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PANDION



THE OSPREY JOURNAL OF RESEARCH & IDEAS
OFFICE OF UNDERGRADUATE RESEARCH
UNIVERSITY OF NORTH FLORIDA

PANDION

THE OSPREY JOURNAL OF RESEARCH & IDEAS
UNIVERSITY OF NORTH FLORIDA

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(front cover)

Jaycee Guttormson, *Doorway*, 2022

Oil on Hardboard, 15”x 15”



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A NOTE FROM THE EXECUTIVE EDITOR

The University of North Florida Office of Undergraduate Research (OUR) is pleased to present this third volume of PANDION: The Osprey Journal of Research and Ideas. This research journal is interdisciplinary in nature and includes a snapshot of research, scholarship, and creative activities (RSCA) by students, under the guidance of their faculty mentors. It is exciting to see the return of Ospreys to our campus and into our community and we look forward to the continued growth and prominence of student RSCA at UNF.

Following the tradition set by Dr. Karen Cousins, the previous Director of the OUR and General Editor of PANDION, the articles published in this volume were nominated by the faculty mentor and then submitted by the student author. Although not a peer-reviewed journal, the articles were reviewed by a member of the editorial board in a related discipline. Student authors were given a taste of the publication experience by receiving reviews, resubmitting their edited works, and approving the layout prior to publication. The OUR thanks the Editorial Board members for volunteering their time and expertise for this endeavor. Additionally, I personally thank Associate Editor Kaitlyn Minnicks and Layout and Design Editor Rebeca Mata for coordinating and overseeing the entire process.

As an interdisciplinary research journal, PANDION proudly publishes articles representing various disciplines of study. In addition to research and scholarly articles, creative works are included in this volume. As a new endeavor, students were invited to submit art pieces of any medium to be considered for the cover art for volume 3. The submissions received can be found within the journal. *Doorway* by senior Painting, Drawing, and Printmaking major and

Psychology minor Jaycee Guttormson was the piece selected for the cover, as it invites you to step inside and immerse yourself in the student works within. We intend to continue this new tradition and hope that ambitious students will continue to vie for this coveted distinction. As another first, we have an article that represents the culmination of a student's educational and capstone experiences at UNF prepared in the student's second language. As a Spanish major in the Department of Languages, Literatures, and Cultures, Melinda Peacock analyzed the gender violence in the novel *La Casa de la Belleza* (The House of Beauty) by Colombian writer Melba Escobar and concluded that societal problems affecting women's safety in isolated Colombia are not very different from those around the world.

Congratulations to the students, mentors, and editorial staff for making PANDION a success!



Judith D. Ocbrietor, Ph.D.
Executive Editor, PANDION
Director, Office of Undergraduate Research
Associate Professor of Biology
University of North Florida

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PANDION

THE OSPREY JOURNAL OF RESEARCH & IDEAS

UNIVERSITY OF NORTH FLORIDA

ART SUBMISSION

Doorway

Jaycee Guttormson

Department of Art, Art History and Design
University of North Florida

Artist Statement

Doorway is a piece that exists in a state of duality and cyclicity, just as a door operates both as an opening and a barricade. Through decay, there is new life and new life gives way to decay. This fact of life and death existing synchronously is furthered through the cohesion of natural forms and manmade structures. In this state, the form is both familiar and unrecognizable and asks the viewer to step into a world that is as alien as it is commonplace.

This dichotomy of life and death, growth and decay, and familiar and strange is a steppingstone into the concept of the uncanny. I feel strongly that we as humans should never take our suppositions and perceptions of reality for granted and that we can never know the complex mysteries of our universe at large or our place in it. By viewing our world through the lens of the uncanny, the strangely familiar and almost knowable, we can begin to deconstruct that which we take for granted and venture into a new perspective.

I am a senior at the University of North Florida majoring in Painting, Drawing, and Printmaking with a minor in Psychology. In many of my works, like *Doorway*, I attempt to explore mortality, the uncanny, and the unknown. These topics are important to me as, in their mystery, they help me better understand and prioritize in my own life. The acceptance of mortality and the unknowable is almost comforting in its absoluteness. Upon graduation, I hope to work in the art and medical fields and continue exploring the uncanny in my future works.



Jaycee Guttormson

Doorway, 2022

Oil on Hardboard

15" x 15"

NGLY1 Deficiency Affects Glycosaminoglycan Biosynthesis and Wnt Signaling Pathway in Mice

Amy Batten

Faculty Mentor: Marie Mooney, Ph.D.
Department of Biology
University of North Florida

Abstract

Individuals affected by NGLY1 Deficiency cannot properly deglycosylate and recycle certain proteins. Even though less than 100 people worldwide have been diagnosed with this rare autosomal recessive condition, thousands are affected by similar glycosylation disorders. Common phenotypic manifestations of NGLY1 Deficiency include severe neural and intellectual delay, impaired muscle and liver function, and seizures that may become intractable. Very little is currently known about the various mechanisms through which NGLY1 deficiency affects the body and this has led to a lack of viable treatment options for those afflicted. This experiment uses a loss-of-function (LOF) mouse model of NGLY1 Deficiency homologous to a mutation observed in affected humans that prematurely terminates the protein. Mouse pups with two LOF alleles are embryonic-lethal, and we observe gross morphological effects in the liver and brain of these pups starting as early as embryonic day 15.5 (E15.5). Given the potential for pharmaceutically improving cognitive function post-diagnosis in humans, we focused on understanding the neurological gene expression. Therefore, we harvested cortex and full brain tissue from littermates of a carrier cross at E14.5 to acquire transcriptomes for gene expression analysis. NGLY1 gene counts displayed significant dose dependency across the normal, carrier, and affected littermates with correlated effects in genes dealing with glycosaminoglycan biosynthesis, as expected, and Wnt signaling pathways. Previous knowledge of glycosaminoglycan biosynthesis and recent breakthroughs in treatments utilizing the Wnt signaling pathway provide a foundation for future treatment investigations concerning NGLY1 Deficiency and potentially other glycosylation disorders during development.

Introduction

NGLY1 Deficiency is a rare genetic disorder in which individuals lack the ability to successfully deglycosylate and recycle certain proteins (Suzuki et al., 2016). The phenotypes of this disease manifest in early childhood through delayed neural and muscular development (Rare Diseases Clinical Research Network). Less than 100 cases have been identified and therapeutic approaches are ineffective in improving quality of life. Very little

is known about NGLY1 pathway interactions, leading to a lack of supported drug treatments.

Known pathway interactions include components of the Endoplasmic Reticulum-Associated Degradation (ERAD) pathway (Enns et al., 2014). The ERAD pathway identifies misfolded proteins and degrades them. NGLY1 encodes *N*-glycanase 1, which aids in the cytosolic degradation of these misfolded proteins.

N-glycanase acts at the asparagine residues of N-linked proteins by cutting off the initial GlcNAc (Suzuki et al., 2016). Mutations in this gene lead to an inability to recycle the proteins and block protein recycling. Specific details of the role of NGLY1 in the ERAD pathway are still unclear. Transcriptomic identification of drug targetable pathways in NGLY1 Deficiency have not been reported, though transcriptomic data have recently been published for a *Drosophila* model of the disorder and our group has generated both zebrafish and mouse transcriptomics. It is important to gain insight into gene expression of a mammalian model of NGLY1 due to the lack of phenotype in zebrafish. Mouse models of NGLY1 are embryonic-lethal which provide a druggable phenotype for future research. The purpose of this experiment was to find drug targetable pathways in an NGLY1 mouse model using ‘omics’ technology. Zebrafish transcriptomes point to a downregulation of cholesterol biosynthesis which was the acting hypothesis for this experiment. Transcriptomes were obtained through RNA sequencing of wildtype (WT), carrier (heterozygous), and mutant brain tissue, then analyzed using BioJupies to find the upregulated and downregulated pathways across the unaffected (WT and heterozygous) and the mutants (Torre et al., 2018).

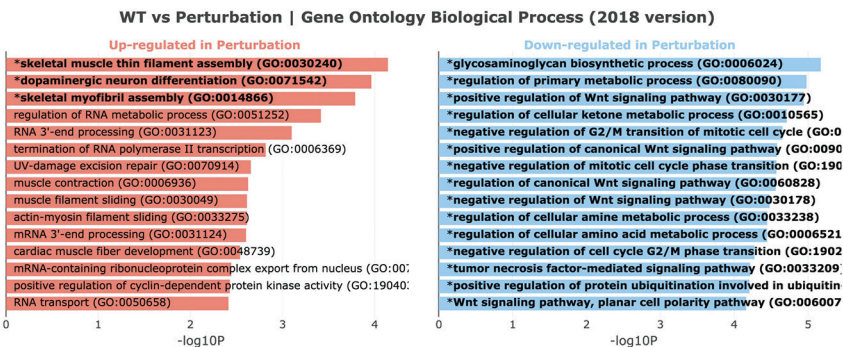
Materials and Methods

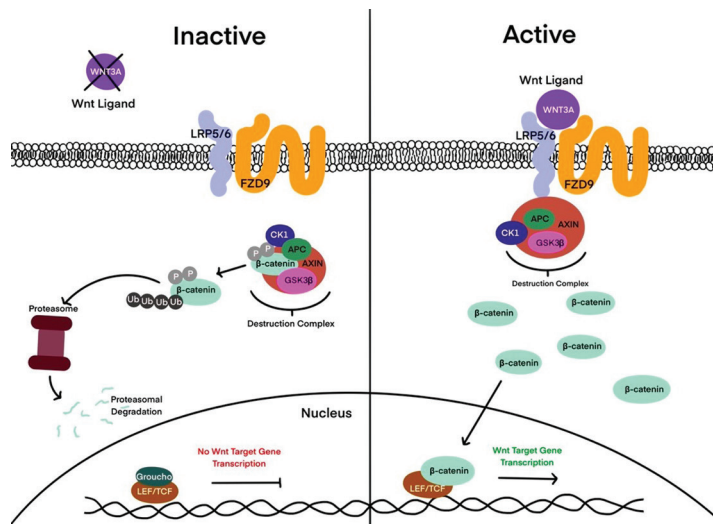
Carrier crosses were conducted, and the pups were harvested at day E14.5. Whole brain and cortex tissue were collected separately. The

tissues were genotyped and subjected to 50bp single-end sequencing on Illumina HiSeq 4000 platform at the NUSeq Core at Northwestern University. RNA sequencing provided .fastq files that were analyzed using the cloud-based program, BioJupies. The BioJupies analyses combined with further analysis of raw and normalized gene counts in Excel led to the identification of pathways and individual genes that were downregulated in the mutants. Gene counts were averaged for each phenotype and the differential expression was calculated. Reactome software facilitated the creation of schematics that outlined the gene interactions between the most significantly downregulated genes. Further literature research provided insight into possible explanations and hypotheses for unknown interactions.

Results

The BioJupies analysis of .fastq files containing NGLY1 mouse RNA sequencing data showed glycosaminoglycan biosynthesis to be significantly downregulated among the mutants. Various instances of cell cycle and metabolic downregulation were also noted. Wnt signaling was downregulated as well, specifically in the canonical Wnt signaling pathway using β -catenin (Figure 1). **Figure 1.** Specific metabolic and growth pathways are significantly downregulated in mutant mice. Analysis of the transcriptomic data allowed the affected genes in the mutant animals to be classified as up-regulated (highlighted in red) or down-regulated (highlighted in





blue). The function of each transcript was determined using the Gene Ontology Biological Process (2018 version).

Expression of *NGLY1* displayed dose dependency across the phenotypes (Figure 2). A similar dose dependency to that of *NGLY1* was seen for transcripts *RSPO2* and *WNT2B*, which are both implicated in the Wnt signaling pathway (Figure 2). Although expression levels were decreased among mutants for most of the main genes involved in Wnt signaling, there was a lack of dose dependency for the majority. The expression level for *WNT3A*, a Wnt ligand, was decreased in mutants with greater disparity between mutant and WT than seen in *NGLY1* itself (Figure 2). *FZD9*, the *WNT3A* receptor, was decreased in mutants as well (Figure 2 and Figure 3).

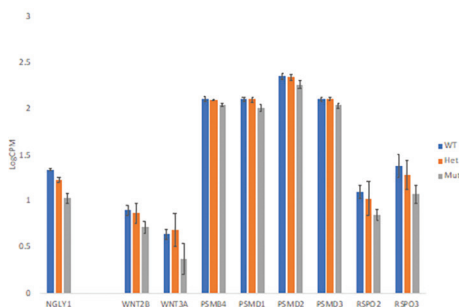


Figure 2. *NGLY1* and Wnt signaling components were dose dependent across the phenotypes

examined. LogCPM gene counts for wild-type (WT, blue), heterozygous (Het, orange), and mutant (Mut, gray) mice for genes associated with the Wnt signaling pathway were plotted. The error bars represent the standard error of the mean.

Figure 3 (see above). Canonical Wnt-signaling pathway in the inactive and active states. In the inactive state, β -catenin is bound by the destruction complex and eventually degraded by the proteasome. Ligand-bound receptors in the activate state sequester the destruction complex, which allows β -catenin to accumulate and translocate into the nucleus, where it binds TCF/LEF transcription factors to stimulate Wnt-signaling target genes. These genes encourage cell growth and differentiation. (Figure generated with Procreate software).

Dose dependency was less evident among genes implicated in glucosaminoglycan (GAG) biosynthesis (Figure 4). It is interesting to note that *B4GALT7* and *B3GLAT6* showed increased expression in mutants even though the pathway was identified as downregulated. Other genes involved in GAG biosynthesis did have lower expression levels in mutants, but overall looked to be insignificant. *BCAN* and *XYLT1*, which carry out the initiation of the tetrasaccharide linkage formation, displayed lower levels of expression

(Figure 5). Heparan sulfate (HS) was identified by Gene Ontology and Reactome as a major GAG affected by the downregulation of necessary biosynthetic genes (Figure 5).

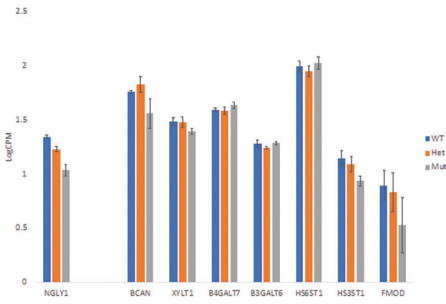
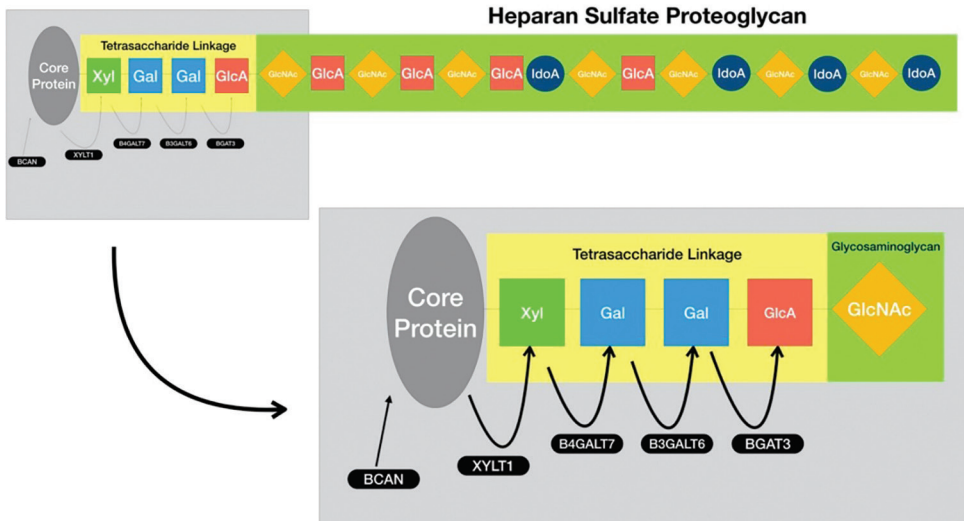


Figure 4. Glucosaminoglycan (GAG) biosynthesis components did not have dose dependent expression across the phenotypes examined. LogCPM gene counts for wild-type (WT, blue), heterozygous (Het, orange), and mutant (Mut, gray) mice for NGLY1 and genes associated with the GAG biosynthesis pathway were plotted. The error bars represent the standard error of the mean.

Figure 5. Interaction of genes identified by the Gene Ontology Enrichment Analysis in production of the GAG heparan sulfate. Carbohydrates are added to the core protein using enzymes indicated by the black ovals. (Figure generated using PowerPoint software).



Discussion

GAG biosynthesis and canonical Wnt signaling were found to be downregulated among NGLY1 deficient mice. The original hypothesis of mutant mice experiencing cholesterol biosynthesis downregulation was not supported as a main affected pathway. However, cholesterol biosynthesis may be hidden under the larger group of metabolic processes indicated to be downregulated. Downregulation of both Wnt signaling and GAG biosynthesis pathways is known to display phenotypes like NGLY1 mutants. Individually and synergistically, GAGs such as HS and Wnt signaling are crucial to embryonic development. Significant downregulation of both processes could account for the embryonic lethality of the NGLY1 mutation when homozygous.

Through analysis of the biochemical structure of the Wnt signaling components, their possible interactions with NGLY1 become clearer. The Wnt-signaling pathway relies on Wnt ligands to cause downstream sequestration of the β -catenin destruction complex by other membrane bound proteins. This is the mechanism by which β -catenin accumulates within the cell and moves down its concentration gradient into the nucleus (Komiya & Hapas, 2008). The application of

this mechanism has not been studied in models of NGLY1 Deficiency. Therefore, β -catenin nuclear localization may not be occurring as in normal models. The Wnt ligand, WNT3A, is *N*-glycosylated at two asparagine (Asn) residues along the molecule. A study by Komekado and colleagues demonstrated that glycosylation at Asn87 was critical for the secretion of WNT3A (2007). The second *N*-glycosylation at Asn298 has little effect on secretion when compared to the WT. Interestingly, the lack of deglycosylation seen in NGLY1 deficiency should theoretically help Wnt ligand secretion, yet an overall downregulation of the canonical Wnt signaling pathway was seen. This may indicate other areas of malfunction in the pathway, or disruption of the cycle of glycosylation all together. When dealing with *N*-linked fucosylation of Wnt ligands in zebrafish, Feng and colleagues discovered that increased levels of Wnt *N*-fucosylation decreases Wnt signaling through a negative feedback mechanism, as well as diminishes the range of Wnt signaling all together (2014). Although this study deals with fucosylation, it could possibly explain the downregulation of Wnt signaling without impaired secretion.

When looking at downstream Wnt target genes, DPAGT1 is another possible mode of negative feedback. DPAGT1 is a gene involved in the regulation of the *N*-glycosylation pathway (Vargas et al., 2016). After the initial decrease in Wnt signaling due to excessive *N*-glycosylation of the Wnt ligands, decreased DPAGT1 could propagate lower glycosylation states in the cell. This may be a cause for subsequent issues in Wnt ligand secretion. RSPO2 shows dose dependency like that of NGLY1. A study by Kim and colleagues demonstrated that RSPOs act to amplify the Wnt ligand signal by inhibiting DKK1, a negative regulator of the Wnt pathway (2008).

The end goal of the canonical Wnt signaling pathway is the facilitation of transcription of

downstream target genes through increased nuclear β -catenin. Therefore, downregulation of PIN1 could lead to an inability to retain nuclear β -catenin. PIN1 is a prolyl isomerase that keeps β -catenin in the conformation necessary to remain in the nucleus (Shin et al., 2016). An inability to keep β -catenin in the nucleus makes it less likely for the Wnt ligand stimulation to have any effect on Wnt target gene transcription. A PIN1 knockout mouse model has significantly decreased nuclear β -catenin and neuronal differentiation (Nakamura et al., 2012). The same study was able to rescue wild-type neuronal differentiation in neuronal progenitor cells through overexpression of β -catenin (Nakamura et al., 2012). With the downregulation of PIN1, decreased expression of Wnt signaling components downstream of the Fzd receptor are seen.

In terms of signaling and the binding of ligands to target receptors, Wnt ligands and GAGs like HS are connected. Binari and colleagues studied a *Drosophila* model of *kiwi* mutants (1997). The *kiwi* gene codes for UDP-glucose dehydrogenase, which is a key player in GAG biosynthesis. They found that the *kiwi* mutants have identical phenotypes to *wingless* (Wnt) mutants which alludes to the importance of GAGs in Wnt-mediated development. More specifically, they were able to rescue wild-type cuticular development through supplementation of HS. Wild-type individuals were given heparinase, a heparan degrader, and displayed *wingless* phenotypes as well. HS modulates Wnt signaling by binding and releasing Wnt ligands in variation (Gao et al., 2017).

Specific *O*-sulfations are needed for maximum binding affinity of Wnt ligands (Gao et al., 2017). Wnt molecules were found to have high affinities for HS chains with six to eight saccharide residues and 2-*O*, 3-*O*, and 6-*O* sulfations. In a study by Mii and colleagues, clustering of HS along the cell surface by

N-sulfo-rich and *N*-acetyl-rich chains facilitates the colocalization of Wnt ligands and associated receptors (2020). Wnt ligands readily bind to *N*-sulfo-rich HS proteoglycans and form signalosomes that are internalized and lead to the phosphorylation of LRP5/6 (Bilic et al., 2007). Wnt ligand association with *N*-acetyl-rich HS proteoglycans is implicated in long range Wnt signaling (Mii et al., 2020). Downregulation of GAG biosynthesis decreases the amount of HS available to assist Wnt ligands in binding target receptors. HS proteoglycans also play a role in axon guidance and synapse function (Condomitti and de Wit, 2018).

Heparan Sulfate Proteoglycans (HSPGs) are some of the largest glycosylated proteins. They consist of a core protein, a tetrasaccharide linkage, and a GAG region with many possible biochemical modifications. The gene expression data for BCAN, the gene encoding the brevican core protein of HSPGs, was downregulated in mutants (Figure 4). The mutants may be downregulating biosynthesis of core proteins due to the low levels of available GAGs for use in building larger proteoglycans. Furthermore, we propose a new biochemical function for NGLY1 cleavage at the tetrasaccharide linkage. The use of lectins to identify the presence of key HSPG structures post-exposure to NGLY1 could be used to test the proposed interaction.

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Limitations of this study include the small sample size and stress responses after the harvest that influence transcription levels. Moving forward, the treatment of an NGLY1 model with a Wnt agonist could provide insight into the sensitivity of the downstream signaling components experiencing downregulation. A study by Chai and colleagues found that structural birth defects in a mouse model of deficient Wnt secretion could be overcome using a Wnt agonist (2021). They were able to rescue the development of vertebrate within the mutant tails. If developmental delay of NGLY1 models can be overcome with Wnt agonist supplementation, future use in humans may provide a simple drug treatment for the afflicted children and their families.

