that involve them getting up and moving around the classroom and “acting out” sections of the lesson plan. The students could also do artistic representations of the differences between embodied cognition and disembodied cognition, such as drawing “brains in vats” or re-creating relevant scenes from *The Matrix*.

Similarly, the lesson plans can offer an opportunity for more specific incorporation of EC. If, for instance, the course includes a section on prescriptive and descriptive linguistics, then the syllabus can provide a brief description of how embodiment will be incorporated for those specific lessons. This might involve exercises where students break into groups and analyze each other’s writings for traditional grammatical errors and discuss their emotional and physical responses to having these so-called errors pointed out (e.g., “I feel defensive over the way I spelled these words, and I can feel this sensation as a tightness in my chest and jaw”). Following the guidance of Glenberg (2021), the teaching of such abstract concepts will be aided through extended procedure where multiple lessons engaging the body in the service of clarifying and reinforcing such concepts could be helpful. A secondary lesson on prescriptive and descriptive grammar, then, could involve more embodiment exercises, such as having students read pieces of writing in a variety of dialects, including ones rich with errors according to Standard English, and discuss if there are any levels of comprehension loss (or in what ways the meaning changes). A way to further incorporate embodiment in these exercises could be to explore dialects in, for instance, scripts for stage plays, where

students can act out their understanding of the language being used.⁹

Abstract concepts are a given in higher education and certainly prevalent in the humanities. Following the traditional way of learning abstract concepts by treating students as receptacles for definitions while testing their ability to memorize is, based on more and more emerging neuropsychological evidence, an inadequate way of approaching pedagogy. Abstract thinking has long been considered the highest level of cognition and has been assumed to develop later during adolescence.¹⁰ Because humans function with hierarchical thinking, this way of approaching cognition often aims to *replace* thinking based on sensory and motor processes with formal logical thinking (Kiefer et al., 2022, p. 25). But this is both unhelpful and empirically indefensible. Cognition does not entirely cease to be tied to our bodies and environment, no matter how abstract cognizing may be. We should not abandon EC and embodied learning after grade school. Instead, we can take steps to ensure that embodiment is better understood and more embraced at all levels of education. Educators can be better served recognizing that, even when reasoning abstractly, there is still engagement with body-based concepts.

9. An exercise like this immediately raises concerns over what it means to move and act and engage with the body in the classroom. It should be noted that discussion of embodiment in the classroom will invariably entail discussion of *ability* in the classroom as well. The philosophy of embodiment can bring about a worry that there will be *essentializing* of human bodies, i.e., the idea that there is one (or some) necessary and sufficient condition that defines a human body. This runs the risk of excluding or marginalizing certain people, especially people with disabilities. Thus, it is important that any discussion of embodiment takes steps to ensure a pluralistic approach to bodies: there are many different kinds of bodies, with many different kinds of abilities and affordances.

10. This results largely from Jean Piaget's hugely influential model of cognitive development, which Kiefer et al. (2022) summarize as follows: "According to Piaget's theory of cognitive development, children acquire knowledge through sensory experiences and the manipulation of objects until the age of two. After learning to use symbols (e.g., words, pictures) to represent and think about objects and events, children are thought to develop logical thinking, which is still based on concrete events between the ages of seven and eleven [...] Formal logical thinking detached from sensorimotor experiences, the highest level of cognition, is assumed to develop later during adolescence. According to this theory, formal logical thinking replaces thinking based on sensory and motor processes" (p. 25).

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The Edge of the World: An Exploration of the Fringes of the Psalter World Map*

Rebecca Price

ABSTRACT

Medieval *mappaemundi* are richly complex images that hold within them clues to improve understanding of the medieval psyche concerning the natural world and the place of medieval cultures within it. In my exploration of the Psalter World Map, I provide a brief historical context for the psalter in which this map resides, including information on its creation and provenance. I then examine aspects of the fringes of the map to display the liminality of two specific images: the winds surrounding the Earth and the fourteen “otherworldly creatures” positioned across the Nile River on the bottom right-hand corner of the Earth. In doing so, I argue that medieval people were acutely aware of their place in the world, that they recognized their own human, transformative state, and that they utilized the edges of *mappaemundi* as a safe and controlled environment to explore and better understand their anxieties about the world and their place within it.

Although there is much that medieval manuscripts can tell modern-day scholars about the ideologies and thoughts of the medieval population, there is one remarkable kind of artifact within a select few manuscripts that might hold even more clues as to how medieval people felt and interacted with the world around them. Medieval maps are deeply complex artifacts, and they remain with us today in a few different formats. From the Hereford Mappa Mundi measuring 1.59 x 1.34 meters to the smallest of maps found in Psalters, these maps are deeply significant pieces of a complex series of artifacts that we have left of the medieval period. When looking back to examine a culture, artifacts play a pivotal role in our understanding of the whole of their story. My focus is to examine some of the nuances of *mappaemundi*, or maps of the world, to attempt to peer further into the psyche of medieval England and better understand their view not only of the world around them, but of their place within it. In examining the fringes of the Psalter World Map, the rich symbolism found on the edges of the map come to life and show us how this population both used liminal edges as both a way to define themselves and to explore general anxieties not just about the world around them, but about their place within the world. I argue that particular aspects of this map, specifically the spheres surrounding the whole of the world and England's location on the map in relation to otherworldly creatures present, possess an ambiguous duality that is oftentimes found in works of medieval literature. There is much that we can infer about medieval attitudes towards the world as well as England's place within it by better understanding the intentional ambiguity and duality seen on the fringes of the Psalter World Map.

In their *Introduction to Manuscript Studies*, Raymond Clemens and Timothy Graham note that *mappaemundi* are “essentially representations of the earth as it was known from the ancient world, including Asia, Africa, and Europe as seen from a celestial perspective” (Clemens and Graham 241). With *mappa* meaning “cloth” or “chart” and *mundus* meaning “world,” these maps differ quite a bit from T-O and zonal maps in the sense that they include detail that goes far beyond geographic depictions of the world. The majority of medieval *mappaemundi* were meant to be displayed on walls, though the particular *mappaemundi* that I will be focusing on resides inside a psalter and is only 14.3 x 9.5 cm in size (British Library).

Medievalists in the field each have a different opinion as to what the exact function of *mappaemundi* are, with Clemens and Graham asserting that *mappaemundi* “can be very complex, encompassing not only the known and unknown world, but also all of time, from the Garden of Eden to the Last Judgement” (Clemens & Graham, 243). P.D.A. Harvey finds that they are instead “vehicle[s] for conveying every kind of information. . . [such as] zoological, anthropological, moral, theological, historical,”

while Mirko Grčić asserts that rather than providing objectively accurate geographical information of the world, the *mappaemundi* was meant to “express biblical symbolism and medieval Christian cosmology” (Harvey 19; Grčić 25). Although each of these theories have their merits, Asa Mittman’s theory on the purpose of medieval *mappaemundi* is most intriguing. Mittman believes that *mappaemundi* are about relationships, and in his book *Maps and Monsters in Medieval England* he examines the fringes of the Hereford World Map in an innovative way. He ultimately presents an opinion of how the medieval people might have not only felt about the world around them, but how they felt about their place within the world as well (42).

While Mittman’s study looks at the Hereford World Map, my study instead focuses on the Psalter World Map, currently housed in the British Library under the shelf mark Add. MS 28681, f. 9r. Though it may seem a questionable decision to use a study discussing the Hereford Mappa Mundi while I will be analyzing another map entirely, medievalists who are familiar with these maps will understand their connection. The structure and content of each of these *mappaemundi* are incredibly similar, and these two examples, along with the Ebstorf *mappaemundi*, were all likely created from a singular exemplar copy that resided on the bedchamber wall of King Henry III in Westminster (Westwell). With this connection and the vast visual similarities between the Psalter World Map and the Hereford Mappa Mundi established, some of Mittman’s commentary can be applied to the Psalter World Map.

It is imperative to recognize the significance of the entirety of BL Add. MS 28681 as a cultural artifact, rather than mentioning only one small portion of it. Because of this, we must also consider what else lies within the manuscript. According to the research of Chet Van Duzer, the psalter, created around c. 1262,¹ contains a mixture of prayers and psalms mixed in between a calendar, verses praising the Virgin, prayers in Anglo-Norman,² the Office of the Dead, and psalters with the Canticles (Van Duzer 181). Van Duzer also recognizes the inclusion of six full-page illustrations of different scenes from the New Testament, which were added at the end of the thirteenth century. As far as provenance for this manuscript is concerned, it is believed that the psalter was created somewhere around London. On f. 18r, the name “Mary Wyndham” was written

1. In the British Library blog post about the Map Psalter, Chantry Westwell comments that the psalter was created shortly after c. 1262, because it includes a depiction of Richard of Chichester as a saint in the calendar page for June. Richard was not made a saint until sometime in 1262, and Westwell dates the psalter as being created in c. 1265 instead. While this is outside of the scope of my research here, I thought this was a rather interesting discrepancy, and that it was important to include here.

2. The majority of this psalter is written in Latin, rather than the Anglo-Saxon vernacular (Van Duzer 181).

in sixteenth century hand. Eventually the book made its way to Mr. Henry D. Jones who placed a bookplate in the upper binding. He sold the psalter to the British Library in 1871, where it has remained since (“Detailed record”).³ While the scope of this study is narrow, by considering the other aspects residing within this manuscript a more holistic perspective may be applied, thus allowing for more nuanced conversations about medieval people and culture.⁴

Although many aspects of the Psalter World Map draw our gaze, I would like to draw attention to the fringes of the map, rather than examining the many geographical locations presented here. Much like the marshes and moors of *Beowulf* or the deep forest of Wirral seen in *Sir Gawain and the Green Knight*, there is a particular type of curious nature found on the fringes of medieval society. Michael Camille in *Image on the Edge: The Margins of Medieval Art* finds that margins of the early English world were both dangerous and powerful places, stating:

In folklore, betwixt and between are important zones of transformation. The edge of the water was where wisdom revealed itself; spirits were banished to spaceless places ‘between the froth and the water’ or ‘betwixt the bark and the tree’. Similarly, temporal junctures between winter and summer, or between night and day, were also dangerous moments of intersection with the Otherworld. (16)

Like the juncture between the seasons or the liminal space between night and day, the liminal edges of medieval *mappaemundi* are powerful spaces of parchment that hold a great many things, including rich symbolism and hidden understandings of the medieval psyche. To gain a better understanding of the fringes of the Psalter World Map, and beyond that to gain a better understanding of the snapshot of time in which this artifact was created, I examined two major aspects at the edges of this *mappaemundi*. The first area I examined is the outer circle of the world, which includes multiple circular figures along the perimeter depicting twelve winds, all with humanistic faces in the center. This outer circle also includes different words that I examined. I also considered the “otherworldly

3. Unfortunately, due to a cyber-attack, this detailed record of the Psalter world map is currently unavailable at the time of publication for this article. The source I retrieved this information from cited this site, and so I too am citing the original location for this information.

4. For a more in-depth exploration of the contents in BL Add. MS 28681, see *Nigel Morgan's Early Gothic Manuscripts (II) 1250-1285* (London, 1988), pp. 82-5. Heather Wacha and Lauralee Brott also address the connection between the Psalter World Map and the other contents of the psalter in their article “Reframing the World in BL, Add. MS 28681.” *Imago Mundi*, vol. 72, no. 2, 2020, pp. 148-62, <https://doi.org/10.1080/03085694.2020.1748374>. Accessed 30 March 2024.

humanoids⁵ beyond the Nile River, depicted at the bottom right-hand portion of the map. These aspects of the Psalter World Map are each symbolic in different ways, and they each provide insight into the medieval psyche.



FIGURE 1. PSALTER WORLD MAP © BRITISH LIBRARY BOARD ADD. 28681, F.9R

5. “Monsters” is a deeply nuanced term that has been haphazardly tossed around in medieval scholarship. To remain sensitive to this kind of terminology, I have elected to use an alternative, more generic phrase instead.

Around the most distant circle of the earth on the Psalter World Map, there are twelve spherical shapes placed apart in equidistant fashion around the world's circumference. The spheres at the East (top), West (bottom), North (left), and South (right) are noted by their beige shade, and their slightly larger size as compared to the smaller, blue-gray spheres. Each of these spheres includes a humanoid face inside, displaying pursed lips as if they are blowing air. The four beige spheres represent both the four cardinal directions and the four primary winds of the earth, which Mirka Grčić's refers to as "windmills" (Grčić 29). There is also writing along the circumference of the outer circle that reads:

Subsolanus (eastern); Ve[n]tus Eurus (east-southeast); Ventus Euronothus (south- southeast); Anster vel Nothus (southern); Libonothus (south-southwest); Ve[n]t[us] Aufricin[us] (west-southwest); Ventus Zaphirus (western); Vent[us] Corus (northwest); Ve[n]t[us] Circi[us] (north-northwest); Ve[n]tus Septe[n] trion[alis] (northern); Aquilo (northeast); Ve[n]t[us] Wultur[us] (east-northeast wind). (29-30)

While Grčić makes a compelling argument for the spheres being windmills, it seems there is something more to them. In her in-depth study on medieval wind diagrams and cosmology, Barbara Obrist comments on the nature of the presence of winds on medieval maps, stating "winds always remained a problem with respect to the order of nature and had, as it were, a basic dual character and role" (37). Obrist explains that the winds were viewed as both irregular and, at times, violent, and that in Western cosmology irregularity was, at times, associated with violence and irrationality, and by proxy sometimes associated with evil (37). However, these same winds are the ones that would fill sails and allow for necessary seafaring travel, and in the twelfth and early thirteenth centuries the cardinal winds were the "foremost regulators of spatial and temporal cosmic order," keeping the other winds represented here as the smaller, blue-gray spheres, regulated and in order (73). What's more, around the time of the making of the Psalter World Map, the winds were seen as "direct agents of God, carrying out his will, sometimes as messengers, namely angels, sometimes as spiritual creatures subordinate to angels" (76).

In the dichotomy between the four cardinal winds and the other winds between them, there is a clear tension between control and chaos. It is a precarious balance to be held within one space upon the map, and this is only one interpretation of many possibilities. Here on the fringes of the Psalter World Map we see a symbol with multiple interpretations, each of them seeming to work together and against each other to create a complex meaning overall. These spheres can serve more than one purpose at the same time; they do not need to be confined to only windmills or only representations of the

cardinal directions. Instead, they may also represent the delicate balance between order and chaos and how those two forces might exist together in the same space within the world. These spheres might also represent irregularity and by proxy evil, while also representing elements of the natural world that may act as agents of God. As we will see with the creatures at the bottom of the *mappaemundi*, as well as the otherworldly humanoids on the other side of the Nile, this map is full of liminal elements that cannot be defined by one category. Instead, there is a duality to each of these elements, which may comment upon the mutability of human nature.

Van Duzer comments upon the “surprisingly malevolent expression” of the West Wind and notes the careful positioning of this wind in relation to the wyverns⁶ directly below (181). He also notes that the darkened expression of the West Wind is juxtaposed to the East Wind, which lies closest to Christ at the top of the map. Here, the East Wind is positioned under Christ, at the top of the sphere and the West Wind is at the bottom, directly above the wyverns. Because there is great significance hidden behind these illustrations, the positionality of the figures in relation to one another and to aspects of the *mappaemundi* are important. When Mittman suggests maps are all about relationships, he means that in order for one place to have meaning, we must examine first how it is placed in relation to other areas and aspects of the map (42). What then does the positionality of these winds to Christ and the creatures at the bottom of the map tell us?

Starting first with the figure of the West Wind, or zephyr, at the bottom of the map, it is clear that the expression presented is, indeed, a much different one than those we see from all of the other spheres. The eyebrows are downturned in a sort of frightful furrowing and, while time has slightly distorted the sphere’s mouth, we can tell that it is actively blowing wind by the marking on the face’s cheeks. The mouth may seem upturned, but on the left corner of the mouth, it looks as though there is a marking that may resemble a fang protruding from it, which further alludes to a hellish appearance. In his study, Grčić notes that “the lower part of the painting presents an underground world dominated by two conflicting two-legged feathered dragons, as symbols of trickery and hatred” (30). The sphere’s malevolence is such because of its proximity to what might be considered hell upon the map. Van Duzer also comments upon these wyverns, stating that they “allude to evil” partially because of their proximity to the malevolent West Wind. Similar wyverns can be seen in Andrea Bianco’s *mappae mundi* of 1436 as well as Thomasin von Zirclaere’s *Der welsche Gast*, which is dated to 1256, and they are designed to indicate the presence of hell (Van Duzer 181). On the Psalter List Map, the map on

6. Wyverns are the dragon-like creatures at the bottom of the map.

the verso of the Psalter World Map, Christ's feet can be seen standing upon the head of the two wyverns, likely indicating Christ's triumph over death and hell, and marking his power and superiority to these hellish creatures, and thus hell itself.

On the other side of the map, the East Wind's more benevolent and peaceful expression may be so not only because it is the direction which the sun rises from, but also because of its proximity to Christ and the heavens above. Symbolically speaking, it makes sense that the directions in which the sun, a representation of light and goodness, rises and sets is significant, and so to see a more sinister wind expression placed strategically on the lower fringes of the map tells us that the darkness that comes once the sun sets is directly correlated to the evils and dangers of the lower half of the map: a potential allusion to hell. Here, proximity and placement of specific creatures and expressions play a significant role in our understanding of the Psalter World Map as a whole.

It is interesting, then, that Grčić also comments upon the presence of many spherical shapes beyond the winds as a representation of the perfection of God's creation (29). We see the halo around Christ's head and the angel's heads, the circular shape of the world itself, the circle within the heart of the map, which is the holy city of Jerusalem, the circle representing the Garden of Eden placed "as a ladder to heaven," and finally the T-O map held within the left hand of Christ⁷ all within the scope of this *mappaemundi* (Dora 292). The winds also fall into this circular category and share this continual perfection with no beginning and no end. This shape harkens back to Revelation 22:13, which states "I am the Alpha and Omega, the beginning and the end, the first and the last" (KJV). Just as the circle, the Christian God has no beginning or ending point. He is continual, and in his nature of never having a starting or stopping point, he is perfection. In this sense, the circle is meant to also represent that same perfection that has no beginning and no end. How, then, can the circle that makes up the West Wind be perfect and somehow represent the evil that is positioned directly below it? The answer is simple: it does not have to be only one or the other. Like human nature, the sphere can represent multiple things at once, making it liminal and transitional.

Beyond the Nile River on the bottom right-hand section of the Psalter World Map, there are fourteen humanoid figures, some of which possess bizarre, otherworldly qualities. According to Mirko Grčić, Conrad Miller identified all fourteen of these creatures based on descriptions he studied from sources originating from both Pliny and Solinus. Miller's list of creatures is as follows:

1. [Phanesii] - Panotti, a people with huge ears with which they can cover themselves;

7. Van Duzer states that this is a "symbol of power" (181).

2. [Sine naribus] - People without noses, whose faces are weakly expressed;
3. [Gens ora concreta] - People with other mouths, who feed themselves by drinking through a reed tube;
4. [Gentes carent lingua] - People without tongues, use nodding and gestures to talk;
5. [Psambari] - People without ears;
6. [Marmini Ethiopes] - Mauritians or maritime Ethiopians - people with four eyes, and therefore very accurate in archery;
7. [Sciapod / Monoculi] - People with one very large foot and one eye, lying on their back and use their foot as an umbrella;
8. [Amymtreae] (Gens labro prominente) - People with oversized lower lips used for face protection from solar heat;
9. [Blemmye] - People who have eyes and mouths on their chests;
10. [Oculis in humeris] - Epiphagi, people without a head with eyes on their shoulders;
11. [Trocodites] - Troglodytes, inhabitants of caves who eat wild animals and snakes;
12. [Artobatitiss] - People who walks on all four legs;
13. [Anthrophophagi] - Cannibals;
14. [Antrophophagic Cynocephales] – Cannibals with dog heads (Grčić 42-43).

From these descriptions of the otherworldly creatures, it is impertinent to note the liminal state in which each of them finds themselves. They are not entirely beast or monster, and not entirely human either. They reside in a threshold space between man and monster, which seems to be a recurring theme in medieval literature.⁸ In his study on medieval misericords, Paul Hardwick looks at depictions of the Irish “Wild Man,” whose character can “manifest not only Otherness, but also potentially mutability for good or ill” (140). This figure is not only man, but it is wild and untamed as well, being both wild and man, yet not wholly one or the other. He rests in between, much like the otherworldly creatures seen on the Psalter World Map. Hardwick goes on to analyze this figure, stating in general about these creatures: “the part-human hybrids may well

8. Consider figures like Grendel, Beowulf, and Grendel’s mother. In Old English, contradictory and ambiguous phrases are used to describe these figures. For example, Grendel’s mother is called *ides*, or “lady” in a sense that she is a woman with a high social standing, yet she also displays monstrous qualities that are not considered to be the typical behavior of a “lady” of a court. In this way, Grendel’s mother is a paradox of sorts, inhabiting the humanistic lady and the monstrous within her one form. She and the otherworldly creatures on the Psalter World Map, are liminal.

interrogate the very definition of the line between man and beast. When these hybrids are present in a devotional context, whether that be a misericord or a manuscript, it is surely their symbolic function which is paramount” (147). Much like the significance of the symbolism of the winds, the wyverns, and the figure of Christ both being outside and a part of the map as a whole, there is more to these otherworldly creatures than meets the eye. The significance of these creatures is in what they represent in their very nature and within their proximity to other aspects of the map.

Considering the liminality and mutable nature of these otherworldly figures, it seems as though they may have helped a medieval audience make more sense of the wide, unknown world. The fringes of the map were, as Mittman states, a place to shun the undesirable outcasts of society, especially when we examine these “undesirables” in relation to the center of the map, which stands as a holy place (41). There is a juxtaposition present between the fringes and the center of the map, where the wondrously strange and the divine reside respectively. If we follow Mittman’s suggestion to read this map in stages, looking first at the inner ring and then working our way outwards, we see even clearer the distinction between the divine center and the dangerous edges. When dealing with these strange creatures, they are a mingling of human and monster, or the socially acceptable and unacceptable. It is no secret that medieval thought found a direct correlation to inner sin and outward appearance, thus furthering the idea that these otherworldly creatures were sinful in nature. This train of thought would also lend itself as further evidence to the fact that these creatures were strategically placed at the lower fringes of the map, far away from Jerusalem and Christ, and close to what might be hell. These creatures, in the end, may serve as manifestations of the anxieties of inner sin being displayed in an outward fashion and also as an exploration of the duality of human nature, which, at times, is fueled by reason and sometimes by animalistic passions.

After closely examining each of these aspects on the fringes of the Psalter World Map, their connection and their relationship with the English psyche can be addressed. In his introduction to *Maps and Monsters in Medieval England*, Asa Mittman notes that the medieval population widely defined themselves through “dependent differentiation,” or defining themselves through their differences to others (5). However, understanding also that medieval *mappaemundi* are all about relationships and how certain aspects and places are set in relation to one another, medieval people also defined themselves through proximity or distance to certain locations, and thus ideas that these aspects of the map hold symbolically. In Yi-fu Tuan *Topophilia*, Tuan notes that humans tend to view the self as the center, which adds to a “we/they” mentality, where “we” are centrally located, and “they,” or the “other,” is outside of the center. As these “others” are positioned further and

further from the center, they “lose human attributes in proportion as they are removed from the center” (Tuan 30-31). On this particular map, England itself is on the lower fringes, across the way from creatures like blemmye and anthropophagi who are displaced from the center and thus gain monstrous qualities, and who are also positioned near the malevolent-looking West Wind that does not lie too far away from the wyverns on the bottom of the page. England is positioned far closer to these liminal edges and further away from the center of the map, away from the holy city of Jerusalem, from Eden, and from Christ sitting atop the entire map. This distance certainly speaks volumes on how the English felt about their distance to the holy within and beyond this world, and the physical placement of England on the Psalter World Map both allowed for an exploration of these anxieties, but also reinforced them as well.

In their book, *Maps: Finding our Place in the World*, James Akerman and Robert W. Karrow comment upon the practice of mapping the imaginary and claims that these maps are “emblems of our desire to know and possess . . . the true, the beautiful, and the good, those treasures that so often elude us in real life. Our job as readers is to recognize these maps for what they are: fantasies about . . . our quest for knowledge itself” (270). The quest for knowledge is nothing new to the human condition. Humans are designed to question, to make sense of the world around them, and to try and understand how they fit within the scheme of it all. Ultimately, it is quite plausible that the English audience that created and gazed upon the Psalter World Map, particularly those keeping a scribal tradition or those wealthy enough to commission such work and literate enough to read the extensive rubrics paired with some *mappaemundi*, were filled with questions and anxieties concerning the world at large and their place in it (Woodward 286).⁹ They were acutely aware of their distance from Christ, both in the physical distance from the holy site of Jerusalem to their distance to Christ through the world and the cosmos separating them. The medieval *mappaemundi* was a safe, controlled environment where medieval people could wrestle with, and solidify, their anxieties of being placed on the fringes of the world, and it was a place to explore the liminality that is inherent to the human condition. What we ultimately see from the Map Psalter is a complex, multi-layered exploration and expression of a community’s place, fears, and understanding of their relationships with the rest of the world.