In conclusion, although the original hypothesis stating that cholesterol biosynthesis would be downregulated in mutants was not supported, GAG biosynthesis and Wnt signaling were downregulated. Heparin sulfate is a GAG implicated in Wnt signaling. With continued investigation, targeting Wnt signaling using a Wnt agonist could provide an inexpensive and direct way to treat NGLY1 Deficiency and a possible future treatment option for the children affected by this disorder.

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Detectability of Wormholes through Various Methods

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Abstract

There are three methods that can possibly detect wormholes: Negative Temperature, Hawking/Phantom Radiation, and $K\alpha$ iron emission lines. This paper discusses whether or not any of these three methods are useful ways to detect wormholes with today's technology and if so, which one is the best and which is the worst. As it turns out, all of these methods have their flaws and impracticalities. After looking through all the evidence and comparing it to what capabilities we have currently, there is clearly a best and worst method. The best method to detect possible wormhole candidates is through the detection of radiation using indirect methods. Indirect detection of radiation is by far the most practical with the least amount of disadvantages. The worst detection method is through the detection of negative temperature as it has many impractical needs to work.

Introduction

Since the beginning of the field of science fiction, people have speculated ways to travel across the universe instantly, without having to deal with the effects of time. However, according to special relativity, traveling via a spaceship across the universe and back would take so much time that when you got back to the planet it may have finished its life cycle. This conundrum leads to many questions about space travel, especially when considering travel outside our solar system.

Wormholes may provide an answer to the pesky issue of special relativity and time dilation. People have speculated ways for them to exist and be stable enough for anyone to travel through, but until recently, it was still considered science fiction. The concept of the wormhole started in the early 20th century when Einstein proved the existence of an Einstein-Rosen bridge, which fell out of his equations for the theory of general relativity in 1916 (Martín-Moruno & González-

Díaz, 2009a). The term 'wormhole' was not coined until much later, in 1957 when Misner and Wheeler published their paper on the topic (Martín-Moruno & González-Díaz, 2009a).

To understand the different variants of wormholes, you must first understand what a wormhole is in general. In 1988, Morris, Thorne, and Yurtsever came up with the first mathematical solution to show that wormholes can, in fact, exist within the laws of thermodynamics. These science fiction objects weren't only shown to be possible, but they were shown to be potentially stable using exotic matter. This type of matter is unique because it is essentially the time reversed version of regular matter (Martín-Moruno & González-Díaz, 2009b). This time reversed property exists because exotic matter is thought to violate the null energy condition (Martín-Moruno & González-Díaz, 2009a). Therefore, if you were to combine exotic matter with a black hole, you may create

a wormhole (Martín-Moruno & González-Díaz, 2009b). However, if you were to attempt to make a wormhole with normal matter, it would be thermodynamically unstable and would collapse into the black hole.

Lorentzian Wormholes

In reference to the field of physics, there are two main types of wormholes, the Lorentzian wormhole, which is a hole through space and time, and the Euclidian wormhole, which relies on particle physics and quantum mechanics. There are several special properties that make Lorentzian wormholes one of the most popular versions to study and for which to look (Martín-Moruno & González-Díaz, 2009b).

Lorentzian wormholes are interesting because of their special properties. First, they are stable and traversable both ways. These two unique properties potentially allow for time travel, covering vast distances in an instant and then coming back. Another property special to wormholes is they do not have an event horizon, like their counterpart, the black hole (Rehman & Saifullah, 2021). The lack of an event horizon, which is the boundary of a black hole through which no light or radiation can escape, is what allows the Lorentzian wormhole to be traversable (Rehman & Saifullah, 2021). With these properties and the uniqueness of exotic matter, the equations showing wormholes exist also suggest that they have both a negative pressure and energy density, which is very strange.

To look for Lorentzian wormholes, scientists can rely on properties thought to be specific to wormholes. The first is negative temperature, which arises from the distribution of exotic matter within the wormhole itself. With exotic matter thought to produce a negative temperature, the possibility exists that this property can be observed and measured. The second method is through the detection of certain types of

radiation. Phantom radiation, or radiation that violates the null energy condition, was proposed by Martín-Moruno and González-Díaz (Martín-Moruno & González-Díaz, 2009a). They used the Hayward Formalism of general relativity for spherically symmetric solutions regarding trapped horizons to show that the accretion of phantom radiation is possible. Martín-Moruno and González-Díaz also showed the thermodynamics that describe phantom radiation (Martín-Moruno & González-Díaz, 2009a). In addition, Hawking, or black body, radiation thought to be emitted from gravitinos coming from the wormholes may be measured. Hawking radiation is proposed to have a negative temperature as well (Sakalli & Ovgun, 2015). The last way to detect these types of wormholes is through the broad relativistic $K\alpha$ iron emission line that is thought to be around the accretion disk of a wormhole. The accretion disk is the region in which matter swirls inward toward the black hole because of gravitational pull (Bambi, 2013). The $K\alpha$ iron emission line that should be around a slow rotating wormhole has been compared to the same emission line that comes from a Kerr black hole with a high spin (Bambi, 2013). This suggests that a Kerr black hole may be a wormhole with a slow spin (Bambi, 2013). Detecting $K\alpha$ iron emission lines may be a useful way to discover wormholes.

Negative Temperature

Temperature in the sense of black holes and wormholes is not the same as with regular matter. The temperature of these objects is specifically defined by their geometry. The only characteristic needed to calculate the temperature of these objects is their geometric surface gravity (Hong & Kim, 2006). Negative temperature is just as it sounds, when you work out the equations of general relativity for a typical black hole you find that it is impossible for there to be a negative temperature. The impossibility of a negative

temperature is produced because if you take the limit as the temperature goes to zero, the black hole produces unstable thermodynamics, which then makes it impossible to occur (Hong & Kim, 2006). However, when you solve the same equations for a wormhole and account for the exotic matter that exists within, the limit as the temperature goes to zero doesn't produce unstable thermodynamics. This shows negative temperature is possible for wormholes because they have exotic matter keeping them stable (Hong & Kim, 2006).

The wormhole temperature is related to the Hawking temperature, which is defined as

$$T_H = \frac{\alpha_7}{2\pi} = \frac{1}{2\pi} \Phi'(r) \left(1 - \frac{b(r)}{r}\right)^{\frac{1}{2}}, \quad (1)$$

where α_7 is the specific acceleration that comes from the Rindler motion from the surrounding flat space around a black hole. Along with the surface gravity that is described after the second equal sign, this produces the Hawking radiation for a typical black hole in the universe.

From the Hawking temperature (shown in Eq. 1), we can substitute in the surface gravity k_s and resolve to get the equation for the wormhole temperature

$$T_o = \frac{k_s}{2\pi} = T_H e^{\Phi(r)}, \quad (2)$$

It is important to keep in mind that these equations are as r approaches $b(r)$, which is the event horizon of a typical black hole. The event horizon does not exist for a traversable Lorentzian wormhole. The reason these equations are written with this limit is to get a good approximation as to the limit of the temperature that is possible. It considers both Hawking radiation from black holes as well as the temperature of the wormhole (Hong & Kim, 2006).

Although a potentially useful parameter for detecting wormholes, it is important to note that it is unknown whether the negative temperature

can be detected outside of the wormhole. The temperature inside a wormhole where the exotic matter is distributed is negative. As you pass the Schwarzschild radius for a wormhole, the temperature becomes positive. Once $r > r_o$ where r_o is the Schwarzschild radius, the temperature goes from negative to positive at that transition (Hong & Kim, 2006).

If the negative temperature is not detectable from the outside perspective, then it would not be possible to detect at all. The only way to detect this property would be to directly go inside a wormhole, which obviously defeats the purpose of detecting one in the first place. Even though this is a unique property that only wormholes produce, this property does not appear to be detectable with our current technology. The infrared telescopes we have today would not be able to see the negative temperature emitted from wormhole candidates in the universe. However, if we could invent or modify an instrument able to detect a negative temperature out near the middle of galaxies, then this unique property applicable only to wormholes could be used for detection (Hong & Kim, 2006).

Hawking Radiation

Stephen Hawking surprised many people when he published his first paper on Hawking radiation (Sakalli & Ovgun, 2015). While some were sceptics and some were believers, the presence of radiation leads to a very good candidate for wormhole detection. Hawking radiation is when a black hole emits energy spontaneously, like black body radiation. Hawking proposed this effect through his calculations using quantum field theory and changed the way we look at black holes (Sakalli & Ovgun, 2015).

Hawking radiation then gives rise to the idea of phantom radiation, which comes from the mouth of a wormhole in a similar way. It is argued that this phantom radiation is what gives

rise to the wormhole's existence (Martín-Moruno & González-Díaz, 2009a). It is also hypothesized that active galactic nuclei, which are regions with a higher degree of brightness than can be explained by the stars in that region, are not super massive black holes, but the opening to a massive wormhole (Piotrovich, et al., 2020). If this is indeed the case for active galactic nuclei, then there would be consequences that would produce observable effects. One of these effects would be the production of gamma radiation as the accretion flows collide within the wormhole itself (Piotrovich, et al., 2020).

Hawking radiation led to the development of the thermodynamics for this specific type of radiation to see if it could exist. This development and Hayward's formalism characterized the thermodynamics of a spherical black hole with a trapping horizon. They were able to come up with thermodynamics regarding wormholes that also had a trapping horizon because they were so similar (Martín-Moruno & González-Díaz, 2009a).

To calculate a set of thermodynamic equations for this type of wormhole, you need to assume it has a non-zero temperature that characterizes a non-zero surface gravity. With this assumption, you can use a specific $f(R)$ model from the background radiation to derive the thermodynamic field equations for a wormhole at the apparent horizon (Saiedi, 2012),

$$dE = TdS + WdV + TdS; \quad (3)$$

where dE is the energy of the system, T is the non-zero temperature, W is the work, dV is the volume, and dS which is the normal entropy term. The only term that separates this equation from the typical first law of thermodynamics is the extra entropy term TdS that comes up when those specific assumptions are made (Saiedi, 2012).

It was also found that density and tangential pressure have no effect on the horizon, which leads to another relationship within the first law shown below as heat flow dQ (Debnath et al., 2014). This relationship is shown as

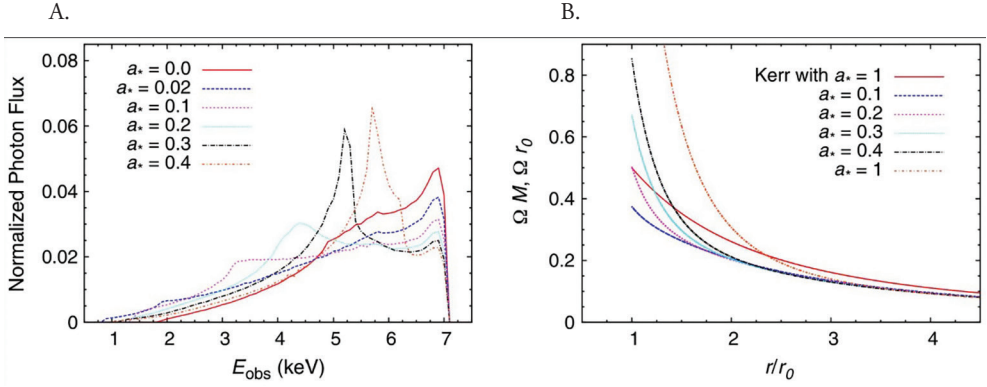
$$T_H dS_H = dQ = -dE_H \quad (4)$$

where the heat flow is described by temperature T_H and entropy dS_H regarding enthalpy H . This is then related to the energy dE_H (Debnath et al., 2014).

A few issues that could make this method more difficult is the fact that this type of radiation is very small in quantity. The sensitivity needed to detect Hawking radiation around a black hole is a great deal higher than most, if not all, detectors currently constructed. The other issue is if we can construct a device capable of detecting Hawking radiation at the center of galaxies, there is no way we can determine whether it is the phantom radiation from a wormhole or just regular Hawking radiation from a black hole.

Instead of looking for the direct radiation coming off a wormhole, we could look for radiation scattering from wormhole candidates (Kirillov & Savelova, 2018). There are a few effects that could be useful in discovering wormholes using indirect detection. One method is to look for a diffused source in the background radiation of the universe. There should be a distinct distortion that can only be caused by a wormhole. We could also look for the subtle changes in the cosmic microwave background to find the possible locations for wormhole candidates (Kirillov & Savelova, 2018).

The only issue with this method is determining how subtle these distortions are and what to look for that definitively says this distortion is a wormhole. Even with the cosmic microwave background essentially mapped out over the observable universe, we would have to figure out if there would be a sensitivity issue



that arises to show the relatively small distortions created by wormholes.

Emission Lines

When we look at objects in the universe, the only physical phenomena that can be observed is radiation such as, light. Many objects and elements give off specific combinations of colors that can be separated and identified. These are called emission lines. Black holes and wormhole candidates are no different; they produce unique emission lines that can be detected from vast distances. What makes wormholes and black holes unique is that there is no light coming from the object, but we get these emissions from the accretion disk around the object. The emission from these disks allows us to look deeper into the geometry around possible wormhole candidates (Bambi, 2013).

This idea came together because a specific type of black hole called the Kerr black hole with a medium to high spin parameter produces a very similar $K\bar{\alpha}$ iron line to the theoretical wormhole (Bambi, 2013). A Kerr black hole is just a rotating black hole with only mass and angular momentum. These objects have no net charge, which is possible for other types of black holes. This can be shown graphically (Figure 1). As spin parameter (α) is increased, it becomes more related to the known Kerr black hole line ($\alpha = 1$,

red solid line). This could be a useful method of detection for wormholes. On the other hand, one could ask why the Kerr black hole is the only type that matches and whether Kerr black holes are actually wormholes (Bambi, 2013). There needs to be more research done to answer a question like that, and maybe detection is the first step.

Figure 1 (see above). Comparison of the different parameters for wormhole space time with that of the Kerr black hole. (A) The profile of the $K\bar{\alpha}$ iron line produced in the accretion disk around wormholes with $\gamma = 1$ and different α values. (B) The angular frequency of equatorial circular orbits shown as a function of the radial coordinate r (Bambi, 2013).

Theoretical measures using different γ values show similar results (Figure 2). A medium to high spin Kerr black hole has similar properties to a slow spinning wormhole when g is changed from 1. In this code they also attempted to use higher flux values but got reduced energy in the peaks due to red and blue shifts at a smaller radius. This gives more evidence to show that these $K\bar{\alpha}$ iron lines are likely to indicate a promising result if they were to be detected (Bambi, 2013).

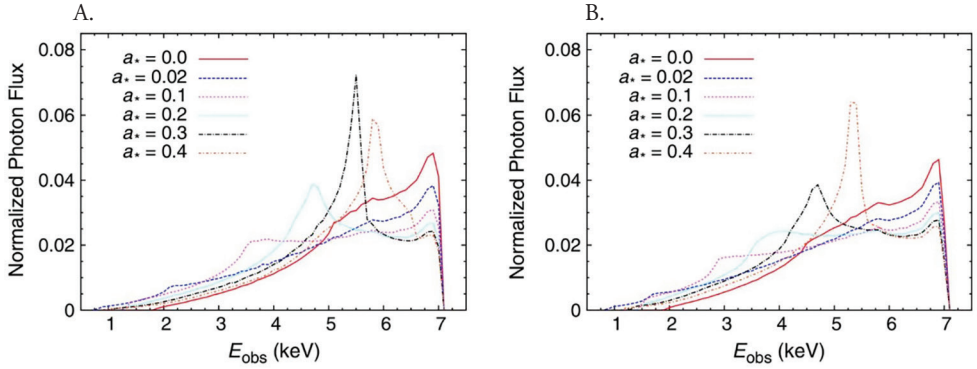


Figure 2. $K\alpha$ iron lines in wormholes with different backgrounds. (A) The $K\alpha$ iron line with a photon flux (γ) of 2 at different spin parameters for a wormhole. (B) The $K\alpha$ iron line with a photon flux (γ) of one half at different spin parameters (Bambi, 2013).

These $K\alpha$ iron lines are very good candidates for a detection method. Emission lines are already one of the most common methods of detecting objects and gathering data in the universe today. The main issue with this detection method is understanding the signal that we find. If we detect a potential wormhole candidate, we need to have a way to, without a doubt, say whether it is a wormhole. Otherwise, there will always be evidence supporting that it may just be a Kerr black hole because they are more likely.

Discussion

With the knowledge and technology we have today, wormhole detection seems to be close but not quite there yet. With current detection methods that are possible, there is no way to distinguish between wormhole candidates and black holes. Maybe in ten to twenty years there will be a breakthrough and equipment sensitive enough to detect these objects, but it does not currently appear that way. If wormholes do exist, it will be like the discovery of a black hole in the sense that it was predicted and then many years later it was

indirectly detected. Objects that produce no light are notorious for being difficult to detect and it's expected that wormholes are no different.

One of the most important ideas that mankind needs to figure out about Lorentzian wormholes is exotic matter. This concept is discussed several times throughout many papers, and it seems that they all come to the same conclusions. We don't know exactly what it is, but it is the reason wormholes can exist in the first place. Once there is more research done to understand what exotic matter is, the ability to detect wormholes should increase.

It also depends on the different types of wormholes that are possible, which is just one specific type out of many. It is unknown which one is the most likely to exist. The type chosen in this paper is the most popular because it is stable and traversable, which makes it extremely useful if humankind can find a way to harness and reproduce the effects. Lorentzian wormholes are currently the most likely link between science fiction and the real world.

It is tricky attempting to detect the property of negative temperatures. According to the equations of wormhole temperature, it is only negative on the inside of the Schwarzschild radius. This is equivalent to the event horizon for a black hole in which no information can escape. It is currently unknown if that information would

be able to come out of that radius. The reason it would need to escape is because outside of that radius the temperature would be positive and if it can't escape the Schwarzschild radius then it would be impossible to detect.

Negative temperature is a great method that would definitively show a wormhole if it was detected. The issue is how to detect it and whether we have the technology to create such an instrument. That is yet to be seen in the field of astronomy and astrophysics. Even though the thermodynamics clearly work and show that is it possible with the presence of exotic matter, the detectability aspect of this method is not practical. Out of the three methods discussed in this paper, negative temperature is by far the hardest and most far-fetched one to use as a reliable detection method.

Furthermore, Hawking radiation for wormholes, also known as phantom radiation, appears to be the best method for detection if we can create an instrument sensitive enough to detect radiation on that small of a scale. Using the phantom radiation method would also produce evidence that definitively shows the existence of wormholes due to the unique thermodynamics that explain this phenomenon. It would be useful to get a better understanding of phantom radiation. It is currently unknown whether phantom radiation is the same as Hawking radiation except for wormholes, or if it is uniquely different.

Direct detection of radiation may not be the way to go when it comes to the search for wormholes, just like when the scientific community first discovered black holes. It wasn't through direct detection; it was observing the effects that black holes had on their surroundings. Indirect detection was used to calculate the size and mass of the invisible object and to learn about its properties. It wasn't until decades later that we finally took the first direct

image of a black hole, and even that was mostly its accretion disk.

Maybe indirect detection is the way we need to go to detect wormholes. This is executed by looking for the effects of scattering off the inside of the wormholes and the unique distortion in the cosmic microwave background. These are already commonly used methods to detect dark objects within our universe. The key is to hone in on exactly what we need to look, so detection is possible.

With indirect detection for wormholes, there are several reasons why this method could be the best. The main reason is the effects are easier to detect with today's technology. We already have been mapping the cosmic microwave background for over thirty years so there is plenty of data to analyze. Once a wormhole candidate is discovered, then we have the means to observe the effects that object has on its surroundings. These observations will help prove whether the candidate really is a wormhole since we are able to compare the findings with what should and shouldn't occur for a wormhole.

The last method for detecting wormholes discussed in this paper is the $K\alpha$ iron line. On the surface, trying to find a detection method by comparing known objects to wormholes seems like a plausible idea but it leads to many concerns. Using a set of code to predict what the pattern might be according to a formula may lead people down the wrong rabbit hole. A lot of times, code like this has a lot of built-in assumptions that could be wrong. Even if the parameters seem to be right, according to the Kerr black hole, it may be just a coincidence that the data appears to line up. There are just too many uncontrollable variables at this point involved for this method to be viable.

Another issue with the $K\alpha$ iron line idea is not being able to distinguish between a Kerr black hole and a wormhole candidate to determine if they are similar. The only way to know for sure

is if there was a way to prove that all Kerr black holes are wormholes. Proving Kerr black holes and wormholes were one in the same would take away the issue entirely, but it seems almost impossible to do that in today's time.

After going through and discussing all the methods outlined in this paper, the best candidate to look deeper into is the indirect detection of wormholes through scattering effects. If we could make a more sensitive scan of the cosmic microwave background and single out this event to study, it's more than likely that would be the best-case scenario. If the small distortions in the cosmic microwave background had a distinguishable pattern, this is by far the best method available to detect wormholes.

Conclusion

Overall, there are several great potential properties of wormholes that can be used for their detection. The common issue that arises is practicality: making it possible to detect with the current technology. All these methods would work if anything was possible, but unfortunately, that is not the case. The only methods that are possible with today's technology are the detection of the $K\alpha$ iron emission line coming from the accretion disk of wormhole candidates and the indirect detection of wormholes. However, these methods have their own red flags and need to be refined a lot before they can be useful as they are currently. They remain two of the only methods that are usable today.

The property that has the worst chance of being used and may be impossible to detect is the property of negative temperature. Until we figure out whether negative temperature is detectable outside of the Schwarzschild radius, this detection method will be impossible. Even if we figure out that negative temperature is detectable outside of the Schwarzschild radius, it will still be many years away before we have the technology to do so.

Even though it is not currently usable, the most promising method must be the radiation approach by indirect detection. Because a wormhole is very similar to a black hole and that was the main approach, we used to detect those to begin with. We can look for unique properties using this approach that separates black holes from wormholes, including but not limited to cosmic background distortion and scattering of radiation off wormholes. With some refinement and new technology, there is a chance this method will be the one that ultimately determines whether wormholes exist at all.

In conclusion, wormhole detection may be possible under the right circumstances. Even though some of the methods are not practical, several avenues can be taken to ultimately determine the existence of wormholes. It is just a matter of time before someone figures out a practical method that can be repeated. What has been considered science fiction for decades will hopefully someday have an answer.

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ART SUBMISSION

Creating; Kind

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Artist Statement

As a printmaker, I use the versatility of the medium to create diverse representations of the environment and society each of us are placed in. These contexts are the “tool kit” we are provided to forage together our own identities and relationships. The piece *Creating; Kind* represents the individual in a moment of time. A set of rigid assets are used to create unique combinations of layered textures, objects, and color that are then cut down to create the element needed for the composition. The contrast between the finite nature of the matrices and substrates used and the variability in how they are layered, manipulated, cut, and repeated reflects the shared experiences of a community versus an individual, along with celebrating that relationship and their growth.



Jordan Boutelle

Creating: Kind

Cut screen print on cardstock

18" x 24"

Benefits and Challenges of Support Facilitation in an Inclusive Classroom

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Abstract

The purpose of this inquiry was to determine the benefits and challenges of support facilitation in an inclusive classroom. To answer our inquiry questions, we (UNF ESE teacher candidates) collected data on general education (GE) teachers and the varying exceptional (VE) teachers' perceptions of support facilitation at Coastal Middle School through surveys, observational walkthroughs, and teacher interviews. From the data, we discovered benefits and challenges in four overarching categories: teachers' perceptions, collaboration, instruction, and student engagement themes. As a result of the data, we recommended that Coastal Middle School outline clear and explicit roles for both the GE teacher and the special education teacher during the co-planning and co-teaching process, train the teachers on how to co-plan together, inform them of co-teaching methods they can use, and to create a schedule where the VE teacher only needs to focus on one class during each period.

Part 1: Context Background

Our inquiry project took place at Coastal Middle School in Jacksonville, Florida. At the time of the study, Coastal Middle School was made up of 1,336 students in grades 6 through 8. The student population was comprised of 54% male students and 46% female students. In addition, the student population's ethnicities were: 36% white, 35% African American, 12% Hispanic, 7% Asian, 1% Pacific Islander, and less than 1% American Indian. Also, out of the 1,336 students, 13% were exceptional student education (ESE) students. In addition, the ESE population included 7% speech impaired, 9% language impaired, 7% deaf or hard of hearing, 1% visually impaired, 4% classified

with an emotional behavior disorder, 40% classified with a specific learning disability, 9% classified with an intellectual disability, and 20% classified as "other." Moreover, when looking at the teachers, there were 73. Of those, 12 were ESE or special education teachers. In addition, of those 12 ESE teachers, six were varying exceptionality (VE) teachers. VE teachers are special education teachers who supported students with a variety of disabilities in the general education (GE) classroom following each students' Individualized Education Plan (IEP). At Coastal Middle School, VE teachers are responsible for reviewing and developing IEPs and providing services to the ESE students on their caseload. These services can be delivered inside the general classroom or outside of the classroom as determined in the student's IEP. Furthermore, VE teachers at Coastal Middle School were not

¹ We would like to thank Dr. David Hoppey for all of his help, support, and guidance throughout this process. He has believed in us since the beginning and has challenged us to be the best students and future educators we could possibly be.

responsible for creating any type of lesson plans. Our group was placed with four of these VE teachers at Coastal Middle School, including Ms. Haley, Mrs. Becky, Mrs. Sarah, and Mrs. Daisy.

VE teachers each support either grade 6, grade 7, or grade 8, and each have anywhere between 45 to 47 students on their caseload. Additionally, the VE teachers supported anywhere between 3 to 6 GE teachers during a week. Our mentor teachers' days typically involved visiting three different classes in one period for approximately 30 minutes per class. While the VE teacher was in the classroom, they were only responsible for their ESE students in that class. During this time, the VE teacher typically observed the GE teacher while they were lecturing. After the GE teacher was done lecturing, the VE teacher circled around the room while the students were working independently to assist any of the students who needed help. While their main focus was the ESE kids on their caseload, they also helped all the students. This is a teaching model called support facilitation. Support facilitation is when two teachers provide instruction to a class. The GE teacher is responsible for teaching the course content, and the ESE teacher is responsible for providing direct services in the class for students with disabilities. The ESE teacher has a flexible schedule that allows them to support a class for a partial amount of a class period or only on certain days. The frequency and intensity of support varies based upon students' and/or GEs' need for assistance. In addition to supporting their ESE students in the GE class, our mentor teachers also taught their own learning strategies class in a resource classroom for students with disabilities for one period a day. For this class, our mentor teachers were given a curriculum guide that they followed for the first half of the period. During the second half of the period, they worked independently with students who used that time as a study hall class.

Part 2: Purpose and Wonderings

During our time at Coastal Middle School, the UNF ESE teacher candidates were each partnered with a VE mentor teacher. Our VE teachers supported ESE students inside the GE classroom. We observed them inside the classroom, supporting their ESE students and the GE teacher. From this observation, our group became interested in the process of support facilitation at Coastal Middle School.

As a result, we began to dive into the literature surrounding support facilitation. The first valuable source we discovered was Chapter 7 in the *Handbook of Learning Disabilities*. (Swanson, Harris, & Graham, 2014). This chapter discusses the different special education service delivery modules, including 'pull-out' and 'co-teaching' models. The 'pull-out' method focuses on a special education teacher removing a student with disabilities outside of the GE classroom to provide any services that are specified in their IEP. On the other hand, the 'co-teaching' method emphasizes inclusion by allowing the special education teacher to work closely with all their students inside the GE classroom. The GE teacher and the special education teacher can work collaboratively to provide explicit and differentiated instruction to all students in an inclusive setting.

Support facilitators work in the GE classroom and collaborate with the GE teacher. However, they are only responsible for supporting students in that classroom who have disabilities. They also have a flexible schedule that allows them to provide support facilitation for a partial amount of a class period or only on certain days. However, co-teaching requires the GE and ESE teacher to share responsibilities for planning, delivering, and assessing the learning needs of all the students in a class, and for both teachers to work together for an entire class period. Research shows that the best practice for support facilitation is using co-teaching methods.

Benefits and Challenges of Support Facilitation in an Inclusive Classroom

A multitude of different co-teaching models can be utilized by a GE teacher and a special education teacher in the classroom. Module 8 of *Supervision Modules to Support Educators in Collaborative Teaching* (Hoppey, Haley, & Robinson, 2019) outlines and discusses the different models of co-teaching. In all, this module provides an overview of the strategies to use while co-teaching, highlights why each strategy is important, and when to use these strategies. There are six specific models described. The first one is ‘One teach, One observe.’ This model involves one teacher instructing, while the other teacher assesses student learning through observation. The second method, ‘One teach, One Assist’ means that a teacher is instructing while the other teacher is walking around, monitoring student progress, and providing additional assistance if needed. The third method, ‘Team teaching,’ requires both teachers to teach instruction cooperatively and to share the duties in lesson planning. ‘Station teaching’ is the fourth method and highlights how each teacher is responsible for planning and instructing a different station of the class where the students will be rotating. The fifth method, ‘Parallel teaching,’ describes how the teachers divide the class in half, and then each takes half of the students. Both teachers in this situation teach the same material at the same time to half of the class. The last method, ‘Alternative teaching,’ is when one of the teachers takes a smaller group and teaches/provides instruction that is different from what is being taught to the other students.

There are multiple components that make a co-teaching relationship successful. The article, *Understanding Co-Teaching Components* (Gately & Gately Jr., 2001), discussed the eight critical components of a co-teaching relationship. The first component, ‘Interpersonal Communication,’ centers on how the teachers are communicating with each other about their plans and goals for

the students. The next component, ‘Physical Arrangement,’ is the process of co-teachers agreeing upon how the classroom is arranged. This includes materials, students, desks, and the like. In the ideal co-teaching relationship, teachers would share materials and resources. Familiarity with the curriculum is another important component for a co-teaching relationship. This means the GE teacher is knowledgeable about the curriculum, so they can teach the content. It is also important for special education teachers to be familiar with the curriculum so they can make suggestions on how to modify the content. This leads to the next component, ‘Curriculum Goals and Modifications.’ This component entails teachers co-developing goals and objectives for each of the students. In addition, both teachers need to discuss goals, accommodations, and modifications necessary for an individual to be successful. The next critical component is ‘Instructional Planning.’ This requires that both teachers plan together outside of the classroom on a daily/weekly basis. Another important component of co-teaching is ‘Instructional Presentation,’ where both teachers need to participate regularly during instruction. The next component, classroom management, emphasizes the importance of both teachers developing and agreeing on a classroom management system. Finally, the last component of co-teaching is assessment. This component requires teachers to create grading procedures and progress monitoring systems that they will implement in their classrooms. Each of these components helps create a positive and effective co-teaching relationship that benefits the teachers and students.

During our research process, we discovered two significant sources to help us collect data. The first source was the *Collaborative Teaching Walkthrough Tool* (Florida Inclusion Network, 2020). This walkthrough instrument synthesizes the evidence-based best co-teaching practices

into a tool that observers can use while watching the classroom. The walkthrough tool focuses on identifying characteristics of effective co-teaching. Some of the indicators include both teachers directing activities, co-planning, classroom management, collaborative relationships, and student engagement. These are all indicators that we felt would help us determine if support facilitation was being utilized in the classroom. See Appendix A for a copy of the walkthrough tool.

An additional source used to help collect data was the *Co-Teaching Survey: What Works Best & the Biggest Challenges* (State Education Resource Center, 2016). We adapted questions from this survey to determine the co-teaching modules the teachers were using in addition to questions about what Coastal Middle School teachers think is challenging, beneficial, and what they want to improve about co-teaching. We picked these questions for the survey so that we could understand the GE teacher and the special education teachers' thoughts and opinions about co-teaching.

Therefore, the purpose of this inquiry was to determine the benefits and challenges of co-teaching in an inclusive classroom. As a result of our observations and research, our guiding inquiry question was "*How does Coastal Middle School implement co-teaching in their VE classrooms?*" Other sub-questions that helped us unpack the attitudes and beliefs of the Coastal Middle School teachers are:

- What are the perceptions of Coastal Middle School teachers about support facilitation?
- What are the teachers at Coastal Middle School's opinions on trying new support facilitation strategies?

Part 3: Research Plan

To answer the inquiry questions, we collected data on GE teachers and the VE teachers at Coastal Middle School. We chose to collect data on both types of teachers because we wanted to understand support facilitation from both viewpoints. The VE teachers might feel differently than the GE teachers about support facilitation. Therefore, we thought it would be beneficial to survey both types of teachers at the school. We first surveyed the GE teachers who use support facilitation with VE teachers. Second, we surveyed the VE teachers. This survey contained questions about the teachers' thoughts and beliefs regarding support facilitation. The ESE lead teacher, Mrs. Gauttie, sent the survey to ten teachers, including GE and special education teachers at Coastal Middle School. There was a 90% response rate to the survey. Of those nine teachers, four were VE teachers, and five were GE teachers.

Our next set of data collection came from conducting walkthrough observations of our mentor teachers inside the GE classroom. The checklist included nine characteristics that are prominent for support facilitation to occur inside the classroom. Some of the characteristics include topics about collaboration, instruction, and student engagement (see Appendix A). We completed the walkthrough checklist with a simple yes and no and then wrote any other comments and questions we acquired through observing our mentor teachers. Finally, after we completed our walkthrough observations, we each sat down with our mentor teacher and interviewed them about the lesson we observed. This provided us with the opportunity to unpack their attitudes and beliefs about support facilitation after we observed it in practice. During the interview, we asked questions about why they completed specific actions when we observed them, in addition to in-depth questions about their beliefs on support facilitation.

Part 4: Data Analysis

To analyze the data from the teacher surveys, we created graphic references representing the results of the survey's multiple-choice questions. We used graphic references like pie charts and bar graphs to display the data trends. In addition, to analyze the open-ended questions from the surveys and the walkthrough observations, each group member read through all the interview data. We then grouped the data into four different categories: teachers' perceptions, collaboration, instruction, and student engagement themes, by finding commonalities and differences across the teachers' responses. In addition, we also categorized the overarching themes into different benefits and challenges we found in the data. Finally, we discussed the findings with everyone in our group to determine if we all agreed or noticed any additional themes in the data.

Part 5: Results

Teacher Responses Concerning Support Facilitation

The first data were the results of the survey, which included preferred co-teaching methods as well as the teachers' perceptions of support facilitation. This included the benefits and challenges of support facilitation that the teachers identified in the study. We developed a list of claims to help us organize the data into cohesive units

In response to the survey question asking, 'Which co-teaching method do you use at least once a week in your class?' 88% of the teachers answered that they used 'One teach, One Assist' (Figure 1). This was something that we also saw throughout our walkthrough observations. In our 18 walkthrough observations, we observed the 'One teach, One assist' co-teaching method 100% of the time. In addition, 62% said they used 'Station teaching,' 37% said they used 'One teach, One observe,' 25% said they used 'Team teaching,' and 12% said they used 'Parallel

teaching' (Figure 1). However, we did not see these other co-teaching methods used at any point during our walkthroughs.

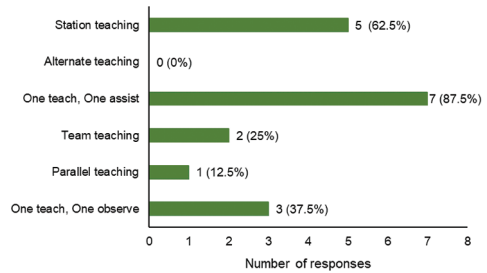


Figure 1. Teacher responses to survey questions regarding co-teaching methods. Responses from eight teachers were recorded and plotted. The number of responses and percent of the whole data set is shown.

Teacher Perceptions of Support Facilitation

These are some of the findings we discovered about the teachers' perception of support facilitation.

Claim #1: *VE teachers are seen as 'assistants' in the GE classroom.*

Of seven responses on one of the survey questions, four mentioned VE teachers being seen as assistants while being in the GE classrooms. One of the special education teachers said that when they are in the classroom, "the gen ed teacher doesn't want you to work with the students." This quote emphasized how VE teachers feel like they are treated as assistants while providing support facilitation in the GE classroom. In addition, one of the GE teachers also said that support facilitation was challenging because "the ESE teacher would talk during a lesson." This answer does not illustrate the parity that the research suggested (Gately & Gately, 2011; Hoppey et al, 2019) and confirms that the GE teachers also view VE teachers as assistants in their classrooms.

Claim #2: *VE teachers feel like they are being pulled in multiple directions during one period.*

In a different survey question, 4 out of 8 of the survey responses from teachers mentioned they needed more VE teachers because they are required to be in multiple places (classrooms) during the same period. One of the teachers said that they would appreciate “more evenly distributed students for their schedule.” Another VE teacher said that they felt like they were “spread out to the point that I am pulled in 3 or 4 different directions during one period.” These responses from teachers amplify that VE teachers feel like they cannot complete their job to the full extent because they must visit too many classes during one period.

Collaboration Themes in Support Facilitation

Detailed below are some overarching themes we discovered about the challenges of collaboration in co-teaching.

Claim #3: *The GE teacher and the special education teacher do not regularly co-plan lessons with each other.*

We discovered this overarching theme based on our walkthrough data. In the 18 walkthroughs we completed, there was no evident collaborative planning between the teachers. Often the GE teacher created their own lesson plans without any input from the VE teacher. During most of the walkthroughs, the VE teachers were unsure of what content was being taught in the classroom that day. On one of our walkthroughs, a teacher commented when she got in the classroom “I’m not sure what they are learning right now.” In another walkthrough observation, we noted that our mentor teacher was unsure what the students were supposed to be doing. In addition, one of us noted when “helping her student she was unsure how to solve the problem because she did not know what they were learning.” This evidence

illustrates that the VE teachers do not co-plan with the GE teachers because they are unaware of the content the GE covers each day.

However, it is interesting to note that our walkthrough data contradicts what the GE and VE teachers said on the survey (Figure 2). Of the eight responses on the survey, three of the teachers responded that they spend over an hour co-planning every week. One teacher said they spent 45 to 60 minutes co-planning. In addition, 3 teachers spent 30 to 45 minutes co-planning each week.

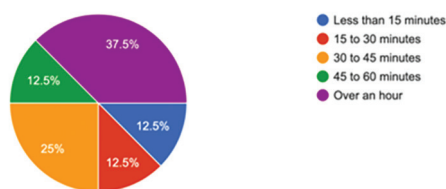


Figure 2. Teacher responses to survey questions regarding the amount of time spent co-planning in a week. Responses from eight teachers were recorded and plotted. The percentage of each response is indicated.

Claim #4: *There is not a collaborative relationship between the GE and VE teachers.*

We discovered this overarching theme based on our walkthrough data. During the 18 walkthroughs, 44% of the time there was no collaborative relationship between the teachers. While completing one of the walkthroughs, one of us noted that “there is little to no interaction between the teachers during our time in the classroom.” Another walkthrough comment explains that while they were observing their mentor VE teacher in the general classroom, the “teachers did not talk to each other at all.” The data clearly illustrates that the VE teacher and the GE teacher typically don’t communicate with each other. The teachers cannot have a truly collaborative relationship unless they communicate with each other.

Instructional Themes in Support Facilitation

Outlined below are some overarching themes we discovered about the benefits and challenges of instruction in support facilitation.

Claim #5: *There is respect between teachers and students.*

During the data collection process, we discovered the overarching theme that there is respect between teachers and students. In the 18 walkthroughs, there was visible respect between the adults and the students 83% of the time. One comment recorded during the walkthroughs was, “students and teachers appear to have respect for one another and listen to each other.” One thing we noticed during a walkthrough was that “the students seemed to get excited when they saw their teacher, Mrs. Becky, enter the room and had lots of questions for her about the content.” Respect was evident between both of the teachers as well as the students. Although respect was evident most of the time, it was not something that happened all the time.

The teachers also identified many challenges associated with the instructional methods used in the co-taught classrooms.

Claim #6: *Both teachers are not heard during the instruction/activities.*

We discovered this overarching theme based on our walkthrough data. During the 18 walkthroughs we completed, 73% of the time the voices of both the GE teacher and the VE teacher were not heard during instructional time. In addition, both teachers did not direct activities 62% of the time. In most of the classes we observed, only the GE teacher was heard during instruction and while directing activities. On some of the walkthroughs, it was even pointed out that “neither of the teachers’ voices was heard during the instruction or the activities.” These data illustrate that usually the only dominant voice heard during the lessons, or while directing activities, was that of the GE teacher.

Claim #7: *Both teachers do not participate in using classroom management strategies.*

We discovered this overarching theme based on our walkthrough, survey, and interview data. During the 18 walkthroughs we completed, 54% of the time we observed both teachers not enforcing the class rules and using classroom management techniques. In an interview where a VE teacher was asked to share their opinion on classroom management, the teacher said, “I am not responsible for classroom management because it is not my classroom.” In addition, when completing another walkthrough observation, we noted that “the classroom was out of control and neither of the teachers were trying to fix it.” When asked about classroom management, the same VE teacher said that “classroom management is not part of my job.” Finally, on one of the survey questions, a VE teacher stated that “when a teacher’s classroom management is poor, it is hard to help out I am not there to manage the classroom.” These data emphasize that VE teachers do not use classroom management strategies while in the GE classroom.

Claim #8: *The VE teachers’ roles in the support facilitation classrooms are unclear.*

We discovered this overarching theme based on the survey responses. Out of seven responses to a survey question, four of the teachers highlighted that the roles of VE teachers inside the GE classrooms are unclear. Furthermore, one VE teacher responded that the “general education teacher doesn’t want you to work with

students and doesn't want me to have any input." Another VE teacher responded to the survey by saying they wish the GE teacher would "allow the VE teachers the opportunity to do their jobs properly." These data illustrate that the GE teachers and the VE teachers do not understand the roles and responsibilities needed to successfully co-teach inside the GE classroom.

Student Engagement Themes in Support Facilitation

These are some overarching themes we discovered about the benefits of student engagement in support facilitation.

Claim # 9: *Students seek out help from both the GE teacher and the special education teacher.*

We discovered this overarching theme based on our walkthrough data. During the 18 walkthroughs we completed, 67% of the time students sought out and accepted help from both teachers. While completing a walkthrough observation, one of us noted that "all of the students including the general education students and the ESE students asked for help from both of the teachers while completing an activity." In addition, another observation mentioned that the "students ask for help from both teachers." These data illustrate that all the students in the classroom typically seek out help from both the GE teacher and the VE teacher. This is beneficial because the teachers can share the responsibility of providing scaffolding and help twice the number of students during the same amount of time.

On the other hand, the teachers identified many challenges associated with student engagement in the co-taught classrooms.

Claim 10: *Students are not actively engaged in instruction.*

We discovered the overarching theme that students were not actively engaged in instruction

based on our walkthrough data. During the 18 walkthroughs we completed, 44% of the time students were not actively engaged in the instruction. While conducting a walkthrough observation, some of us commented that students "are not engaged during independent time" and that "none of the students were paying attention to the instruction. The students were screaming, cursing, play fighting, and throwing things at each other." These data emphasize that while we were observing support facilitation, the students were not engaged in the instruction or activities. It is crucial for students to be engaged throughout the class to learn.

Recommendations

According to Hoppey et al., in Chapter Eight of *Supervisions Modules to Support Educators in Collaborative Teaching* (2019), to collaborate in the classroom productively, GE and special education teachers must plan collaboratively, utilize many teaching styles, analyze data, share responsibility, reflect on the process, and communicate.

However, we did not see these characteristics during our time at Coastal Middle School. As a result, one of our recommendations for Coastal Middle School is to outline clear and explicit roles for both the GE teacher and the special education teacher during the co-planning and co-teaching or support facilitation process. No true benefits of support facilitation can exist without outlining and understanding the roles and responsibilities of collaboration. Teachers who collaborate should set aside the time to determine clear and defined roles on what each teacher is responsible during the planning and teaching process.

Additionally, another recommendation we have is training the teachers on how to co-plan together. In the article *Understanding Co-Teaching Components* (Gately & Gately Jr., 2001), the authors emphasize the importance of co-planning in a successful collaborative support facilitation

classroom. They explained both teachers need to plan together outside of the classroom on a daily/weekly basis to be successful. As a result, we recommend that teachers at Coastal Middle School dedicate time each week to collaborate and co-plan together. This time should include teachers collaborating on instruction, goals, grading, accommodations, and any modifications required.

Another recommendation we have for Coastal Middle School is to train the teachers on the different co-teaching methods they can use. It is crucial that the teachers who collaborate are knowledgeable of the eight different types of co-teaching models. In *Supervisions Modules to Support Educators in Collaborative Teaching* (Hoppey et al., 2019), the authors explain the importance of using many collaborative teaching models. Therefore, the teachers at Coastal Middle School need to select a model of teaching for each lesson and apply or change those teaching models based on the students' needs.