9. For a more exhaustive study on medieval *mappaemundi* and their intended audience, see David Woodward’s chapter in *The History of Cartography*, Volume 1, pp. 286-370. Much like Woodward states, the intended audience for medieval *mappaemundi* was entirely dependent upon the specific type of map in question, and an exploration of that topic is so vast and nuanced that it cannot be explored at the length that is required for this issue here.

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Powerful Words: Wealhtheow's Use of Imperatives in *Beowulf*

Kat Kolby

ABSTRACT

How powerful were the women in Old English poetry, particularly in the well-known poem *Beowulf*? There are few female characters within the poem, and only one of them has a speaking role. Wealhtheow, queen of the Scyldings, is a peace-weaving wife to Hrothgar, one of the primary characters alongside Beowulf. Discussions of the specifics of her role as peace-weaver between her home nation and that of Hrothgar are mired in gender role assumptions on the parts of critics throughout the ages. Some have viewed this title as one denoting property: Wealhtheow is traded to Hrothgar as a gift to create peace between nations. Others acknowledge that peace-weaving is more of an active position, wherein Wealhtheow is a diplomat between nations, weaving peace herself. I argue that her power as a leader is best exemplified by her use of the imperative case. By examining the frequency of this case and the choice of imperative verbs within Wealhtheow's speeches, I demonstrate that she issues commands more often than any other speaker, often with long-standing expectations on those to whom she speaks.

Beowulf contains few female characters, only one of which has a speaking role. Much debate has circulated as to just how powerful these characters are, yet there is little examination of their issuing of commands. Wealhtheow is the only woman with readable speech acts in the poem. After first encountering her character and reading her speeches, I was left wondering just how much sway this *freoðuwebbe*¹ wielded. Wealhtheow is the queen of the Scyldings (clan of Danes) and wife to Hrothgar, and I argue that she is one of, if not the most, practically and politically powerful characters in the poem by way of her use of imperatives in comparison with any other character's use in a speech act. Prior to my analysis, however, one must consider how some of our current misconceptions regarding the gender roles within the poem were constructed—primarily how certain source materials may have influenced perceptions of the female roles therein. Outside of our own cultural assumptions projected upon the poem, many of us were first introduced to *Beowulf* in high school, if at all, and this is where some of our gendered misconceptions probably began regarding the roles of women in the poem. If not high school, then we were most likely introduced to the poem through Klaeber's renowned edition of the text—one in which Wealhtheow has been glossed as a mothering, nurturing figure rather than one of power.

Wealhtheow's words can lose some of their impact and intensity during the translation process, with some of the choices on the part of the translator falling back on gendered connotations for terms with far broader scopes of meaning. Josephine Bloomfield writes about understanding the "social, familial, and political roles of the aristocratic Anglo-Saxon woman" from a reading of Wealhtheow and how Klaeber's glossing of certain words consistently as "kind" or "kindness" "transformed [her] from peace weaver and power broker to tender maternal care giver:" her speeches become lessened and "altered by this series of uniform glosses to emphasize personal affection over tribal necessity."² Bloomfield argues that, because of Klaeber's upbringing and the roles of women in Germany throughout his life, his "glosses seem potentially to reflect not Old English polysemy but the biases of his culture."³ There are five words that the poet uses both in the descriptions of the queen and within her speeches that all could have alternate translations that Klaeber consistently glosses, and only in the occasions connected to the

1. Peace-weaver. Unless otherwise noted, all translations are my own.

2. John P. Bloomfield, "Diminished by Kindness: Frederick Klaeber's Rewriting of Wealhtheow," *Journal of English and Germanic Philology* 93, no. 2 (January 1, 1994), 184.

3. Bloomfield, "Diminished by Kindness: Frederick Klaeber's Rewriting of Wealhtheow," 185.

queen, as “kind” or “kindness.”⁴

Bloomfield makes a series of excellent points regarding all five terms (*milde*, *glæd*, *freondlāþu*, *liðe*, and *gedefe*) and how each gloss of the term should align with Wealhtheow’s ability to call for action and make her political moves as peace weaver among her king and Beowulf rather than implore them to be kind: “her concern is not with gentle interpersonal behavior but with the reins and passage of power and the treachery possible in such passage.”⁵ It is Bloomfield’s opinion, and my own, that she does not demonstrate “motherly kindness,” but instead “the penetrating rationality and practicality with which she vigilantly ‘weaves peace’ for her tribe.”⁶ Much like we may fall prey to viewing women in Old English poetry through a modern lens, Klaeber seems to have simplified Wealhtheow by way of confirmation bias and has reduced her to his concept of woman rather than representing her how she is within the context of the piece or would have been historically.

If, however, one was introduced to *Beowulf* in high school, Daniel F. Pigg’s article, “Rethinking Masculinity Studies in the Curriculum: So What Do We Do about *Beowulf*?” outlines how one of the most available abridged versions of the poem, often found in textbooks, “distorts that understanding with respect to the status of masculinity, and thus, thwarts the forms of reflective gender representation both inside and outside the text.”⁷ It does this by representing “masculinity without question...a very unmedieval position as we now understand it.”⁸ This is because “no high school anthologies have ever included” scenes regarding Beowulf’s “own controlling of his temper and diplomatic posturing, the warrior Beowulf’s contact with Queen Wealhtheow, and the warnings of Hrothgar about the growth of pride that becomes destructive.”⁹ These are all scenes that highlight not only the warnings for a purely aggressive-masculinist mentality in the hero but also establish power that Wealhtheow wields over her male counterparts. The lack of introduction to these key scenes could also be a source for our understanding of how women interact within the text or should be viewed in cultural context of the poem—there is no basis to make judgments if there is no source material to analyze.

Of specific interest to me is Pigg’s exploration of Wealhtheow’s interactions with

4. Ibid, 184.

5. Ibid, 195.

6. Ibid, 196.

7. Daniel F. Pigg, “Rethinking Masculinity Studies in the Curriculum: So What Do We Do about *Beowulf*,” *Journal of Curriculum Theorizing* 21, no. 4 (December 22, 2005), 13.

8. Pigg, “Rethinking Masculinity Studies in the Curriculum: So What Do We Do about *Beowulf*,” 13.

9. Ibid, 14.

the protagonist. In his section concerning the queen, Pigg immediately acknowledges that the “role of women in *Beowulf* is an important one that many viewers fail to recognize on first acquaintance” and that “the female voice is also significant in critiquing male behavior.”¹⁰ The queen’s voice is of particular interest—not just for its ability to critique but also for its ability to enact change. Wealhtheow, according to Pigg and many other scholars, “was a skillful diplomat, preventing her husband Hrothgar from making a fatal mistake.”¹¹ This mistake refers to Hrothgar’s wanting to leave his kingdom to Beowulf instead of his own sons or nephew after Beowulf successfully defeats Grendel in battle. Without students engaging with these sections, they would be unable to understand the political power wielded by Wealhtheow in this passage.

The issue with Pigg’s discussion comes later, wherein he uses the word “warning” to describe Wealhtheow’s speech to her husband.¹² This, alongside other scholars’ readings of her speeches as warning, reminding, urging, or imploring rather than directing,¹³ renders the queen as less powerful than she is—even reduces her to a gendered stereotype of all talk and no action. The talk is the action, and language regarding Wealhtheow “suggesting” action on the part of others is inaccurate. Further and more extreme, the women characters of *Beowulf* “have been customarily looked upon as passive figures, shadows in an otherwise brilliantly illuminated heroic world... Wealhtheow is the ‘tragic queen,’ caught in the net of male political intrigue.”¹⁴ Wealhtheow is not “caught” in the net, she is weaving it herself through her continuous commands given in her speeches. Another gendered stereotype to be dismissed is that of the peace-weaver as an object or possession of her king. Often, these accounts consider peace-weaving to be the singular act of exchanging the bride rather than the continuous actions of the bride in their subsequent marriage.

10. Ibid, 16.

11. Ibid, 16.

12. Ibid, 17.

13. For more examples of this kind of language concerning Wealhtheow’s speeches, see Carol P. Jamison, “Traffic of Women in Germanic Literature: The Role of the Peace Pledge in Marital Exchanges,” *Women in German Yearbook* 20, no. 1 (January 1, 2004), 13–36, <https://doi.org/10.1353/wgy.2004.0012>; Victoria Wodzack, “Of Weavers and Warriors: Peace and Destruction in the Epic Tradition,” *Midwest Quarterly: A Journal of Contemporary Thought* 39, no. 3 (March 1, 1998), 253–62, <https://search-ebscohost-com.ezproxy.mtsu.edu/login.aspx?direct=true&db=mzh&AN=2003531999&site=eds-live&scope=site>; and Jacek Olesiejko, “Wealhtheow’s Peace-Weaving: Diegesis and Genealogy of Gender in *Beowulf*,” *Studia Anglica Posnaniensia* 49, no. 1 (March 1, 2014), 103–23, <https://doi.org/10.2478/stap-2014-0005>.

14. Helen Damico, Olsen Alexandra Hennessey, and Alexandra Hennessey Olsen, *New Readings on Women in Old English Literature* (Indiana University Press, 1990), 14.

In his brief article concerning a legal connection to the name *Wealhtheow*, Nathan A. Breen discusses how the queen could be named after a “legally defined group of people who, while not natives, existed in the kingdom and had certain limited legal rights” or ‘*ðeowwealh*.’¹⁵ These were essentially slave-like people, and Breen does note the possible irony in its transformation into the name of the commonly described as a “free” queen. This concept of ownership of her person, however, is common among scholars. Christopher Fee, in discussing the similarities between treasure giving and the exchange of a peace-weaving bride, essentially likens peace-weavers to the golden artifacts bequeathed to thanes as social transactions. Fee states that women in these roles are objects “used to affect social cohesion.”¹⁶

While there were many examples of those considering peace-weaving as an act among nations rather than the actions of the bride in question, opinions have since shifted.¹⁷ In 2021, Erin Sebo and Cassandra Schilling wrote about the issues of peace-weavers and how the “current consensus, led by scholars such as Sklute and Cavell, is that peace-weaving as a term refers to a practice—the active fostering of peace through diplomacy—and not to a category of women.”¹⁸ Throughout their article, they dismiss much of the projection of modernized sexism onto these characters of medieval texts and situate peace-weaving as an act that requires intense emotional fortitude and active political involvement. These women are meant to appease the group they are married into, to weave peace with them by making them happier and more amenable towards the family from which the peace-weaver hails, and to learn to dismiss any anger that they may have been harboring for, presumably, previous foes. Despite the possible sadness or resentment these women may have towards their situation, peace-weaving wives must control and overcome these emotions if they are to be effective in their role. Furthermore, their involvement in the court, by exchanging gifts and participating in courtly rituals, places them in league with their kings as performers of the same rites with the same

15. Nathan A. Breen, “*Beowulf*’s *Wealhtheow* and the *ðeowwealh*: A Legal Source for the Queen’s Name,” *American Notes & Queries—a Quarterly Journal of Short Articles Notes and Reviews* 22, no. 2 (April 1, 2009), 2, <https://doi.org/10.3200/anqq.22.2.2-4>.

16. Christopher Fee, “‘*Beag & Beagroden*’: Women, Treasure and the Language of Social Structure in ‘*Beowulf*,’” *Neuphilologische Mitteilungen* 97, no. 3 (1996), 287, <https://www.jstor.org/stable/43346397>.

17. For other empowering interpretations of *Wealhtheow* and updated views on the women of Old English literature, see also: Damico, Hennessey, and Olsen, *New Readings on Women in Old English Literature*.

18. Erin Sebo and Cassandra Schilling, “*Modthryth* and the Problem of Peace-Weavers: Women and Political Power in Early Medieval England,” *English Studies* 102, no. 6 (August 18, 2021), 638, <https://doi.org/10.1080/0013838x.2021.1966966>.

privileges.

Another major counter to views like those of Fee who liken rings to women who are gold-adorned is Helen Damico's *Beowulf's Wealhtheow and the Valkyrie Tradition*. A must read for anyone looking deeper into Wealhtheow, Damico draws attention to the similarities between a woman who is gold-adorned or adorned with rings as one who could be wearing armor or dressed for battle. While much of the book is dedicated to Damico's careful study of similarities between Wealhtheow and other heroic women of Valkyrie legend, it is important for my purposes to point out that Damico would agree with me that Wealhtheow's "mode of expression is the imperative...that lends assertiveness to the queen."¹⁹ Jacek Olesiejko also points out the significance of Wealhtheow's place as the "only female speaker in *Beowulf*," which suggests that she has a "privileged position" in the text.²⁰ My issue with this analysis comes when these speeches are described as using "masculine language," rather than affording the character with the power of her own speech. I also disagree with Olesiejko's insistence that Wealhtheow is merely a manifestation or "icon" of peace-weaving rather than a standalone character to be examined for her innate value as a complete person.²¹ Clearly, some cultural assumptions regarding women are at play in this work as well.

Olesiejko also uses words like "requests" and "questions" to describe Wealhtheow's speech acts, and these, like those previously mentioned, reduce the queen's speech to one of mere words rather than directives that call for immediate action.²² In her article "Speaking of Nostalgia in *Beowulf*," Mary Catherine Davidson legitimizes Wealhtheow's speeches as being unconventionally and uniquely heroic in their use, also due to the use of imperatives.²³ It is this use that primarily interests me and marks Wealhtheow as particularly powerful. Importantly, the "imperative is used exclusively in the second person and marks directives."²⁴ Tanja Rütten points out that the imperative usually shows up more often in reports of speech acts rather than direct speech acts, or that the use of imperatives shows up far more often when we are being told what

19. Helen Damico, *Beowulf's Wealhtheow and the Valkyrie Tradition*. The University of Wisconsin Press, 1984, 8.

20. Olesiejko, "Wealhtheow's Peace-Weaving: Diegesis and Genealogy of Gender in *Beowulf*," 103.

21. *Ibid*, 104.

22. *Ibid*, 104.

23. Mary Catherine Davidson, "Speaking of Nostalgia in *Beowulf*," *Modern Philology*, November 1, 2005, <https://doi.org/10.1086/506533>, 150.

24. Tanja Rütten, "Speech, Texts, and Choices from the Modal System: Mood Distribution in Old English Sermons," *Nordic Journal of English Studies* 16, no. 1 (2016), 190.

someone said to someone else rather than in reproductions of speeches given. Importantly, Rütten's study deals with sermons and other religious texts, so the usage of imperatives would denote when the people being addressed are directly told to do things in a spiritual sense—something with dire importance in the cultural context of Old English poetry. While the subject matter of this study is not quite applicable to my own, the idea that imperatives are both directives and are most often found in the narrative function of a reported speech act would mark Wealhtheow's speeches as interestingly unique within *Beowulf*.

I began looking at Wealhtheow's speeches as unique when I first counted the number of imperatives that I saw in them and wondered if she had used them significantly more often than her male counterparts—most specifically Hrothgar, her husband, and the protagonist Beowulf. I then began counting imperatives in every speech act within the poem to see if my theory was correct. Also of importance were the kinds of imperatives used within each speech—were these characters telling others to have a seat or telling them to be or exist a certain way? In what contexts? These kinds of directives carry different weights of power—as telling someone to sit down is a singular act while telling someone to *be* something is an order in perpetuity. It is interesting to see who is using these verbs as imperatives and how often it is done.

I charted and calculated the density of each character's use of imperatives per line of speech. I included interjections in my count of imperatives because of their variability and possibility of existing as a directive (i.e., "listen" or "let us" for *hwæt* or *uton/wutun*). The following table tracks my findings from every speaker in the poem—including the unnamed coastguard, the last survivor, and the messenger found at the end. The first column lists who is speaking, the second column gives the total number of lines of speech from the speaker in the entire poem, the third column lists how many words were in the imperative, the fourth column lists how many of these imperatives were conjugations of the words *beon* or *wesan*,²⁵ while the final, fifth column calculates the density of imperatives used on average per line of speech. The speakers are given in the order they appear in the text. All names have been modernized. I have placed Wealhtheow's line in bold, as its results are, without a doubt, the most surprising and important for the purposes of this paper.

25. Most often: To be, exist, become (According to Bosworth-Toller's Anglo-Saxon Dictionary Online, <https://bosworthtoller.com/>)

Speaker	Line Count	# Imperatives	# <i>beon/wesan</i>	Density/line
Coastguard	38.5	2	0	0.0519
Beowulf	584.5	17	4	0.0291
Wulfgar	31	2	0	0.0645
Hrothgar	258.5	20	1	0.0774
Unferth	23	0	0	0
Wealhtheow	35	14	5	0.4
Hygelac	12	0	0	0
Last Survivor	20	2	0	0.1
Wiglaf	95	3	0	0.0316
Messenger	128	0	0	0

Table 1: Calculating the density of imperatives in speakers in *Beowulf*

Despite my inclusion of interjections, none of which are from Wealhtheow, she has the highest density of imperative use by far. She is seconded by the last survivor, whose imperatives do not have a particular recipient (one of which is directed at the earth itself), while third goes to Hrothgar who has a speech commonly referred to as a sermon—yet she still has more directives than he. Not only this, but she also has the highest use of *beon/wesan* as an imperative. This alone is impressive, but when considering that she only has thirty-five lines of speech, this becomes significant. The poet, often viewed as highly formulaic and a brilliant artist capable of intense subtlety, has laden her speeches with this mode of speaking and has done so for a purpose. While I cannot be certain due to the unprovable authorial assumptions involved, the purpose must at the very least be to showcase Wealhtheow's ability to issue directives to her king and those in her court. An examination of the speeches in question is worthwhile to consider which kinds of orders she is giving and to whom. Both speeches follow Beowulf's successful wrenching off Grendel's arm and assumed ending of the hall's horrible predicament (i.e., prior to the attack from Grendel's mother).

The first speech, on lines 1169-1187,²⁶ is directed at Hrothgar and contains six of her fourteen imperatives: *onfoh*, *wes*, *spraec*, *beo*, *bruc*, and *laef*. Wealhtheow is telling Hrothgar what to do with four of these: *onfoh þissum fulle*,²⁷ *ond to Geatum spræc*

26. For this and all Old English text of *Beowulf*, I will use R. D. Fulk et al., *Klaeber's Beowulf and The Fight at Finnsburg*, 2008.

27. Take/receive/accept this cup.

mildum wordum,²⁸ *bruc þenden þu mote manigra medo*,²⁹ and *ond þinum magun læf folc ond rice*.³⁰ The first of these is fulfilling the ceremonial goings-on in the hall, as she has just presented him first with the cup. The second is telling him how to act with his guests, most specifically *swa sceal man don*.³¹ The third is providing advice and counsel on how to receive the boons of this victory with an obvious notion that it might be short-lived, while the final imperative is the most crucial to Wealhtheow's responsibilities as queen. She is directing Hrothgar's succession and telling him to leave his lands and people to the hands of his own kinsmen. This is not a request, nor is it a warning as many have described. This is a directive—a command—on how to handle his kingdom moving forward, and it is following Hrothgar's giving Beowulf family heirlooms and great riches and the Lay of Finn has been sung.

Wealhtheow fears that Hrothgar will leave Denmark to his champion and forget the consequences of poor political movements that were just illuminated in one of their favorite songs. She is, essentially, determining the future of Denmark—be that for the good or bad given the later events for the nation—which places a considerable amount of power at her feet. These imperatives deal with the hall and the future of her kingdom, while the others deal with Wealhtheow giving out directives on how Hrothgar should be as a man and a king. She first tells him *þu on sælum wes*,³² which denotes again how he should react to the joyous news of Grendel's defeat. After explaining how to speak to the Geats, she also advises him (and endorses his previous giving behavior) to *beo wið Geatas glæd, geofena gemyndig*.³³ These imperatives all sound akin to maxims on how to act and be a good king and, coming from a woman, they seem out of place to a modern audience. However, Wealhtheow is her king's chief advisor and partner in this speech and is, just as much if not more than Hrothgar himself, determining how the king should behave and rule moving forward. This is a queen running her kingdom in real time through speech.

The second speech on lines 1216-1231 is directed at Beowulf and contains the remaining eight imperatives: *bruc*, *neot*, *þeo*, *geþeoh*, *cen*, *wes*, *wes*, and *beo*. This speech also contains the most important line—her closing one. It is important to note that this speech is separated into the first section concerning what Beowulf should do and the second section concerning how he should be. This shift in type of imperative amplifies the speech over time, showing Wealhtheow's power over her guest growing as she continues

28. And to the Geats speak with mild words.

29. Enjoy, while you can, your many rewards.

30. And to your kinsmen leave folk and kingdom.

31. As a man should do.

32. Be thou in happiness.

33. Be with the Geats gracious, mindful of gift-giving.

to speak. It is also significant that she is speaking this way to the very champion that the entire hall is celebrating—the man who just came to rid her kingdom of its longest standing tragedy—and yet she still has commands, as well as her own gifts, to give him. In giving her gifts, she tells him to make use of (*bruc, neot*) a fabled necklace and mail coat, essentially emboldening her gift-giving with imperatives that highlight their usefulness. She also tells him to succeed and prosper (*þeo, geþeoh*) in another bout of well-wishing or what could be seen as a royal endorsement for his future. In telling him how to behave, she directs him to *cen þec mid cræfte*.³⁴ *Cræfte* here could mean strength, as he has just defeated Grendel by means of his bare hands; however, I argue that this could also be a formal directive to declare himself as one who has power that deserves recognition—perhaps an advisory note on how to behave upon returning home.

Wealhtheow's final three imperatives serve to dictate what Beowulf's life should be like and how he should treat her family moving forward. Much like the last speech, these final imperatives seem to hold the most power—the first of which serves as a directive in how to interact with her sons: *ond þyssonum cnyhtum wes lara liðe*.³⁵ She also blesses Beowulf in what feels like a royal decree: *wes þenden þu lifige, æpeling, eadig*.³⁶ Her final imperative returns to her sons and how Beowulf should act with them moving forward: *beo þu suna minum dædum gedefe*.³⁷ This, as Bloomfield points out, is telling Beowulf to “continue to observe ethical rules and to honor tribal debts as he had with Hrothgar.”³⁸ She is commanding Beowulf's future interactions with her sons and ensuring the safety of her kingdom with a foreign ally. Again, this is the queen's responsibilities and power playing out before the reader by way of issuing directives to her king and guest.

If we are to take Alfred Bammesberger's translation of the final line of Wealhtheow's speech—*druncne dryhtguman doð sƿa ic bidde*³⁹—we could add an additional imperative to our list above. This line is commonly translated as “the warriors have drunk well. They do as I bid,” taking *doð* to be the third person plural indicative and *druncne dryhtguman* to refer to the process of the hall-attendees getting drunk or becoming merry with alcohol, yet Bammesberger has pointed out that this could be read

34. Declare yourself with power.

35. And to these boys be gracious in counsel.

36. Be while you live, prince, blessed.

37. Be thou to my sons fitting in deeds.

38. Bloomfield, “Diminished by Kindness: Frederick Klaeber's Rewriting of Wealhtheow.”

39. Having drunk [from the cup], retainers, do as I bid!

in the second person imperative as well and as directly addressing the hall-attendees.⁴⁰ If this is the case, Wealhtheow not only has an even higher density and usage of imperatives but also is closing her speech to Beowulf by telling her *dryhtguman* to do as she bids. This directive leaves little, if any, room for refusal as an answer to any of her bidding to anyone—except, perhaps, Hrothgar who is not willing to go against her regardless. Further, it is also possible that she is referring to Hrothgar and Beowulf as her *dryhtguman*, or her own retainers, warriors, or men, as they are the only two she has just bid to do anything and would serve as the only two needing this final imperative. This is unlikely but would pose an even larger point towards her being the most powerful figure in the poem. Regardless, Wealhtheow does present as the most commanding character by way of issuing the most commands—more than Hrothgar to Beowulf in his famous “sermon,” and more than either man to their men by sheer number of imperatives per line.

40. Alfred Bammesberger, “The Conclusion of Wealhtheow’s Speech (‘Beowulf’ 1231),” *Neuphilologische Mitteilungen* 91, no. 2 (1990), 207–8, <https://jstor.org/stable/43345793>.

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Poe's Art of Seduction: Montresor as Author in "The Cask of Amontillado"*

Matthew Hutton

ABSTRACT

Herein I argue that the character Montresor, the narrator and protagonist of "The Cask of Amontillado," serves as Poe's fictional illustration of an author engaged in the creative process. Montresor, in his actions and in his recounting of them, executes a "plot" that puts Poe's theory of "unity of effect" to the test. Montresor seduces Fortunato just as Poe seduces the reader: through verbal craft. His intent is to induce terror, and the measure of his success is the measure of the degree to which he achieves maximum effect. Montresor's plan, his execution, and his delivery of the tale all exemplify the principles Poe outlines in "The Philosophy of Composition"—an essay published just months before "The Cask of Amontillado."