Finally, our last recommendation for Coastal Middle School is to create a schedule where the VE teacher only needs to focus on one class during each period. This would involve the VE teacher providing services in a class throughout the entire class period. Our recommendation would allow the teachers time to utilize the different collaborative teaching styles, implement assessment, analyze data, and share the responsibilities of teaching.

Part 6: Collaboration

Throughout this inquiry process, our group repeatedly participated in collaborations. First, we collaborated within our group. We all worked together to complete this inquiry project. Guillermo worked with Mrs. Gaultie to gather all the demographics and background information that we needed on Coastal Middle School. Lily began writing parts one, three, and four of the inquiry projects while Sydney, Hannah, and

Guillermo all began to dive into the literature. In addition, after they found some literature that connected to our project, they each wrote a section in part two about the sources they had found. Then, everyone in the group worked together to gather data needed to answer our inquiry question. Each of the group members asked our mentor teacher to complete the survey, we all collected walkthrough data, and we all interviewed our teachers. After collecting the data, we split the data into sections for everyone to analyze. Lily analyzed the perceptions teachers have about support facilitation and some recommendations for Coastal Middle School. Sydney worked on analyzing the data about the themes in support facilitation instruction. Guillermo was responsible for analyzing the themes in student engagement. Finally, Hannah worked on analyzing the data about the themes in collaboration at Coastal Middle School. Furthermore, we all worked together to create a PowerPoint presentation. Each group member was responsible for creating a slide based on the data they analyzed. Overall, we worked together throughout the entire inquiry project by bouncing ideas off each other and giving each other feedback on our different parts.

Then, we each collaborated with our mentor teacher at Coastal Middle School, with whom we worked closely over a three-month time span. Our mentor teacher provided a vast amount of valuable information throughout this project. They answered our survey questions and allowed us to complete our walkthrough observations while they were in the GE classroom. In addition, they also answered multiple questions we had about co-teaching at Coastal Middle School and their beliefs about co-teaching.

Next, we collaborated as a group with the ESE lead teacher at Coastal Middle School, Mrs. Gaultie, on support facilitation and presented our project to her. We explained to her what we

wanted to do and what we wanted to get from this inquiry project. As a result, she provided us with a multitude of information that we used in this project. She gave us all the demographics and background information we needed on Coastal Middle School. In addition, she also sent our survey to all the VE teachers and the GE teachers that co-teach with the VE teachers. Throughout this project, she was just an email away for any questions we had about Coastal Middle School.

Finally, we collaborated with one of our professors Dr. Hoppey, who played an important role in our inquiry project. He was our support throughout the entire process and did many things to help, including guiding us through this,

our first inquiry process. Dr. Hoppey constantly answered any questions we had about the inquiry project during class and over email. He also helped us make important decisions for the project. For example, he helped us decide what kind of data would be best to collect. In addition, he also helped us figure out our next steps when we got stuck. Furthermore, Dr. Hoppey provided us with ongoing feedback on our project that we were able to use for professional development. He read through the paper and gave critical feedback, which we used to refine the paper. In addition, Dr. Hoppey gave us feedback during class, which we used to improve the project and grow on a professional level.

Appendix A

Walk Through Observation Tool

Observation Date		
Observer Name		
Teachers Observed		
Content Area/Grade		
Support Facilitation Approach Observed		
Total number of students in the classroom		
Number of students with disabilities in the classroom		
Look Fors	Evident Y/N	Comments
1. Both teachers are directing student actions and activities.		
2. Both teachers are using classroom management techniques.		
3. A collaborative relationship is evident among both teachers.		
4. Students are actively engaged in the instruction.		
5. Teachers collaborate to develop lessons.		
6. Teachers are using supports, modifications, and accommodations.		
7. Students appear to accept and seekout both teachers' help in the learning process.		
8. Respect between adults and students is evident.		
9. The voice of both teachers are heard during the teaching process.		

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Enhancing the Educational Environment: Improving Student Outcome Using Visual Supports

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Abstract

Students in varying educational settings are supplied with varying levels of academic support. While it is well known that academic supports assist students in learning academic content, visual supports are proven to improve and develop academic language and improve academic proficiency. Visual supports assist students in becoming more knowledgeable of academic content by increasing student engagement and the implementation of classroom structure. The overall focus of this research project was to determine the effectiveness of visual academic supports within primary education, specifically the behavioral and academic impacts of visual aids in a Communication and Social Skills (CSS) classroom at Willow Grove Elementary School within the Duval County School District. The preliminary conclusions of the study are that the visual supports made more consistent academic impacts than behavioral impacts on the students observed.

School Background Information

My internship was at Willow Grove an Elementary School located in Jacksonville, Florida. At the time of the internship, this Title I elementary school consisted of 993 students and 60 teachers/ support staff (National Center for Education Statistics, 2021). The student body was a diverse group of students, consisting of 54% Caucasian and 46% minority students (National Center for Education Statistics, 2021). At the time of the internship, all students were eligible for free breakfast and 43% of the student body was eligible for or received free or reduced lunch. The ratio of student to teacher averaged 16:1, however, some classes received extra support, including those in the Communication and Social Skills (CSS) Program offered at the school. The CSS program consists of 72 students with a diverse range of exceptionalities. In addition to

the CSS program, the school also has a Voluntary Pre-Kindergarten (VPK) Program, which is not offered in all schools throughout the district.

Classroom Background

In my internship, I conducted observations, instructional assistance, and one-on-one small groups with students in a third-grade self-contained CSS classroom. This classroom consisted of nine students with varying exceptionalities, including Autism Spectrum Disorder (ASD), Intellectual Disability (ID), and Specific Learning Disabilities (SLD). All students have an Individualized Education Program (IEP). The classroom has varying decorations hanging from the ceiling, decorations on all the walls, and at the front of the room, student work can be located. On the board at the front of the

classroom is a visual schedule and the Florida State Standards with the students' learning objectives. The room has three rows of student desks with three students in each row. In addition to the student-arranged rows, there are two work areas that have crescent moon-shaped tables, one located in the back of the classroom, and the other located at the front corner of the classroom. Both work areas were utilized for instructor and student-led centers. Lastly, in the front of the classroom is a desk utilized to project information on the board at the front of the classroom. A graphical depiction of the classroom layout is shown in Figure 1.

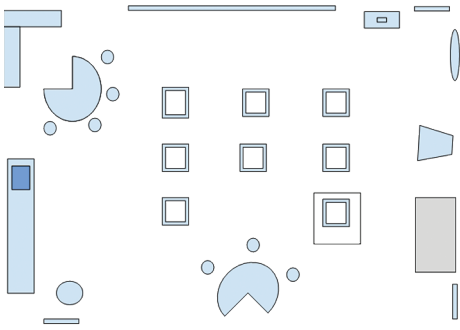


Figure 1. Classroom graphic layout. The room has three rows of student desks with three students in each row. In addition to the student-arranged rows, there are two work areas that have crescent moon-shaped tables, one located in the back of the classroom, and the other located at the front corner of the classroom.

Teaching Responsibilities

As a student intern in a third-grade self-contained CSS Classroom, teaching responsibilities vary. When starting my internship, I assisted with check-in by ensuring that students walk to the correct classroom and had their temperatures checked upon entering the building. In this classroom, I aided the students in their breakfast clean-up and morning work before conducting their math lessons. During the math lessons, I

utilized guided practice, explicit instruction, and modeling to ensure students' understanding of the math content. I usually provided students with a worksheet which served as an informal formative assessment. This worksheet was utilized during the lesson as group work and independent work, depending on the lesson for the day. Once the students had completed their math work, they were asked to read independently before transitioning to their lesson in language arts. As a student intern, I typically led the lesson for math. During the other lessons conducted throughout the day, I provided students with one-on-one instruction when they needed extra instruction on the course content.

COVID's Impact

Over the past few years, education and other public entities have been faced with many challenges related to the worldwide pandemic, COVID. Also known as Coronavirus, COVID is an infectious disease caused by the SARS-CoV-2 virus (World Health Organization, 2020). This disease spreads rapidly and causes respiratory illness and in serious instances can be fatal. When beginning my internship experience, I witnessed first-hand the extent to which this virus is contiguous to individuals. Within my internship, in the Exceptional Students Education (ESE) Department, 14 of 21 adults had been absent from their classrooms due to COVID. Therefore, there had been a severe shortage of individuals to sustain the students within the classes. The impact of the virus had not only impacted the adults within these ESE classrooms, but there were also several classes in which over half of the students had tested positive for the coronavirus as well. This impact led to inconsistencies with instruction, inconsistencies in students' behavior, and the remaining staff to feel overworked with limited resources.

Context of Inquiry

Within education, there are many challenges. As an intern within ESE Program, I had the opportunity to see the high demand for intervention for students with exceptionalities. Through observations within Physical Impaired (PI), Emotional Behavioral Disorder (EBD), and Communication and Social Skills (CSS) classrooms, I had the opportunity to learn in and explore different educational settings, which refers to “the diverse physical locations, contexts, and cultures in which students learn” (Great Schools Partnership, 2013). Every educational setting in which students with exceptionalities learn has its own unique characteristics. As a teacher candidate observing a PI classroom, I determined that the classroom is characterized as a learning environment that provides an accessible space for students that utilize wheelchairs, students that utilize walkers, and students with other functional limitations to allow for proper intervention to improve these students’ learning outcomes (Great Schools Partnership, 2018). I was also placed as an intern was an EBD classroom, which is characterized by the adaptations made for students who have pervasive and/or emotional behaviors that adversely impact their learning outcomes (Great Schools Partnership, 2018). Lastly, I had the opportunity to intern in a CSS classroom. This educational setting is uniquely characterized by its ability to provide intervention and supports for students with communication and social limitations to make the learning environment more accessible (Great Schools Partnership, 2018). Across each of these educational settings, different academic supports were utilized. Academic supports “*entails a variety of instructional methods, educational services, and school resources that help students accelerate skill acquisition and learning progress, meet expected school requirements and competencies, and succeed in their education*” (Great Schools Partnership, 2018). However, in

each of these settings, instructors utilized visual supports to enhance their instruction. This led me to wonder about the overall effectiveness of visual supports as a strategy to enhance outcomes for students with disabilities.

As a teacher candidate, over the different semesters and these experiences, I had the opportunity to provide intervention support, which is defined as actions taken to improve the students’ learning outcomes (Great Schools Partnership, 2018). In providing intervention support, I determined that some actions taken were not effective at improving student learning. This determination was made based on students’ formative classroom assessments and informal assessments including classwork and other daily tasks. After making this determination, I asked what form of visual supports had the greatest impact on students’ learning outcomes.

Instructional Tools and Supports

Within education, there are many tools used to improve students’ learning outcomes, especially for kinesthetic, visual, auditory, and other learners. Which type of instructional tools and supports will best benefit a classroom with a variety of learning needs has been called into question. For example, for kinesthetic learners, learning needs include physical movement integrated into instruction (Wiley Educational Resources, 2021). In lesson instruction this can include activities that keep students from remaining stagnant during the instructional time and allows the students to utilize hands-on activities to be more involved in the instruction occurring. For visual learners, learning needs include visuals, images, and graphics to support instruction (Wiley Educational Resources, 2021). In lesson instruction, this can include the use of graphics, charts, and other visual aids that support the information provided in the instruction. Auditory learners, prefer “instructional discussion,

the use of audio, and other auditory forms of instruction” (Wiley Educational Resources, 2021). Specifically, this includes classroom discussion, lecture, and Socratic seminars that add audio components/inclusions to the instruction occurring. All these students’ learning needs differ, therefore, multiform instructional tools and supports provide the ability for learners’ needs to be met. This has led many to question which instructional tools and supports have the largest benefit for student outcomes.

For this inquiry, I chose visual aids as an instructional tool of interest. The instructional implementation of visual supports should increase students’ outcomes on classroom formal assessments, classroom tasks, and end-of-unit summative assessments. Therefore, the purpose of this inquiry was to ascertain the evidence pertaining to the overall benefits of the implementation of visual supports in the classroom setting.

Academic Support vs. Visual Supports

In understanding the ways to improve students’ learning outcomes, an instructor needs to understand the instructional strategies that support students. Academic support includes a variety of “instructional methods, educational services, and school resources available to accelerate skills acquisition” (Great Schools Partnership, 2018). Because it is proposed that the instructional methods, educational services, and school resources all have a role in students’ outcome, this review is limited to the academic supports that examine the instructional methods teachers use to increase students’ learning outcomes.

Visual supports are a variety of “images, pictures, and visual items which give students access to their learning content/learning environment” (Rao & Gagie, 2006, pg. 27). While examining the overall usefulness of visual supports, there was a high prevalence of research surrounding

the implementation of visual supports in Exceptional Students Education (ESE) classrooms.

Inquiry Question

For this project, my inquiry question was: “*How do students with exceptionalities within a CSS classroom benefit academically from the use of visual supports in the educational environment?*” This inquiry stems from the growing population of students with exceptionalities within the public school system and the different means of academic intervention the public school system provides for students with exceptionalities.

Selection of Participants

During my internship, I conducted observations and provided instructional assistance, and one-on-one small groups with students in a third-grade self-contained CSS classroom. The classroom consisted of nine students with varying exceptionalities, all of whom had an IEP. The demographics of the nine students consisted of 22 percent (2 students) non-verbal students and 55 percent (5 students) on Florida’s Alternate Curriculum standards also known as Assess Points. When determining which participants to include in my inquiry project, I determined that the students that would benefit from visual supports intervention were the students on Access-Points. These students on Access Points consisted of five third grade students, all of whom have an IEP on file. These students were chosen because they are in third grade performing academically between a kindergarten to first grade level in reading curriculum and math curriculum. In addition to performing at similar levels academically, these students also have similar accommodations and related services included on the IEPs, including directions read aloud and extended time on classroom tasks, as well as bi-weekly meetings with the Speech-Language Pathologist (SLP), respectively. The accommodations and related

special education services are appropriate for the inquiry question and reflects accurate intervention implementation.

Data Collection Procedures

To answer the question, *“How do students with exceptionalities within a CSS classroom benefit academically from the use of visual supports in the educational environment?”* The pre-intervention data collected were students’ scores on Performance Measures Assessments (PMA) and students’ average performance level on classroom tasks. Classroom tasks assessed included classwork, formative/summative classroom assessments, and homework accuracy/ completion. These pre-intervention data determined the student’s starting academic level of performance and hence provided a baseline of students’ performance prior to intervention provided through visual supports. Additionally, by determining the baseline for students’ academic performance, the post-intervention data should reflect the areas in academic content that made improvement after the intervention was provided.

The intervention that was provided to students was three forms of visual supports, including visual schedules, behavior flip-cards, and first/then cards (Figure 2). These three forms of visual support were implemented within the classroom to support smoother transitions from one academic content to another and eliminated behaviors that prevent academic instruction. The intervention spanned over an eight-week time frame. Week one was strictly initial data collection and classroom observation. In weeks two through week seven, the implementation of visual supports took place. The students were taught the meaning of symbols/images on visual support, how to use the visual supports, and a gradual release of responsibility of the visual support to the students utilizing the visual support. In week eight, the post-intervention data

was collected and analyzed to reflect the overall benefits academically of the implementation of visual supports in an ESE program.

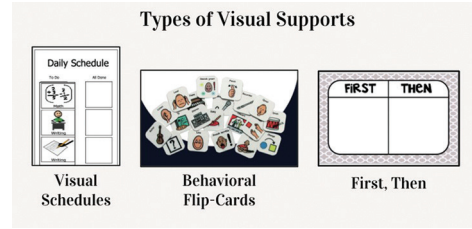


Figure 2. Types of visual supports. The three types of visual supports used in this study are shown.

Establishing that visual supports could influence students’ outcomes led to initial data collection of students’ behaviors, the duration/ times of behavioral incidents, and pre/post student performance data. The data were collected with the intention of determining the overall effects of visual supports on students learning and on students’ behaviors to answer the question *“How do students with exceptionalities within a CSS classroom benefit academically from the use of visual supports in the educational environment?”* The data collected were both quantitative and qualitative, which allowed a variety of analyses. The wide range of data included notes students’ behaviors and the duration/times of behavioral incidents because students’ behavioral incidents impact the educational environment which could impact students’ outcomes. The students’ pre-performance data was collected to reflect students’ outcomes prior to intervention and the post-performance data to reflect students’ outcomes after intervention.

For the quantitative and qualitative data collection, a chart was constructed with five-minute increments throughout the school day, from 8:00 a.m. to 2:45 p.m., to track behavioral incidents and duration (Figure 3). The chart was marked when an incident occurred and again if the incident continued through the five-minute increment. As a continuation of data collection on

Antecedent	Behavior	Consequence
Student was asked to sit down and complete morning work.	Student continued to walk around the classroom and began huffing/breathing heavy throwing small items (Pens/eraser/poppers)	Teacher redirect task Postponed, Students laugh, and students watch
Student was asked to sit down and complete morning work.	Student continued to walk around the classroom and began huffing/breathing heavy throwing small items (Pens/eraser/poppers)	Teacher redirect task Postponed, Students laugh, and students watch
Student was asked to switch from one rotation in stations to another	Student began to walk around the classroom and began talking louder/refusal of assigned tasks	Teacher redirect task Postponed, Students laugh, and students watch
Student was asked to sit down and complete work.	Student continued to walk around the classroom and began huffing/breathing heavy throwing small items (Pens/eraser/poppers)	Teacher redirect task Postponed, Students laugh, and students watch
Student was asked to sit down and complete work.	Student continued to walk around the classroom and began talking louder/refusal of assigned tasks	Teacher redirect task Postponed, Students laugh, and students watch
Student was asked to switch from one rotation in stations to another	Student began to walk around the classroom and throwing small items (Pens/eraser/poppers)	Teacher redirect task Postponed, Students laugh, and students watch

Time	Behaviors			
8:45 AM	x			x
9:00 AM	x		x	x
9:15 AM	x		x	x
9:30 AM	x	x	x	x
9:45 AM		x	x	
10:00 AM		x		
11:45 AM				x
12:00 PM			x	x
12:15 PM			x	x
12:30 PM		x	x	x
12:45 PM		x	x	
1:00 PM	x			
1:15 PM	x			

Other Notes:

Behaviors typically occur upon arrival and reoccur upon afternoon transition
 Function of Behavior: Task Avoidance, Attention Seeking (Behavior does not continue if classroom is evacuated), and to see peers’ reaction

behaviors occurring in the educational space, an Antecedent, Behavior, and Consequence (ABC) chart was completed with details regarding the behaviors that were noted on the time chart. These two forms of behavioral data collection served to help in understanding the behaviors and the student’s educational environment during instructional execution. Behaviors throughout the internship experience were recorded for five students. The initial observations served as a baseline to which behaviors after implementation of the visual supports could be compared. Other forms of data collected during this process included quantitative data on students’ weekly assessments. Like for the behavioral data, the performance of students on course materials before, during and after this process was implemented was compared.

Figure 3. ABC data table and time chart.

Example antecedent, behavior, and consequence for each incident observed. The time chart was used to log the time and duration of the behaviors logged in the ABC chart.

Behavioral Results

Figure 4 displays the average duration of behaviors for the student J.A. per week over the course of the six weeks of intervention. As compared to baseline (1/31-02/04), the durations of behaviors during the study showed little to no variation. This implies that the visual supports had little impact on student J.A.’s behavior. Also, these results imply that the short-term effect of the visual supports varied per week. JA data showed variations in the average of each week’s weekly behavioral average duration. It is not known if there were external factors that were impacting the results for J.A.

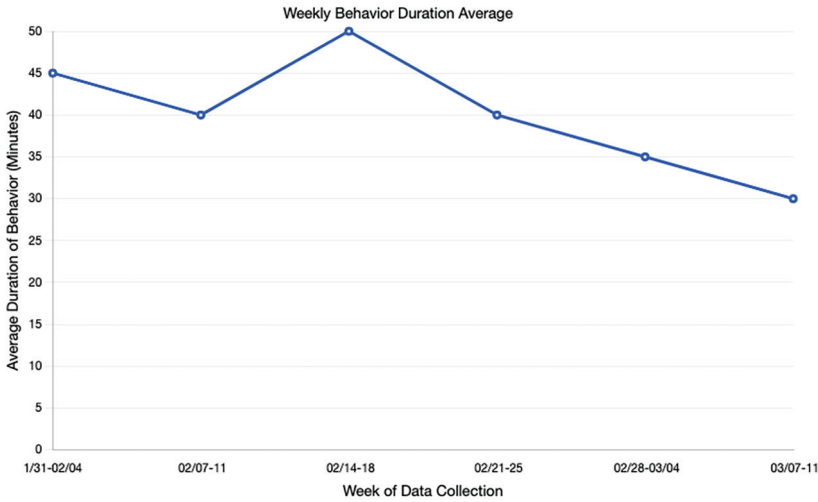


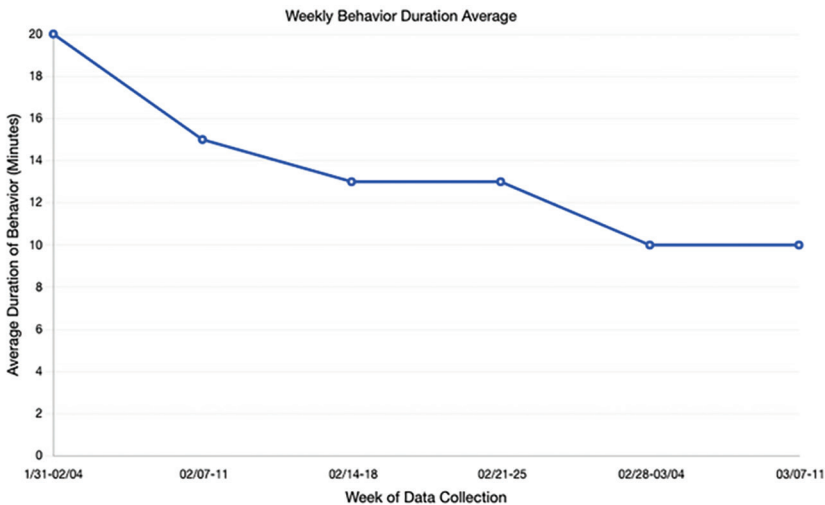
Figure 4. Weekly behavior duration average for student J.A. The average duration (in minutes) was plotted for each week of the study, which was conducted from January 31 to March 11, 2022.

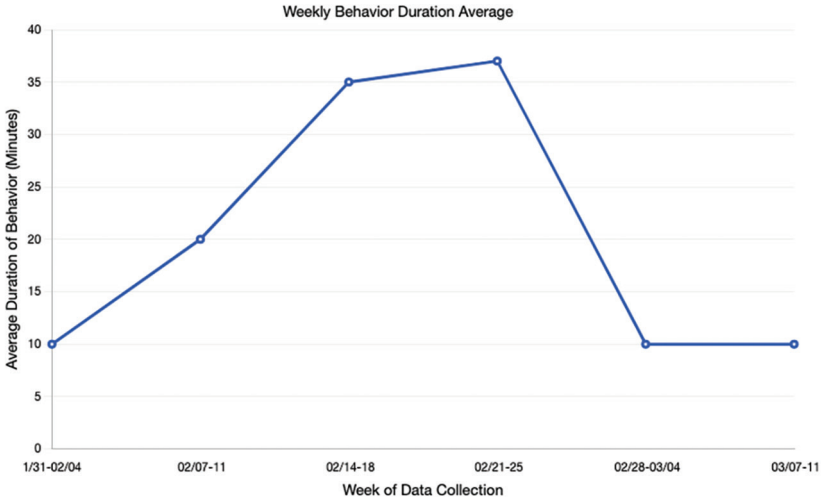
Figure 5 displays the average duration of behaviors for the student E.H. over the course of the six weeks of intervention. As compared to baseline, the durations of behaviors showed a decrease after the start of implementation of visual supports within the classroom. This implies that the visual supports impacted E.H.’s duration of behaviors. Also, these results imply that the short-term effect of the visual supports helped E.H to make slight decreases in the duration of behavior. Based on these key findings for student

E.H. further studies will need to be conducted to determine which visual support could have a greater impact on the student’s behavior within the learning environment.

Figure 5. (see below) Weekly behavior duration average for student E.H. The average duration (in minutes) was plotted for each week of the study, which was conducted from January 31 to March 11, 2022.

Figure 6 displays the average duration of behaviors for the student J.K. over the course of the six weeks of intervention. As compared to baseline, the durations of behaviors had significant variations. These results imply that the visual supports impacted J.K. behaviors both positively





and negatively. These inconsistent results led to conversations with the guardians of J.K. and the Applied Behavioral Analyst (ABA) assigned to J.K. Through these discussions, we concluded that throughout the six-week implementation period, changes and inconsistencies in the student’s medication may have led to significant variations in behaviors. Therefore, the impact of visual supports on J.K. behavioral outcomes cannot be accurately concluded.

Figure 6. Weekly behavior duration average for student J.K. The average duration (in minutes) was plotted for each week of the study, which was conducted from January 31 to March 11, 2022.

Two additional students, A.V. and O.T., did not have a significant number of behaviors recorded. The behaviors that were observed can be summarized as small instances that did not cause a disruption to peers during instruction. Therefore, the benefits of visual aids on these students’ behavior were not evaluated.

When beginning data collection all the students received a weekly average conduct grade that reflected completion of tasks and behavioral impacts on those assigned tasks. These results concluded that students with less behaviors were able to thoroughly complete assigned tasks and had less distractions on given tasks (Table 1).

Table 1: Grades Assessment

		Freckle (Math)	Freckle (Math time Min)	Freckle (Read/ELA)	Freckle (RELA time Min)	PMA (R/ Raw)	PMA (Band)	PMA (Math Row)	PMA (Band)
1	J.A. (Gen. Ed.)	N/A	N/A	N/A	N/A	10	10	13	13
2	E.H. (Gen. Ed.)	N/A	N/A	N/A	N/A	15	15	16	16
3	J.K. (Access Points)	45	55	80	122	N/A	N/A	N/A	N/A
4	O.T. (Gen. Ed.)	N/A	N/A	N/A	N/A	16	16	14	14
5	A.V. (Access Points)	70	100	45	114	N/A	N/A	N/A	N/A

N/A on Assessment due to assessment being specifically for student’s om General Education Standards or Assess Points Standards
 ***J.K. dislikes math and exhibits frustration when assigned math tasks which prevents accurate reflection of math skills and math comprehension
 **J.A. and E.H. receive small group assessment/ tested together both have behavioral issues scores reflect assessment when with students completing talking and yelling at one-another

Academic Results

The average student performance on weekly assessments over the six weeks of intervention was compiled. Comparing the baseline of performance to the student outcomes at the conclusion of the study, there was an increase in overall student performance per weekly assessment. The students' baseline data in academic performance was collected during the week of 01/31-02/04. This reflected their initial academic performance level prior to the use of visual supports. After the

implementation of the visual supports, students J.A., J.K. and A.V. increased academic performance by five percent, while O.T. increased by ten percent and E.H, maintained his strong understanding of math academics (Table 2). The increases in math assessment data suggests that the visual supports assisted the students in improving their academic performance. To continue, the student's averages in reading performance also similarly increased to suggest that the visual supports assisted in improving academic performance (Table 3).

Table 2: Weekly Math Assessment Data

		Math (01/31-02/04)	Math (02/07-11)	Math (02/14-18)	Math (02/21-25)	Math (02/28-03/4)	Math (03/07-11)
1	J.A. (Gen. Ed.)	80	80	85	75	80	85
2	E.H. (Gen. Ed.)	100	95	100	95	90	100
3	J.K. (Access Points)	70	70	I.C.	I.C.	80	75
4	O.T. (Gen. Ed.)	90	90	100	100	95	100
5	A.V. (Access Points)	80	80	85	75	80	85

Table 3: Weekly Reading Assessment Data

		Read/ELA (01/31-02/04)	Read/ELA (02/07-11)	Read/ELA (02/14-18)	Read/ELA (02/21-25)	Read/ELA (02/28-03/4)
1	J.A. (Gen. Ed.)	70	70	I.C.	I.C.	80
2	E.H. (Gen. Ed.)	90	90	100	95	90
3	J.K. (Access Points)	90	90	100	100	95
4	O.T. (Gen. Ed.)	90	95	100	95	90
5	A.V. (Access Points)	70	70	75	75	80

Conclusions

After conducting this inquiry project on how visual supports impact students' learning outcomes, I concluded that the visual supports had positively impacted students' academic outcomes. The visual supports had greater impact on students' academic outcomes than their behavioral outcomes.

Implications

To further reflect on the overall implications of this inquiry, I have learned and gained a better understanding of teaching students with exceptionalities. For example, I learned that through visual supports students with verbal and communication needs have more access to the vocabulary because the images in the visual support provide context that was missing without using the visual support. Additionally, this inquiry informed my teaching practices that I will use moving forward as an educator. Prior to analyzing the results, my teaching practices stemmed from the use of high leverage practices. When collecting student outcome data from this inquiry, I realized that visual supports coupled with high leverage practices provide additional forms of scaffolding for students that need additional assistance on learning academic content. This realization has led me to think of ways I can include more types of visual supports within the classroom to provide support to my students. While there

were many benefits of visual supports within this inquiry project, I also need to continue to try to implement visual supports and gather data to improve behavioral outcomes for my students. Through additional data collection and implementation of visual supports I would be able to determine which visual support will work best within my teaching pedagogy and classroom management. In the future, I plan to continue the use of visual supports within my classroom to allow students the access they need to academic vocabulary and academic content.

To better execute this inquiry there is a need for adjustments to the inquiry research design. When originally conducted, this inquiry examined three visual supports being used accompanying one another. The use of all three supports did not allow for conclusive results of which support made the impact on the student's outcomes. For this study to be conclusive, the visual supports would need to be implemented one at a time and implemented with validity. Further, visual supports also should be expanded beyond the Exceptional Students Educational classroom to understand the impacts of visual supports on other students. Visual supports benefitted my students with moderate to severe disabilities. Therefore, I am curious how visual supports can assist students in general education classrooms reach their potential.

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ART SUBMISSION

Floral Study

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Artist Statement

Floral Study is a quick charcoal study of the faux flowers that were a part of a bigger still life. This piece was created in Professor McGalliard's Drawing II class at the University of North Florida. When creating this piece, I took the mindfulness and fluid movements used to create my meditative drawings and applied them to the technical skill of drawing. Professor McGalliard's class taught me to slow down and focus solely on studying the subject in front of me. I wanted to translate not only what I saw, but how this subject made me feel onto the paper in front of me. Although the flowers were quiet and still, I wanted to capture the quick gestural form of the flowers with a busy atmosphere around them. For this piece, the flowers represent peacefulness immersed in a world of constant action and movement, which we see daily.



Alyssa Hennigar
Floral Study, 2022
Charcoal on Newsprint
8" x 8"

Creating the Cultural “Other”: Ableism, Racism, and Imperialism in the 19th and 20th Centuries

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Abstract

This project argues that disability and physical difference were simultaneously both sensationalized and hidden in the United States and the United Kingdom, while also being overemphasized in non-Western countries, with the intention of evoking either revulsion, a sense of racial superiority, or pity, all of which was used as justification for Western imperialism. In order to make this argument, the project looks at varying attitudes and actions toward the disabled, physically different, and visibly ill in the U.K. and U.S.A., as well as the varying attitudes and actions toward the disabled, physically different, and visibly ill in the broader imperial scope. Understanding how ableism, racism, xenophobia, and paternalism are connected in this context allows for a better understanding of how proponents of imperialism, colonialism, and anti-immigration justified (and, often, are still justifying) these practices.

Introduction and Review of the Literature

Anyone, at any time, can become disabled. It could be argued that ableism is a response to the fear of becoming disabled; that is, in order to distance oneself from the ever-present potential, disabled and visually ill individuals are treated as inherently and essentially **different**, as hidden away, pitied, or gawked at. In the United States and the United Kingdom, disability was allowed to exist as an individual trait within whiteness, yet it was viewed as a defining group characteristic for non-white and non-Western peoples. As Western medical knowledge increased and hygiene became entwined with morality, imperialists in the United States and the United Kingdom looked for ways to distance themselves from those they deemed inferior. Throughout the late nineteenth and early twentieth centuries, perceived disability, physical difference, and visible illness became increasingly associated with a racial or ethnic Other.

I argue that disability and physical difference were simultaneously sensationalized and hidden in the U.S. and the U.K., while also being overemphasized in non-Western countries, with the intention of evoking either revulsion, a sense of racial superiority, or pity, all of which was used as justification for Western imperialism. Unfortunately, this trend did not fall out of fashion in the twenty-first century; as scholar Michelle Jarman demonstrates, modern churches, charities, and other organizations still use the image of disability and physical difference in the Global South to source support (both moral and monetary) for “good imperialism.”¹ In order to recognize this in current affairs, it is important to be aware of the historical context in which ableism

1 Michelle Jarman, “Resisting ‘Good Imperialism’: Reading Disability as Radical Vulnerability,” *Atenea* 25, no. 1 (June 2005): 108.

has been used as both an excuse for injustice and a tool for imperialism. Imperial and colonial history cannot be separated from this cultural history of ableism without losing valuable context about the perception of the Other.

Disability, as a term, is actually quite variable. Even now, but especially in the nineteenth and early twentieth centuries, “disability” could encompass anything from physical disability (such as limb difference or blindness) to the purely aesthetic (visible difference, including things like scars, “ugliness,” or just non-whiteness). As Lennard Davis explains, the concept of “normality” and a “normal” body developed only in the context of “fitness” for industrial labor.² The definition of disability and ableism, especially in different cultural contexts, is a popular topic within the field of disability studies. In his 2015 article, “Decolonizing Eurocentric Disability Studies,” Shaun Grech argues that examining imperialism through the lens of disability provides incredibly valuable insight, and that disability studies should focus on the Global South, not only through the lens of Northern colonialism, but as part of global history in its own right.³ Similarly, Michelle Jarman argues in a 2005 article that images and ideas of disability (specifically a 2004 advertisement using images of children with cleft palate) are used to support and justify medical intervention in postcolonial countries, while ignoring overarching issues of “economic imbalances, poverty, national tensions, unequal access to knowledge and technology, and myriad other social issues.”⁴ Both of these articles are

2 Lennard J. Davis, “Constructing Normalcy: The Bell Curve, the Novel, and the Invention of the Disabled Body in the Nineteenth Century,” in *Beyond Bioethics: Toward a New Biopolitics*, ed. Osagie K. Obasogie and Marcy Darnovsky (Oakland: University of California Press, 2018), 72.

3 Shaun Grech, “Decolonizing Eurocentric Disability Studies: Why Colonialism Matters in the Disability and Global South Debate,” *Social Identities* 1, no. 1 (Jan. 2015): 6-21.

4 Jarman, “Resisting ‘Good Imperialism,’” 112.

foundational to this project; although the authors discuss issues much more contemporary, the concepts are still applicable to this period. Another foundational work is “Approaching Anomalous Bodies,” David M. Turner’s introduction to *Social Histories of Disability and Deformity*.⁵ Turner introduces the historical variability of terms like “disability, deformity, and defect,” as well as the relationships among these terms.⁶

In her book, *The Ugly Laws*, Susan Schweik details the so-called “ugly laws,” or ordinances against “unsightly beggars” in public spaces.⁷ Schweik argues that “lack of regard” is what allowed these laws to pass and be enforced, whether successfully or not.⁸ She elaborates on their history, providing the foundation for these laws, as well as the laws themselves and their intersection with race, gender, and nationality. In a 2015 article, Stefanie Kennedy goes into detail of one aspect of this intersection: race and the practice of slavery. Kennedy argues that “colonialism, race, and, specifically, slavery are key to understanding the intersections between the commodification of the laboring body and disability.”⁹

There are quite a few works that discuss the idea of racialized disability. One of these is Esme Cleall’s “Orientalising Deafness,” which argues that, when looking at “categories of difference” in an imperial context, disability and race are inseparable.¹⁰ She uses the example of d/Deaf

5 David M. Turner, “Approaching Anomalous Bodies,” in *Social Histories of Disability and Deformity*, ed. David M. Turner and Kevin Stagg (London and New York: Routledge, 2006): 1-16.

6 Turner, “Approaching Anomalous Bodies,” 2.

7 Susan Schweik, *The Ugly Laws: Disability in Public* (New York and London: New York University Press, 2009), 2.

8 Schweik, *The Ugly Laws*, 20.

9 Stefanie Kennedy, “‘Let Them Be Young and Stoutly Set in Limbs’: Race, Labor, and Disability in the British Atlantic World,” *Social Identities* 21, no. 1 (Jan. 2015): 37-52.

10 Esme Cleall, “Orientalising Deafness: Race and Disability in Imperial Britain,” *Social Identities* 21, no. 1 (Jan 2015): 22-36.

Indians, identified as both “a cultural group (‘deaf heathens’) and a biological category (‘a deaf race’).”¹¹ Similarly, Natalia Molina uses twentieth century Mexican immigration to the United States to argue that the label of “unfit” was selectively applied to a group when advantageous – in this case, to oppose Mexican immigration.¹² Jay Dolmage, in *Disabled Upon Arrival*, also considers immigration and disability, but he looks at Ellis Island as a place where presumed “illness, deformity, insanity, and criminality” could be removed from the population, and that these presumptions were heavily associated with race and “constructions of class, sex, and sexuality.”¹³ Esme Cleall¹⁴ and Sharon Betcher¹⁵ discuss the intersection of race and disability, but with the added lens of religion. Both Cleall and Betcher demonstrate how missionaries used language of disability to refer to non-Christians: blind, deaf, crippled, etc. Cleall argues that the “voyeuristic” images of disabled people in missionary magazines supported the pathological “othering” of colonized peoples.

Ableism at Home

The turn of the twentieth century was a period of growth for the entertainment industry, including “circuses, street fairs, world’s fairs, carnivals, and urban amusement parks, all of which exhibited

freaks.”¹⁶ “Freak shows,” like the cabinets of curiosity and “museums” before them, displayed the unusual, which, essentially, meant people with visible disabilities, physical differences, unusual skills (such as extraordinary strength or flexibility), and anyone who could be labeled as “exotic,” whether the claims of the showmen were true or not. Performers were often labeled as a different ethnicity in order to add exoticism to the act and make it all the more intriguing for the audience. One example of this is Hiram and Barney Davis, who were advertised as “Waino and Plutaino: Wild Men of Borneo,” despite being, in reality, disabled brothers from Connecticut.¹⁷ The role of “the missing link,” usually played by a disabled person but, at least once, by an ape in a dress, was also a common character in freak shows. Douglas Baynton states that in these cases, disability “was in effect the costume that signified the role of ‘subhuman.’”¹⁸ In the case of Hiram and Barney Davis, their disability was also a costume, signifying the role of “exotic” or “racial Other,” despite the performers being white Americans.

In addition to false claims, these types of shows often exhibited actual people from other countries, especially from colonized places. At the 1904 St. Louis World’s Fair, one of the most popular attractions was the Philippine exhibit, which “had several Filipino tribes in ‘native costume’ doing day-to-day activities before

11 Cleall, “Orientalising Deafness,” 25.

12 Natalia Molina, “Medicalizing the Mexican: Immigration, Race, and Disability in the Early-Twentieth-Century United States.” *Radical History Review* 94 (Dec 2006): 22–37.

13 Jay Dolmage, *Disabled upon Arrival: The Rhetorical Construction of Disability and Race at Ellis Island*. Columbus: Ohio State University Press, 2018.

14 Esme Cleall, *Missionary Discourses of Difference: Negotiating Otherness in the British Empire, 1840–1900* (Palgrave: Macmillan, 2012).

15 Sharon Betcher, “Monstrosities, Miracles, and Mission: Religion and the Politics of Disablement,” in *Postcolonial Theologies: Divinity and Empire*, ed. Catherine Keller, Michael Nausner, and Maya Rivera (St. Louis, MO: Chalice, 2012). Hoopla e-Book via Jacksonville Public Library.

16 Robert Bogdan, *Freak Show: Presenting Human Oddities for Amusement and Profit* (Chicago: University of Chicago, 1988), 38.

17 “Waino and Plutaino: Wild Men of Borneo,” Card featuring a photograph of Waino and Plutaino, Wild Men of Borneo; actually Hiram and Barney Davis, two mentally disabled dwarf brothers from Connecticut (Approximately 1898), *Wellcome Collection*.

18 Douglas C. Baynton, “Disability and the Justification of Inequality in American History,” in *The New Disability History: American Perspectives*, ed. Paul K. Longmore and Lauri Umansky (New York and London: New York University Press, 2001), 40.

curious fair-goers.”¹⁹ This exhibit, already playing into popular exoticism, went further by classifying the Filipinos into a moralized hierarchy, with the “Christianized Visayan, dressed in western attire” at the top, and the “Negrito, whose facial features led Smithsonian officials [...] to call them ‘the missing link,’ and the Igorot, who impressed fair-goers not only for their nakedness, but also for their dietary habit of eating dogs” at the bottom of this moral hierarchy.²⁰ By contrast, the “Christianized Visayan” attended classes at the fair, where they studied (for an audience) “mathematics, geography, and composition.”²¹ Similarly, a school for the deaf and blind held classes at the fair, in which students studied “academic and vocational subjects” and performed art and music for the audience.²² Both this exhibit and the Filipino exhibit were physically separated from the audience with metal bars. By placing disabled or physically different people on display with people of “so-called primitive races,” these shows were merging the two, and, in doing so, cementing ideas about whose humanity could be ignored or denied for the sake of a spectacle.²³

While these types of shows grew in variety and popularity in the latter half of the nineteenth century, they were popular enough by 1847 to provoke satire: in an edition of *Punch, or the London Charivari*, the public’s obsession with freak shows was satirized as “The Deformato-Mania,” in which crowds flock to buildings labelled “This is the Ne Plus Ultra of Hideousness, Acknowledged Such by the Press,” “Hall of Ugliness: the Greatest Deformity in the World Within – No Connection with Deformity Next Door,” and “By Far the Ugliest Biped is Here:

One Shilling.”²⁴ The emphasis on ugliness is particularly interesting, as many of the performers circulated in advertisements and publicity photos were by no standards unattractive, except for their very visible disability. The lovely “Gabrielle the World’s Wonder, [...] entirely devoid of any lower limbs” is one example.²⁵ Often, performers were famed for their height, weight, or another extreme characteristic, rather than a “deformity” of any kind.²⁶ How, then, do we define ugliness?

Susan Schweik, in her analysis of the “unsightly beggar ordinances” that started to gain popularity in the 1880s, explains that ugliness and unsightliness, like disability, are extremely variable terms.²⁷ “Unsightly” could include anything from “deformed, diseased or maimed” to “improper” and “imperfect.”²⁸ While this often referred to perceived disability or physical difference, Schweik also notes that a “beggar’s infirmity could be, of course, sheer poverty.”²⁹ These unsightly beggar laws or, as Schweik and other scholars refer to them, the Ugly Laws, were enacted (if not thoroughly enforced) to remove those deemed “ugly” from

24 “The Deformato-Mania,” *Punch, or the London Charivari* v.13 (September 4, 1847), From the University of California via *Hathi Trust*.

25 “Gabrielle, the World’s Wonder. Born in Switzerland, devoid of any lower limbs, Greatest curiosity of this, or any other age.” Photograph. 1900. *National Fairground Archive*, University of Sheffield.

26 For examples, see “Lofty and Seppetoni,” Postcard signed photograph: “Compliments from Lofty and Seppetoni” showing a “giant” performer Lofty and “midget” performer getting out of a car (Photograph, 1930-1939), *National Fairground Archive*, University of Sheffield. And “Souvenir de Mademoiselle Teresina,” Souvenir postcard photograph of “fat lady” performer (1910-1919), *National Fairground Archive*, University of Sheffield. And “Souvenir of Abomah: The Tallest Lady in the World,” Postcard photographic print of female “Giant” performer, Abomah, born Ella Grigsby of Laurence County, SC, USA (1900-1909), *National Fairground Archive*, University of Sheffield.

27 Schweik, *The Ugly Laws*, 9.

28 (In order of appearance) Denver, CO law of 1898, Lincoln and Denver laws of the 1880s, and New York law of 1895 in Schweik, *The Ugly Laws*, 9-10.

29 Schweik, *The Ugly Laws*, 32.

19 James W. Trent, “Defectives at the World’s Fair: Constructing Disability in 1904,” *Remedial and Special Education* 19, no. 4 (Jul/Aug 1998): 202.