In the first section of the paper, I trace Poe's development of the unity of effect theory in the years leading up to the publishing of "The Philosophy of Composition." I then apply the theory to a close reading of "Amontillado." In the final section, I discuss the tacit contract between author and reader required for Poe's brand of horror. In observing the correlation between Poe's conception of the author and his fictional illustration of the author, we see how Poe sets the preconditions for 20th-Century genre fiction by placing the audience in the foreground—an emphasis that would find full flower in the age of mass media, when the distinction between "art" and "entertainment" would become immaterial.

***Winner of the Deans' Distinguished Essay Award**

In the climate of 19th-Century Romanticism, Edgar Allan Poe posed a challenge to the dominant conception of the author as a vessel of divine intuition. Poe rejected the cult of spontaneous inspiration he saw in the Transcendentalists and responded by championing the view of the author as a skilled tactician exhibiting a mastery of practical craft. His 1846 manifesto, “The Philosophy of Composition,” articulated Poe’s theory of unity of effect, through which an author uses deliberate techniques to sustain the reader’s attention, producing the intended effect by orchestrating details in accordance with the work’s inevitable denouement. In “The Cask of Amontillado” (1846), published just months after “The Philosophy of Composition,” Poe invents a protagonist whose exercise of control in executing a carefully hatched plot stands as a representative Poe’s ideal author. Poe’s professed techniques of composition—unity of effect, economy of language, reverse plotting—all directly correspond to Montresor’s fictive plot to seduce an unwitting subject, lead the subject through a labyrinth, and ultimately bury the subject alive. Montresor executes his plot in direct parallel to Poe’s ideal author by appealing to his subject through a carefully premeditated means of rhetorical seduction. As with the author, Montresor’s plot achieves its ends through the performative use of persuasive language.

I argue that Poe wrote “The Cask of Amontillado” as a deliberate application of his unity of effect theory as outlined in “The Philosophy of Composition”: a narrative proof that the effect upon a reader is measured by the degree of control the author is able to sustain throughout the totality of the work. Although the author does not proceed with Montresor’s barbarous intent in the narrative world of the story, his equivalent goal is to elicit fear and terror, the intended effect of the nascent horror genre anticipated by Poe.

Poe on Fire

“The Cask of Amontillado” may be Poe’s crowning achievement in demonstrating the art of authorial control. In the words of Poe biographer Arthur Hobson Quinn, “There is not one word wasted in ‘The Cask of Amontillado’” (500). The story is a carefully distilled exhibition of Poe’s unity of effect principle. At this stage in his career, Poe was especially fixated on the means through which to produce an effect upon the reader. “The Principles of Composition,” written just months prior to “Amontillado,” delineates his methods. In keeping with Poe’s compositional fixation upon crafting a flawless story, the character of Montresor thinks like an author and acts like an author. In Montresor’s machinations, Poe puts his theory to the test to its greatest extremes. Poe’s author is admittedly a manipulator of the reader’s attention, and here he paints a fictional portrait of a manipulator’s ability to choreograph events with monomaniacal precision. The protagonist’s “plotting” mirrors the author’s plotting. Montresor ensnares his subject

in a "plot" he has crafted to lead his subject into a position of total submission, just as Poe's aim is to fictively bludgeon a reader who finds pleasure in the vicarious experience of pain. Readers submit to the author, allowing themselves to be guided through the fictional world the author has constructed, "brick by brick," Poe's parlance. Montresor "plays" Fortunato with the kind of finesse a Poe-inspired author aims to play with the reader's emotions. The difference—the crucial difference—is that the author induces a horrifying experience to provide the reader with a cathartic experience. In horror, the reader consents to this transgressive delight to release repressed fear, shame, and aggression—the same phenomenon Aristotle defined as *catharsis* in his foundational treatise *The Poetics*. In the case of "Amontillado," Poe seduces the reader into becoming an imaginary accomplice to Montresor's crime by framing the story in Montresor's narrative voice.

The Amontillado Effect

As Jorge Luis Borges famously argued, the short story form better suits Poe's unity of effect theory than does the poem (Esplin). Poe's deconstruction of "The Raven" as an exemplar of his writing process in "The Philosophy of Composition" has puzzled many critics, some of whom have even called the piece satirical. In fact, the poem may not have even been Poe's first choice of material for explication. Poe wrote commercially by necessity, and at the time of the "Philosophy of Composition," "The Raven" had become a public sensation. Poe may have sought to capitalize on its success (Quinn 440). But Poe's unity of effect theory itself had gradually developed through a lifetime of trial and error as a narrative writer. The mixed reviews and relative lack of success of *The Narrative of the Life of Arthur Gordon Pym* (1837), his only attempt at a novel, posed to him a challenge in the ability to maintain narrative consistency for the full length of a novel. We see Poe subsequently honing his short story technique as his career unfolds, savoring the form's brevity and close circumscription of scope. Rapid denouement in a final culminating scene was his narrative instinct from the beginning, from the whirlpool in "MS Found in a Bottle" (1833) to the house crumbling into the tarn in "The Fall of the House of Usher" (1839). But unlike Montresor in "Amontillado," Poe's earlier first-person narrators were often discursive and verbose, at times sounding like mouthpieces for his own philosophical musings on human nature or, in the case of his fictional detective Auguste Dupin, the processes of mind. These were novel approaches to characterization and narrative voice, but they would often veer from Poe's later insistence in "The Philosophy of Composition" that every word of a prose narrative should be essential to its totality, a feat he arguably did not wholly achieve until crafting "The Cask of Amontillado" in 1846.

By 1846, Poe had fully leaned into prose over poetry, a transition coinciding with his concurrent career as an aspiring magazinist. Befitting his entrepreneurial approach

to distribution, "The Philosophy of Composition" sought a balance between artistry and commercialism. His insistence that *any* written work must be fashioned to be read in a single sitting may correspond as much to the demands of appealing to readers of periodicals as to an aesthetic principle of formal unity (Whalen 39). Capturing the attention of a reader perusing a periodical required economy of language; any excess exposition or extraneous plot diversion could lead the reader to abandon the piece at any moment. Thus, his continual emphasis is *effect*. To sustain such an effect in a tightly bound narrative space, the author must deliberate over each detail, each snippet of dialogue, each character gesture. Every last word, for Poe, must increase the reader's immersion, elevating tension until the story's climax, which in a Poe story nearly always arrives just prior to a quick denouement in the very final sentences.

Hatching the Plot

The seeds of Poe's theory appear in the years leading up to "The Philosophy of Composition" in his letters and reviews. In his 1841 review of Edward Lytton Bulwer's *Night and Morning in Graham's Magazine*, Poe writes, "in the true construction, the cause...is absolutely brought about by the effect," and once the plot is determined by the final effect to which it aims, "no part can be displaced without ruin to the whole" (624). As if foreshadowing "The Cask of Amontillado," Poe uses an architecture metaphor in the Bulwer review, referring to a well-crafted story as "a building so dependently constructed that to change the position of a single brick is to overthrow the entire fabric" (624). (A mixed metaphor, but in all fairness, Poe had not yet mastered unity of effect.) Later, in "The Philosophy of Composition," he concludes that "it is only with the denouement constantly in view that we can give a plot its indispensable air of consequence, or causation" (475). In his 1842 review of Hawthorne's *Twice-Told Tales*, Poe devotes more time to theorizing on short story technique than discussing Hawthorne's work. He appears fixated on authorial control in the temporal confinement of a short story. He writes, "In the brief tale...the author is enabled to carry out his full design without interruption. During the hour of perusal, the soul of the reader is at the writer's control" (692). Notably, the control he extols is not just of the mind but of the "soul." The reader is not just interested but induced to inhabit the author's entire fictional "design." This construction can only be held together if the tale is read in a short sitting "without interruption." Ceaseless control requires a carefully premeditated course of events, a kind of honed expertise. In the Bulwer review, Poe even adopts a professional sort of rhetoric, referring to "the management of imagination" through "felicity of execution" (616).

Poe takes pains to make his own presence behind the scenes invisible. True to the creative writing maxim "show don't tell," narrative effect is achieved not by

interpolation of the narrator's interpretive thoughts, but through the interplay of action, detail, and diction. The reader is more engaged by the concrete than by abstraction and molding the contours of the concrete requires careful construction. If the author does not begin with the end in mind, components of the narrative will stray from its totality. It is a matter of combining existing components as opposed to conjuring them from the ether *ex nihilo*. The process of creation must unfold in reverse sequence from the narrative's temporal unfolding, from effect to cause, phenomenon to source. Concrete details are called forth only after predicting a likely conclusion, and only with this end in mind can the tale-spinner select relevant detail to lead the reader to the climax. Though deemed a Dark Romantic, Poe's artistic expression requires not just inspiration, but industry. For Poe such industry rests in the hands of the artist, not in the hands of the gods.

The Literary Histrion and the Mathematics of Performance

Published in *Godey's Lady's Book* in November of 1946, seven months after "The Philosophy of Composition" (*Graham's*, April 1846), "The Cask of Amontillado" exhibits an almost seamless narrative architecture. The action occurs in a single scene, in a time span not far exceeding the amount of time the story takes to read. The contours of the plot are shaped through a dialogic exchange between Montresor, the devilish plotter, and Fortunato, his decidedly unfortunate victim. Unlike the narrators of Poe's other celebrated first-person confessionals, "The Black Cat" and "The Telltale Heart," each published in 1843, this narrator has absolute control of his logical faculties. He makes no mention of his own unsoundness of mind, nor does he demonstrate any mental ailment other than psychopathy--a condition defined not by an absence of control, as Poe's prior first-person narrators tend to suffer, but by an excess of control. Montresor gloats over his ability to manipulate other human beings. Until the final moments, Montresor displays no interiority, no self-reflection. He is monomaniacally bent on hatching his plan, not unlike a determined author executing his final draft. But Montresor's "authorship" does not occur on the page. His verbal execution is more akin to a dramatic monologue, bringing his narrative to life performatively, as if already having gone through an extensive rehearsal process. As an author-performer with a prewritten script, he has no need for deliberation as he navigates the course of action. All deliberation occurs before the action takes place, just as the author strives to make all decisions made in the writing process invisible to the reader. Likewise, an actor's transformation into character seeks to make invisible the time and effort it took to memorize a character's lines. As a monomaniacal manipulator, Montresor anticipates every potential pitfall in executing his plan, without missing any turns, without leaving any room to rely on improvisation.

Although Montresor uses Poe's authorial techniques, he is not a mouthpiece

for Poe the man. He uses these techniques to pernicious, unsound ends. Poe firmly believed art did not need to serve a moral purpose—part of the reason he had such contempt for the pious didacticism of the Transcendentalists. He is solely concerned with perfecting the power of the short story in seizing and taking hold of the reader. The critics who argued that “The Philosophy of Composition” is subtly satirical may have been disoriented by Poe’s choice of “The Raven” as his exemplar of unity of effect. As Borges noted, unity of effect is a temporal principle: a principle dependent on narrative sequence. “The Raven” has a plot of sorts, but plot is not its most affecting feature. The chief aim of “The Raven,” Poe insists in “The Philosophy of Composition,” is to summon a feeling of melancholy. “Amontillado,” on the other hand, is characterized by a disarming absence of emotion, a cerebral emphasis on calculation far more befitting a work that proceeds, in Poe’s words, “step by step to its completion with the precision and rigid consequence of a mathematical problem” (677). Unlike the lovelorn speaker of “The Raven,” Montresor takes pride in his lack of emotional vulnerability. Both the narrator of the story and the speaker of the poem are self-obsessed, but the subject in “The Raven” has been immobilized by his own emotional pain. Montresor more resembles the artist Poe writes of in “The Philosophy of Composition,” an actor in total control of his execution—one who “will always contrive . . . to tone [the work] into proper subservience to the predominant aim,” using hyper-focused calculation to achieve those aims (676). He conceals all the effort it takes to prepare the conditions for achieving his intended effect. Poe writes,

Most writers prefer having it understood that they compose by a species of fine frenzy—an ecstatic intuition—and would positively shudder at letting the public take a peep behind the scenes at the elaborate and vacillating crudities of thought . . . the cautious selections and rejections—at the painful erasures and interpolations—in a word, at the wheels and pinions—the tackle for scene-shifting—the step-ladders and demon-traps . . . which, in ninety-nine cases out of the hundred, constitute the properties of the literary *histrion*. (676)

What is most revealing here is Poe’s use of the Latin term *histrion*. *Histrion* translates as “performer, actor.” Poe plainly states that the author is not just a writer, but a performer. Notably, each of Poe’s biological parents were stage actors, and his mother, Eliza Poe, who died when Poe was three, achieved considerable success. Her fame as an actress, and his earliest memories of the life of the theater, had to have influenced Poe’s self-conception. This legacy is palpable in the theatrical terminology Poe uses throughout the passage in its reference to “scene-shifting,” “step-ladders,” and “demon-traps.” These are the props and techniques of a performer backstage, behind the curtain, preparing

for a dramatic performance. The reference to "demon-traps" is telling, as it suggests a spectacle. This is less like a sober drama and more like a magic show, the kind of show that requires smoke and mirrors, production values that take place backstage: building the props, establishing the blocking cues, running through the scenes, anticipating the audience's response, modifying the delivery of lines with each performance by gauging the audience's reception—"carefully thinking over," Poe states, "all the usual artistic effects—or more properly *points*, in the theatrical sense" (681). Also key is for the dramatist to consider is audience—in this case a demographic akin to Poe's readership. A performance incorporating "demon-traps" appeals to a wide audience. As Poe insists, the author-performer must "[keep] steadily in view the design of rendering the work *universally* appreciable" (78).

Tapping the Cask

Unity of effect is on display from the very opening sentence of "The Cask of Amontillado." As Quinn notes, not a word is wasted. "Brevity," Poe claims, "must be in direct ratio of the intensity of the intended effect" (677). Poe wastes no time in establishing the story's inciting incident or the character of the narrator. Montresor begins, "The thousand injuries of Fortunato I had borne as I best could, but when he ventured upon insult, I vowed revenge" (415). Poe has honed the opening sentence to do as much "work" as possible. In one sentence, Poe establishes the narrator's voice, his intention, and his motivation. At the same time, he deliberately leaves out any indication of who Fortunato is, what his "insult" had been, or what "injuries" he had caused. These omissions pique the reader's interest by raising dramatic questions. Montresor's desire for revenge is what matters, not the cause of it. In fact, its mysterious origins heighten the tension. Most significant to Poe is establishing the narrator's psychopathy. An insult tends to be seen as a minor offense. Here it constitutes an all-consuming narcissistic injury. That Montresor feels so wounded by a single insult reveals the monstrous capacity of his pride.

Poe places the spotlight immediately on the narrator and his voice. He provides no exposition of time or place, preserving an ambiguity of setting to focus the reader's attention on Montresor and his psychological state. Montresor addresses the reader in the second sentence, bringing the narrative voice into the second person. He is speaking to another person, presumably in a space intimate enough to allow a confession to take place. Thus, the reader becomes a character in the story. But in this case the reader also hovers over the story, outside its frame. The character to whom Montresor speaks would better be called "the listener." The listener is not the reader per se, but a character Montresor has deemed his confidante. His tone is conversational, establishing a sense of scene, as if Montresor and the listener are together in a dimly lit room. The reader stands outside

the story, aware of what Poe is doing as an author and having enough distance from Montresor to detect his psychopathology. Montresor's listener is familiar to him—"you who know so well"—and likely intimidated by Montresor's physical presence, but unlike the reader, not conscious of the author who has invented Montresor, creating a dramatic irony. But as the tale unfolds, the reader, initially standing outside the frame and aware of Poe's machinations, becomes the listener, just as entrapped by Montresor, the "mason" who lays the brick and mortar of Poe's fictional world. The tale has already been written in the scheme Montresor hatched in his past. His confession to the listener, fifty years later, returns to his original script, but with new additions and omissions. Both Poe the author in his composition and Montresor his character in narration "must sustain the immensely important effect derivable from unity of impression," Poe attests, lest "the affairs of the world interfere" (677). Both Montresor's listener and the reader inhabit confined spaces, just as the scene Montresor recounts has occurred in a confined space, a space equivalently determined by his character. The tale as a whole thus has three tiers, separated by two interior frames. The original event is the core story; Montresor's confession of the event to the listener is the frame around the core story; and the confession sits within the larger frame of "The Cask of Amontillado" as a whole, as presented by Poe to the reader.

By saying, "You, who so well know the nature of my soul, will not suppose, however, that I gave utterance to a threat" (415), Montresor earns the trust of his listener within the confines of the confessional space. This variation on the nineteenth century "Dear Reader" trope (415) initiates Poe's control over the reader in the same manner Montresor establishes control over his listener in the confessional, as well as over Fortunato in the space of the core event: by flattery. As a manipulative technique, flattery gives the listener an impression of the flatterer's approval. By saying, "You, who so well know the nature of my soul," Montresor makes the listener proud of their own discriminating character. Suggesting that his listener knows him intimately, he feigns vulnerability and conveys a false impression of humility in his seemingly generous willingness to express amiable appreciation. Insisting that the listener would never suppose he "gave utterance to a threat," he subtly controls how the listener should interpret his actions, and makes the listener feel privileged enough to know and understand Montresor—a man whose tone and vocabulary, by virtue of self-aggrandizement, connote power and importance.

When Montresor declares that he "must not only punish, but punish with impunity" (415), he makes a debatable claim with enough smug assurance to imply that his "punishment" is a logical, imperative action. On the literal level, he is saying "I will make a spectacle of the punishment. I will make it hurt, and I will enjoy making

it hurt." Though the notion is cruel and psychopathic, Montresor's chiseled rhetoric makes the preposterous sound reasonable. Montresor's sadism comes in sideways, snakily inserting itself into the listener's consciousness undetected, exploiting the listener's impressionability and gradually tapping into any latent unconscious sadism the listener has kept guarded. Montresor is giving the listener permission to transgress.

Having earned trust, Montresor enlists the listener to hear a detailed narrative explication of his devious methods. He will suffer his listener to vicariously relish in his manipulative prowess. He states, in a supercilious tone, "It must be understood that neither by word nor deed had I given Fortunato cause to doubt my good will" (415). The passive voice suggests an unbestowed authority. Although Montresor's listener will subsequently hear the confession to a despicable crime, they have no cause yet to know the degree of barbarity in Montresor's deed. The reader, on the outer frame, has more ability to anticipate what will ensue, because the reader is aware that this is a fictional construction. But as Poe leads the reader further into Montresor's verbal lair, he seduces the reader into becoming a voyeur, a kind of participant in the action, and at the point of the reader's compulsive desire for the tale to come to its fruition, an accomplice.

Montresor's unfolding oral narrative is as focused on his brilliance as a manipulator as it is on the story itself. "I continued," he shares, "as was my wont, to smile in his face, and he did not perceive that my smile *now* was at the thought of his immolation" (415). Montresor invites his listener to take pleasure in the success of his deceptions—an appeal to *schadenfreude*, to experiencing delight in beholding Fortunato's torture. And like the wine that he will proposedly uncork for Fortunato, his tale lures the listener in by appealing to a baser instinct, in this case *bathos*, known colloquially as the "trainwreck instinct"—that kernel of the human mind that cannot resist gaping at calamities and misfortunes—a tendency the manipulative personality can easily exploit. When Montresor tells his listener that Fortunato's weak point is his snobbery as a self-appointed wine connoisseur, he is simultaneously appealing to the listener's weak point: the desire to gloat over the weakness of Fortunato. It is a triangulation of weaknesses. He further appeals to the listener's prejudice, saying, "few Italians have the true virtuoso spirit." Although Montresor affords Fortunato one complimentary feature, that "in the matter of old wines he was sincere," the words have a patronizing connotation. "Sincere" is an endearing quality, not a commanding quality. All these subtle verbal appeals serve to suggest a co-conspiratorial discourse, a false camaraderie through which Montresor will offset the listener's better judgment and be led to perceive Montresor's evil as something legitimate, if not impressive.

Meanwhile, the ideal reader sees what Poe is doing, but not for the story's

full duration. Poe's aim runs parallel to Montresor's, albeit to a solely aesthetic end: to entrance the reader into losing third-person observer status and be drawn into the monomania of Montresor's madness. The reader's critical judgments are gradually relaxed as the reader cedes to the author's narrative control. Montresor the character becomes Poe's authorial henchman. As his sensory descriptions become ever more entrancing, more authorial, and the dramatic irony in the dialogue between Montresor and Fortunato thickens, the reader hungers for the story to continue. The author has earned the reader's trust, just as Montresor has earned both the listener's trust and Fortunato's trust. Such trust can make the depiction of a lurid and grotesque scenario seem, in context of the fictional experience, satisfying. This effect is achieved by Poe through his ultimate authorial control—a control not at all unlike that of Montresor's upon his listener, and upon Fortunato.

Only after Fortunato enters into the scene does Montresor veer from anecdote-teller to storyteller. The story-within-a-story told to the listener begins in traditional gothic mode: "It was about dusk, one evening during the supreme madness of the carnival season, that I encountered my friend" (415). If this were standard genre fiction, this sentence would open the entire frame story. Instead, Poe first places us in the hands of Montresor, as befitting his unity of effect. The tale is more a portrait of a monomaniacal mind than of a random murder in the catacombs, and Poe's immediate aim is for the reader to be seduced by Montresor's charisma, lured in more by the character than the exposition. If Poe were to have begun the entire tale, "It was about dusk, one evening . . ." the reader would ease into the familiarity of the gothic mode, which instills a certain comfort, a sort of Victorian luxury. But Montresor's narrative voice in the hushed tone he delivers the tale to the listener is more dramatic, more arresting, and more unsettling. It asserts more control than a soft-focus, objective third-person narrative voice would.

Montresor subsequently plants the listener into the scene of the fifty-year-old memory where the action takes place. What might otherwise be an anecdote we now know to be a story-within-a-story, a box within a box. It is the sort of stacked, symmetrical, labyrinthian framing in which Poe delights. Poe further jars the reader by panning into panoramic exterior space, the night of Carnivale, where an air of festivity is palpable. The event evokes the spaciousness of a town square, a mood of public cheer and community—a direct contrast to where Poe will lead us, into a windowless cell deep underground where the scene, the anecdote, and the story as a whole will simultaneously reach their climax and denouement. Enclosed interior space, as Richard Wilber points out in his classic essay "The House of Poe" (1959), is nearly always Poe's chosen setting. In this case, Poe wants to exploit the contrast between the festive open street setting and

the isolated underground setting, from the champagne burst of Carnivale to the untapped wine of the bone-lined catacombs. The reversal of atmosphere unsettles Fortunato, the listener, and the reader at once. Fortunato himself stands in contrast as well, dressed in a cap and bells as a jester, in jest, but about to be genuinely fooled. His giddy bearing, the festive atmosphere, and his literal state of intoxication all serve to render him uniquely vulnerable to Montresor's manipulation. All the demon-traps have been set.

Montresor has clearly chosen the night carefully, like an author with his denouement in mind, and has come prepared to greet Fortunato on his rival's own terms, adopting a cheerful, ingratiating tone: "My dear Fortunato, you are luckily met. How remarkably well you are looking today. But I have received a pipe of what passes for Amontillado, and I have my doubts" (416). Poe puts every word to work. Every word Montresor utters has an ulterior motive. There is the sly "you are luckily met," not specifying what kind of luck, and letting the listener in on a pun on "fortune" and "lucky." If Montresor's listener does not get it, the reader does, as the connection between "fortune" and "Fortunato" is especially evident when read on the page. He continues to flatter Fortunato by complimenting his appearance and, without a moment's hesitation, broaches the subject that will most nibble at Fortunato's pride. The four-word clause "I have my doubts" constitutes the inciting incident. As Fortunato bites at the bait, the journey commences, and he believes that he is the one initiating it. Montresor has anticipated Fortunato's response, having determined that Fortunato's weakest point is his vanity, his need to feel superior as a connoisseur. Further, as a master of narcissistic manipulation, he knows that he will wield more control if he gives his subject the impression of being in control. Montresor's flattering of Fortunato mirrors his flattering of the listener at the very beginning of the story. His method is to plant three flattering ideas into any subject's head: (1) you are special; (2) the two of us are superior to others; and (3) I am going to let you in on a privileged secret. He yields maximum effect by hiding his intent behind his surface words. This is authorial control.

In the ensuing dialogue, Poe allows us to see how Montresor functions in the face of uncertainty—the greatest threat to absolute control. He cannot be sure of Fortunato's responses, but he has anticipated them deftly. Like Shakespeare's Iago, Montresor uses reverse psychology, telling Fortunato *not* to follow him, knowing this insistence will prompt Fortunato to desire to follow, and more importantly, to *opt* to follow. He has been given the illusion of choice. It is not unlike Montresor telling the listener at the outset that he will achieve his revenge while withholding any detail that might suggest how he will achieve it. The use of "negative space" makes the listener an eager participant, wishing to fill in the gaps of the story. Montresor has perfected the

technique of arousing desire indirectly, just as the author seeks to arouse the reader's desire to follow the tale to its end without making explicit how the author is crafting the story.