20 Trent, “Defectives at the World’s Fair,” 210.

21 Trent, “Defectives at the World’s Fair,” 210.

22 Trent, “Defectives at the World’s Fair,” 203.

23 Trent, “Defectives at the World’s Fair,” 203.

public view. At the same time, laws were being created to ban the freak show or, more specifically, to ban the “exhibition [of] any deformed human being or human monstrosity, except as use for scientific purposes before members of the medical profession,” and to criminalize “those who by making Exhibition of themselves and their infirmities seek to obtain money from people.”³⁰ Not only did these laws aim to remove disabled or “ugly” beggars from sight, but they also aimed to remove access to sensationalized displays of disability like those in freak shows, further pushing visibly different and disabled people out of sight and, perhaps, out of mind.

Another part of the effort to push visibly different people to the margins of society was the creation of institutions or “homes.” In an 1875 article from the London *Daily News*, a new institution for “crippled boys” is announced, and the word choice within the article reveals a lot about the author’s (and, presumably, the audience’s) feelings about disability.³¹ Significant emphasis is placed on preventing these “crippled boys” from becoming “the victims of poverty, wretchedness, and crime,” a feat that could only be achievable by “the segregation of the persons who were so afflicted [with disability].”³² When describing what occurs when the disabled are not so segregated, the phrases chosen are extremely harsh: “distortion and deformity of every kind” and “misshapen and repulsive objects that everywhere meet the eye.”³³ This article was just a brief announcement in the daily paper, which further suggests that these views would have been shared or, at least, accepted by the audience as nothing out of the ordinary.

30 Michigan Act 103 of 1903 and Alderman Peevey to the mayor of Chicago in 1881, quoted in Schweik, *The Ugly Laws*, 101.

31 “Crippled Boys’ Industrial Home,” *Daily News* (London, England), February 10, 1875, From the British Library via *Gale Primary Sources*.

32 “Crippled Boys’ Industrial Home.”

33 “Crippled Boys’ Industrial Home.”

In contrast to the support for institutionalization, an essay published in New York in 1911 argues for the “non-residential system of education and care” for “crippled” children.³⁴ The beginning of this essay describes the author’s opinion of the then-current experience of the average “crippled” child:

“shut-in, neglected, deprived of any educational advantages, unable to engage in any form of activity and enduring an existence devoid of any fun or play – the crippled child’s attitude may well be one of hopelessness and discouragement.”³⁵

McMurtrie goes on to say that, with proper encouragement and out-of-home education, “it is amazing what the crippled child can accomplish. He is far from the complete wreck we may have thought him.”³⁶ The ultimate goal, according to the author, is to make these children into self-sufficient adults. This essay is a support piece for the Association for the Aid of Crippled Children, so it is, of course, extremely optimistic about the work of said Association. The things the author chooses to emphasize, however, reveal a lot about what was considered important – self-sufficiency, medical or surgical cure, and normalcy.

This idea of “normalcy” was new; the word normal was not used in the context of the body and its abilities until the mid-nineteenth century.³⁷ Lennard J. Davis argues, in fact, that the idea of normalcy was directly related to the rise of both industrialization and eugenics: normal “is part of a notion of progress, of industrialization,

34 Douglas C. McMurtrie, “The Permanent Betterment of the Crippled Child: an essay on the operation of the nonresidential system of education and care, the social principles involved, and the restoration of crippled children to places as useful members of the community; an account of the work of the Association for the Aid of Crippled Children,” New York, 1911, *Wellcome Collection*.

35 McMurtrie, “The Permanent Betterment” (1911), 4.

36 McMurtrie, “The Permanent Betterment” (1911), 5.

37 Davis, “Constructing Normalcy,” 64.

and of ideological consolidation of the power of the bourgeoisie.³⁸ This relationship is certainly demonstrated at the 1904 St. Louis World's Fair, where, unlike the deaf and blind students who could demonstrate some ability to work (i.e. to contribute to an industrialized society), those deemed "feble-minded" (displayed in an exhibit that "emphasized education" but was physically distanced from other educational exhibits intended to show progress) were considered to have a "permanent abnormality; they might learn, but not enough to rejoin civilization."³⁹ Even as the fruits of the students' labor – handicrafts, schoolwork, writing samples – were enjoyed by the audience, "speeches and writings advocat[ed] the segregation of the feble-minded from society, their sterilization, or even extermination."⁴⁰

In the late nineteenth and early twentieth centuries, many people believed that eugenics was necessary for societal progress, and the disabled were some of the primary targets. Ayça Alemdaroğlu identifies two main strategies of practicing eugenics: positive, "promoting reproduction, marriage and childcare among the healthy groups in the society," namely with "education, moral inculcation and material benefits," and negative, to discourage:

"reproduction in families having inferior hereditary qualities" by "premarital medical examinations, birth control, prenatal screening, abortion, sterilization, and immigrant restriction."⁴¹

Immigration officers were trained to visibly scan for anything that could indicate that a person was "likely to become a public charge," namely

"a man's posture, a movement of his head or the appearance of his ears, [which] may disclose more than could be detected by puttering around a man's chest with a stethoscope for a week."⁴² This first "major federal immigration law," in fact, banned anyone likely to "becom[e] a public charge," including "lunatic[s], idiot[s], or any person unable to take of himself or herself."⁴³ This identification process also became racialized, as certain ethnic groups came to be associated with particular illnesses and/or perceived disabilities, as well as race or ethnicity itself being treated as an inherent disability.

Racialized Disability

In addition to the disabled, eugenicists targeted people of color, and disability became a tool for this, especially with regards to immigration. By arguing "that certain ethnic groups were mentally and physically deficient," eugenicists could use ableist immigration laws to "exclude[e] undesirable ethnic groups."⁴⁴ Even before these laws were in place, however, race and disability were often equated. Esme Cleall explains how, first, geographic areas were pathologized as medically dangerous for the white colonizer.⁴⁵ She notes that d/Deaf people in the wider British Empire were increasingly identified as "both a cultural group ('deaf heathens') and a biological category ('a deaf race')."⁴⁶ The first, "deaf heathens," identifies the entire non-Christian population as deaf; this, along with other words such as lame, crippled, and blind, is a common

38 Davis, "Constructing Normalcy," 72.

39 Trent, "Defectives at the World's Fair," 204 and 206.

40 Trent, "Defectives at the World's Fair," 208.

41 Ayça Alemdaroğlu, "Eugenics, Modernity and Nationalism," in *Social Histories of Disability and Deofinity*, eds. David M. Turner and Kevin Stagg (London and New York: Routledge, 2006), 129.

42 Dolmage, *Disabled on Arrival*, 16 and Victor Safford (medical doctor at Ellis Island), quoted in Dolmage, *Disabled on Arrival*, 14.

43 The Act of 1882, quoted in Baynton, "Disability and the Justification," 45.

44 Baynton, "Disability and the Justification," 47.

45 Cleall, *Missionary Discourses*, 81. See also Warwick Anderson, *Colonial Pathologies: American Tropical Medicine, Race, and Hygiene in the Philippines* (Durham and London: Duke University Press, 2006).

46 Cleall, "Orientalising Deafness," 25.

metaphor used by Christian missionaries to refer to non-Christians. The second, “a deaf race,” isolates and others deaf people from the idea of normalcy; that is, that the deaf are biologically, essentially **different** from the hearing.

Mexican immigrants to the United States are another group against whom disability or the idea of “fitness” was racialized. At first, Mexicans were presented by immigration advocates as “uniquely able-bodied” and suited for manual labor.⁴⁷ Those opposed to immigration, however, presented Mexicans as extremely “unfit, [...] even as laborers.”⁴⁸ This affected Mexican women the most, since the American economy was not dependent on their labor like it was on male manual laborers. While health and illness were not initially used to oppose Mexican immigration, health became the deciding factor to prevent Mexican women from immigrating; for example, Natalia Molina argues that the focus on “high [infant mortality rates]” was used to “mark Mexican women as the source of the health problems,” shifting the blame away from male Mexican laborers.⁴⁹ This brings up the subjectivity of “fitness.” Male Mexican laborers were presented as both exceptionally fit for labor and exceptionally *unfit* for labor, in order to support either opinion on immigration.

Disability was also racialized to justify slavery, both in Europe and the United States. For the trafficking and sale of enslaved people, disability affected their material value: in Jamaica, “traders disguised the illnesses and injuries acquired during capture and forced transformation,” and proof of smallpox or yew survival raised a person’s material value, “for they gave evidence of the individual’s immunity to such illnesses.”⁵⁰ “One plantation management guide,” from which Kennedy’s

article takes its title, stated the preferred physical qualifications for enslaved laborers:

“let them be young and stoutly set in limbs, strait a full open eye, their tongue red, a broad large chest, wide shoulders; their belly small, not large and watery, clean and strong bodies, large thighs and legs, and strain of equal length; and be careful that they are not foolish, which you may judge by their looks and attention on you.”⁵¹

Outside of the market, however, disability was applied to enslaved people as a defining group characteristic. One medical doctor, John H. Van Evrie, wrote a number of pro-slavery texts, including *Negroes and Negro Slavery: The First an Inferior Race: The Latter its Normal Condition* in 1861, in which he uses “the figure” and “the features” to argue that African “inferiority” was proof of the “great and fundamental law of organized life” – meaning slavery and white supremacy.⁵² His examples of this physical “evidence” are things such as “stooping posture,” “the narrow forehead and small cerebellum – the centre of the intellectual powers,” and comparisons to animals like the “ourang-outang.”⁵³ The emphasis on the bodies of enslaved people is part of the dehumanization required to justify slavery.

The institution of slavery was, in itself, disabling. Shaun Grech writes that, in domestic slavery as well as the broader imperial world, “bodies became the medium upon which these differences [racial and other categories] were permanently inscribed and displayed.”⁵⁴

47 Molina, “Medicalizing the Mexican,” 24.

48 Molina, “Medicalizing the Mexican,” 24.

49 Molina, “Medicalizing the Mexican,” 26.

50 Kennedy, “Let Them Be Young,” 42.

51 Dovaston, J, *Codex Agricultura Americana* or improvements in West-India husbandry considered (Vols. 1&2 [N.P., 1774], *Codex Eng* 60), quoted in Kennedy, “Let Them Be Young,” 43.

52 John H. Van Evrie, *Negroes and Negro Slavery: The First an Inferior Race: The Latter its Normal Condition* (New York: Horton&Co., 1861), 3.

53 Van Evrie, *Negroes and Negro Slavery* (1861), 93-97.

54 Grech, “Decolonizing,” 9.

Enslaved people were maimed and disabled while enslaved: from overwork, illness, accidents in dangerous jobs, and as punishment.⁵⁵ In Jamaica, punishment was physical; for example enslaved people were “sentenced to have their ears cut off close to their heads, to have a foot removed, and to have their nostrils slit for crimes such as theft and running away.”⁵⁶ The result of these punishments was often then used for identification, especially when advertising that an enslaved person had escaped.

In addition to this, the descriptions of “‘bow-legged,’ ‘knock-kneed,’ ‘splaw footed,’ ‘parrot toed,’ and ‘crooked in both knees,’” likely the result of rickets due to malnutrition, contributed to the popular idea that “Africans and their descendants were biologically, indeed racially, prone to these physical deformities.”⁵⁷ From their earliest days, slave laws “constructed enslaved [people] – in the coarse parlance of the day – as “cripples,” “mutes,” and “idiots,” in an effort to “mark them [enslaved Africans] as visibly different from [white] indentured servants.”⁵⁸ Africans were considered inherently less able than other ethnic groups, specifically, white Europeans. The idea that enslaved people would be disabled by their freedom was also commonly used to excuse or justify slavery.⁵⁹ John H. Van Evrie claimed that:

With the broad forehead and small cerebellum of the white man, it is perfectly obvious that the negro would no longer possess a center

of gravity, and therefore those philanthropic people who would ‘educate’ him into intellectual equality or change the mental organism of the negro, would simply render him incapable of standing on his feet or of an upright position on any terms. [...] But were it true that men can make themselves, can push aside the Almighty Creator Himself, as taught by certain ‘reformers’ of the day, and vastly improve the ‘breed’ and, as the ‘friends of humanity’ hold, that the negro can be made to conform in his intellectual qualities to those of the white man, then it is certain that their difficulties would become greater than ever.⁶⁰

This idea, often “evidenced” by the ratio of disabled freemen to the (reported) number of disabled enslaved persons, is just another way in which disability became a racial characteristic in order to justify slavery and the slave trade.

Paternalism

Abolitionists were not exempt from using images of disabled bodies to further their cause. By circulating images that, similarly to the runaway or “fugitive” advertisements, emphasized physical traits and bodily injuries, abolitionists aimed to evoke pity in their audience in order to gain support for abolition.⁶¹ One abolitionist strategy, writes Marcus Wood, emphasized

“suffering and failure: the slave is an innocent victim who might have been saved had he or she reached the North but who is now a prime

55 Kennedy, “Let Them Be Young,” see page 41 discussing illness and dismemberment on plantations.

56 Diana Paton, cited in Kennedy, “Let Them Be Young,” 45.

57 Kennedy, “Let Them Be Young,” 47.

58 Jennifer Barclay, “‘The Greatest Degree of Perfection’: Disability and the Construction of Race in American Slave Law,” *South Carolina Review* 46, no. 2 (Spring 2014): 36 and 28.

59 Dea H. Boster, *African American Slavery and Disability: Bodies, Property, and Power in the Antebellum South, 1800-1860* (New York and London: Routledge, 2013), 23.

60 Van Evrie, *Negroes and Negro Slavery* (1861), 94.

61 See Marcus Wood, *Blind Memory: Visual Representations of Slavery in England and America, 1750-1865* (New York and London: Routledge, 2000) for visual examples of this.

site for sentimental lamentation as a victim of Southern savagery.”⁶²

Not only do these types of narratives take away the agency of the enslaved person, but they place the (white, free) reader into a position of power. These stories and images tell the reader, *you* can help, *you* could have saved them, they need *your* help, *you* can be the savior. This idea of white saviorhood or paternalism is extremely important to the imperialist agenda.

Rosemary Garland Thompson, discussing images of disability, presents three types of visual rhetoric: the wondrous, the sentimental, and the exotic. The sentimental, she explains, “constructs the viewer as benevolent rescuer and the disabled figure as grateful recipient. Such a model infantilizes the disabled figure [...] and bestows authority and agency on the spectator.”⁶³ Missionaries, particularly medical missionaries, frequently used such rhetoric. Stories and photographs were sent home, usually describing sick or disabled people (often children) who were “cured” with modern western medicine, and then, immediately after, converted to Christianity and went on to tell all their friends and family how good the Christian doctors were. These stories usually also vilified the culture and beliefs of a missionized group, at the same time as the missionaries themselves were presented in the best light possible.⁶⁴

One such example of this is from a promotional work for the Board of Foreign Missions of the Presbyterian Church in the U.S.A. There are numerous examples in this short book of heroic American physicians. The missionized people are presented as “ignorant of the simplest

principles of modern medical science,” who will only be helped by the goodwill of the Christian medical missionary.⁶⁵ The missionary, Abraham Woodruff Halsey, describes his own failures to communicate well, but frames it in a very paternalistic manner, as if the problem lies entirely with the child-like, foreign patient and not at all with the knowledgeable, American doctor. Halsey claims that “custom, tradition, ignorance, superstition are fast giving way before the medical missionary. The medical missionary is welcomed in many lands. His task is but just begun.”⁶⁶ Another work from 1894, twenty years earlier than Halsey’s, describes the most perfect situation that a missionary could ever hope to come across: a young girl (Iness), treated for an [infected] dog bite, goes on to live with the Kerrs for a time, after which she professes her love for Jesus and her plans to convert her family:

[Iness was] open-minded and had a bright intellect, and quickly learned a number of gospel hymns, and the Lord’s Prayer [...] Next she learnt a number of texts of Scripture [gives examples of memorized verses]. By-and-by, Mrs. Kerr taught her to sing “Jesus loves me” to the tune so familiar to us all [...] she manifested great delight in family prayers, and would listen with rapt attention when the Bible was read. [...] When asked what she thought of the doctor and his wife when she first came, her answer was, “I was greatly afraid. I had never seen a Christian before, and our people said the Christians were vile and wicked, and ate continually pig’s flesh, and never

62 Wood, *Blind Memory*, 97.

63 Rosemary Garland-Thompson, “Seeing the Disabled: Visual Rhetorics of Disability in Popular Photography,” in *The New Disability History*, 342.

64 For examples of this vilification, see John Lowe, *Medical Missions: Their Place and Power* (London: T. Fisher Unwin, 1886), *Wellcome Collection*.

65 Abram Woodruff Halsey, “Go and Tell John”: *a Sketch of the Medical and Philanthropic Work of the Board of Foreign Missions of the Presbyterian Church in the U.S.A.* (New York, 1914), *Wellcome Collection*, 11.

66 Halsey, “*Go and Tell John*” (1914), 20.

prayed to God.” “Do you think those stories are true now?” asked Mrs. Kerr. “Oh, no! oh, no!” was her reply. “I know you are good; I know you love Saidna-Asia” (our Lord Jesus). [...] she said, “[...] I love Jesus too – I have given my heart to Jesus.” [...] Iness said, “I would like so much that my mother and father heard about Jesus [...] When I go back to my tent I will tell them all about Jesus – how He can give us new hearts, and wash away our sins in His precious blood.”⁶⁷

In the context of Christianity, disability is an extremely common metaphor. The ideas of “wholeness” and “health” have been conflated with goodness and righteousness.⁶⁸ Sharon Betcher writes that:

“both disabled persons and colonial subjects have been jointly marked as the territory of mission and objects of social pity. So marked, disablement [which includes both physical disability and non-Christianity] has been read as necessitating (humane) intervention.”⁶⁹

In this way, stories and images like this are circulated to demonstrate the need for these missionary interventions. Whether these stories were true or not is irrelevant; more important

is that the majority of stories published from medical missions were extremely positive tales of success (both medical and religious), in which the missionary is praised as a hero and the conclusion of the story aligns with imperialist ideals. Like the abolitionist advertisements, the end goal of these stories was to garner support – often financial support – for the missions. In this context, the circulation of these types of stories and images are propaganda, not only for the good, Christian nature of medical missions, but for the “positive” effects of imperialism itself.

Postcolonial scholar Gayatri Spivak calls this “good imperialism.”⁷⁰ Others, like Arthur Frank, call this “medical colonization,” meaning that “modern medicine lays claim to the patient’s body as its own territory.”⁷¹ This medical colonization generally ignores deeper issues in favor of things that are visible and much easier to fix (like, for example, a cleft palate) than poverty or the effects of colonialism.⁷² Rather than acknowledging that imperialism was driven by power and greed, the script was flipped so that imperialists suddenly became benefactors helping the poor, diseased, and “disabled races” of the world. At home, disabled or otherwise physically different people were increasingly institutionalized and kept out of the public eye, while images of illness and disability were increasingly circulated from the Global South, along with tales of miracle-working western doctors and their eternally grateful, newly Christianized patients, which served as a justification for western imperialism.

67 Robert Kerr, *Pioneering in Morocco: A Record of Seven Years’ Medical Mission Work in the Palace and the Hut* (London: H. R. Allenson, 1894), *Wellcome Collection*, 55-56.

68 Betcher, “Monstrosities, Miracles and Mission.” Note that the e-Book edition does not have fixed page numbers.

69 Betcher, “Monstrosities, Miracles and Mission.”

70 Quoted in Jarman, “Resisting ‘Good Imperialism’.”

71 Jarman, “Resisting ‘Good Imperialism,’” 107.

72 Jarman, “Resisting ‘Good Imperialism,’” 112-113.

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I Dreamt I Was Kafka: Freudian Interpretation and Kafka's The Metamorphosis

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Abstract

Franz Kafka's *The Metamorphosis* has been examined through the lens of Freudian theory for decades. This article argues that Franz Kafka wrote *The Metamorphosis* with Freudian theory in mind, particularly regarding The Oedipal Complex, a theory Sigmund Freud developed to describe the psychosexual development that occurs during the Phallic stage. According to Freud, during this stage, children experience an unconscious feeling of desire for their opposite-sex parent and jealousy and envy toward their same-sex parent. This article examines how Franz Kafka seems to reverse the Oedipal pattern in *The Metamorphosis* as the main character Gregor seems to not long for the love of his mother but rather that of his sister, Grete. This article also examines how Kafka seems to have written *The Metamorphosis*, as well as most of his work, through an autobiographical lens.

"Metaphors are one of the many things that make me despair of writing," noted Kafka in December 1921, commenting on the last sentence in his letter to a friend, which says only: "I warm myself by it this sad winter." In *The Metamorphosis*, Kafka presents the ultimate metaphor, one that mirrors his own life. Kafka wrote to his fiancée Felice Bauer in July of 1913:

"Felice beware of thinking of life as commonplace if by commonplace you mean monotonous, simple, petty. Life is merely terrible; I feel it as few others do. Often—and in my inmost self perhaps all the time—I doubt whether I am a human being."
(Kafka, LTF 287)

Franz Kafka was born on July 3, 1883, to a middle-class Jewish family in Prague, the capital of Bohemia, then part of the Austro-Hungarian Empire. He was the first of six children: the two brothers who followed, Georg and Heinrich,

died in infancy; then, three sisters, Elli, Valli, and Ottla, arrived. Except for a short period in 1912, Franz remained very close to Ottla, his youngest sister, throughout his life. However, Kafka was an expert on feeling foreign or extraneous. This feeling was very much a product of the variegated Austro-Hungarian empire in which he grew up: to the Czechs, he was a privileged German speaker; to the Catholic and Protestant majority, he was a Jew, and to many Jews, he wasn't Jewish enough. Kafka studied law at Prague German University, then worked for an insurance company and wrote in his spare time. He was dismayed that he had to spend too much time on his occupation and often lamented that he did not have enough time for writing. In a diary entry dated July 31, 1914, he wrote, "I have no time. But I will write in spite of everything, absolutely; it is my struggle for self-preservation" (Kafka, Diaries 300). He soon got a job at the Worker's Accident Insurance Institute, where he handled

compensation claims from lone workers against powerful companies. In this environment, Kafka would have witnessed the legal and bureaucratic forces that limited an individual's freedoms—themes that would influence his later works, such as *The Trial*. Here, he was rapidly promoted and worked shorter hours, thus providing him with sufficient writing time.