In their subsequent journey through "several suites of rooms," a "long and winding staircase," and a descent to the "damp ground of the catacombs of the Montresors" (417), both listener and reader are led into the same labyrinth as Fortunato, a realm of increasing isolation and confinement. The architecture, from the bone-stacked walls to the structure at the interior, is a Poe trademark. As J. Gerald Kennedy notes in "Phantasms of Death in Poe's Fiction" (1983), "the subterranean passageway, the secret vault, and the sealed room . . . evoke anxiety because they pose the implicit threat of fatal enclosure," placing the reader, like the character subject to the controlling agent in the story, in a state of "ultimate vulnerability" (898). Andrew Dykstal argues in "The Voyeur in the Confessional: Reader, Hoax, and Unity of Effect in Poe's Short Fiction" (2019) that the reader plays an active role in the narrative, a role that "entails risk and commitment, as the reader at once engages and constructs the text . . . obeying cues and reading through the lenses crafted by his obedience." When Montresor has led Fortunato to the final corridor, we see an image of the two of them "[standing] together upon the damp ground" (419). The image suggests intimacy, not unlike the intimacy of Montresor's confession to the listener in the frame story or between author and reader in the privacy of the printed page. Such intimate spaces frame the fictional world, carefully chosen by Poe. When he speaks of "bringing together the lover and the Raven" in "The Philosophy of Composition," he notes that his "first branch of this consideration was the *locale*" (681). In Poe's gothic mode, the narrator must place the subject in an enclosed space which has "the force of a frame to a picture" (681). That sense of confinement carries "an indisputable moral power in keeping concentrated the attention" (681). The author has the world-creating power of a god. As Poe phrases it in his review of Bulwer, "I made the night tempestuous" (682). Only a god could make the night tempestuous. But in the realm of the imagination, so too can the artist.

The listener and reader are at this point fully entrapped in Montresor's tale, just as Fortunato has surrendered himself to his own entombment. The reader may savor the extremity of emotional effect Poe has constructed, layer by layer, in the narrative architecture of the tale. David Faffik, in his 2016 article "What We Talk About When We Talk About Poe" (2016), argues that many of Poe's tales take the form of a "captivity narrative." They "induce readers to relax the defenses with which they would normally meet the author's signature exaggerations," leaving the reader "in as awkward a position as the voyeur in the confessional." To Poe, providing the reader with such a witness to

destruction is the pinnacle of delight for author and reader alike. As he phrases it in his Bulwer review, "the air of premeditation . . . is so pleasing" (624).

Like Fortunato, the reader knows the dreadful act is imminent, but the deliriousness of immersion in the experience of wandering the labyrinth of Poe's fictional world, akin to Fortunato's intoxication, renders the moment of recognition no less terrifying. Fortunato seems to beg for his own immolation:

"Come, let us go"

"Whither?"

"To your vaults." (416)

Montresor has led Fortunato to believe he is determining the course of events. By here eliciting Fortunato's request, in all its lack of awareness, Montresor lets the listener luxuriate in his inimical delight—the delight of witnessing an innocent suffer. It is a diabolical dramatic irony. By the story's end, the reader too has become complicit in the crime. Poe has indulged the reader to embrace their own unsavory desires and merge with Montresor's listener, putty in the devil's hands, eagerly hungering to witness—indeed to experience—the final dastardly act.

Poe's use of imagery to heighten effect is masterful in the final moments. If the plot is guided by Montresor's voice, the fictional world is painted by Poe's use of sensory details. From the light of the flambeaux to the smell of the nitre, Poe triggers all the senses. His greatest attention is given to sound, which reaches full effect in the climax, wherein Poe applies his poetic techniques, beginning with Fortunato's cough—"ugh! ugh! ugh! ugh!"—uniting auditory and kinesthetic imagery in rhythmic repetition. The repetition continues, punctuating the air with an anxious urgency, a creeping discomfort. Montresor and Fortunato's subsequent dialogic exchange, in this case stacked with double meanings, stretches the irony to diabolical extremes. When Montresor toasts, "To your long life" (418), the reader easily grasps the underlying meaning. Fortunato will not live much longer. Just as Montresor invites the listener to gloat, Poe invites the reader to gloat.

At the final point of passage, the interior crypt stands "ornamented" in bones comprising three walls of a room (419). Montresor says as an aside, "It seemed to have been constructed for no especial use in itself." This would seem implausible, but the reader at this point is rapt enough not to question its believability. Poe may also include the line for another reason: there is no rational "use" in Montresor's construction of this plot, nor in Poe's construction of the tale. For Montresor, this is revenge for revenge's sake. For Poe, this is art for art's sake. The "use" of the nearly formed chamber is merely to serve the tale. Just as Fortunato stands "stupidly bewildered," the listener is too stunned by the image to process its plausibility with any critical distance. It is simply too horrific to

question. The chamber so falls into the symmetry of the story that the reader, too, loses all critical distance. All actors are forced to behold the structure with the grim fascination of a helpless child. It serves as the ultimate prop for Montresor the performer to stage Fortunato's moment of recognition. As Elena Baraban argues in "The Motive for Murder in The Cask of Amontillado" (2004), "Montresor does not murder Fortunato secretly, but stages a spectacle of execution so that the victim knows who kills him" (56). Were the reader not drained of all critical faculties, they would question how Montresor could conceivably now proceed to bind and chain a wholly submissive Fortunato "too much astounded to resist" (419). Such a state of submission is where Poe wants the reader to lie, immersed in the extremity of the action. The reader has become willing voyeur to a sadomasochistic fantasy. As if to underscore his total control over Fortunato, Montresor plants a final tease. "Once more let me implore you to return" (420). Remarkably, and improbably in any other context but a Poe story, the bound Fortunato insists upon staying. He doubles down, begging for "The Amontillado!" while bound and chained in what will clearly be the site of his own slow and painful death (420).

Poe has achieved full authorial control—the closest thing to proof that in the cryptic confines of the imagination, everyone desires to be, in a sense, tortured. But another twist remains. Fortunato loses his passivity and asserts himself, saying "let us be gone" (421). In another ironic repetition, Montresor repeats, "let us be gone," in this case implying death. Fortunato then pleads "For the love of God!" which Montresor also coolly repeats, as if to say, "God wants you to suffer," or perhaps to assert an even greater authorial control, to say, "I am God. I have determined your fate."

But authorial control has its end point, and Montresor's words cease to sting. Montresor's "heart [grows] sick." Nowhere has it been yet suggested that Montresor possesses a heart. In Poe's final twist, Montresor's Nietzschean pride withers because he has lost control. The mind cannot ultimately sustain dominion over the heart. As Zachary Bennet argues in his essay "Killing the Aristocrats: The Mask, the Cask, and Poe's Ethics of S & M" (2011), "Montresor's heart grows sick because upon completing the perfect murder, he does not feel the satisfaction he had anticipated while planning it" (54). Montresor's ultimate loss of control reverses the result of an otherwise perfectly planned performance. When Montresor subsequently calls out "Fortunato!" and receives no response, the ensuing silence speaks volumes. Fortunato no longer heeds Montresor's call. Montresor is no longer able to engineer Fortunato's response. The final act of communication comes from Fortunato: the shaking of the bells. This is his last "word." It is an uncanny use of Poe's favorite sound device, in this case signifying mockery. Perhaps he is a jester after all. The murder, despite all Montresor's careful plotting, becomes a

joke—a joke at the expense of Montresor, rendering his entire diabolical plan ridiculous.

There is heated scholarly debate as to which character says, "*In pace requiescat*" (421). In either case, Fortunato is the one who rests in peace. Montresor lives on, without peace. He has not achieved revenge if Fortunato has not had the reaction Montresor so desired. Thus, nothing will erase Montresor's ultimate existential impotence. To have hatched and launched such a miserable scheme appears, in the end, damningly pitiful. It is clear that he feels shame, if not guilt. Fifty years later, he is still trying to process the sickness in his heart.

The Soul Delights in Self-Torture

"The Cask of Amontillado" is a tale of bald-faced malice and brutality. How, then, do we account for its appeal? Poe defended the horror story by asserting that it "satisfie[s] a human craving for excitement," something Poe may have learned from his teacher George Tucker at the University of Virginia who held that "what is horrible in life is tempered by the artist to satisfy aesthetically this fundamental drive of man" (806). Aristotle, in his *Poetics*, classically posed that tragedy must elicit "pity and fear" in the audience, providing a *catharsis* in which the line between pleasure and pain, entertainment and ritual, is blurred. As Joseph J. Moldenhaur argues in "Murder as Fine Art" (1968) "artist and audience alike must suffer to earn their beatitude—must lose their life to find it" (835).

Recent critics have been enamored of the apparent sadomasochism evident in "The Cask of Amontillado." Bennett claims that "the reader experiences the literary equivalent of the Stockholm Syndrome. Depending on whether the reader perceives the mood as sadistic or masochistic, he or she will vicariously experience either sadism or masochism, respectively" (52). Sadomasochistically speaking, under the author's control, the reader is in a submissive position. But such a submission may paradoxically be the result of Poe having elicited a repressed sadism in the reader. Any reader who hopes Montresor will follow through with his plan, who finds pleasure in the moment he finally binds and entombs Fortunato, must reckon with the source of this desire. In the words of Faflik, "the author would seem to have managed to hold us by a hook that has been forged on the strength of our fascinated attraction for the imperilment of persons other than ourselves. All the while, we read on without realizing that we, too, have been taken." What has been "taken" is our moral judgment, or as Baudelaire would have it, the moral fetters in which we are bound. Dykstal adds, "the transgressions in the tales mirror the transgressions inherent in reading them" (18). "The reader is able to take pleasure in the knowledge that he or she is not the one being punished," says Bennett, and the fictional victim's annihilation "serves our sadomasochistic need to excise the darker side of our

psyches, which we regard as morally inadequate” (49). Lurid as the experience may be, it would seem that Poe is offering us not only entertainment, not only escape, and not only an encounter with aesthetic totality, but with an opportunity to face the emotions we most hide from ourselves. In Kennedy’s view, Poe’s horror “violates language, logic, and cultural taboo, allowing the unspeakable to speak, the unbearable sight to be seen. It compels us to confront death in all of its visceral repulsiveness, unsoftened by the effusion of sentiment or the prospect of a spiritual afterlife” (904).

Sadomasochism is a preoccupation of scholars fond of examining transgression, discussed at length by French theorist Georges Bataille and others of the poststructuralist school. Scholar Mike Edmunson goes so far as to deem Poe’s gothic mode “the principal forerunner to S&M culture in the United States” (Bennett 43). But Poe’s literary concern is a malaise of soul more explored historically by philosophers and theologians than BDSM practitioners. He identifies it as “a species of despair that delights in self-torture” (680). Poe was possessed and preoccupied by this despair, and the connection between personal angst and fictional content, as evident in his doubling down on the subject in “The Philosophy of Composition,” referring yet a second time to “the human thirst for self-torture” (683). Poe’s appeal to the masochistic impulse would suggest that the brutalized Fortunato is a stand-in for the reader. But a key component of the author-reader exchange, if any parallel can be drawn between aesthetic experience and voluntary sadomasochistic practice, is the element of consent, which Bennett curiously does not address. Consent may be the most essential comparison when considering the extreme emotions elicited by fiction. The reader experiences “pleasure” in pain by virtue of the consent afforded to the author. Faflik, critical of Poe’s delight in prompting the reader’s self-torture, claims “we relinquish our self-governing capacity for any kind of independent agency. In their encounters with these works,” adding, “readers often find that their critical instincts are slowly eroded; they are in consequence left captive to a pleasing species of release that depends on their submitting to a determining will other than their own.” The willing embrace of both cruel impulses and submissive impulses in a controlled environment—the narrative space—is placed in the hands of the author. “[Poe] appeals to us,” he writes, “precisely because he binds and restricts us, because he holds us captive.” Faflik evidently fails to consider the prospect that in this indulgence of dark impulses we may find release. In the Aristotelian view, catharsis is a key purpose of fictional narrative. The experience involves suspension of moral disgust in the safety of the author’s hands. Such trust is a vital component of the author-reader contract.

“Sadomasochism and the deathwish,” Moldenhaur holds, “are a saving grace in the eschatology and psychology to which Poe is committed” (841).

In Pace Requiescat

Arguments as to why Poe achieves his aim of seducing the reader into desiring a character to be tortured and buried alive notwithstanding, the story unquestionably achieves his aim of putting his own unity of effect theory to the test. The story succeeds just as Montresor's plan succeeds in the fictional narrative. The plan, in each case, has been hatched with a specific end in mind: burial of Fortunato in the hands of Montresor, and "burial" of the reader in the hands of the author. Most mysterious is the story's conclusion, in which Montresor appears to suffer disappointment after losing control, to the extent that he still feels compelled to confess the story to the listener fifty years later.

Such a fate also parallels that of Poe. Upon publishing his work, he ceded control to his readership—and to his critics. Considering Poe's mysterious death and the false impression of his character given to history by his rival Rufus Griswold, his own story ended with a question mark. Whatever control he had as an author, he had no control over his legacy. Although his reputation and respect as an author has been reclaimed in recent years, the fact remains that only history can determine whether Poe will rest in peace.

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Maisie's Moral Sense: Aestheticism in *What Maisie Knew*

Rebekah Lawler

ABSTRACT

Despite being born American and being considered a major American author, Henry James spent the majority of his adult life in England, becoming a British citizen a year before his death. James lived in England during the *fin-de-siècle*—the end of the nineteenth century— a period when art and literature were at their height in upper-class London. The *fin-de-siècle* was also the height of the aesthetic movement—one in which James participated. Another author at the pinnacle of his career in the *fin-de-siècle* and a leader within aestheticism was Oscar Wilde. Though they ran in the same circles and shared similar beliefs, James and Wilde were not close friends. James thought Wilde was too flamboyant and likely felt ill feelings towards Wilde since he was a successful dramatist and James—despite his best efforts—failed in this genre. In this article, I will examine the ways in which both James and Wilde approached aestheticism and how James's background as an American influenced his views of this idea. Although Wilde did spend time in America—albeit significantly less than James spent in England—Wilde remained overtly British in his mannerisms and opinions. While aestheticism is primarily a British ideology, this paper will discuss the ways that James and his role as an American influenced this movement.

Dating back to the ancient Greeks and further developed by Immanuel Kant, the aesthetic movement dominated the art, literature, and culture of the *fin-de-siècle* in both England and America. Aestheticism, defined as art for art's sake, represents that moment in British literary history in which a group of writers and artists took to claiming that the thing they valued—the life of the mind, for example, or art itself—called forth a compelling awareness of the value of their opposites—the life of the body, for example, or the virtues of sincerity and artlessness... [they] all found themselves yearning after. (Freedman 8)

During his career, Henry James took inspiration from the fathers of aestheticism—Walter Pater and John Ruskin—to develop his own view of aestheticism that he incorporated into his canon. While current scholarship focuses on the themes of morality and child/adult relationships in the Jamesian classics *The Turn of the Screw* and “The Author of Beltraffio,” the same themes also underscore *What Maisie Knew*. The concepts of Jamesian aestheticism are demonstrated in *What Maisie Knew*; thus, *What Maisie Knew* should be viewed as an aesthetic text.

The two fathers of nineteenth-century aestheticism were John Ruskin and Walter Pater, and both influenced James and his views on aestheticism. James met John Ruskin in 1869 and heard Ruskin's “The Queen of the Air” lecture at University College in London. Ruskin's view of aestheticism, as presented in his lecture, significantly influenced James's own ideals on morality within art. For Ruskin, art should subtly promote morality among its readers without it being too didactic. James would also say that “there is a point at which the moral sense and the artistic sense lie very near together” (qtd. in Eguchi 6). This moral sense is what lies at the heart of *What Maisie Knew* as Mrs. Wix frequently encourages Maisie to develop her moral sense. This emphasis on morality is evident in other books published around the same time by aesthetic authors.

Contemporary to Ruskin and James was the aesthete Walter Pater. Pater coined the term “art for art's sake” in his book *The Renaissance*: “[b]e sure it is passion—that it does yield you this fruit of a quickened, multiplied consciousness. Of such wisdom, the poetic passion, the desire of beauty, the love of art for its own sake, has most” (190). Pater was a prominent aesthete who influenced Ruskin, Oscar Wilde, and Henry James. Pater and James shared many of the same views on aestheticism, as James “turn[ed] from the dominant aesthetic orthodoxies of early-nineteenth-century neoclassicism and mid-nineteenth century medievalism toward an explicit praise for the art of the Renaissance” (Freedman 134). Pater's influence on James allowed James to further develop his opinions and views on British aestheticism. Although he originally disliked the aesthetic movement for its “hypocrisy, its fraudulence, its moral and aesthetic failures,” he was

eventually able to “encounter the aestheticist dream of the aesthetic, an autonomous realm separate from but oddly redemptive of the social sphere it inhabits” (Freedman 136). While James was not a frivolous dandy like Wilde, he was able to find his own niche of aestheticism that, as Freedman claims, allows James’s fiction to bridge the nineteenth and twentieth centuries—to straddle Victorian and Modern literature. While this is something that Wilde attempted with *Salomé*, which was published in 1893 but not performed in England until 1905, Wilde did not live long enough to develop his sense of modernism as fully as James (Robson).

What Maisie Knew was published in 1897 during the height of London’s aesthetic movement. Wilde and James met during Wilde’s American aesthetic tour in the 1880s, and they maintained a rocky professional relationship. Wilde thought James “wr[ote] fiction as if it were a painful duty, and wastes upon mean motives and imperceptible ‘points of view’ his near literary style, his felicitous phrases, his swift and caustic satire” (Wilde 219). James’s view of Wilde was just as shaded:

I was at the *première* [of *Lady Windermere’s Fan*] on Saturday last and saw the unspeakable one make his speech to the audience, with a metallic blue carnation in his buttonhole and a cigarette in his fingers. The speech, which, alas, was stupid, was only to say that he judged the audience felt the play to be nearly as charming as he did. (Edel 4:45)

James also viewed Wilde as his competition. James aspired to delve into plays during the mid-1890s; however, this was the height of Wilde’s career and after James’s play *Guy Domville* failed at the St. James’ Theatre, Wilde’s most famous play—*The Importance of Being Earnest*—replaced *Guy Domville*. After attending the opening night of one of Wilde’s previous plays, *An Ideal Husband*, James wrote to his brother William that “I sat through it and saw it played with every appearance (so far as the crowded house was an appearance) of complete success, and that gave me the most fearful apprehension. The thing seemed to me so helpless, so crude, so bad, so clumsy, feeble and vulgar” (Beckson 183).

Although James and Wilde did not enjoy each other’s work (or personalities), the fact that they were both influenced by Ruskin and Pater and incorporated similar themes in their work, signifies that the two authors are more alike than they probably would have wished. Fisher states,

Despite their mutual distaste, there are distinct similarities in their decidedly different styles; both impose a strict order on their compositional style, reflecting the rigid social order they examine in their works, and both scale the ladder of social observation to probe the moral shadings of their time. (169)

The fact that James shared a similar style to Wilde, who was the embodiment of Victorian aestheticism, shows that James has a rightful place in the aesthetic movement, and that *What Maisie Knew*, which overlaps the Victorian and Modern period, deserves a spot in James's aesthetic oeuvre.

An additional similarity between the two aesthetic authors was their representation of children in their work. While neither Wilde nor James wrote children's literature, they each portray children, or child-like figures in their work. For James, this is clearly seen in *What Maisie Knew* (as the protagonist is a young girl) and for Wilde, in his epic prison letter *De Profundis*, he represents his ex-lover Bosie Douglas in a childlike manner. Michèle Mendelssohn marks the publication of these two works (both in the latter half of the 1890s), as the end of the innocence of aestheticism. For Wilde and James,

the child's figure's unusual and conspicuous lack of innocence and moral values generates a nightmarish situation for the adult characters, who struggle in vain to control the children. By projecting onto the child the problematic questions aestheticism was facing, James and Wilde probed its moral quandaries more deeply than before. (Mendelssohn "Fate" 144)

This sense of morality—and its representation in the literature of two prominent aesthetes—shows how important “the moral sense” is to aesthetic literature and proves that *What Maisie Knew* should be viewed as an aesthetic text. Finally, James and Wilde share similar themes of child/adult relationships and morality in their work. In several of Wilde's plays, he explores the relationships that exist between children and their parents and many of his characters are morally gray and make questionable decisions. These similarities further show that since Wilde's works—which are traditionally considered aesthetic texts—have the same themes as *What Maisie Knew*, that this book can also be considered an aesthetic text. The central theme behind *What Maisie Knew* is how her interactions with the adults in her life shape her maturity, and many of the adult characters possess few redeeming qualities. *What Maisie Knew* is an exemplary text that bridges the gap of nineteenth century views of children and aesthetic ideals with the stylistic choices of twentieth century modern literature and serves as an example of how the landscape of British literature was changing with the new century.

Despite being published in 1897, *What Maisie Knew* is viewed as a modern text and considering James's later texts, the style of writing in *Maisie* can be seen as the beginning of James's venture into modernism. Most important to *Maisie* is the radical rethinking of childhood in the late nineteenth-century and James's choice to include a child as his protagonist. According to Michèle Mendelssohn, James uses children in

his works as representations of the aesthetic movement and to bring out “adult panics” including moral, religious, and nationalistic fears. One of the primary reasons James’s selection of a child-protagonist for this novel is surprising is the fact that James himself had a negative view towards writers of children’s stories. In her foundational book, Beverly Lyon Clark examines the preconceived notions of childhood and children’s literature at the turn of the twentieth century and the ways in which authors such as Henry James looked down on this genre of literature. Although not all literature with child protagonists is considered children’s literature, Clark examines James’s critical view of childhood and children’s literature and the reasons why James wrote from the perspective of a child. She argues:

Henry James frequently characterized the audience for literature that sold—literature by such a writer as [Frances Hodgson] Burnett—as childish. And I turn here to scrutiny of James’s rhetorical deployment of childhood, in his nonfiction and fiction. I do this in part because his thinking was profoundly influential. His protestations and tropes, his condemnations and swerves, also register shifts that were occurring more broadly throughout the culture at the turn of the century. (35)

For someone who frequently railed against children’s literature in the press, it is puzzling that he would write from a child’s perspective.

Additionally, James’s harshest criticism was towards women writers (i.e. Frances Hodgson Burnett, author of *The Secret Garden* as mentioned in the above quotation), yet he gave high praise to children’s literature authors who wrote primarily for boys—most notably Robert Louis Stevenson. James, in his essay “The Future of the Novel,” describes how “[g]reat fortunes, if not great reputations, are made, we learn, by writing for schoolboys”; yet earlier in that same paragraph, James says that children’s literature is that of girls, especially if the term is applied to the “later stages of life of the innumerable woman who, under modern arrangements, increasingly fail to marry—fail, apparently, even, largely, to desire to” (James “House of Fiction” 49). If James despised children and their fiction so much, then why would he include a child—and a female child at that—in one of his books?

Mendelssohn offers her commentary on the role that children play in aestheticism and how James utilizes this in *What Maisie Knew*:

James’s engagement with Aestheticism and Decadence can fruitfully be read in conjunction with his response to the paradox of childhood. James’s ambivalent attitude to these movements is reflected in his portrayals of children, either as the blameless casualties of grown-up games, or as cunning little operators in

these games. ("Aestheticism and Decadence" 97)

Henry James backs up these claims in his preface to *What Maisie Knew*: "[s]mall children have many more perceptions than they have terms to translate them; their vision is at any moment much richer, their apprehension even constantly stronger, than their prompt, their at all producible, vocabulary" (*WMK* 27). Whereas children's literature authors were beginning to give their characters agency where they are at the mercy of adults, at the end of James's novel, Maisie gains no more agency than she had at the beginning of the book.

Furthermore, "[i]n treating Maisie seriously, in having Sir Claude treat her seriously, James has had to prise her out of the pigeonhole to which he has elsewhere tried to confine children" but "ultimately James takes Maisie seriously only in order to use her" (Clark 39, 42). For James, Maisie is an instrument to display the selfishness of the adult characters as they continually disregard Maisie to chase their own pursuits. Yet, instead of the traditional childhood innocence that dominated the fiction of this period, Maisie "knows" more than she should at this age, and she is often no more mature than the adults who are making the decisions for her. Phillips writes, "In Maisie's precocity, James implicitly offers a challenge to the Romantic ideals of childhood immaturity circulating in nineteenth- and twentieth-century society. But in making characters like Ida and Beale Farange the mouthpieces of these ideals, James appears to ridicule much of mainstream adult society" (47). Maisie's innocence—and thus, her childhood—is exploited for her parents' gain, forcing Maisie into being an adult before the appointed time. James, in having Maisie masquerade as an adult in a child's body, allows himself to, as Phillips said, reject those Romantic views of childhood, an action that lines up well with modern approaches to literature. *What Maisie Knew* also adds an additional representation into modern literature in:

the way it lifts the conventional child protagonist out of the subversive world of children's literature and sets her down in the middle of a more overtly abrasive modernist universe... It becomes a scathing critique of society's preoccupations with an unreal child figure, and it becomes a narrative petri dish for rethinking literature's own relationship to childhood. (Phillips 40)

This alternative view of looking at childhood is what makes *What Maisie Knew* both a modernist and an aesthetic text. It is the combination of these two literary movements that allows Maisie to be such a complex, intricate text that is worthy of study.

Maisie's childhood is atypical of the average child as she is tossed about between her parents and subsequent stepparents, none of whom seem to care about her well-being or general happiness. Although she always has someone to live with, she is emotionally manipulated into forgetting—and often forsaking—the family structure she has just left.

Maisie longs for her mother's love, and while Sir Claude assures Maisie that her mother loves her, Mrs. Wix continually reminds Maisie of how immoral her mother is because of her many lovers. Maisie is never granted her own agency, and while most children are not able to dictate where they live, Maisie is left with no opportunity to maintain a stable living situation: "the tearfulness was far from deterrent to our heroine's thought of how happy she should be if she could only make an arrangement for herself" (*WMK* 136). Maisie longs for a moment where she can make one decision for herself and eventually stands up to Mrs. Wix:

"You give me up? You break with me for ever? You turn me into the street?"

Maisie, though gasping a little, bore up under the rain of challenges. "Those, it seems to me, are the things you do to me." (*WMK* 207)

However, Maisie's agency does not last long as she is continuously manipulated by the adults in her life and in the end, she is forced to decide with whom she wants to permanently live. Maisie chooses Mrs. Wix, and although she loves Mrs. Wix, she must give up Sir Claude and his love in the process. Even at the end of the novel, Maisie is being emotionally manipulated by Mrs. Wix who believes that Sir Claude will not love Maisie as well as she can, even though Sir Claude was possibly the one adult who truly loved Maisie although he most likely had ulterior motives as well. Mrs. Wix claims that Sir Claude "would like to please her [Maisie]; he would like even, I think, to please me. But he hasn't given you [Mrs. Beale] up" (*WMK* 265). Though on the next page, Maisie and Sir Claude share a tender goodbye that perhaps indicates that Sir Claude does not want to give up Maisie but is not man enough to give up his life with Mrs. Beale for the sake of Maisie: "[o]n the threshold Maisie paused; she put out her hand to her stepfather. He took it and held it a moment, and their eyes met as the eyes of those who have done for each other what they can" (*WMK* 266). Mrs. Wix's disapproval of Sir Claude and Mrs. Beale's relationship—and morality—prevent her from allowing Maisie to live with someone who truly cares about her. It can be argued that Mrs. Wix's only reason for wanting to raise Maisie is that she sees Maisie as a replacement for her own daughter. If this is the case, even in her permanent living situation, Maisie is only seen as a substitute and not as her true self.

Morality is another aspect of Jamesian aestheticism that is discussed in the scholarship yet has not yet been applied to *What Maisie Knew*. Mendelssohn's theories on morality as applied to "The Author of *Beltraffio*," are also applicable to Maisie as they both "revea[l] the repressive, suffocating and ultimately crucifying power of the righteous" ("Aestheticism and Decadence" 99). Throughout the novel, Maisie is continually plagued with Mrs. Wix's desire for a moral sense, despite the fact that Maisie has no model—not

even Mrs. Wix—to show her what morality entails. Much to Mrs. Wix's chagrin, Maisie never really seems to gain that “moral sense” that Mrs. Wix has decided is of utmost importance in Maisie's development as a person. Yet, that behavior is never modeled to Maisie as all the adults around her lack any morality. Even Mrs. Wix is incredibly judgmental of those she deems beneath her. Towards the end of the novel, Maisie, in a rare display of her childhood agency, disregards Mrs. Wix when she chides Maisie for her absent morality: “[h]aven't you really and truly any moral sense?” Maisie was aware that her answer, though it brought her down to her heels, was vague even to imbecility, and that this was the first time she had appeared to practise with Mrs. Wix an intellectual inaptitude to meet her” (*WMK* 211). Maisie has no inclination for why developing this moral sense will be beneficial for her as she is simply trying to survive being tossed around between four different parents and the emotional damage that ensues from the two households despising each other. Maisie “must also discover that in acquiring a ‘moral sense’ she will still lose. Even Mrs. Wix is the enemy of Maisie's free spirit, for Mrs. Wix only differs from the rest of Maisie's mentors in offering to confine her in sentimentality and conventional morality” (Bell 247). James's representation of morality in *What Maisie Knew* places this book in the aesthetic movement, and further cements the duplicity of the adult characters in their relationship to Maisie.

What does this mean for *What Maisie Knew* in that it can be viewed as both a Victorian and early modern text? How do the themes and values of each movement work together (or against each other) to produce a book like *Maisie*? Since modernism is a rejection of Victorian ideals, it seems impossible that a text could exist in both worlds simultaneously. However, *What Maisie Knew* breaks the binary of Victorian versus Modern; while the form resembles traditional modernist texts, the themes reflect that of Victorian aestheticism during the *fin-de-siècle*. James was the master of existing in two different worlds—living in both America and England, publishing in both the nineteenth and twentieth centuries—therefore, it is easy to see how his fiction could exist in two different literary movements. Viewing *What Maisie Knew* as both an aesthetic and modern text opens the book to multiple interpretations of childhood, child/adult relationships, and morality: ideas that are crucial in Jamesian aestheticism and modernism. Despite its similarities to others of James's aesthetic works, *What Maisie Knew* has not yet been discussed in this context. By looking at *Maisie* through this lens, readers can better understand both aestheticism and the themes and issues in the book. By *What Maisie Knew* being an aesthetic text, Henry James further solidifies himself in the Victorian period while at the same time blurring the lines between the Victorian and the Modern in a way that calls into question the rigid definitions of literary movements

and creates new interpretations for these books.

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Vampires, Werewolves, and the Racialized Other

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ABSTRACT

The *Twilight* series by Stephanie Meyer captured the attention of millions when the first book was released in 2005. The series has long been criticized for an array of issues, but this essay analyzes the representation of race within the books and how Meyer contributes to Othering, particularly racial Othering. The paper begins with an introduction to Othering and the different ways in which the process unfolds and then goes into an exploration of Othering in the fantasy genre, particularly in low fantasy, before shifting into the main focus of the essay of racial Othering within the *Twilight* series. This article combines previous scholarship on the topic with literary analysis to argue that Othering within the *Twilight* series contributes to racial Othering in the real world. As a solution, fantasy authors should strive for belongingness in their stories so that, in the real world, society is one step closer to achieving it.

Introduction

While Stephanie Meyer's *Twilight* series has dominated teen pop culture for over a decade, its representation of racial minorities as the "Other" is rarely a topic of discussion. The depiction of the racialized Other in the media, such as the *Twilight* series, is both common and controversial. "Othering" is a complicated and nuanced term that is defined and discussed by several scholars such as Jean-Francois Staszak. Staszak is a well-established researcher who discusses the impact geographical boundaries have on human perception of Others in his book, *International Encyclopedia of Human Geography*. According to him, an Other refers to a "member of a dominated out-group, whose identity is considered lacking and who may be subject to discrimination by the in-group," while Othering refers to the actual process of creating the Other by transforming a difference to create an out-group, or the Other, and an in-group (Staszak 1).

There are contrasting methods used to create these differences. According to writers John Powell and Stephen Menendian, some differences used in the process of Othering are "religion, sex, race, ethnicity, socioeconomic status (class), disability, sexual orientation, and skin tone" (17). The in-group, or a dominant group in a society, manipulates these differences to effectively create the Other, which then ostracizes them from the rest of the community. There are several speculated causes of Othering, but Powell and Menendian argue that the act is typically driven by anxiety and fear influenced by racism, nativism, or xenophobia (19). Staszak's opinion on the cause of Othering is closely aligned with these two scholars, asserting that Othering is not so much about the perceived difference of the Other, but more about the personal beliefs and views of the in-group who fear the Others overthrowing their domination of society (1). Thus, it is evident that there are numerous differences that cause one to become the Other and that the process is typically based on fears, anxieties, and previously held beliefs of the in-group.

While these scholars focus on Othering in real life, my focus is Othering depicted in fiction, which is caused by a lack of representation; this issue is common in fantasy books. The genre of fantasy refers to a story set in some sort of magical world and often contains fantastical elements such as dragons or vampires ("Fantasy Fiction Definition"). It is one of the most expansive and impactful categories of literature. There are many kinds of fantasy, but the genre is often divided into low and high fantasy. The primary difference between these two sub-genres is the setting, with low fantasy taking place in the real world that features a magic system and high fantasy taking place in a secondary world consisting of magical elements (Simmonds). No matter the sub-genre a fantasy novel fits into, fantasy books are extremely popular and impactful, but authors

of these books do not always do the best job representing and accurately depicting the diversity of those who enjoy their stories. A common motif found in popular fantasy series, such as the *Harry Potter* or original *Percy Jackson* series, is a lack of racial diversity, and when there is diversity, it is not done well. The characters who drive the plot in fantasy novels are typically white males, creating a major issue for millions of fantasy lovers: there is no hero in their favorite stories who looks like them.

One popular low fantasy series that falls into this lack of representation and contributes to the process of Othering is Stephanie Meyer's *Twilight* series. The series is made up of four lengthy novels: *Twilight*, *New Moon*, *Eclipse*, and *Breaking Dawn*. The primary setting of the novels is Forks, Washington, where 17-year-old Bella moves in with her sheriff father, Charlie. She quickly becomes acquainted with elusive and intriguing Edward Cullen, whom she later discovers is part of a family of vampires who lives in Forks. Despite attempts to stay away from one another, the two quickly enter a romantic relationship (Meyer *Twilight*). Eventually, a love triangle unfolds between Edward, Bella, and Bella's old friend, Jacob, who readers later discover is a shapeshifting werewolf, because Edward briefly leaves Forks (Meyer *New Moon*). However, Bella does eventually pick Edward, although she and Jacob remain great friends (Meyer *Eclipse*). After Bella and Edward's wedding in the final book, the two of them have a hybrid vampire-human baby before Bella herself becomes a vampire. The child, Renesmee, angers the evil group of vampires, the Volturi, because vampire children are extremely powerful and dangerous. After narrowly avoiding a battle with the Volturi, the Cullens convince the Volturi of Renesmee's innocence, and they go on to live happily in eternity together (Meyer *Breaking Dawn*). The series remains one of the most popular fantasy series of all time, selling over 100 million copies (Parker) and producing five full-length films, with the last book, *Breaking Dawn*, being split into two parts. Due to the popularity of this series, the lack of representation and acts of Othering are especially impactful and significant.

The series is considered low fantasy because the events unfold in the real world with magical elements, like vampires and werewolves, existing within the realms of our world. Since the series is set in the real world, its acts of Othering and lack of representation are more dangerous and impactful. A real-world setting makes representation more important because it is closer to our world and easier to influence Othering within it. In recent years, fantasy has had a renaissance, especially low fantasy books (Barron 31). This resurgence shows the enormous audience low fantasy draws in, especially novels like the *Twilight* series. Examining the Othering and lack of representation present within these novels is exceedingly important because a great

number of people encounter the books. Moreover, when people read something they enjoy, they are more likely to be understanding and empathetic to other people (Bal and Veltcamp 11). Due to this increased empathy and the popularity of *Twilight*, it can be assumed that the lack of representation and acts of Othering in the series are important and dangerous because the material within the story greatly impacts people. Since minority groups are rarely if ever represented in the books, people do not see them in the story and, thus, cannot empathize with them as easily. Also, since low fantasy is set in the real world, events that take place, such as acts of Othering, are far more likely to happen in our world. This Othering also promotes the ideal that white people should have the spotlight in the real world because that is all that is reflected in these books, which may be difficult for readers to distinguish. Therefore, it is incredibly important to analyze the *Twilight* series as a representation of the fantasy genre because its negative aspects are extremely potent. This series exemplifies the lack of racial diversity and representation that exists within the fantasy genre, which continues the idea of the racial Other that exists in real life.

Othering in General Fantasy

When examining Othering in *Twilight*, it is first important to understand Othering and representation in the fantasy genre. Many scholars have expressed disdain at the lack of representation in fantasy literature. For example, in her book *Race and Popular Fantasy Literature: Habits of Whiteness*, author Helen Young explains that, because fantasy is so often rooted in Medieval English culture and history, it “has a reputation for being a Eurocentric genre, that is, one which is by, for, and about White people” (1). She also argues that fantasy actually has room to be an extremely representative genre, because it defies logic by including creatures like vampires and dragons, so there is no reason that fantasy cannot represent the expansive diversity of its readers (2). Similarly, in his master’s thesis, John Henry Rumsby argues that fantasy has great opportunity to bring magical worlds to life with diverse representation but instead creates white and Eurocentric worlds that:

are at best unintentionally racist, at others, reminiscent of the most vile works of white supremacy propaganda. Though there are many exceptions to the rule, a large majority of Fantasy works are reductive in their representations of ‘the other,’ treating non-WASP ethnicities as subhuman, and progressive ideologies as inherently dangerous. (2)

Thus, despite characters like elves, dragons, Orcs, and other mystical beings, fantasy as a genre often falls flat in terms of representing minority groups.

Not only does the fantasy genre have a lack of representation, but it also

contributes to the act of Othering that is mirrored in real life. One way this Othering happens is by depicting negative racial stereotypes. Young argues that fantasy “habitually constructs the Self through Whiteness and Otherness through an array of racist stereotypes with Blackness” (11). This act of Othering through racial stereotypes could be done in a variety of ways; one notable example Young gives comes from arguably one of the most popular fantasy series: *Lord of the Rings* by J.R.R. Tolkien. Young argues that the Orcs in Tolkien’s medieval European-esque Middle Earth harbor negative racial stereotypes, as they are described as dark-skinned, slant-eyed, and “inherently evil” (96). This portrayal of dark-skinned evil figures depicts racial minorities as evil and opposed to the white main characters, effectively making them the Other. In addition, Rumsby argues that many non-human creatures in fantasy are based on negative racial and ethnic stereotypes. He says that white characters are often put into situations where they must fight the oppression of these “evil” characters and creatures, or the racialized Other, and these situations “mirror those of real-world discriminated minorities” (22). These situations make the white characters the heroes and these Other characters evil based upon racial and ethnic stereotypes because they are dangerous to not only the hero, but the betterment of the world as well. While these examples of negative racial representation and racial Othering are numerous and potent within the overall genre of fantasy, they are extremely evident in the *Twilight* series, which can give readers a sense of what is happening both in broader fantasy and the real world.

Othering in *Twilight*

Due to a lack of positive representation in the *Twilight* series, the act of Othering is extremely potent in its pages; one of the most glaring acts of Othering is the depiction of the vampires themselves. When Bella first sees the vampires, she is instantly blown away by their pale beauty. First, Bella notices that, despite looking different, all the vampires are extremely pale, almost albino, and describes them as “the palest of all the students living in this sunless town” (Meyer *Twilight* 18). However, Bella denotes that the reason she cannot look away from the vampires is because of their exquisite beauty. She thinks, “I stared because their faces, so different, so similar, were all devastatingly, inhumanly beautiful. They were faces you never expected to see except perhaps on the airbrushed pages of a fashion magazine. Or painted by an old master as the face of an angel” (Meyer *Twilight* 19). With this introduction to the vampires, Bella and readers automatically associate the pale and white Cullens with beauty and angels, which are often symbols of perfection and purity. The depiction of the vampires as perfect and pure contributes to Othering because it paints the pale and white vampires as perfect, or the in-group or self. In addition to this introduction, there are several times where Bella

describes Edward's perfection and beauty in direct conversation with his whiteness. For example, when thinking about Edward, Bella says: "the inhuman beauty, the pale, frigid skin" and another time describes Edward's "pale, glorious face" (Meyer *Twilight* 137, 193). With both instances, Bella marvels at Edward's beauty which is inherently tied to his paleness and whiteness. Thus, the depiction of the vampires' beauty tied to their whiteness contributes to Othering because the vampires' pale skin is at least in part, what makes them so undeniably beautiful.

However, even the indisputably beautiful pale vampires are presented as more dangerous and less perfect when associated with the color black. In the series, the vampires' eyes change depending on their diet, and the Cullens, who only consume animal blood, have golden eyes, while vampires who drink human blood have red eyes. When a vampire is hungry, however, their eyes turn to black as an indication that they thirst for human blood, making them a greater threat (Meyer *Twilight*). In the book *Bitten by Twilight: Youth Culture, Media, & the Vampire Franchise*, author Natalie Wilson argues that "even the heroic Cullens are presented as more dangerous when their eyes turn black, suggesting that those who are 'white and delightful' are also 'susceptible to evil'" (56). This association of evilness with the color black, as described by Wilson, is seen many times throughout the *Twilight* series. For example, when Edward's eyes are black, he is more dangerous to Bella, but when his eyes are a lighter color, he is less dangerous (Meyer *Twilight* 126). Because of this, the *Twilight* series contributes to Othering as Meyer paints the pure and perfect white vampires as susceptible to evil by the color black, which may symbolize race and skin color since there is such a heavy emphasis on the pale perfection of the vampires.

While most vampires in the series are associated with whiteness and purity, there are a few examples of vampires who are not strictly "white," and they are either evil or no longer associated with perfection. For example, in the last book, *Breaking Dawn*, many of the Cullens' vampire friends from all over the world gather to defend Renesmee from the Volturi. One group of vampires that come to the aid of the Cullens are the Amazonians, two women who Bella describes as being "wild in every way" and that she had "never met any vampire less civilized" (Meyer 612, 613). With this example, Bella clearly depicts these vampires as the Other, viewing them as savage and less like the civilized, white, perfect Cullens. In addition, Laurent, a vampire who is white in the book series, was cast as a black man in the movies, but director Catherine Hardwicke claims she had a tough time getting Meyer to agree to this casting. About the vampires, Meyer allegedly said, "I wrote that they had this pale glistening skin," so they had to be white in the films. Eventually, she did agree to let Kenyan American actor Edi Gathegi play Laurent, who,

coincidentally, is evil and attacks Bella in the second book *New Moon* (Zimmerman). While this casting decision does provide representation for some fans, it is problematic and rooted in Othering because Meyer only sees her perfect vampires as white and pale, making anyone who is not white and pale the outsider and thus, the Other. These representations go back to the idea of people with dark skin being evil or the perpetrator against white people commonly found in the fantasy genre.

In addition to vampires, the description of the Quileute tribe members, who are shape shifting werewolves, furthers the idea of the racialized Other. Unlike the vampires, the Quileutes are based on a real Native American tribe; when Bella first encounters members of the tribe, she describes them as having “straight black hair and copper skin” and gives them the moniker of “newcomers” (Meyer *Twilight* 117). This description and name given to the tribe members is incredibly important because, in this scene, Bella’s friends wonder why she invited the “newcomers” or outsiders to the beach, which immediately paints the Quileutes as the out-group and Others upon readers’ first introduction to them. This scene also establishes the werewolves as having dark skin and features, which is in stark contrast to the paleness and golden eyes of the vampires. In addition, as the books continue, Bella describes the Quileutes as very similar to one another, saying they are “all tall and russet-skinned” and having “strikingly similar hostility in every pair of eyes” (Meyer *New Moon* 263, 323). Throughout the books, the appearance of the Quileutes is reduced to being extremely similar or entirely the same, as demonstrated in these two examples. Furthermore, Wilson notes that the werewolves are constantly referred to as “the wolf pack,” while the vampires are usually referred to on an individual basis, furthering the idea that werewolves are all one and the same (62). This idea of all people of one race appearing similar is problematic and contributes to Othering because it reduces people of the same race, who may have little else in common, to being the same and, thus, automatically the outsiders because they are not like the self or in-group.

Continuing, while the white and perfect Cullens are portrayed as civilized, with Edward even being able to date a human girl and control his blood thirst around her, the werewolf Quileutes are portrayed as savage and vicious, furthering the idea of the racialized Other. In *Eclipse*, Edward describes the wolves as “mutant canines” while Bella describes them as “big idiot wolf boys” (Meyer 31, 231). Throughout the books, the tribe members are characterized more as near-human intelligent animals rather than humans, with Bella noting that, after Jacob becomes a werewolf/shape shifter, he could eat an entire cow (Meyer *Eclipse* 243). Additionally, as the series wraps up, Aro, the leader of the Volturi, notes that the werewolves would be great guard dogs (Meyer *Breaking Dawn*

700). As Wilson argues, these references and descriptions reduce the Quileute tribe members to animals with near-human intelligence, who have more value as wolves than as humans (62). Thus, the Quileute tribe members are Othered by being portrayed as less than human, furthering the idea that they are the outsiders and do not belong in the dominant group because they are not civilized or intelligent enough, traits that are tied very closely with the color of their skin.

Conclusion

Stephanie Meyer's *Twilight* series makes it evident that the fantasy genre of literature sometimes lacks greatly in representation and racial diversity, which perpetuates the idea of the racialized Other that exists in the real world. By painting the vampires as white and perfect and the Native American werewolves as less than human and savage, Meyer continues negative stereotypes pertaining to Native Americans and paints them as the Other. When the vampires are associated with the color black, like their eyes changing because they are hungry, Meyer shows them as dangerous and violent. However, when their eyes are the light, golden color, they are safe and civilized. Also, on the rare occasion when vampires are anything but white, like Laurent in the films and the Amazonian vampires, they are either depicted as evil or animalistic and savage, which further contributes to Othering by depicting minorities as scary outsiders.

By failing to depict minorities in a positive light and showing them as savage and dangerous, Meyer contributes to Othering because she paints minorities as outsiders and harbors a them-versus-us attitude. In the series, the white and beautiful vampires are the self, while the savage werewolves and evil, dark vampires are the Other. This attitude is furthered by the conflicts between the self and Other, with the self always coming out on top. Meyer's acts of Othering most closely align with Powell and Menéndez's explanation of Othering happening because of anxiety and fear fueled by racism (19). These acts of Othering are a gross misuse and disrespect to fantasy's wonderful ability to recontextualize and change how people think about the world and people unlike themselves.

For centuries, fantasy has remained one of the most popular literary genres and, regardless of if a book fits low or high fantasy categorization, it often misses out on opportunities to change the way people think and not only help people see minorities as equal, but as heroes. Rumsby argues that the racist and insensitive history of the fantasy genre is a tool to help readers rethink these literary worlds where the impossible becomes possible (175). Because fantasy can have characters ride dragons, fight with magic, and turn into vampires, it also has the ability to paint minority characters, specifically characters of color, in a positive and heroic light, which is something the genre commonly

fails to do, often because of “historical accuracy” since many stories are inspired by medieval Europe (Rumsby 28). However, if fantasy books can host an epic eight-hundred-page story inspired by medieval Europe that features elves and dragons, there is no real reason that they cannot contain positive depictions of minorities except for racism which contributes to Othering. Low fantasy, like the *Twilight* series, has a fantastic opportunity to use its boundary-pushing depictions of the real world to positively and accurately portray minority characters, specifically characters of color. Because low fantasy is set in the real world and is closest to our world, it is important to look at stories within this subgenre because of its popularity and impact on people, as well as because the Othering that happens in these stories is all the more dangerous as it could more easily transfer to the real world.

A great way to combat the Othering found in low fantasy books is to contribute to and strive for the idea of belongingness instead. According to Powell and Menendian, inclusion in society is one of the foundational human concerns and belongingness goes beyond tolerating and understanding differences and is about “ensuring that all people are welcome and feel they belong in the society” (33). This idea is coined “the circle of human concern” by these two researchers, and that is where negative representations and stereotypes of the racialized Other must be challenged. One way to ensure belongingness is to give “voice” to minority groups, which gives them expression and focuses on their group needs. In the end, these two scholars support the creation of “inclusive narratives, identities, and structures” (33-34).

One major way to implement this strategy is to provide inclusion in popular literary genres, such as low fantasy. By including representation of minorities in fantasy literature, particularly low fantasy, society becomes one step closer to belongingness. As Bal and Veltkamp argue, what we read is important, because it impacts us heavily and increases empathy for people unlike ourselves (11). Because readers see positive attitudes and heroic depictions of minority characters, this empathetic understanding can transfer into real life as well. Instead of creating fear and anxiety of the Other by depicting them as savage and outsiders, positively depicting and representing them can improve attitudes surrounding minority groups. With belongingness in fictional magical versions of our world, we become one step closer to achieving belongingness without swords and dragons.

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LGBTQ Rights Policy Analysis

Scott Coble

ABSTRACT

This policy paper addresses the progress and setbacks in the struggle for LGBTQ rights in the United States, advocating for the passage of the Equality Act as an essential legal safeguard. Despite notable advancements, LGBTQ Americans continue to encounter systemic and interpersonal discrimination, particularly in employment, housing, and public spaces. Such discrimination is often entrenched in heterosexist and transphobic ideologies, creating pervasive inequities and mental health disparities. The Equality Act is presented as a critical response to these challenges, proposing comprehensive protections that would prohibit discrimination based on sexual orientation and gender identity. By ensuring equal treatment in all facets of life, the Equality Act would support the mental and emotional health of LGBTQ individuals and symbolize a national commitment to equal rights. Its enactment would represent a milestone in the movement toward full civil rights for LGBTQ Americans, reflecting the country's dedication to the principles of liberty and justice for all.