Kafka's personal life was troubled. Handsome but deeply insecure, Kafka suffered from depression and anxiety, which contributed to a series of unsuccessful relationships with women. Kafka's father, Hermann, owned a business selling woman's clothes and fancy goods, and his mother worked alongside him. Hermann Kafka was a strong character; loud, assured, and domineering. Franz often found it hard to get along with him. It was clear from Kafka's correspondence and diaries that he considered himself to be a martyr to his work. In a letter to his fiancée Felice Bauer he declared, "I am made of literature; I am nothing else and cannot be anything else." This was a constant theme of his mature years and one that he expanded on in a highly significant diary entry from August 1916: "My penchant for portraying my dreamlike inner life has rendered everything else inconsequential; my life has atrophied terribly and does not stop atrophying" (Kafka, Diaries 369). This feeling was no doubt intensified by his imprisonment in his ailing body. Kafka was diagnosed with tuberculosis in 1917, and from then onward, he spent frequent periods in sanatoriums. In 1923, Kafka went to Berlin to devote himself to writing, but worsening health meant a return to his family in Prague, where he finally succumbed to tuberculosis in 1924.

Kafka was a very self-analytic writer. While his diaries and letters contain many reflections on his own life and how it went wrong, his fictional writing was a less direct way of shaping and making sense of his experiences (Robertson 5). Suffering from depression, Kafka constantly

feared everyone around him would abandon him if they ever saw through his façade. Thus, *The Metamorphosis* can be read as Kafka working this depressed state into a conclusion a depressed individual would have - that everyone would be better off without him.

Kafka was fascinated by institutions, and among one of the first institutions anyone encounters is family (Robertson 83); to Kafka, family was the place where oppression started. The main protagonist of *The Metamorphosis*, Gregor, is truly an insect—disgusting to himself and others, despised, and in constant danger of being crushed by his oppressive family. "I have always looked on my parents as persecutors," Kafka wrote to Felice in 1912. He also hated family life:

I cannot live with people. I absolutely hate all my relatives, not because they are wicked, not because I don't think well of them ... but simply because they are the people with whom I live in close proximity. Seen in a detached way, I enjoy all people, but my enjoyment is not so great that, given the necessary physical requirements, I would not be incomparably happier living in the desert, in a forest, or on an island, rather than here in my room between my parents' bedroom and living room. (Kafka, LTF 287)

Kafka lived with his parents nearly all his life, even when he was financially independent, in very close quarters, where his hyper-sensitivity to noise was tested daily.

This is the domestic situation out of which came the claustrophobia and self-disgust of Gregor Samsa in *The Metamorphosis*. Kafka transposed the apartment on Nikalasstrasse where he lived with his parents into Gregor Samsa's room. The doors, the desk, the wardrobe, the hospital outside the window, and the streetlights reflected the upper part of the room (Citati 61). The oppression

Gregor suffers from his family is even embodied in the layout of his room, which has three doors that Gregor locks every night. The fact that he locks these doors every night within the house that he shares with his family doesn't seem to strike Gregor as odd; he even congratulates himself on it. But seen through the persecuting eyes of the outside world, his door-locking gesture can be seen as an act of hostility. As the chief officer of Gregor's firm says after seeing what happened to him, "You are barricading yourself in your room." After waking up to find himself trapped in bed as a bug-like creature, each member of his family knocks at these doors, urging him to get up and go to work as the family depends on Gregor for sustenance. He works as a traveling salesman for a boss he hates, and he plans to quit soon,

"Well all hope is not yet lost; as soon as I've saved up enough to pay back what my parents owe him—another five or six years should be enough—I'll most definitely do just that. This will be the great parting of ways."

(Kafka 4)

In some ways, Gregor's transformation is liberating. It frees him from the burden of a humiliating job and an ungrateful family. The family was feeding off of Gregor; now, they are the ones who have to feed him.

Kafka had a difficult relationship with both of his parents. His mother, Julie, was a devoted homemaker who lacked the intellectual depth to understand her son's dreams to become a writer. Franz's feelings towards her were lukewarm at times—he admitted an occasional coldness toward his mother. In conflicts between the father and children, particularly Franz and Ottla, she did her best to mitigate the impact of her husband's outbursts (Karl 18). In the end, however, she generally bowed to the indomitable will of Franz's father, Hermann Kafka. Kafka's lifelong awe in the face of power began with his father.

"Have I already told you I admire my father? You know that he is my enemy, and I his, as is determined by our temperaments but apart from this my admiration for him as a man is perhaps as great as my fear of him."

(Kafka, Diaries 310)

By all accounts, Franz Kafka's relationship with his real father was tempestuous at best. The division between father and son existed on so many levels it is difficult to identify them. Besides the personal differences were the cultural differences; Hermann Kafka was a former small-town Jewish peasant who emigrated to Prague with nothing, while his son was well-educated with a law degree and literary friends. Franz grew up with eccentric interests and indifferent professional success and never married. To Herr Kafka, his son was a failure and a major disappointment (Karl 39). The struggle between father and son takes on several aspects in *The Metamorphosis*. Gregor's father is horrified by his son's transformation and aims to avoid the sight of Gregor through every possible means. Once it becomes clear to the father that Gregor has become economically useless and a social embarrassment, only the interventions of his mother and sister prevent Herr Samsa from beating him to death.

"All Gregor's entreaties were in vain, nor were they even understood, for as submissively as he might swivel his head, his father only stamped his feet all the more ferociously."

(Metamorphosis, Kafka 16)

Sigmund Freud was an Austrian neurologist who invented psychoanalysis, a practice in which an analyst uses a patient's free associations, dreams, and fantasies to deconstruct hidden tensions. Some of the most significant academic conceptions of the twentieth century were his thoughts on child sexuality, libido, and the ego (Breger 10). Freud suffered a traumatic,

impoverished, and difficult childhood that left him with fear, insecurity, and unhappiness. Like many bright children in similar circumstances, he escaped into the world of his imagination.

Romantic novels and accounts of life in ancient Egypt, Greece, and Rome are where he found solace. His heroes became conquerors like Alexander the Great and Napoleon. He was also drawn to another figure, one out of the dramas of ancient Greece: Oedipus, who bested his own father in combat, solved the riddle of the Sphinx, and became King of Thebes (Breger 2).

In creating a new heroic self, Freud relied on his impressive literary skills. He became a masterful stylist, capable of presenting his ideas in compelling prose, of shaping arguments with persuasive metaphors and rhetoric (Breger 3). Freud wrote several important essays on literature, which he used to explore the psyche of authors and characters, explain narrative mysteries, and develop new concepts in psychoanalysis. His essay *Delusion and Dream in Jensen's Gradiva* and his readings of Shakespeare's *Hamlet* in *The Interpretation of Dreams* are great examples of how Freud used his literary and rhetorical skills to control and shape his personal legend, as well as the history of the psychoanalytic movement.

It is reasonably certain that Kafka first became acquainted with the theories of Freud during a series of lectures and discussions held in 1912 at the house of Frau Bertha Fanta (Wagenbach 199). The most controversial work published by Freud up to this period was *The Interpretation of Dreams*, in which the Oedipus complex first appears. Published in 1899, Freud analyzed himself using his own dreams, many of which he recorded in *The Interpretation of Dreams*. In his opinion, a dream resembled a neurotic symptom; both arose from an unconscious wish, derived from infancy, that had been repressed (Ferris 166). It was here he proposed the Oedipus complex, which he instantly promoted to a

universal law: All boys lust after their mothers, which brings them into rivalrous combat with their fathers. The conflict, fear, and guilt of this situation became Freud's principal explanation for the symptoms and anxieties of adult neurosis, both his own and those of his patients (Breger 3). Freud created psychoanalysis in part from his observations of neurotic patients. However, an even more potent source for his theories was the self-analysis that he carried out in his late thirties and early forties, confided in letters to his friend, the Berlin physician Wilhelm Fleiss. As Freud stated in a letter to Fleiss,

I have found in my own case too, the fact of being in love with my mother and jealous of my father, and now I consider it a universal event in early childhood...If this is so, we can understand the gripping power of Oedipus Rex...the Greek legend seizes upon a compulsion which everyone recognizes because he senses its existence within himself. Everyone in the audience was once a budding Oedipus in fantasy and each recoils in horror from the dream fulfillment here transplanted into reality. (Ferris 150)

Kafka's earliest recorded reference to Freud can be found in a letter to Willy Haas dated July 19, 1912, in which he calls Freud's ideas "unprecedented" and professes "a great, but empty respect" for him (Winston 168), a suggestion that, at this point at least, he had not actually read any of Freud's texts. Kafka also never underwent psychotherapy and often expressed doubts about the validity of analyzing the mind. However, one important access point towards psychoanalysis was through his own writings. In September 1917, Kafka asked his friend Willy Haas to copy a passage from the 1917 study by the Freud pupil Wilhelm Stekel titled *Masturbation and*

Homosexuality, in which *The Metamorphosis* is mentioned in passing (Winston 145).

Studies of Freud's influence on Kafka's work have been numerous. Kafka was first opened to Freudian interpretation by Walter Sokel in his 1964 essay, *The Myth of Power and the Self*. Sokel was compelled to use Freud to "unlock the secret doors" to Kafka's texts, as he explains in the introduction to his compilation of essays entitled *The Myth of Power and the Self* (2002):

As a native of the city of Freud, I found it natural to use the author of classic text of dream interpretation as the first guide in my quest to understand and interpret Kafka's work that fascinated me on account of its dreamlike quality. Kafka himself, as I read in his diary, had found thinking of Freud quite "natural" when composing the work of his "breakthrough." Thus Freud offered himself as the first key in trying to unlock the "secret doors" to Kafka's texts. They seemed to me structured according to principles analogous to dreams as analyzed by Freud. I saw manifest text as a disguised expression or projection of the protagonist's feelings. (Sokel 14)

Interpreting Kafka's work in light of Freud seems to validate the importance of literature, as Freudian theory was built on a literary key for analyzing. Freud himself wrote:

The dream thoughts which we first come across as we proceed with our analysis often strike us by the unusual form in which they are expressed; they are not clothed in the prosaic language usually employed by our thoughts, but are on the contrary represented symbolically by means of similes and

metaphors, in images resembling those of poetic speech. (26)

In her study from *Kafka In Context*, Carolin Duttlinger explains, "The earliest, and most frequently cited psychoanalytic reading of Kafka's works, however, comes from the author himself." On September 23, 1912, having just finished his breakthrough story "The Judgement," Kafka notes in his diary: "thoughts about Freud, of course." Self-observation was a key method of experimental psychology. In his early diaries, Kafka frequently emulates this approach as a source of creative inspiration. In an entry dated October 4, 1911, he records his impressions while lying on his sofa at nightfall:

Why does one take a rather long time to recognize a color, but then, after the understanding has reached a decisive turning-point, quickly become all the more convinced of the color. . . . When the light in the ante-room is turned off and only the kitchen light remains, the pane nearer the kitchen becomes deep blue, the other whitish blue, so whitish that all the drawings on the frosted glass . . . dissolve. The lights and shadows are thrown on the wall and ceiling by the electric lights in the street and the bridge down below is distorted, partly spoiled, overlapping, and hard to follow. (Kafka, Diaries 216)

In their paper *A Study of Kafka's The Metamorphosis in Light of Freudian Theory*, Barfi et al. suggest that *The Metamorphosis* is a symbolic presentation of Gregor's unconscious world. According to Freud, our mind consists of two parts: conscious and unconscious. He believed we held our suppressed wills, feelings, horrors, drives, conflicts, and even memories in the unconscious part of our psyche (107). "The Judgement" and

The Metamorphosis thematize the alienation between father and son. Catherine Hezser, in her study of *Freud's Oedipal Complex in the writings of Franz Kafka and Philip Roth*, wrote,

“this alienation develops in reaction to a gradual or sudden change in the son’s lifestyle or character or appearance as well as a change of the father’s behavior from initial weakness to vigor, strength, and authority” (260). However, none of these studies seem to address the obvious reversal of the Oedipal pattern in *The Metamorphosis*; Gregor seems to not long for the love of his mother but rather that of his sister, Grete.

There is no doubt, however, that Kafka saw elements of his guilt-laden relationship with his father in Freud’s Oedipal Complex. These elements are exemplified in *The Metamorphosis* when Gregor seems to become jealous of Herr Samsa’s newfound authority. Now that Gregor is indisposed, Herr Samsa has taken a job, and he’s so proud that he refuses to take off his uniform even when not at work.

“In a peculiar form of stubbornness, Gregor’s father refused to take off his porter’s uniform even at home; and while his nightshirt hung uselessly on its hook, he would slumber where he sat, fully clothed, as though he remained ready for service at all times.” (*Metamorphosis*, Kafka 33)

With this new authority, there also seems to be a sexual relationship building between mother and father. Just before Gregor loses consciousness from the pain caused by an apple his father just lodged into his back, he witnesses a primal scene:

He caught only a last glimpse of the door to his room flying open, his shrieking sister, and his mother running out of the room before

her wearing only a chemise, for his sister had undressed the unconscious woman to let her breathe more freely, then he saw his mother rush to his father’s side, her unfastened skirts slipping one by one from about her waist as she ran. Saw her stumble across these skirts as she threw herself at his father, and embracing him, in perfect union with him.

(*Metamorphosis*, Kafka 32)

Gregor’s sight goes dim to prevent him from seeing what he must not see, an act of parental union which, in sparing his life, re-enacts the one that gave him life. This points to the mother’s confused attitude towards her son and to the unquestioned dependence upon and total union with the father, but Kafka never rebelled; instead, he turned his fear into self-abasement or psychosomatic illness. In every dispute with authority, he made himself the guilty party; moreover, he began to see himself through his father’s eyes (Robertson 66).

Like *The Metamorphosis*, Kafka’s 1912 story, “The Judgement,” conjures Freud’s Oedipal conflict. Here the conflict between father and son once again ends with the death of the son, but the mother is not there. In fact, she has been dead for several years. There are, however, two contenders for her place in Kafka’s take on the Oedipal triangle: the protagonist Georg Bendemann’s fiancée and his nameless male friend in Russia. Georg’s father contests his son’s relationship with both of them as he attacks and eventually destroys Georg’s role as the head of the family. Again, Freud’s influence looms large in Kafka’s writings, though less as an uncontested authority than as a template of life and writing to be wrestled with and rewritten. Kafka was perfectly cognizant of the father-son conflict as the focal theme dominating not only “The Judgement” but *The Metamorphosis*. In fact, he initially wanted to

publish the two pieces along with “Letter To My Father” jointly in one volume under the title of *The Sons*. Franz Kafka had written earlier in his 1906 story *Wedding Preparations In The Country* of turning into an insect in order to let his body go on an unwanted journey while his mind stayed peacefully at home:

As I lie in bed I assume the shape of a big beetle, a stag beetle or cockchafer, I think. The form of a large beetle, yes. Then I would pretend it was a matter of hibernating, and I would press my little legs into my bulging belly. And I would whisper a few words, instructions to my sad body, which stands close beside me, bent. Soon I shall have done—it bows, goes swiftly, and it will manage everything efficiently while I rest. (Stories 56)

In “The Judgement,” his father passed a sentence of death onto him; whereas in *The Metamorphosis*, two themes were joined into one even more terrible: My father regards me as nothing better than an insect and kills me himself.

In Gregor’s family, his sister, Grete, is the one Gregor admires and seems to be the only one sympathetic to his plight. Gregor and Grete are siblings but seem to share an unnaturally close relationship. His feelings for his sister are both paternal and slightly incestuous, consistent with Kafka’s take on such matters: “Love between brother and sister—the repeating of love between mother and father” (Kafka, *Metamorphosis* 210). In time, Gregor was to reveal a secret plan to send Grete as a student at the conservatory as soon as the following Christmas.

“After this declaration, his sister would be moved to the point of tears, and Gregor would now raise himself to the height of her armpit and kiss her throat, which now that she went to the office everyday,

she wore free of ribbon or collar.”

(Kafka, *Metamorphosis* 39)

Kafka’s youngest sister, Ottla, allowed him to move in with her temporarily when he was particularly ill. At one point, Kafka felt he should quit working afternoons and do more writing, but his parents disagreed. Unexpectedly, Ottla sided with her parents, a betrayal which Kafka never fully forgave (Karl 441). This is mirrored in *The Metamorphosis* when Grete decides Gregor’s fate:

“Dear parents,’ his sister said, striking the table by the way of preamble, ‘things cannot go on like this. Even if you two perhaps do not realize it, I most certainly do. I am unwilling to utter my brother’s name before this creature, and therefore will say only: we have to try and get rid of it.” (Metamorphosis Kafka 41)

So, Gregor’s fate is sealed and the alliance between Grete and Gregor is broken. Experiencing a revelation through surrender, Gregor makes his way to his room and the door is pushed shut indignantly by Grete and locked. In the darkness, “He thought back on his family with tenderness and love. His opinion that he must by all means disappear was possibly even more empathetic than that of his sister” (Metamorphosis Kafka 43). Even in his last moments, Gregor’s thoughts are of his family and their well-being.

We can take Grete and Gregor’s relationship a step farther and consider them both as part of a whole, part of one individual, which is represented by the family. Therefore, Gregor represents a sudden illness, such as depression. He represents a critical situation that is becoming an obstacle; whereas Grete might represent the will, the future, or the butterfly-in-potential. By confronting the problem head-on, Grete learns how to become a caretaker and how to deal with the most unpleasant and real consequences of the issue. The very last line of *The Metamorphosis* conjures the

image of a butterfly escaping its cocoon:

“And when they arrived at their destination, it seemed to them almost a confirmation of their new dreams and good intentions when their young daughter swiftly sprang to her feet and stretched her young body.”
(*Metamorphosis* Kafka 47)

She has undergone her own metamorphosis except hers is a successful one, unlike Gregor’s.

In a letter dated January 27, 1904, Kafka wrote to his friend Oskar Pollak:

If the book we’re reading doesn’t wake us up with a blow on the head, what are we reading it for? ... We need books to affect us like a disaster, that grieve us deeply, like the death of someone we loved more than ourselves, like being banished into forests far from everyone like a suicide. A book must be the ax for the frozen sea inside us. (Kafka LFFE 16)

The Metamorphosis is not simply a story about a man that turns into a creature; it is catharsis, not only for the reader, but for Kafka himself. After all, in a diary entry on December 8, 1911, Kafka wrote,

“I have now, and have had since this afternoon, a great yearning to write all of my anxiety out of me, write it into the depths of the paper just as it comes out of the depths of me, or write it down in such a way that I could draw what I had written into me completely.” (Kafka Diaries 134)

The proximity of literature and autobiography could hardly be closer than it is with Kafka; indeed, it almost amounts to identity. Harold Bloom, the famous literary critic, once stated,

“Freud, slyly following Shakespeare, gave us our map of our mind; Kafka intimated to us that we could not hope to use it to save ourselves, even from ourselves.” (Bloom 940)

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Thailand: The Return of Authoritarianism

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Abstract

In the post–World War II global order, democracy has made advancements around the world. However, it is not uncommon for governments to establish systems that try to emulate democracy while embodying a more authoritarian rule, which quickly becomes problematic because authoritarian governments are notorious for violating their citizens’ rights. This can be seen specifically in Thailand, where multiple military coups d’état have caused changes in the government, forcing the nation to alternate between democratic and authoritarian policies. The most recent coup staged in 2014, shifted the government away from democracy entirely, transitioning into the strictest authoritarian rule Thailand has seen since 1976. With this understanding, I analyzed the effects of the shift to authoritarianism in 2014 on Thai citizens and their rights. This project addresses this question by researching the junta that emerged from the 2014 coup called the National Council for Peace and Order (NCPO). The NCPO believed the only way to hold onto power was through intimidation, suppression, and violation of the people’s rights. Through torture, free speech infringements, and even murder, the NCPO and their leader, Prayuth Chan-ocha, have proven they are unable to lead Thailand in a manner that protects their people and advocates for their wellbeing.

In the post–World War II global order, democracy has made advancements around the world. However, it is not uncommon for governments to establish systems that try to emulate democracy while embodying a more authoritarian rule, which is problematic because authoritarian governments are notorious for violating the human rights of their citizens. This can be seen specifically in Thailand, where multiple changes in governing styles have brought the country closer and closer to authoritarianism. While the 2006 military coup seemed to be guiding Thailand’s government back toward democracy, the return to a stricter authoritarian rule in 2014 has led to numerous violations of Thai citizens’ rights unseen under previous regimes.

In 1932, Thailand experienced its first military coup d’état, which abruptly ended the absolute monarchy. Since then, the country has experienced a total of thirteen takeovers. While each of these individual coups is important, only a “select group of Thai coups” aimed “to shift the trajectory of the country’s politics” and had an impact on the Thai government today (Baker 388). This includes the 1932 coup; the 1957 coup, which brought back the monarchy; and the 1976 coup, which instituted a democratic era with the king as the head of state. Many systems of governance were implemented and stripped away through these incessant coups; however, the current structure is modeled closely after what some see as “twin coups”: the 2006 coup and the 2014 coup (Baker 389). This term was coined as

both coups originate from the same section of the military and had the primary goal of ending the regime of Thaksin Shinawatra, who was prime minister until 2006, and the continuing legacy of that rule that continued after his exile. The 2006 coup was able to achieve its goal of removing and exiling Shinawatra; however, it failed to make substantial changes within the government he left behind. Previous backers of the 2006 coup called this a “waste” and staged an uprising in 2014 to implement their own system of governance, completely erasing any political remnants of Shinawatra (Baker 389).

In 2014, a failed election allowed a gateway for the military to act and stage their coup. Yingluck Shinawatra, Thaksin Shinawatra’s younger sister, was voted into office as prime minister in 2011. In order to quell protests that demanded her removal, Yingluck Shinawatra dissolved parliament and, following her brother’s example, called for “snap elections, hoping they would confirm her popular support” (Sopranzetti 299). She won the election; however, reminiscent of what happened during her brother’s regime, the constitutional court overturned the vote. This period in which Thai society was acephalous allowed Prayuth Chan-ocha, the commander-in-chief of the army, to declare martial law and stage the “twelfth successful military coup in Thailand since the formal end of absolute monarchy” on May 22, 2014 (Sopranzetti 299).

While previous Thai governments had implemented authoritarian structures, the 2014 coup led the country through a system of suppression and restriction that quickly became more aggressive than past reigns. The junta that emerged, called the National Council for Peace and Order (NCPO), “ushered in the most repressive regime in Thailand since the counterinsurgent regimes of the Cold War” (Haberhorn, *Under and Beyond* 315). The martial law order that Chan-ocha declared was in effect

for over ten months and only ended when the junta replaced it with Section 44, which “gives the head of the junta absolute power of repression” (Baker 402). Specifically, it allowed Chan-ocha to make any laws or adjustments where he saw a “benefit of reform” or a need for “prevention... of any act which undermines public peace and order or national security” (Baker 402). While this was not seen as an issue at the time, the new addition to the Thai Constitution granted Chan-ocha unlimited power and permitted that any violations of a citizens’ rights could be dismissed through explanations that it was a necessary evil. Section 44 allowed the NCPO to intimidate the population through “violent interrogation techniques and possibly torture” on a select group of individuals (Baker 390). While torture has always been strenuously denied by the junta, it is believed to be a method they utilized. Chan-ocha talked openly and freely about violence in television addresses, notably threatening to “execute” journalists and “getting rid of human garbage” (Baker 390).