Keywords: LGBTQ rights, Equality Act, discrimination, mental health disparities, civil rights

This social policy proposal delves into the ongoing struggle for LGBTQ rights in the United States, highlighting the significant progress achieved and the adversities faced, particularly legislative efforts that threaten to reverse these gains. The proposal outlines the multifaceted nature of discrimination against LGBTQ individuals in employment, housing, and public life, exacerbated by heterosexist and transphobic attitudes at both systemic and interpersonal levels. The proposal emphasizes the urgent need for the Equality Act, examining its potential to offer comprehensive protections, mitigate mental health disparities, and further the cause of justice and equality in the fabric of American society.

Social Problem

In the United States, the LGBTQ community has made notable strides toward equality and legal recognition (Lambda Legal, 2023). Nonetheless, this progress is continually challenged by new legislative measures that threaten to erode these gains. In fact, state legislatures nationwide have introduced over 275 pieces of adverse legislation targeting the LGBTQ community for the 2024 legislative session, in addition to the more than 500 similar bills from the previous year (Robertson, 2024). The difficulties encountered by the LGBTQ population are diverse and intricate, necessitating an in-depth review of these legislative challenges, their consequences, and strategies for advocacy and pushback (American Civil Liberties Union [ACLU], 2023).

LGBTQ individuals often confront bigotry, discrimination, and violence due to their sexual orientation, gender identity, or how they present themselves (Casey et al., 2019). Such discrimination can permeate many life areas, including employment, security of marriage equality, adoption rights, housing, medical care, and public accommodations (Elias, 2020; Lambda Legal, 2023).

Discriminatory practices against the LGBTQ community, rooted in heterosexism and transphobia, occur on both systemic and personal levels. Systemic discrimination is apparent in the laws of certain states that target transgender people, particularly around access to bathrooms and public amenities. 'Religious freedom laws' also provide a legal basis for individuals to deny services to LGBTQ persons under religious pretexts. While religious exemption laws play a crucial role in safeguarding individual liberties by allowing persons to opt out of certain legal requirements that conflict with their sincerely held religious beliefs, it becomes controversial when employed to legitimize discrimination. Religious liberty was frequently invoked to justify segregation and Jim Crow laws, opposition to interracial marriage, and restrictions on women's reproductive rights (Koppelman, 2014). Yet, balancing religious freedom with LGBTQ rights is crucial for fostering a just and equitable society. Harcourt

(2017) explains how religious freedoms should not justify actions that harm others. Discrimination against LGBTQ individuals could inflict significant psychological and economic damage. Hence, there should be clear limits to religious exemptions, especially when they result in harm to others.

Moreover, federal employment discrimination laws do not presently classify sexual orientation and gender identity as protected categories (Lambda Legal, 2023). At a personal level, LGBTQ individuals continue to experience widespread bias, as seen in school bullying and the alarmingly high murder rates of transgender women of color (Nadal, 2019, p. 1310). Furthermore, research indicates that LGBTQ individuals disproportionately suffer from mental health issues, such as depression, anxiety, and suicidal thoughts and actions, often due to persistent discrimination, rejection, and stigmatization (Kaniuka et al., 2019).

Past Policy Efforts

The analysis of past policy efforts to address LGBTQ rights in the United States can be approached by examining two significant milestones: the ‘Don’t Ask, Don’t Tell’ (DADT) policy and the legalization of same-sex marriage. Reviewing these past policies provides a framework of initiatives that underscore how current political climates and societal perceptions affect long-term progress.

Don’t Ask, Don’t Tell

Alford and Lee (2016) discuss the significant role of the ‘Don’t Ask, Don’t Tell’ policy in the history of lesbian, gay, and bisexual (LGB) rights within the U.S. military. Before the implementation of this policy, LGB individuals faced a complete prohibition from serving in the military. Enacted in 1993 as a compromise between Congress and President Clinton, DADT aimed to soften the absolute ban by allowing lesbian, gay, and bisexual individuals to serve, provided they neither disclosed their sexual orientation during enlistment nor engaged in same-sex relationships or behaviors. This policy was intended to circumvent the prevalent discriminatory practices of the time.

The ‘Don’t Ask, Don’t Tell’ policy resulted in mixed outcomes, reflecting the complex interplay between public perception and policy enforcement. While it enabled numerous LGB individuals to serve in the military—a previously unattainable opportunity—it simultaneously compelled them to hide their identities. This concealment led to heightened stress, vulnerability to subjective targeting, and a pervasive fear of exposure, alongside inconsistent enforcement of the policy. Ultimately, DADT was responsible for the discharge of thousands of service members and notably failed to consider the transgender community (Alford & Lee, 2016; Wansac, 2013).

The repeal of DADT in 2011 marked a monumental shift. It acknowledged

the policy's unjust nature and opened the door for LGB individuals to serve openly, promoting inclusivity and diversity in the military. In 2021, the policy expanded protections for transgender soldiers to serve openly as well (Suits, 2021). This repeal and updated policy can be seen as both a reflection of and a catalyst for changing societal attitudes towards LGBTQ rights.

Legalization of Same-Sex Marriage

The fight for same-sex marriage in the U.S. has been a prolonged and central issue in LGBTQ rights. Before its nationwide legalization, same-sex marriage was a patchwork of differing laws across states (Ofosu et al., 2019). Legalizing same-sex marriage, culminating in the landmark Supreme Court ruling in *Obergefell v. Hodges* (2015), was a significant victory for LGBTQ rights. It gave same-sex couples legal recognition and rights, signifying societal acceptance and equality (Ofosu et al., 2019).

The ruling had far-reaching implications beyond the right to marry. First, it legally contested heteronormative frameworks, thereby influencing societal perceptions of sexuality, gender, and family structures more broadly. Additionally, the ruling affected various sectors, including healthcare, taxation, and adoption. Same-sex couples were now able to receive the same legal treatment as their heterosexual counterparts. Moreover, the ruling had profound cultural and psychological effects, validating the dignity and worth of LGBTQ individuals (Bernstein, 2018; Ofosu et al., 2019).

Competing Options

The policy strategies addressing LGBTQ rights in the U.S. reveal a stark contrast in their conception and impact, reflecting the changing dynamics of social attitudes and legal interpretations over time. The 'Don't Ask, Don't Tell' policy was a barometer of the era's prevailing norms. It was a policy of compromise that allowed LGB individuals to serve in the military, provided they did not openly disclose their sexual orientation. This requirement for secrecy can be seen as a tacit acknowledgment of their presence while simultaneously mandating their invisibility, a poignant reflection of the conditional acceptance of the time (Wansac, 2013).

In stark contrast stands the legalization of same-sex marriage, a policy that did not just open the door to equality but emphatically affirmed it. Unlike the implicit expectations of concealment under DADT, the legalization of same-sex marriage was a clear and loud declaration that love and commitment should be recognized and honored regardless of gender. It was a policy that granted rights and validated identities, with the Supreme Court's ruling in *Obergefell v. Hodges* serving as an historic beacon of progress (Bernstein, 2018; Ofosu et al., 2019).

The repeal of DADT and the embrace of same-sex marriage chart the trajectory

of LGBTQ rights from begrudging tolerance to full legal recognition. These policies mirrored the shift in public opinion, with each step towards equality influencing and being influenced by societal attitudes. DADT's existence and eventual repeal highlighted the inherent conflict between a society's call for service and its reluctance to accept the full personhood of those in service. The end of DADT marked an acknowledgment that sexual orientation should neither be a barrier to service nor a cause for dismissal or discrimination.

Furthermore, the transition from DADT to the celebration of same-sex marriage reveals the evolution of advocacy and legal strategies within the LGBTQ movement. Initially, the strategy was to fit within the confines of restrictive norms, but the approach shifted towards challenging and changing those norms. Legal victories such as the right to marry represented not just a change in law but a transformation in the cultural landscape, carving out a space where LGBTQ rights are understood as an inseparable part of broader human rights.

Both policies serve as case studies in the power of law as a reflection of and a force for societal change. The journey from DADT to marriage equality underscores a broader narrative of growth and struggle within the LGBTQ community and American society. It showcases the competing options of gradual integration through compromise versus the pursuit of unequivocal equality through legal recognition, each with its implications and ramifications for societal change and the lived experiences of LGBTQ individuals.

Policy Proposal

However, while great strides have been made over the last fifty years in the advancement of LGBTQ rights, nearly a decade after the nationwide legalization of same-sex marriage, a majority of states in the U.S. continue to have the power to refuse fundamental rights to LGBTQ Americans. Individuals can still face discrimination with employment, housing, credit, and accessing public goods and services solely because of their sexual orientation or gender identity (Human Rights Campaign [HRC], 2023; Santos et al., 2021). Thus, the Equality Act aims to rectify this situation, providing essential freedoms and safeguards to all Americans, regardless of their state of residence (Human Rights Campaign [HRC], 2022).

Gamble-Eddington (2020) explains that the origins of the Equality Act trace back to the 1970s when Representative Bella Abzug introduced progressive LGBTQ discrimination laws in Congress, aiming to expand civil rights protections for the LGBTQ community. Despite initial setbacks and opposition, the concept of LGBTQ protections continued to resurface over the years in various forms. In 2007,

the Employment Non-Discrimination Act (ENDA) was revised to include safeguards for sexual orientation and gender identity, serving as a precursor to the current iteration of the Equality Act. In 2019, another version of the Equality Act was introduced in the House of Representatives to amend civil rights statutes to prohibit discrimination based on sexual orientation and gender identity. Passing the House by a vote of 236 to 173 (with unanimous Democratic support), the Act expanded protections to LGBTQ individuals by redefining sex to include gender identity and sexual orientation.

However, critics identified potential conflicts between sex-based and gender identity-based rights, which could potentially impact existing legal provisions. The Republican-controlled Senate stalled the bill's progress by keeping it untouched in committee for over a year, thus thwarting its chances of passage (Burt, 2020; Gamble-Eddington, 2020). This legislative journey reflects a persistent effort to combat discrimination and promote equality for marginalized communities. The Equality Act, despite its imperfections and need for additional legal scrutiny, represents a crucial advancement in explicitly outlawing discrimination based on sexual orientation and gender identity. By amending existing federal civil rights laws and incorporating sexual orientation and gender identity as protected categories, this inclusion places them alongside other established categories such as race, religion, sex, and national origin, thereby explicitly prohibiting discrimination based on these grounds (Santos et al., 2021).

Furthermore, the Equality Act plays a crucial role in establishing uniform national standards to address the variance in LGBTQ rights across states. It introduces legal mechanisms for recourse against discrimination, aligning with and reinforcing existing civil rights frameworks. The Act enforces safeguards in employment practices—such as hiring, firing, and promotions—to ensure workplace equality for LGBTQ individuals. It also broadens protections to housing, prohibiting discrimination in activities like renting, selling, or financing homes. The definition of public accommodations is expanded under the Act to include retail stores, transportation services, and online retailers, ensuring LGBTQ individuals receive fair treatment. Moreover, the Act bans discrimination in federally funded programs across various sectors, including education and healthcare, and forbids bias in jury service (Santos et al., 2021).

Nevertheless, the Equality Act's societal impact goes beyond its legal provisions. It is a powerful statement affirming the dignity, equality, and rights of LGBTQ individuals. By amending and extending the scope of existing civil rights legislation, it seeks to foster a more inclusive and equitable society where discrimination based on sexual orientation and gender identity is no longer tolerated.

Policy Components

The Equality Act, aimed at protecting LGBTQ rights, involves multiple stakeholders, including LGBTQ individuals, advocacy groups, businesses, religious institutions, and the public. Its implementation does not require significant new funding sources, as it primarily amends existing civil rights laws. Instead, the focus is on reallocating and efficiently using existing resources within various federal agencies to enforce these expanded protections (Jansson, 2018). The Act necessitates a balanced distribution of enforcement efforts across various sectors, such as employment, housing, education, and public accommodations. This would ensure that all areas of potential discrimination are adequately addressed. The enforcement of the Act's provisions does not involve tangible goods but rather the equitable application of legal protections and services (Santos et al., 2021).

The primary entity responsible for carrying out the policies outlined in the Equality Act is the U.S. Department of Justice (2019), particularly the Civil Rights Division. This division is tasked with enforcing federal statutes prohibiting discrimination based on race, color, sex, disability, religion, familial status, and national origin. With the passage of the Equality Act, their responsibilities would expand to include the enforcement of non-discrimination based on sexual orientation and gender identity, ensuring that these protections are upheld across all states.

Supporters and Audience

A multifaceted persuasion strategy is crucial to gain widespread support in crafting a policy proposal to enact the Equality Act. This strategy must interweave the ideological underpinnings of the policy with targeted objectives for various audiences to create a coalition of support.

Persuasion Strategy

The core ideology of the Equality Act is rooted in the principles of fairness, justice, and the fundamental right to equality under the law (Badgett, 2020; Lambda Legal, 2023). The policy is grounded in the belief that all Americans, regardless of sexual orientation or gender identity, deserve to live without fear of discrimination. Strategies should emphasize universal values that transcend ideological differences to persuade a broad spectrum of society. These include the love of family and friends, freedom of expression, compassion and understanding, community and belonging, and fairness and justice (Putnam & Campbell, 2011).

Storytelling can be a powerful tool to create support, showcasing personal narratives illuminating discrimination's real-world implications (Lowndes, 2016). The policy is humanized by placing human faces and stories at the forefront, fostering

empathy and understanding. Furthermore, economic arguments emphasizing the benefits of diversity and inclusion in the workplace and marketplace can appeal to business interests, framing the Equality Act as a moral and economic imperative (Badgett, 2020).

Plan for Objectives

By crafting a narrative that aligns the Equality Act with American values and demonstrating the broad benefits of its implementation, the proposal can appeal to diverse groups, galvanizing a robust support base for enacting the policy. Therefore, a combination of approaches will be utilized: the friendly approach, which involves engaging with supportive policymakers through relationship building and coalition forming, and the adversarial approach, which addresses skeptical policymakers through confrontational tactics like public demonstrations, aggressive lobbying, and media strategies (Jansson, 2018). The effectiveness of the friendly and adversarial approaches is contingent upon the specific context and dynamics of the prevailing political environment. Therefore, to lay the groundwork for enduring advancements in civil rights, it is crucial to employ strategies that are both insightful and persistent.

Incorporating the policy stratagems illustrated in Jansson (2018), combative persuasion and coercive messaging in advocating for LGBTQ rights and the passage of the Equality Act involve assertive strategies that highlight the costs of not enacting the legislation. This approach might include stressing the legal and social repercussions that states and organizations could face if they continue to discriminate, such as economic boycotts, legal challenges, and public relations crises. This form of messaging is confrontational, aiming to create a sense of urgency and the inevitability of change, thus pushing legislators and the public to support the Act to avoid adverse outcomes. The underpinning message is clear: failure to support the Equality Act equates to supporting discrimination, which is untenable in a society that values equality and justice.

Conversely, a win-win persuading strategy for the passage of the Equality Act would focus on mutual benefits, emphasizing how its enactment would not only safeguard rights for LGBTQ individuals but also promote a more harmonious and equitable society for everyone. This method would involve engaging opponents in dialogue to understand their concerns and finding common ground, such as the shared desire for safe communities and economic prosperity. The mediator method would introduce a neutral party to facilitate discussions between opposing sides, helping to break down misconceptions and build alliances. This strategy seeks to reduce adversarial attitudes, fostering an environment where all parties feel heard, valued, and willing to contribute to a solution that respects both LGBTQ rights and the diverse fabric of American society (Jansson, 2018).

Key Presentations

To galvanize support for the Equality Act, the key presentations must articulate objectives tailored to resonate with specific audiences. Given the inherent and deep-seated opposition of conservative lawmakers and their constituents, a combative persuasion must be taken. For instance, The Heritage Foundation (2019), a politically conservative think tank, outlined in an article that the Equality Act could adversely affect several groups. This article highlighted concerns about parental rights being at risk, the erasure of women's spaces and opportunities, and the impact on medical professionals who may be forced to provide certain therapies. They addressed conflicts arising from disagreements on gender identity and sexual orientation, citing examples like the case of Colorado baker Jack Phillips. Additionally, it raises issues related to sports competitions, charity organizations, and the potential chilling effect on individuals expressing differing beliefs. Overall, the document argued that the Equality Act could lead to a politicization of medicine, legal battles over personal beliefs, and challenges to traditional notions of gender and sexuality.

However, the counterargument must center around the cherished principle of fairness (Lambda Legal, 2023). By positioning the Act as an extension of the meritocratic ideal that individuals should be judged on their abilities and character rather than their sexual orientation or gender identity, the policy aligns with conservative values. This framing underscores that the Equality Act ensures that all citizens have an equal shot at success, a concept that transcends partisan lines.

Many religious-right groups maintain a strong adherence to their faith's traditional views on marriage and family, often seeing the advancement of LGBTQ rights as a challenge to these beliefs (Hopkins et al., 2013). Therefore, when engaging with religious communities, it is crucial to find a delicate balance that honors religious freedom while emphasizing universal values of dignity and respect (Lambda Legal, 2023). A confrontational strategy should be moderated; the approach should reflect the ethical imperative present in many faiths to treat others with compassion, ensuring no one is subjected to discrimination while preserving religious expression rights. Overcoming this significant barrier is essential for legislative success. Although finding common ground may seem insurmountable, the strategy should prioritize compassion and understanding, even towards those staunchly against LGBTQ human rights.

When engaging with business and corporate leaders, the dialogue will pivot to the economic advantages of a diverse and inclusive workforce. This will emphasize the innovation and broad market appeal that inclusivity brings, presenting the Equality Act as a catalyst for economic growth and enhanced corporate reputations. For

example, leaders can be presented with case studies from companies that have seen a direct correlation between implementing inclusive policies and experiencing a surge in creativity, productivity, and overall company performance. Additionally, discussions can include data-driven reports illustrating how companies known for their diversity and inclusivity have gained substantial market share and customer loyalty (Jansson, 2018). This perspective is particularly compelling to the business community, which often seeks to align with progressive social values that reflect the demands of their customers and employees (Badgett, 2020; HRC, 2022).

In outreach to civil rights and advocacy groups, the approach will be to invoke the shared heritage of fighting for equal rights, drawing parallels with historic civil rights battles (HRC, 2023). This approach aims to unite these groups under a common cause, summoning a sense of solidarity and shared mission that has historically been a powerful motivator for change. These tactics include conducting joint research to provide solid evidence for policy changes, organizing community events to raise awareness and support, and developing strategic communication plans highlighting proposed policies' mutual benefits. Additionally, building long-term relationships with these groups through regular meetings and collaboration can enhance trust and cooperation, facilitating more effective advocacy efforts for LGBTQ rights (Jansson, 2018).

Finally, in communicating with the public, the strategy involves a widespread educational media campaign. The Pew Research Center recently reported that in 2002, 51% of Americans stated homosexuality should be accepted by society, whereas, in 2019, that percentage increased to 72% (Poushter & Kent, 2020). Therefore, with the increased public support for the LGBTQ community, the approach would then simply be debunking myths and highlighting the Act's universal protections. The message will be clear: the Equality Act is not about special privileges for some but equal rights for all (HRC, 2022).

Thus, presentations must resonate with various audiences to garner support for the Equality Act. Critics, like conservative groups, express concerns over traditional values. Yet, the counterarguments highlight fairness and alignment with these merit-based ideals. Engagements with religious groups balance respect with advocating for dignity. Business discussions focus on the economic benefits of diversity. Outreach to civil rights groups emphasizes historical solidarity. Public strategies leverage increasing societal acceptance to underscore the Act's commitment to equality for all. Thereby, each audience-specific approach forms a part of a strategic plan aimed at building a broad and even bi-partisan coalition to pass this historic piece of civil rights legislation.

Conclusion

The journey for passage of the Equality Act represents a comprehensive effort addressing entrenched issues of discrimination within the United States. Addressing the concerns of various stakeholders — from conservative groups to religious communities and from business leaders to civil rights advocates — requires a deliberate and inclusive strategy. By fostering dialogue based on mutual respect, economic benefits, and shared values of fairness and dignity, a broad-based coalition in support of the Act can be created. Uniting diverse groups to the common goal of advancing LGBTQ rights is a lofty ambition; however, the passage of the Equality Act would signify a significant milestone, ensuring all Americans, regardless of their sexual orientation or gender identity, are treated with equality and respect.

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Stopping the Willow Project on Social Media: An Exploration of the Social Problems Process in a Sub-Environmental Issue

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ABSTRACT

The Social Problems Process (SPP), a sociological theoretical model, encompasses an in-depth examination of the stages a social problem (SP) passes through to achieve remediation. This project aims to explore the SPP of the environmental sub-SP of fossil fuel continuation as demonstrated by the Willow Project (WP), an accepted policy that allows for intensive oil drilling in environmentally vulnerable landscapes, contributing to exacerbated climate conditions. The aim of this exploration is to better understand the SPP in contemporary SPs and role of social media. The present study uses qualitative content analysis, emphasizing frequency and themes, of WP-related Instagram posts. A total of forty-four posts were collected and analyzed across two account categories: activist/educational (n=5) and news/informative (n=5). Approximately 86% of the analyzed posts were collected from the activist/education account category (n=38) with primary themes of taking action and animal/environmental consequences. Contrastingly, the news/informative account category produced minimal coverage prioritizing contextual information. These findings support the WP sub-SP passing through the initial three stages of the SPP: claims making, media coverage, and public reaction. This work contributes to filling in the gaps of literature exploring SPs within social media with an acute focus on the connections between environmental SPs, public perception, and youth.

Introduction

From casual sexism to disastrous terrorism, social problems (SPs) are prevalent in vast ways throughout society. Some SPs, especially those relating to environmental crises, have and will continue to impact humans across classes, genders, races, geographic locations, etc. Climate change and relating sub-issues, such as environmental degradation and global warming, align with both the objective and subjective definitions of SPs (Best 2008). Notably, many sociologists have challenged the validity of the objective approach of defining SPs (Best 2008; Blumer 1971; Hubbard, DeFleur, and DeFleur 1975; Schneider 1985). Nonetheless, as Blumer (1971) described a SP becoming reified once societally recognized, environmental-based issues have long since earned mass acknowledgement and concern within society. For instance, the initial scientific indication of global warming phenomena in response to fossil fuel usage was released in the mid 1890s, with the concern and harsh realities only growing since (Weart 2012). However, environmental issues' labeling as a social problem is not a prominent debate in the present time nor is its discussion the purpose of the current paper.

Most SPs hold the commonality of being social constructions, which supports the analysis of SPs through the SPs process (SPP) as this approach allows for understanding through focusing on how and why certain conditions are labelled as SPs (Best 2008). Building from the subjective definition, SPs are constructed when a collective of people recognize the conditions and later acquire social legitimacy (Blumer 1971). The SPP is an all-encompassing approach to examine why and how these conditions were recognized as such. Common examples of SPP application focus on varying phenomena caused by large societal movements or events (e.g., COVID-19 impacting the educational institution and health policies) (Best 2020). Building on this, I argue that a SP itself may serve as an umbrella for more sub-categorically defined issues. This is exemplified in environmental SPs due to their systemic and deep-rooted nature within society, leading to numerous microscale SPs. From this and pertinent to the current paper, I hypothesize that when examining these 'sub-issues' of a SP (i.e., sub-SPs), the SPP still functions and is prevalent at an acute scale. In the current paper's context, environmental sub-SPs consider a wide range of issues such as air pollution, ocean acidification, and deforestation, among others. This paper focuses on the sub-SP issue of fossil fuel continuation through exploring the online response to the proposal and approval of the Willow Project in the United States.

The Willow Project is a recently Biden-administration-approved (as of March 2023), eight-billion-dollar oil drilling operation led by ConocoPhillips, a multinational fossil fuel company (Turrentine 2023). The plan allows for ConocoPhillips to expand

drilling practices into the vulnerable Arctic environment, bringing harsh consequences to the National Petroleum Reserve in Alaska and Teshekpuk Lake, which are ecologically sensitive and significant areas (Chiappinelli et al. 2023; Garthwaite 2023; Turrentine 2023). The projected outcome of this project is approximately six hundred million barrels of oil—a questioned estimate that could exponentially increase U.S. carbon emissions (Turrentine 2023). This area of Alaska has already experienced climate change stressors including increased ocean temperatures, ocean acidification, coastal erosion, thawing permafrost, and more (Garthwaite 2023; Turrentine 2023). Given the vulnerability of this area, further environmental stressors can only reap additional negative consequences and exacerbate current conditions (Garthwaite 2023). Regardless of the site's environmental status, the support of oil drilling's continuation is detrimental to climate crises' calls, failing to align with U.S. President Biden's promises of beneficial climate-oriented policies (Megerian 2023; Milman 2023).

Benefit-cost analyses in past economic explorations have indicated that the benefits of expanding oil drilling practices in environmentally vulnerable areas may exceed the costs (Hahn and Passell 2010). While oil drilling supports the U.S. economy, allows for technological and scientific developments, creates job opportunities, and more (Office of Oil & Natural Gas 2020), its continuation poses a multitude of environmental concerns. The practice of oil drilling itself has major environmental consequences including disruption of ecosystems, harm onto mammals, vegetation clearing, contamination, and contributing to the increase of average global temperatures furthering the impacts of global climate change (Turrentine 2023; U.S. Energy Information Administration 2022). Thus, the backlash that such an oil drilling project received is not an isolated event. Protests against drilling have sparked over the years and across the globe from Argentina to Australia (Alcoba 2022; Lewis 2019). In this paper, the Willow Project, specifically the online response, will be explored through the SPP as an example of an environmental sub-SP.

The entirety of the SPP includes six stages: (1) claims making, (2) media coverage, (3) public reaction, (4) policymaking, (5) social problems work, and (6) policy outcomes (Best 2008). The initiation of claims making is seen when one brings about a topic to others' attention through claiming the issue as troubling in some manner that should be addressed; the people spreading this claim are referred to as claims makers (Best 2008). Environmental SP claims have been made by both activists/social movements and expert/scientist claims makers. Most commonly, activists/social movements build their efforts around the scientific research and data produced by experts/scientists. Moving forward into the subsequent stages, environmental issues have

certainly gained increasing media coverage and public reaction over the years (Funk et al. 2020; Simpkins 2021). Environmental SPs have continually passed through the initial stages of the SPP, though—like many other SPs—have yet to be fully remedied. Despite advancements and increased attention in national policy towards mitigating environmental consequences, this SP has continued to repeat the SPP, as policy that does bring the SP into the latter three stages of the SPP typically fails to bring about the positive change necessary to properly combat the environmental crises and hence remediate the SPs (Kamarck 2019; Plumer and Popovich 2021; Tyson 2021). The present paper aims to explore the journey of the Willow Project sub-SP through the SPP to explore the extent the issue succeeds in the SPP; as Willow was a policy proposal, the succeeding into stage four of the SPP would be pertinent to the remediation. This will serve to bridge gaps in literature regarding modern environmental issues within sociological theoretical understanding and application of the SPP. Further, the current work demonstrates the importance of youth and social media as pertinent topics of exploration.

There has been speculation that public opinion and concern regarding environmental issues are nothing more than reflections of the public's consumption of mass media—which act as a definer of issues for public concern—given the comparisons between general public opinion and mass media coverage of environmental issues (Funkhouser 1973; Hansen 1991; Lowe and Rudig 1986). However, most relevant literature focuses on mass media, prominently through television and newspapers, as the research was conducted prior to the emergence of social media (Hansen 1991; Schoenfeld, Meier, and Griffin 1979). There are scarce explorations on environmental SPs/SPP and social media/internet (e.g., Facebook, Twitter, Instagram, blogs, etc.). Theoretically, the argument may be made that the SPP would act rather similarly in social media as they do in other traditional media forms; however, social media's growing demand and popularity justifies the need to adequately fill in this gap through addressing this societal force and its potential influencing power over SPs.

Social media's role in society is an inevitable topic demanding sociological attention. Generation Z, those born in the late 1990s to early 2000s, engages with social media at the highest rates in comparison to other generations—using it particularly as a main source for consuming news (Auxier 2022; Briggs 2022; Vogels, Gelles-Watnick, and Massarat 2022; Watson 2022). Further, this young population has demonstrated persistent dedication to efforts alleviating climate crises (Jahns 2021; Lashbrook 2021; Tyson, Kennedy, and Funk 2021). Given Generation Z's strong presence and engagement on social media and their commitment to the environment, social media's role in the SPP

regarding environmental SPs is a topic of worthy exploration. Since end goals for claims makers typically align with remedying the SP, deeper understanding and optimizing the potential influence of social media in this process should be of utmost importance and focus. Thus, the current paper aims to initiate the exploration of environmental issues' SPP on social media through examining and analyzing the case of the Willow Project on Instagram.

Millions of social media posts, viral hashtags, petition signatures, etc. demonstrate the response of the public (especially Generation Z on platforms like TikTok and Instagram) in light of the Willow Project being proposed once again (Nilsen 2023; Phillips 2023; Thiessen, O'Malley, and Gutierrez 2023). Cries of this decision feeling like a "betrayal" demonstrated how these people found the potential approval of the Willow Project to be sealing the demise of the world's climate (Phillips 2023; Thiessen et al. 2023). The activism shared and engaged in over social media platforms was an undeniable force; yet, due to concerns that the courts would have ruled in favor of the drilling company due to their decades-old leases, Biden ultimately approved the Willow Project (George and Horowitz 2023). In the aftermath of this approval, numerous officially recognized environmental organizations including Earthjustice, Greenpeace USA, Natural Resources Defense Council, Friends of the Earth, and others collaborated in suing the Biden administration (Chiappinelli et al. 2023). Hence, this period of intense online and in-person activism presents itself as a prime example of the influential role social media plays within the SPP for the environmental issue of fossil fuel continuation. Though much engagement was through TikTok, I have chosen to focus my analysis on Instagram posts due to the ease of analyzing infographic-type posts.

The present study explores if and how the SPP is present within Instagram posts regarding the Willow Project. I expand upon previous literature focusing on environmental SPs and mass media's role on environmental perceptions. I approach this content analysis with the synthesizing concept that the initial three stages of Best's (2008) SPP are to be exemplified in Instagram posting trends regarding the Willow Project across two different categories of accounts to better evaluate the patterns of media coverage.

Methods

To analyze the collected Instagram posts, I utilized qualitative content analysis emphasizing frequency and themes (Mayring 2014). The Instagram accounts explored were categorized into two overarching groups: (1) activist/educational (n=5) and (2) news/informative (n=5). The first category's accounts were selected based upon their nonprofit or official organization recognition, centrality of environment/climate justice to

their account, and educational driven posts. The first group of accounts is listed below:

- @intersectionalenvironmentalist
- @environment
- @greenpeaceusa
- @earthjustice
- @nrdc_org

The secondary group of news-oriented accounts was selected based upon public perception deeming them as being a part of mainstream news media (Shearer and Mitchell 2021). The news/informative accounts are listed below:

- @nytimes
- @apnews
- @abcnews
- @cnnclimate
- @msnbc

I incorporated the analysis of both these account categories to create a more encompassing view of the Willow Project's presence on Instagram. These groups collectively served as proxies to understand the SPP's stage two (media coverage) and three (public reaction). Additionally, given the nature of the first group's accounts, it is understandable that they would dedicate media attention to this issue as they are seemingly the claims makers (SPP stage one of claims making). However, the presence of Willow Project posts from the second group would be extremely beneficial to the continuation of this issue in the SPP, on which is the aim of exploration for the current paper.

To collect the data, I searched each account on Instagram and explored each profile's posts. The posts collected and analyzed were posted within the range of January 1, 2023 to April 1, 2023. Notably, the current project does not include the consideration of Instagram story posts as these automatically delete after 24 hours. The data was managed and organized in an Excel spreadsheet. Once Willow Project posts were identified, themes present were notated in the spreadsheet; thematic categories were induced during data collection and analysis and were altered if necessary to best fit the data. The post date, visual details, caption, and link were also notated in the spreadsheet.

Results

After searching through all 10 accounts, I collected a total of 44 posts, of which ~86% were produced by the activist/educational accounts. Their attention and efforts centered towards preventing the approval of the Willow Project and continuing to fight after its acceptance. I collected 38 posts from this first group. Dates of posts ranged from

February 9, 2023 to March 30, 2023. The @greenpeaceusa account contributed the most posts by producing 50% of this group’s total posts; meanwhile, @intersectionalenvironmentalist contributed only 5% of posts in the group’s total. Eight total themes were derived, with two instances of sub-categories: announcements (approval, lawsuit) and environmental consequences (animal/local environment, global climate change). See Figure 1 below for thematic breakdown.

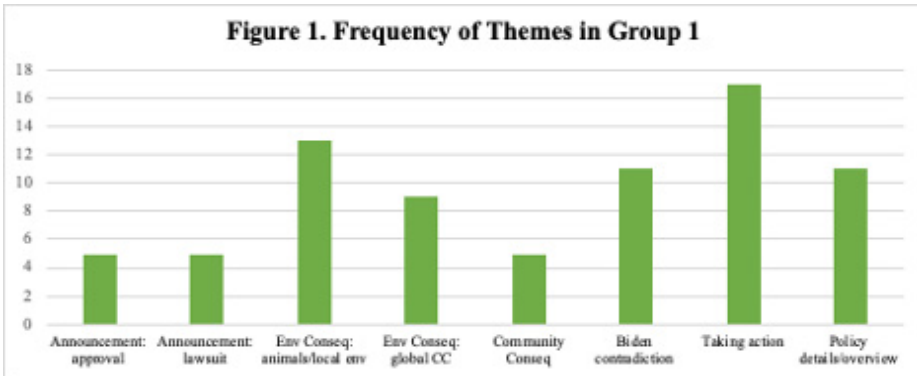


Figure 1. Frequency of Themes in Group 1

From the above figure, four categories of themes were most common: (1) Taking action, (2) Environmental consequences: animals/local environment, (3) Biden contradiction, and (4) Policy details/overview. Their distribution in percentages for overall posts collected in group one is illustrated below in Figure 2.

Themes	Frequency %
Taking action	45
Env Conseq: animals/local env	34
Biden contradiction	29
Policy details/overview	29

Figure 2. Prominent Themes’ Frequency Percentages in Group 1

An example post by @greenpeaceusa is provided (see Figure 3 below), demonstrating through both the visual post and caption the themes of (1) Policy details/overview and (2) Taking action.



Figure 3. Post by @greenpeaceusa (02/17/23) with caption:

America's potentially biggest new oil field in decades, Conoco Phillips' Willow Project, is set to move forward in Alaska's western Arctic, home to sensitive caribou and arctic fox ecosystems and near Indigenous Communities.

After almost a year of protest from supporters like you and from environmental organizations and frontline communities, @potus is the only one left who can stop the project. We have till the end of February, less than 15 days, to tell him to #StopWillow! (Greenpeace USA, 2023).

These accounts used similar hashtags such as #WillowProject and #StopWillow. Additionally, three formats of posts can be identified as (1) standard post: single image with text, informative caption; (2) infographic: in-depth information in post, multiple slides; and (3) video with either person talking to the camera directly or text overlaid captured nature/animal shots. Notably, a fourth format may be considered due to the two meme posts collected.

On the other hand, the second account group consisting of news/informative

accounts produced drastically different results. In total, I collected only six posts from these five accounts. Similar themes were derived as for the above group; notably, two new thematic categories introduced included (1) situational information: offering a concise summary of the background, not emphasizing one aspect more than another and (2) support versus oppose: detailing who/what groups support and those who oppose of the Willow Project approval. The themes of Biden contradiction and situational information both held the most posts ($n=2$ respectfully).

A mentionable observation is the lack of any Willow Project related posts by the @nytimes and @msnbc accounts. Meanwhile, @apnews and @abcnews only produced one post each; these were both released on the day of the project's approval (March 13, 2023). Contrastingly, @cnncclimate's initial Willow-related post was on March 2, 2023. This account produced four posts regarding the project. An additional pattern found was this group's emphasis in their posts' captions to visit resources linked in their bio for more information ($n=5$). This contradicts the previous group's mention of visiting their bio, which was almost exclusively for information on opportunities to take action.

Discussion

Though the Willow Project was approved—despite the online uproar—I found supporting evidence of this sub-SP's engagement through the first three stages of the SPP (claims making, media coverage, and public reaction). This sub-SP failed to advance beyond these initial stages given the project's approval; however, it is worthy to note—though not a policy change for stage four—that a lawsuit was conducted by numerous environmental organizations against the Biden administration regarding this approval. The claims-making stage was very clear to identify in the activist/educational accounts' posts through the announcements and urging their audience to take action. Two of the three news/informative accounts that posted about Willow solely announced the approval or political contradictions rather than highlighting the threat the project holds. The SPP's stage two of media coverage is covered to an extent. Posts about the Willow Project were prominent on activist/educational profiles, with some consistently posting about this issue leading up to the decision. Nonetheless, this focus could be expected from these accounts due to their role as claims makers. However, the mainstream media's accounts (news/informative group) covered this issue significantly less.

Although I would not argue that this means the Willow SP halted its way through the SPP at this stage due to its minimal attention from mainstream media, this fact does seem to be a foreshadowing call that its journey is soon to end given that media coverage and policy changes tend to go hand in hand (Grossman 2022). Public reaction, stage three of the SPP, can be argued to have been adequately achieved. Over

half a million views of the hashtag #WillowProject on TikTok, hundreds of thousands of posts using #StopWillow on Instagram, and millions of petition signatures, etc. equates to a prominent public reaction on this issue. Millions of young people, climate activists, experts, and the like became exponentially concerned about the continuation of fossil fuel and the project's inevitable consequences on the environment, supporting the campaign of stopping the Willow Project from moving forward. Ultimately, despite public backlash, no aligning policy was instilled as the project was approved. Notably, the Biden administration did work towards ameliorating the impacts by denying two of the five proposed drill sites, upon ConocoPhillips relinquishing rights to over 60,000 acres of ecological vulnerable land (U.S. Department of the Interior 2023). Thus, I argue that the Willow Project, as an example of a sub-environmental SP of fossil fuel continuation, was halted at the conclusion of the third stage, public reaction, in the SPP. If the project had progressed to the latter stages of the SPP, policy implications would have led to remediation, the desired outcome of the claims makers. While the plausible ultimate denial of the Willow Project would not have remediated the entirety of the fossil fuel continuation sub-SP, it could have demonstrated promising progress towards that intended remediation. Additionally, its potential completion of the SPP would have exemplified the influence that virtual activism, particularly on social media platforms, holds regarding environmental policies. However, since the Willow Project was approved and ceased at the SPP's third stage, it now serves as an apparent example of fossil fuel continuation.

Additional analyses revealed notable patterns in Willow-related posts. To begin, the activist/educational accounts tended to utilize a fearmongering tactic to spark their audience's concern for the Willow Project. This was done prominently through referring to the Willow Project as a "carbon bomb." I will not contest the severe long-term consequences this project poses to the climate crises at hand given the estimate of its ultimate release of approximately nine million metric tons of carbon emissions (Turrentine 2023). However, the usage of fearmongering in climate media—even if the claims are factually sound—has shown negative consequences on younger audiences' mental health, public perceptions of environmental issues, and possibly disadvantageous impacts in reaching stubborn audiences such as those who are doubtful of climate change (Killough 2023; Nebert 2021; Russell 2022). Given the use of this strategy, media's coverage of environmental issues not only has a close connection with public perception of issues but more specifically may have negative, fear-driven consequences (Funkhouser 1973; Hansen 1991; Killough 2023; Lowe and Rudig 1986; Nebert 2021). This pattern, being observed in the current small sample of 44 posts across ten accounts, presents an

opportunity for future research to expand upon.

Other notable observations derived from analyses include consideration of how the accounts frame their posts. For one, there was no targeting towards the ConocoPhillips company, which is the driving force behind the Willow Project and other oil drilling impacts in Alaska. Instead, the posts were specifically targeted towards the Biden administration, calling for him to follow his climate promises by not approving the project; this is supported by the repeated theme of Biden contradiction ($n=13$). This offers insight into how easily environmental issues can become politicized (Kamarck 2019). It is logical to highlight the president's role in the Willow Project, especially when emphasizing opportunities to take action to stop its approval. However, I find it surprising to see the absence of "villainizing" the multi-million fossil fuel company, particularly given the legal restrictions and limited ability present in the situation the administration faced regarding their decision on Willow (George and Horowitz 2023). Additionally, the posts tended to assume their audiences' understandings. For instance, in captions, the accounts would detail the factual consequences the Willow Project approval would bring (e.g., "...would produce as much pollution as 76 coal power plants do each year and devastate local wildlife..." from @nrdc_org on 02/27/23) but did not include detailed educational descriptions of the climate/environmental science on *why* or *how* pollution, carbon emissions, drilling, and the like have these negative impacts on the environment. While this could be due to the accounts' expectation that their target audience is environmentally aware and intelligent, it could still present as a sort of knowledge barrier for others outside of their typical audience. The lack of explanation alongside the layer of fearmongering could have the opposite effects of intended beneficial online exposure to the Willow Project.

A final observation I will briefly expand upon is the heavy usage of animals in posts. Animals, from polar bears to birds, were pictured in numerous posts (~30%). Meanwhile, a mixture of Alaskan landscapes, people/protestors, and oil drilling infrastructure contributed to the remaining posts given images were present. Posts that portray sickly polar bears huddled together demonstrate the usage of guilt appeals in media (Wen 2016). This connects with the previously discussed fearmongering-aligned tactics, as the portrayal of suffering animals play the role of targeting an audience's guilt with hopes that this feeling sparks dedication and drive towards the efforts of stopping the harm—in this case, stopping the Willow Project. This practice, in particular found in the Willow Project posts and broader environmental issues, offers future potential of investigation within animal sociology. I make this claim as these posts visually favored animals, rather than the impacted communities of people or specific environmental

landscapes. Hence, this strategy appears to support the idea that people may be more inclined to care about environmental-related crises if animals are being impacted or threatened, rather than when people are at risk; this serves as a prime topic for animal sociological exploration.

Limitations

The current study exhibits some limitations. First, my exploration of social media posts was limited to Instagram. While this platform is popular and greatly contributed to the online uproar against the Willow Project, similar future research should additionally explore other platforms including TikTok and Twitter. Second, I acknowledge that discussion from mass media (i.e., news/informative) sources extends beyond social media, entering traditional media such as articles and news stories via television. I encourage future researchers to consider these alternate medias in examination. Third, the sample size for the post data equaled $n=44$, while account sample size equaled $n=10$. Thus, I recommend for future research to utilize a larger account sample size, which should assumingly result in a greater post sample size.

Conclusion

Social problems surround us in our daily life and during extreme events. Environmental SPs encompass numerous sub-SPs, including fossil fuel continuation. Using the Willow Project's online backlash, an example of an environmental sub-SP of fossil fuel continuation, I explored how Best's (2008) Social Problems Process was portrayed via Instagram posts. Content analysis revealed that the Willow Project sub-SP experienced the initial three stages of the SPP (claims making, media coverage, and public reaction) but did not continue further. Thematic analyses revealed prominent themes of taking action, environmental consequences for animals/local environment, Biden contradiction, and policy details/overview. Additional analyses revealed various details regarding post framework in reaching audiences. This work contributes to the literature of the SPP and its presence in social media, particularly for environmental based issues.

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Evaluating Chlorine Dioxide Gas as an Antiviral Agent: Insights from the Development, Optimization, and Application of a MS2 Bacteriophage Model System *

Hunter Brady

ABSTRACT

Since emergence of the SARS-CoV-2 virus, the etiological agent causing COVID-19, the need to identify antiviral agents for disinfection purposes has dramatically increased. Chlorine dioxide gas has previously been identified as an antibacterial agent with strong oxidizing capabilities. Additionally, the MS2 bacteriophage was identified as a suitable surrogate for the development, evaluation, and application of virucide decontamination methods. The purpose of this study was to identify and assess the antiviral properties of chlorine dioxide gas and to identify optimum physical conditions for potential deployment in support of current antiviral disinfection needs. Using the MS2 bacteriophage model system, studies used the double-layer agar plaque assay technique to design, optimize, and evaluate the antiviral activity of chlorine dioxide gas. Results support the potential use of chlorine dioxide gas as an antiviral agent and show that environmental factors heavily influence the ability of chlorine dioxide gas to act as an antiviral agent. (1925), commenting particularly on those practices' impact on the internal worlds of Clarissa Dalloway and Septimus Smith.

***Winner of the Deans' Distinguished Essay Award**

Introduction

Since their discovery in the 1800s, viruses have been of interest to the scientific community because of their potential to cause a variety of diseases in humans. Viruses have altered many aspects of people's lives throughout human history (Oldstone, 2010). For example, notable diseases caused by viruses include smallpox, influenza, COVID-19, and human immunodeficiency virus (HIV). It is estimated that nearly 300 million people were killed by smallpox in the twentieth century. In perspective, more than three times more deaths were associated with the virus than wars in the twentieth century (Oldstone, 2010). Most recently, the SARS-CoV-2 virus was responsible for the novel outbreak of COVID-19, which has claimed the lives of over five million worldwide (Johns Hopkins University, 2020). As Nobel Prize winner Peter Medawar says, "It has been well said that a virus is a bad piece of news wrapped up in protein" (Medawar and Medawar, 1985).

Viruses are submicroscopic biological agents and consist of a basic genome (either deoxyribonucleic acid or ribonucleic acid) and a protein coating. Categories of viruses are based on structural features, type of nucleic acid, and the presence or absence of an envelope. Viruses are obligate intercellular parasites, which means that viruses are reliant upon a host cell for replication (Pellett et al., 2014). Intercellular viral replication is a feature of viral infection in humans.

Viral replication can be characterized by absorption, penetration, genomic replication, reassembly, and release. The initial step for viral replication is the protein coating on the virus binding to the host cell's surface; the protein coating and the binding site on the cell are specific. The cell must then intake the virus into the cell by endocytosis, which is a packaging of the virus into a vesicle. The virus uses the host cell's environment to replicate the viral genetic information and protein coatings. Once the necessary genetic materials are created, the virus reassembles and is released from the cell, completing the replication cycle. Typically, as a result of viral replication, the host cell ruptures and dies (Cowan et al., 2019).

Because of the labor required for culture of eukaryotic cell viruses and the pathogenic nature of some viruses, bacteriophages have become an excellent model organism for virological studies (Keen, 2015). Bacteriophages are unique viral particles that only infect bacteria. Bacteriophages have similar biological features to viruses infecting human eukaryotic cells, thus, allowing bacteriophages to serve as a model organism (Clokie et al., 2011). The bacteriophage MS2, bacteriophage Phi-6, MHV, 229 E, and the SARS-CoV-2 virus were recently compared to evaluate their suitability for virological studies. In comparison, the MS2 bacteriophage offered the most promising

potential as a model organism for antiviral studies because of its ease of use and high resistance to inactivation (Ratloff and Oudejans, 2021). Additionally, MS2 bacteriophage is easily recognizable because of its well-known conjugate host, *Escherichia coli*.

For thousands of years, disinfectants have been employed to limit the spread of disease. The earliest mention of a chemical disinfectant is noted in 800 B.C. in Homer's *Odyssey*, in which sulfur was used to disinfect a room. In ancient times, sulfur, mercury, copper, acids, and salts were used for disinfection (Blancou, 1995). Although it has only been within the last 300 years, disinfectants have gained more widespread use in the scientific community. Chlorine, discovered in 1744, became one of the first industrial chemical disinfectants (Hugo, 1991). The early 1800s started with advertisements for the use of phenols for disinfection (Virox Technologies). Later, in 1839, iodine became another common disinfectant used as an antibacterial agent. Additionally, the use of hydrogen peroxide and formaldehyde became widely used by the end of the 19th-century (Hugo, 1991). The 1950s introduced the use of alcohol-based products for disinfection, and by the 1970s, use of ammonium-based products started to be used by commercial manufacturers (Virox Technologies). For almost 3,000 years, humans have employed antimicrobial agents to defend against infectious diseases.

In 1814, Sir Humphrey Davy is reported to be the first person to discover chlorine dioxide (ClO₂), which is now recognized as an antibacterial agent. Davy discovered ClO₂ gas by mixing sulphuric acid with potassium chlorate (Lenntech, 2021). Since the discovery, ClO₂ has been used in a variety of ways.

Chlorine dioxide gas and liquid are potent oxidizing agents and have a history of different practical applications. A notable historical use was the use of ClO₂ gas in the disinfection of *Bacillus anthrax* from federal buildings during the intentional release of anthrax spores in 2001 (Rastogi et al., 2010). Chlorine dioxide gas has also historically been used for the disinfection of drinking water (Aieta and Berg 1986). Additionally, ClO₂ has more recently been used in the disinfection of medical equipment such as endoscopes (Isomoto et al., 2006). Although ClO₂ gas and liquid have been historically used for many practical applications, generating the gas or liquid is often challenging.

Previous studies conducted on ClO₂ gas at Middle Tennessee State University have aptly demonstrated the antibacterial properties of the gas. Several studies have examined the potential practical uses of ClO₂ gas (Bhawana et al., 2014; Newsome et al., 2009; Stubblefield and Newsome, 2015). Additionally, studies have been aimed at evaluating the use of ClO₂ to inhibit the hemagglutinin protein on the influenza virus (Gormsen, 2016). These preliminary studies place Middle Tennessee State University in a unique position to continue investigating the antimicrobial properties of ClO₂.

The use of ClO₂ gas has historically been restrained because of the difficulties in generating the gas. The gas is too unstable for transportation and must be prepared at the application site. Presently, this presents a problem because the gas has typically been generated using trained personnel and expensive machinery (Stubblefield and Newsome, 2015). Recently, new technology has emerged, allowing one to quickly produce ClO₂ gas (Smith et al., 2014). This current study is based on use of the ICA-TriNova system, which involves mixing a solid acid and base in a gas-permeable bag to produce ClO₂ gas. It does not require machinery or highly trained professionals to easily produce ClO₂ gas. Additionally, the novel ICA-TriNova ClO₂ production system poses minimal safety risk to the individual handling the gas at low concentrations. However, inhaling the gas at high concentrations can lead to lung irritation and toxicity, underscoring the importance of caution during its use.

Most recently, ClO₂ gas has attracted the attention of scientists because of its oxidative properties that may allow ClO₂ to express antiviral properties. Several studies have been aimed at evaluating the antiviral properties of ClO₂ gas in different model organisms (Ogata et al. 2016; Ogata and Shibata 2008; Ogata 2012; Gormsen 2016; Sanekata et al. 2010). Although most studies published to date evaluate the inactivation of the surface portions of these viruses, they do not address the actual ability of ClO₂ to inactivate the virus. Also, several of the above-cited pieces of literature require that the ClO₂ gas be held at a particular part per million for a specific time for viral inactivation, which is a substantially difficult task (Kály-Kullai et al., 2020). Additionally, much of the literature in circulation has a financial interest in the study's success. Lastly, the current literature lacks in its ability to show the inactivation of non-enveloped viruses, which are known for their inability to be inactivated in the presence of antiviral agents (Lin et al. 2020). The lack of data to support the ability of ClO₂ gas to inactivate viruses has prompted this current investigation.

Few studies have shown that ClO₂ oxidatively interacts with amino acids, which aid in the infection process by viral particles. Specifically, ClO₂ oxidatively interacts with cysteine, methionine, tyrosine, and tryptophan (Noszticzius et al., 2013). Studies have also shown that haemagglutinin and neuraminidase are inactivated in the presence of ClO₂ (Ogata and Shibata, 2008; Gormsen, 2016). Most studies addressing the mode of viral inactivation by ClO₂ have been investigated using enveloped viruses. In regard to enveloped viruses, one study evaluated the effects of ClO₂ on viral RNA. The study revealed that the positive-sense RNA poliovirus genomic information was affected by ClO₂ (Alvarez and O'Brien, 1982). Comprehensive knowledge of the mechanism of action of ClO₂ against viruses remains limited and poorly understood.

The objective of this study was to develop a system by which the antiviral activity of ClO₂ gas could be examined, quantified, and analyzed to aid in the investigation of potential antiviral agents (Figure 1). In optimization, factors such as humidity, exposure time to ClO₂ gas, and substrates were examined. Additionally, this study was aimed at developing a system that would be easily recognizable by the Environmental Protection Agency as a valid mechanism for future studies to examine the antiviral properties of ClO₂ gas. This included the use of the MS2 bacteriophage as the model organism of choice due to its high resistance to inactivation as a nonenveloped virus. Thus, studies were modeled in accordance with other Environmental Protection Agency publications and presentations (Oudejans and Ratliff, 2021; Wyrzykowska-Ceradini et al., 2019).

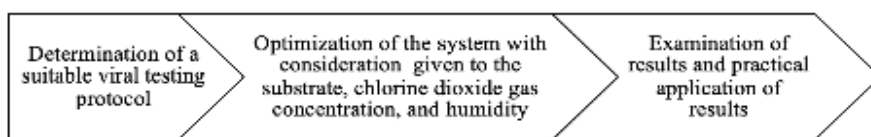


Figure 1: Research objectives flow chart

Materials and Methods

Viral and bacterial cultures used for this study consisted of the MS2 bacteriophage and *Escherichia coli* as the conjugate host. The MS2 bacteriophage (15597-B1) and *Escherichia coli* (Migula) Castellani and Chalmers (15597) were purchased from American Type Culture Collection (ATCC). Upon receipt of the MS2 bacteriophage, it was reconstituted in 2 mL of deionized water and stored at 4° C. Prior to use, bacteriophage was diluted 1:10 in sterile deionized water and stored at 4° C. Additionally, upon receipt, *Escherichia coli* was cultured, and aliquots stored (-70° C). When needed, samples were thawed, plated onto trypticase soy agar (TSA), incubated at 37° C, and stored at room temperature after 24 hours of incubation.

Trypticase soy agar was prepared by mixing 20 grams of TSA powder with 500 mL of deionized purified water, brought to a boil, autoclaved, and evenly divided into petri dishes aseptically. Trypticase soy broth (TSB) was prepared by mixing 15 grams of the powder with 500 mL of deionized purified water, brought to a boil, 4.5 mL was pipetted into test tubes, capped, and autoclaved. Nutrient agar was prepared by mixing 1 gram with 99 mL of deionized purified water, heated to boiling, and 4.0 mL were pipetted into test tubes, capped, and autoclaved. All media was stored at 4° C.

Traditionally, ClO₂ gas has been generated by placing sodium chlorite in aqueous solution causing its production. Although, examination of ClO₂ gas's properties and uses has been difficult due to the gas's instability (Stubblefield and Newsome 2015). Thus, investigation of ClO₂ gas's antiviral properties was modeled on a solid acid base

mixture, a novel system of examination. The ICA-Trinova (Newman, GA) ClO₂ gas release system was employed as the deployment mechanism of choice. This novel system allows scientists to swiftly generate ClO₂ gas in a cost-effective, safe, and easy-to-use way. The system uses two granulated solid chemicals, a base (reagent A) and an acid (reagent B), mixed in a gas permeable pouch to produce ClO₂ gas.

Prior studies conducted at Middle Tennessee State University with ClO₂ have used an airtight gassing bucket (Gormsen, 2016). This bucket has been chosen as a suitable gassing container for the current study due to the airtight lid and internal air circulating fan to promote even distribution of the gas in the chamber. Additionally, for this conducted study, mathematical formulas have been derived by ICA-Trinova for determination of parts per million (PPM) of gas present in the container.

A Union 10' x 20" galvanized steel roll was purchased from Lowes and used for the metal treatment protocol. Coupons were cut from the galvanized steel into 15 mm x 12 mm coupons, and the edges were bent to create a small well for holding the viral suspension. Metal coupons were then sterilized (via autoclave) and aseptically stored. In similar fashion, two-ply 100% cotton fabric was obtained and cut into 15 mm x 15 mm slices, sterilized (via autoclave), and aseptically stored.

Treatment using ClO₂ gas was prepared according to ICA-Trinova (Newnan, GA) mixing protocol. Measured equal amounts of reagent A and B were mixed together in a gas permeable bag and hung on a clip inside the gassing container. Substrate of interest (either metal or cloth) was impregnated with MS2 bacteriophage and was placed on top of a test tube rack in the 5 L gassing chamber in which a small battery-operated fan was placed to promote equivalent gas distribution. In subsequent protocols, to ensure humidity stabilization, single-use humidity chips (Vetovation Raleigh, NC) were inserted into the testing chamber. Each treatment was performed in duplicate or triplicate along with untreated controls.

After treatment, the protocol for determining the number of bacteriophages recovered, killed, log-reduction, and percent reduction was based on the traditional viral plaque assay method (Figure 2). This method includes creating dilutions of the stock cultures, mixing the viral particles with the conjugate host cell, and using a double-layer agar technique. This method allows one to quickly quantify the number of viral particles per milliliter by counting the number of plaques present and using mathematical analysis to establish or determine the amount of virus recovered, killed, and inactivated in treated and untreated controls.

Treated and untreated substrates (containing bacteriophage) were placed in 4.5 mL of TSB and vortexed. The solutions were then diluted ten-fold 5 times in TSB.

Recoverable plaque forming units (PFU) were determined by delivery of 0.1 mL of the appropriate dilution into 4.0 mL of 1% nutrient soft agar. To this, 0.1 mL of *E. coli* (in logarithmic growth) was added to the soft agar/phage preparation and immediately poured onto the surface of TSA plates. Plates were incubated (37° C) overnight and recoverable PFU/mL were then determined from the treated and untreated substrate test coupons. A general outline of methodologies is outline in Figure 3.



Figure 2: Example of plaque assay

Mathematical analysis calculations were performed to determine the amount of MS2 bacteriophage recoverable after treatment of a stock culture. For computations, plates with 30300 plaques were utilized. Plaques were tallied and documented in a laboratory-grade notebook. From the plaque assays, calculations were performed on the plate with the most countable plaques. The number of plaques counted was multiplied by ten (giving the number of recoverable viral particles per mL of that given dilution), then multiplied by ten, the number of times the number on the dilution tube (for example, if the number of plaques on a plate was 250: $250 \times 10 = 2500$ signifying PFU/mL in the -5 solution, the 2,500 is multiplied by ten, five times giving the number of recoverable viral particles in the stock solution and present from the material exposed to ClO₂). Relative humidity determinations were made using a Thermo-Hygro meter (Fischer Scientific).

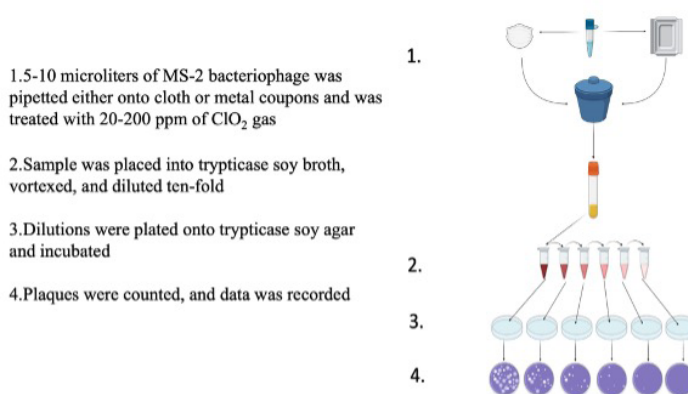


Figure 3: General outline of the methodologies developed and employed in the pursuit of the determination of the antiviral properties of ClO₂ gas

Results

In the development of the ClO₂ gas and MS2 bacteriophage testing protocol, preliminary studies were aimed at testing to evaluate if previous experimental protocols would be suitable for the proposed study. This included evaluation of studies published from the Environmental Protection Agency, Middle Tennessee State University, and other laboratories investigating the oxidative properties of ClO₂. All tests were measured against controls that mirrored the protocol given to the test groups except for the exposure to ClO₂ gas. These preliminary tests yielded results that promoted the collection of additional data in support of the antiviral potential of ClO₂.

Studies were first aimed at the investigation of the antiviral properties of ClO₂ on nonporous surfaces such as stainless-steel metal coupons. The investigation of metal coupons included the testing of 200 PPM ClO₂ gas on small stainless-steel coupons yielding a percent reduction range of 61%-99.99% in recoverable MS2 bacteriophage at 200 PPM for either 45 minutes or 960 minutes (16 hours) gas treatment (Table 1). In this range, it was observed that allowing the MS2 bacteriophage suspension to dry to completion before gas treatment resulted in a decreased percent reduction with an average of 61% ($SD = 0.093$), while placing the coupon “wet” (not dried suspension) into the gassing chamber yielded a larger percent reduction with an average of 87% ($SD = 0.024$) at 45 minutes (Figure 4).

In optimization of these findings, it was observed that the organic content present in the MS2 bacteriophage suspension can alter the percent reduction of MS2 bacteriophage in the presence of ClO₂ gas. For example, when the stock culture from

ATCC was diluted 1:10 in deionized water (thus reducing the organic content by 90%), the percent killed was increased. It was found that dilution of the stock MS2 bacteriophage culture by 10-fold yielded a 99.80% reduction of MS2 bacteriophage after 200 PPM exposure for 45 minutes (Figure 5) and a 99.99% reduction of MS2 bacteriophage after 960 minutes of exposure.

In review of ClO₂ gas antiviral potential using stainless steel coupons, it was found that ClO₂ was capable optimally of acting as an antiviral agent on stainless-steel coupons under certain conditions, such as reduction of organic content in the MS2 bacteriophage suspension and dependent upon the state of the suspension (either evaporated or wet) on the substrate. Log reduction displayed an average of 0.91 log reduction (< 90% reduction) in MS2 bacteriophage on stainless-steel surfaces when the contaminate was immediately exposed to ClO₂ gas and a 0.41 log reduction in MS2 bacteriophage when the viral suspension was allowed to evaporate to dryness. Additionally, it was found that an average of 2.7 log reduction occurred when the viral suspension was diluted by 90% in water, thus reducing the organic content of the suspension (Figure 6). Thus, in continued optimization of the antiviral system, the protocol was adjusted to contain both 1:10 diluted stock MS2 bacteriophage suspension, and solutions were not allowed to dry to evaporation.

Prior sets of studies determined that maximum antiviral potential was achieved when the stock solution was diluted in water (thus, reducing organic content) and when the material was inoculated and not allowed to dry before exposure to ClO₂ gas. Thus, the next phase of investigation examined the antiviral potential of ClO₂ gas on cloth (a porous substrate) under the same optimized treatment protocol. In testing three variables, concentration, exposure time length, and relative humidity, it was observed that all three influence the ability of ClO₂ to act as an antiviral agent (Table 2).

First, the effects of ClO₂ on cloth for 45 minutes at 200 PPM yielded an average of 95% viral reduction (SD = 0.894) and a 99.8 % reduction at 960 minutes (Figure 6). It was then determined that decreasing the concentration of ClO₂ gas to 40 PPM for 960 minutes altered the antiviral ability of ClO₂ gas to 24% (SD = 0.021) (Figure 7). Lastly, it was determined that increasing the relative humidity to that of ≥ 90% and decreasing the concentration to 20 PPM increased the antiviral capabilities to a complete elimination of recoverable viral particles (Figure 8).

Table 1: Investigation of the effects of 200 ppm ClO₂ gas on MS2 inoculated stainless-steel coupons at room temperature and ≤ 64% relative humidity

Contaminated Substrate	Exposure Time (min)	Percent Reduction †
Dry Steel Coupon*	45	61%
Wet Steel Coupon**	45	87%
Wet Steel Coupon**	960	99.30%
Diluted Wet Steel Coupon***	45	99.80%
Diluted Wet Steel Coupon***	960	99.99%

* Contaminate left on metal coupon for 1 hour ± 15 minutes to allow contaminated surface to dry to evaporation.
 ** After inoculation, surface was immediately exposed to ClO₂ gas.
 *** MS2 bacteriophage solution was diluted with a 1:10 sterile water solution.
 † Average triplicate experiments

Table 2: Investigation of the effects of ClO₂ gas on MS2 impregnated cloth at room temperature and ≤ 64%- ≥90 % relative humidity

Exposure Time	Concentration (PPM)	Relative Humidity (%)	Percent Reduction	Log Reduction
45	200	≤ 64%	95%	1.9
960	200	≤ 64%	99.8%	2.9
960	40	≤ 64%	24%	0.1
960	20	≥ 90%	NRV* (≈100%)	≥ 7

* NRV = No Recoverable Viruses
 † Average duplicate experiments

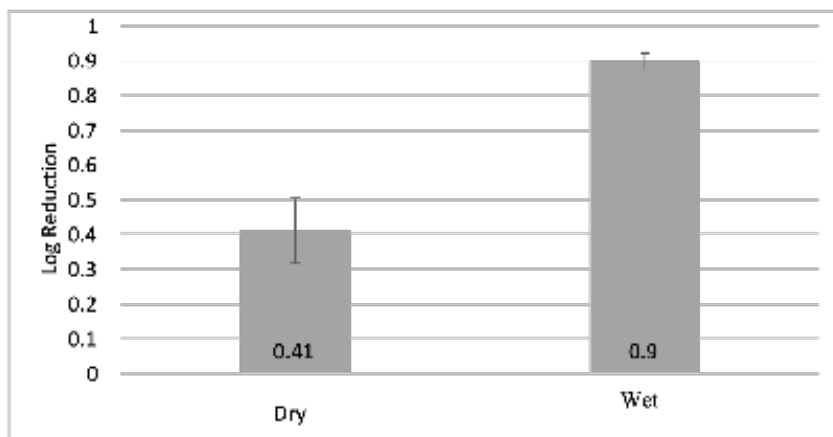


Figure 4: Examination of the effects of wet versus dry viral suspension contaminated stainless steel surfaces exposed to 200 ppm ClO₂ at room temperature and ≤ 64% humidity for 45 minutes.

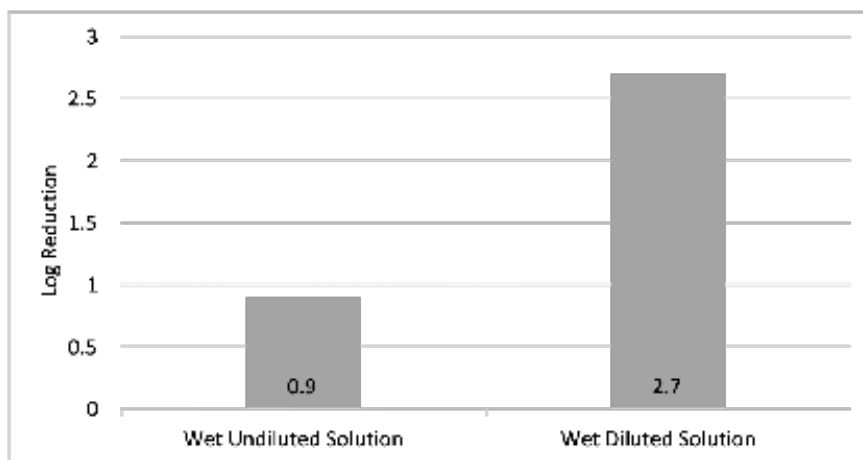


Figure 5: Examination of the effects of 1:10 diluted MS2 bacteriophage stock solution with sterile H₂O prior to 200 ppm ClO₂ gas exposure for 45 minutes at room temperature and <64% humidity

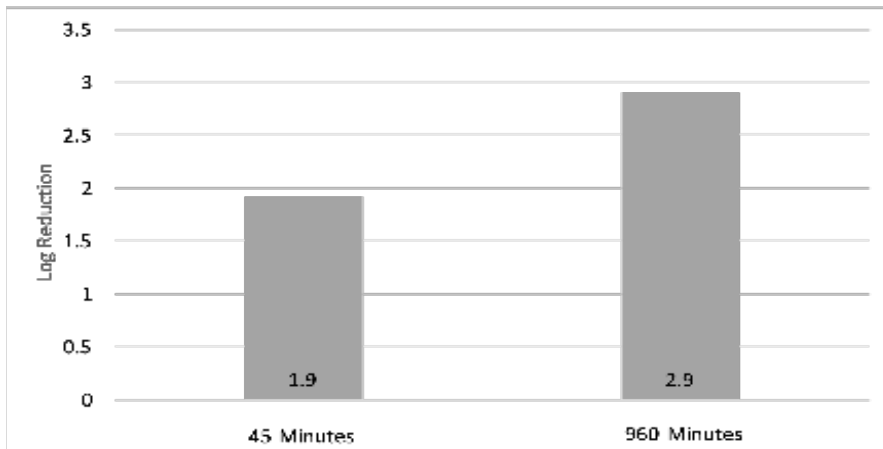


Figure 6: Examination of the antiviral capabilities of ClO₂ on cloth impregnated with 1:10 diluted MS2 bacteriophage solution at 45 minutes and 960 minutes at room temperature and ≤ 64% relative humidity.

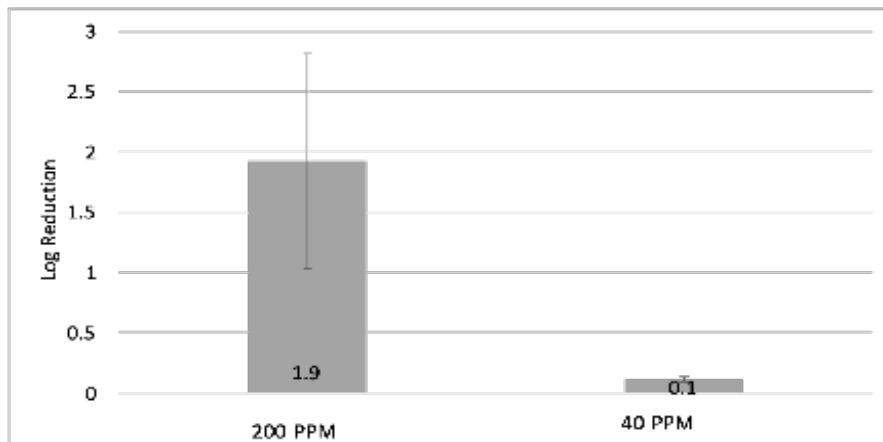


Figure 7: Examination of the antiviral capabilities of ClO₂ on cloth impregnated with 1:10 diluted MS2 bacteriophage solution at varying concentrations of 200 PPM and 40 ppm ClO₂ Gas for 45 minutes at room temperature and ≤ 64% relative humidity

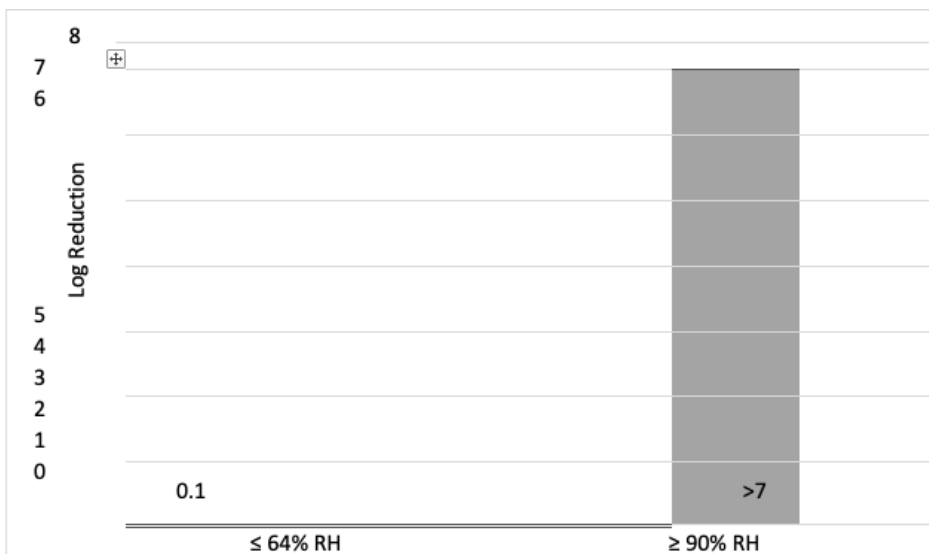


Figure 8: Examination of the antiviral capabilities of CIO₂ on cloth impregnated with 90% diluted MS2 bacteriophage solution at varying relative humidity conditions of ≤ 64% and ≥ 90% relative humidity (RH)

Discussion

In summary, it was found that several factors influence the ability of CIO₂ gas to act as an antiviral agent. Such factors that contribute to the gas’s antiviral activity include the amount of organic content in which viral particles are suspended, humidity, concentration of CIO₂ gas, and substrate. The optimal results of the antiviral capabilities of CIO₂ gas were found at ≥ 90% relative humidity at room temperature with viral particles diluted in 90% sterile H₂O at 20 PPM of CIO₂ gas impregnated in cloth.

Initial findings revealed that percent reduction of viral particles is heavily dependent upon the organic concentration of the viral suspension. Since CIO₂ gas is a strong oxidizing compound, especially toward organic matter, it would be expected that the CIO₂ gas may be reduced to chlorine monoxide or to the chloride ion in the presence of higher levels of organic content (Hupperich et al., 2020; Wenk et al., 2013). The ability of CIO₂ to oxidize organic matter implies that the viability of CIO₂ gas to act as an antiviral agent is reduced in the presence of organic content; thus, as the results show, reduction of the organic content has a direct effect on the ability of CIO₂ gas to inactivate the MS2 bacteriophage.

Additional findings revealed that CIO₂ gas had better ability acting as an antiviral agent on cloth rather than stainless steel metal coupons. Conceivably, this may be

due to oxidation of the stainless steel by ClO₂ gas, although additional research is needed to come to such conclusion. One other potential theory is that ClO₂ gas penetrates deeper into the cloth thus being exposed to more viral particles leading to an increase in viral deactivation.

Lastly, it was found that ClO₂ gas's ability to act as an antiviral agent is dependent upon the relative humidity of the environment in which it is deployed. This finding confirms other studies investigating ClO₂ gas's ability to act as an oxidizing agent towards biological agents at varying relative humidity (Park et al., 2018; Shirasaki et al., 2016). Studies suggest that this property of ClO₂ gas is due to the varying solubilities of ClO₂ gas at differing levels of humidity.

From the results, data supports the use of ClO₂ gas as an antiviral agent. The results yielded a sufficient disinfection of both cloth and metal to be considered an antiviral agent. This study offers insight into the various factors that must be considered when using ClO₂ gas as an antiviral agent and future obstacles that must be considered in pursuit of further ClO₂ gas antiviral research.

Such application of the findings include use of ClO₂ gas on metal and cloth as a potential antiviral agent but also suggest that there may be a wider horizon of antiviral application for ClO₂ gas. Future studies should be aimed at investigation of ClO₂ gas on surfaces such as wood and plastics. It also may be of interest to expand research on the use of ClO₂ gas on bacteria's spores and mycobacteria which are known to be especially resistant to chemical inactivation.

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Acknowledgments

This project was sponsored by the Undergraduate Research Experience and Creative Activity grant fund.