Torture is not the only method that the junta implemented to suppress both their opposition and the people of Thailand. They utilized “repressive regulations and techniques of intimidation to silence opposition in a more aggressive way than any coup since 1976,” making it their priority to eliminate all criticism and opposition to the junta and the monarchy (Baker 390). Any individual who dared to speak out against them was “treated as potential enemies,” including doctors, lawyers, journalists, and many others (Haberhorn, *Dictatorship* 936). Before the 2014 takeover, the government began to allow for some debate on the standing laws, including a “movement to amend Article 112” (Haberhorn, *Under and Beyond* 321). Article 112, which was added to the Thai Criminal Code in 1908, makes it illegal to defame or insult the Thai monarchy through any form of communication, including social media or verbal

transmission. It is more commonly referred to as “lèse majesté,” a French term that means to do wrong to the monarchy (Haberhorn, *Under and Beyond* 312). Despite the progress made before the 2014 coup, the NCPO almost immediately began using Section 112 to oppress the populace after they took power. This was easy for the NCPO to accomplish, as the law itself is written rather ambiguously and is open to interpretation.

Another method the junta utilized to eliminate criticism was the censorship of media, which often goes together with the lèse majesté law. Immediately after the coup, the media was “heavily censored or shut down if they [the media networks] refused to comply with the junta’s order” (Sopranzetti 304). All forms of media are a primary way for individuals to express their opinions, and therefore, citizens are frequently caught violating Article 112 on social media platforms such as Facebook and Instagram. For example, Jatupat Boonpattararaksa, also known as Pai, “was arrested and accused of violating Article 112” on December 4, 2016 (Haberhorn, *Dictatorship* 935). His crime was the act of sharing a biography of the new king on Facebook, which detailed his “string of wives, his four abandoned sons, and his conferral of a military rank on his pet dog” (Haberhorn, *Dictatorship* 935). While thousands of people shared and re-shared the Facebook post, Pai was the only person who was arrested and prosecuted. This indicates the NCPO’s primary form of repression: intimidation through the law “to silence its critics” (Haberhorn, *Dictatorship* 936). While the junta is unable to catch and jail every individual who speaks out against them or the monarchy, they try to apprehend a small number of perpetrators with the hope that citizens will become obedient out of fear of meeting the same fate.

Currently, Thailand’s internet is severely censored, with “more blocked websites than China” (Sopranzetti 304). The continuous

elimination of criticism and censorship of almost every form of media in Thailand has decimated the notion of free speech. Citizens are presently living under an authoritarian rule that approaches the rights of the people like a game of Risk. The regime limits those rights deemed an inconvenience and erases those that could foster democratic movements or discussion. For example, free speech is not the only right on which the NCPO tramples on — they also cross the line in their judicial system. In *Fa Diew Kan*, a notorious Thai journal, Thanapol Eawsakul has written numerous articles “about abuse of power and the exercise of violence against citizens” (Haberhorn, *Dictatorship* 938). He was imprisoned for seven days following his first capture, and, when he was released, his social media accounts were watched. He was apprehended again for posting a Facebook post that criticized the NCPO, and instead of officially arresting him, an officer “invited him for coffee, and then took him from the coffee shop into custody,” a direct violation of his rights (Haberhorn, *Dictatorship* 938). He was not detained again; however, to this day, the police visit his office at *Fa Diew Kan* regularly and actively monitor his social media accounts.

Although the NCPO has never admitted to it, the suspicious circumstances around numerous activist’s disappearances and murders have proved that they know no moral bounds. In 2018, the brutalized “bodies of Chatcharn Buppawan and Kraidej Luelert were found on the Thai side of the Mekong River that separates Thailand and Laos” (Haberhorn, *Under and Beyond* 315). At first glance, this may seem like another simple murder case, but Buppawan and Luelert were self-imposed exiles who feared “that their questioning of the monarchy might lead to their arrest under Article 112” (Haberhorn, *Under and Beyond* 315). After arriving in Laos, they continued to speak up about the NCPO

on online platforms, believing that “exile kept them safe from arrest and prosecution”; however, it “ultimately did not protect their lives” as they became “two among a total of nine” activist exiles who disappeared or were murdered since the 2014 coup (Haberkorn, *Under and Beyond* 315).

When they grasped power, the NCPO banned “political activities,” which includes political opinions that do not coincide with the majority (Soprannetti 304). Historically, Thailand has seen the rise and fall of factions through its numerous shifts in government. In 2017, the NCPO implemented Thailand’s twentieth new Constitution, which “continued to weaken political parties while assisting factionalism” and was likely instated to further their influence and power (Chambers and Waitookiat 157). However, this additional portion of the Thai Constitution had a direct link to the 2019 election, which was held to “restore the country to parliamentary democracy following a military coup d’état in May 2014” (McCargo and Alexander 90). When the junta’s attempts to continuously push the election back failed, Prayuth Chan-ocha, unwilling to give up on the administration he had created and the power he had obtained, created a system of smaller parties that “would work together... following the election” (Chambers and Waitookiat 157). Due to this, the election became rigged, and Chan-ocha won by a landslide victory of “500 to 244 in favor of Prayuth,” even though his opposition, Thanathorn Juangroongruangkit, “had performed better in the elections” (McCargo and Alexander 91). Therefore, Thailand’s attempt to bring back democracy turned into a “democratic dictatorship,” a term coined by a pro-junta Senate supporter, and caused no change to the authoritarian status of the country (McCargo and Alexander 91).

The junta excels at using fear to intimidate their citizens into silence; however, this does not mean that the Thai population is happy with their government or agrees with their policies

or techniques. In 2020, Wanchalearm Satsaksit became the ninth activist to disappear, which spurred “youth activists [to launch] ... the most radical and dangerous movement for democracy since 1932” (Haberkorn, *Under and Beyond* 315). Between February and March, “more than eighty-six campus flash mob actions on forty-seven university campuses in twenty-seven provinces took place,” introducing an era of resistance against the NCPO that was primarily executed by Thailand’s youth (Lertchoosakul 208). When COVID-19 became a threat, universities closed and these rallies were moved off-campus, where they evolved into more violent and radical protests. There were two youth-led protests during this time that were notable: the Free Youth Movement and the White Ribbon Movement. The Free Youth Movement, known as “เยาวชนปลดแอก” in Thai, “attracted more than 2,500 participants to a flash mob action” to put pressure upon the NCPO to “end... intimidation, ... [dissolve] the sitting parliament, and [make] a new constitution” (Lertchoosakul 208). Afterward, the government took the rally leaders into custody, and threatened to “use new control measures including detention, high-pressure water cannons, [and] tear gas” on future protest participants (Lertchoosakul 208). In addition to the college-level Free Youth Movement, high school students in “the Bad Student (in Very Good Schools) (นักเรียนเลวในโรงเรียนแสนดี) group” created the White Ribbon Movement (Lertchoosakul 210). This protest was more subtle: they asked students across the country to wear white ribbons and hold up the three-finger Hunger Games salute while singing the national anthem “in support of student-led anti-government protests” (Lertchoosakul 211). This soon became a nationwide campaign, with thousands of high school students joining in.

While Wanchalearm Satsaksit’s case was the trigger for students to begin protesting,

resentment against the government had been growing inside the Thai population for years. Students became the main force behind these protests because ultimately, it is their future, and they were able to link the economic and political problems their generation was facing back to “the authoritarian military government” (Lertchoosakul 213). However, whether their demands to “revise the constitution, dissolve parliament, ... schedule new elections, and, above all, reform the monarchy” have been met by the NCPO, the fact that the Thai youth are trying to “protect their political rights before it is too late” means that change has begun (Lertchoosakul 215).

Although Thailand has always operated under governments that emulate more authoritarian policies than democratic ones, the 2014 Thai coup believed the only way to hold onto power was through intimidation, suppression, and violation of the people’s rights. Through torture, free speech infringements, and even murder, the NCPO and Prayuth Chan-ocha have proved that they are unable to lead Thailand in a manner that protects their people and advocates for their wellbeing. However, as a society that lives under the threat of the NCPO constantly, Thailand’s youth have begun to revolt, creating hope for change and a better future that the junta will not be able to squash.

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Improving as an Editor, Growing as a Historian: Analysis of Primary Sources through Digital Edition

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Abstract

While digital humanists have often discussed how digital editing develops students' abilities to read closely and analyze sources, historians adjacent to the discipline have underexamined the benefits of the practice on their own students. This article seeks to provide a perspective supporting the existence of such benefits for history students. It examines an application of ideas regarding the use of digital documentary editing to train students as historians. Using my own experience as a student editor and historian, I argue that digital editing especially facilitates close reading which, in turn, enables highly specified primary source analysis. To accomplish this, I reflect on creating an edition and exhibit on a twentieth-century letter relevant to local history for a digital editing course in the summer of 2020, outlining how the experience developed the skills of both disciplines. My project demonstrates the intersection of digital humanities and public history, a space where even undergraduates can effectively be engaged.

Digital editing increases public access to texts and other documents through modern technology. Readers can often discover and read an edited text much more easily than an unedited facsimile because of its clean design, full-text searchability, and regularized use of language. They also learn much more about a text, through supplementary information that can be added because of features only available in a digital context. Digital editing also holds benefits for editors, since those who create editions and compile all information within them gain insight into the texts they work on in different ways. As someone with experience in digital editing with TEI-XML guidelines for encoding in the humanities, I wanted to investigate how an editor's relationship with and knowledge of a text develops through their work.

In 2020, I participated in a remote summer course on electronic textual editing. Each student contributed to the North Florida Editorial Workshop, an initiative at the University of North Florida that seeks to publish online digital editions of primary source documents related to local history. For my final project, I chose to work on a letter written by Ellen Call Long, the daughter of two-time territorial governor of Florida, Richard Keith Call. Long was a nineteenth-century Floridian planter and an amateur historian. While the project's main goal was to transmit the letter through an online medium, a secondary objective had to do with the process itself, exploring how much information could be gathered from a single eight-page document. My work with the letter demonstrates how editorial work, including regularization and annotation, can facilitate close reading and original research. It shows,

furthermore, how such a process is possible even in the relatively short amount of time of a six-week summer semester.

At the intersection of documentary editing and digital history, digital editing projects like mine require intimacy with the text to create quality scholarly work. My project shares similarities with traditional documentary editing as conducted by historians, a process in which editors attempt to faithfully represent a unique original document. In their influential text *A Guide to Documentary Editing*, Mary-Jo Kline and Susan Holbrook Perdue detail how close reading underscores transcription, the foundation of editorial work, in its section dedicated to the subject. Through studying the text closely, Kline and Perdue state that the editor “will inevitably learn to recognize meaning in patterns of inscription that earlier seemed meaningless or baffling” (113). They also argue that close reading and familiarity with the text is fundamental to the documentary editor’s goal of faithfully representing the original primary source, claiming that, “Only a careful analysis of the sources at hand enables the editor to decide which conventions will least distort the source” (Kline and Perdue 121). These observations on the transcription process foundational to documentary editing apply to digital editions as well.

Digital editions might, in fact, require even more scrutiny of the text. In *Digital Scholarly Editing*, Elena Pierazzo introduces the concept of the paradigmatic edition. Due to the possibilities revealed by using markup, this type of edition obscures the boundary between the traditional documentary editions and critical editions of works with multiple sources, as well as clean reading versions and editions covered in annotations (Pierazzo 28-29). Many different editions can coexist at once with the capabilities of modern computers and editors equipped with encoding knowledge. Pierazzo argues that with

this kind of edition “an indefinite amount of information” can be presented to readers and researchers, unlike the hard limits of physical printed editions (81). The editions created as part of the North Florida Editorial Workshop followed some elements of the paradigmatic model, albeit to a limited extent, by including a transcription, intermediate version highlighting all editorial decisions, and an edited reading version with annotations. Gathering the information required to create multiple editions in one file encourages close reading of the text. Encoding, like transcription, lends itself to developing a closer familiarity between editor and text. This familiarity lends itself to digital history and primary source analysis.

For digital historians, the processes involved in digital editing facilitate their research of primary source documents. Historian Jim Mussell provides one example of this when describing his work on the *Nineteenth-Century Serials Edition*, a project dedicated to editing and publishing several periodicals from the period. One specific element of digital editing beneficial to the project was the use of tags to distinguish names and topics relevant to researchers. While much of the actual tagging of semantic elements was left to data-mining programs, the framework for creating tags prepared by editors like Mussell allows historians to “manipulate historical information” to explore new paths of analysis (86). Reflecting on his experience in digital history, Mussell explains that digital tools like encoded editions reveal “unrealized aspects of this material and the unthought assumptions that have hitherto structured our engagement with it” (89). These tools enhance researchers’ ability to engage with and understand the source, while also providing similar benefits to the tools’ creators. Digital editions not only provide unique benefits to professional scholars like historians but also can enrich the education of students.

In recent scholarship, educators in the humanities have examined the relationship between close reading and textual editing among undergraduate students, as well as the knowledge produced by training students to edit. Examining these questions from the perspective of literary criticism, Erick Kelemen experimented with training students in traditional critical editing without encoding to teach students about the nature of creating texts. He emphasizes the crucial role of close reading in the work of the editor, particularly in the proofreading of a text (Kelemen 130). By training students in critical editing, students gained such an intimacy with the text that Kelemen asserts that editorial work “involves the students in the production of the very text that they study” (132).

Amanda A. Gailey found that close reading and digital editing contribute to the creation of new knowledge even at the student level. She argues that encoding in digital textual editing is inseparable from reading a piece of writing closely (197). Her digital editing course allowed students to work closely with documents of their choice, an activity that produced significant changes in her students, who became “unparalleled experts on the topics” of their editions (Gailey 198). The students’ close reading and subsequent annotation of a text generated new, highly specific knowledge based on that one text. While the work of Kelemen and Gailey is articulated from within the field of English, my editorial work has involved close reading from a historical, not literary, perspective. The results described by Gailey reflect the potential of highly specified, original analysis resulting from a more historical approach to editing.

Compared to scholars of literature, historians have written much less about using digital editing as a tool to teach students the close reading that aids primary source analysis. An article by Will Hanley presents an example of incorporating

digital editing into a history course centered on the twentieth-century *Egyptian Gazette* but does not discuss the practice’s benefits to primary source analysis. Hanley emphasizes training in technical skills and issues of student labor rather than discussing editing as a tool to develop the more traditional abilities of the historian in-depth (156-157). While the students wrote analysis papers on their assigned issues of the *Egyptian Gazette*, he does not elaborate on how the students’ editing itself might contribute to their grasp of the source and its context, most likely because of his students’ difficulty in analyzing the source (Hanley 157-158). He does briefly address the results of the papers, reflecting on how their analysis was limited by the students’ access to only a small portion of the newspaper’s issues (Hanley 156). The difficult task of training inexperienced students in encoding skills overshadowed any lessons regarding editing’s relationship to close reading.

Other scholars have addressed how the editorial process might be used to teach students the skills of the historian despite technical problems. Describing the outcomes of an assignment involving the transcription of primary sources on her students, Tona Hangen observes that

“students who perform even short stints as volunteer transcriptionists become very curious about what they are reading, which generates open-ended questions without easy answers,” (1199).

The time spent deciphering the document teaches them to closely read the source to understand it, rather than simply search for information that contributes to their thesis. Digital editing especially encourages students to be active in the creation and outreach of history utilizing the accessibility and power of tools like the internet. Mark Sandle believes that digital history projects encourage students’ transition “from being a

tourist to becoming an explorer” of historical knowledge (144). As employed and discussed by scholars in literature and history fields, text encoding develops undergraduates’ close reading and historical contributions in original research by choosing methodologies conducive to those ends.

A summary of my work, constituting the remaining pages, outlines an application of these ideas regarding students training in the work of historians through digital editing. It presents a case in which a student avoids the problem faced by Hanley, having grasped the technical aspects of TEI-XML encoding. Progressing beyond the mechanical steps of editing to conduct original research, a student can thus create a more interpretive edition. The resulting scholarly product, including both edition and its companion exhibit, combines public history skills and the more traditional primary source analysis written for student research papers. In this case, the product sheds light on early twentieth century Florida historiography, discussing niche figures unknown to all but local historians interested in organizations like the Florida Historical Society. This process, therefore, can produce the type of highly specific knowledge described by Gainey but in the realm of history instead. Undergraduate projects like mine can more greatly fulfill the potential of editing by reflecting on each step of the editorial process and discovering how they train them as young scholars.

As the first step in creating digital editions, potential editors must determine an approach to their work, examining editorial theory and other methodologies used by editors. This particular course taught students an editorial methodology prioritizing the preservation of the original features of the text while regularizing antiquated features uncommon to modern readers and other deviations from modern English that would make reading more difficult. As part of this process, editors include physical features of the text like line and

paragraph breaks and must scrutinize the text for any incorrect homophones and misspellings. After or while they create a transcription of the text in an XML file, they use the <choice> tag to mark any editorial changes made to the document. Whether correcting a misspelled word or adding punctuation, the <choice> tag creates two versions of the document which coexist using XML: a transcription of the original text represented as accurately as possible and a regularized version that incorporates all editorial decisions. The project’s methodology sought to take advantage of the benefits from the digital format, such as creating multiple coexisting versions of the text and removable annotations.

Beyond the more traditional editorial responsibilities of determining the representation of the text, annotation allowed students more freedom in how to approach their projects. By annotating the edition with the <note> tag, students could provide context for understanding the document by concisely presenting their research within the edition itself. Annotations often worked closely with tagging semantic aspects using tags like the <name> tag, which highlights names of people, places, and organizations. Another commonly used method for encoding semantic aspects of the text was using the <title> tag for titles of literary works, periodicals, and other creations. Creating editorial notes with the aid of these tags, students could define technical terms and identify named people. Using transcription notes, they explained any unique physical characteristics and formatting of the document not visible on the webpage for the digital edition worth acknowledging. Annotations, especially editorial ones, played a key role in my approach to the editorial project.

Taking advantage of the digital nature of my work, my editorial approach sought to make digital as many elements of the edition as possible with citations and links through which

readers could learn more about the subjects of the annotations without having to leave the digital environment of the edition. Within annotations visible on the digital edition, these citations provided access to online sources containing further information about specific people, written works, and events. The object was to allow a reader of the edition to learn as much as possible about the text and its context without having to do their own research. Direct links to references within the edition replaced the time, effort, and resources required to locate the information. However, not all annotations had reliable sources which are publicly available through the internet, so I aimed to find as many as possible within the time restraints of a summer semester.

In the process of annotation, my individual approach focused on identifying all individuals named in the letter and their relationships. While researching these relationships, I discovered the most likely name of a book referenced but not directly identified by name in the text that was key to determining the relationships between two figures that appear in the letter: Edwin Luther Green, the recipient of Long's letter, and William N. Sheats, Florida's first superintendent of public instruction. Long references that Sheats had disparaged Green's ability as a historian in some way, referring to an unnamed work that he had published. After researching Green's bibliography, the textbook *School History of Florida* appeared as the most likely candidate, because it had been inspired by and dedicated to Sheats for use in Florida's public schools. The close reading required by editing and additional research allowed for the construction of a web of relationships which formed the backbone of the annotations, edition, and exhibit.

Thorough examination of the text pervaded each step of creating the edition. As one of the first stages of the editor's encounter with the text, transcription is inherently an exercise of closely

reading the text. For example, I had to scrutinize the context of illegible words within a sentence or paragraph in order to accurately interpret the words at times. Making editorial decisions required patience to study the text for the aim of reflecting the text faithfully while remaining accessible to modern audiences. By spending time going over each word in the text while marking features to regularize, an even greater intimacy with the text formed. The editorial process also brought attention to details like breaks in the text, including those separating pages and paragraphs. The physical features of the text, especially page breaks, were valuable pieces of evidence that helped me develop a framework for studying and learning from the letter. The work of editing places emphasis upon this evidence which can often be overlooked. The primary source analysis in the finished exhibit serves as the culmination of the many hours spent with the letter.

The close reading of the letter accomplished through editing facilitated the analysis so fundamentally that it shaped the organization of the exhibit. Weeks of examination showed that the primary source divided naturally into four sections, often along the aforementioned page breaks. First, Long establishes the context of her letter, addressing Green as a potential autobiographer of her father. She then criticizes Duncan Lamont Clinch's account of the Battle of Withlacoochee, one of her father's most controversial episodes. Clinch, the other commander at the battle, took issue with Call's conduct. This discussion leads into her subsequent criticism of contemporary historians of Florida, including the then-definitive historical account of the Second Seminole War during which the Battle of Withlacoochee took place. At the end of the letter, Long expresses her implicit belief that those she considered Floridians were best suited to writing the state's history when discussing Green's previous historical writings on Florida. These

divisions, while not easily apparent, guide Long's writing as she transitions between topics. Because the distinctions between topics are not obvious to readers unfamiliar with the letter and its contents, their inclusion represents my careful decisions as an editor with much time invested into the text.

The exhibit and its analysis could not exist without the work dedicated to making the edition. The digital edition, too, relies on the exhibit to expand upon its annotations and interpret the original document. As an exercise of the work of a public historian, the project provides a unique experience to students such as myself. In my experience, the dual roles of digital editor and public historian coexisted without interfering with each other while complicating my understanding of the project. When working on the project, the distinction between the two functions of my work generally disappeared because of their interdependence. As an editor, I aimed to learn as much about the document as possible to represent it faithfully, which assisted the public history element of informing the users of the North Florida Editorial Workshop website about the context of the document. While improving as an editor, I grew as a historian. The Appendix contains a replication of the exhibit published on the NFEW's website included to demonstrate the product that can result from using the editorial process to support close reading and primary source analysis when synthesizing the

role of editor and historian.

After six weeks spent studying the original letter written by Ellen Call Long, the resulting edition produced original research in the form of an exhibit highlighting a topic often overlooked because of its specificity. Taking inspiration from documentary editions and the model for paradigmatic editions, the digital editing project purposefully considers how transcription, encoding, and annotation deepen the editor's understanding of the text and reveal new methods of interpreting it. As an undergraduate digital history project, the edition and exhibit demonstrate how students can engage in the creation of historical knowledge through editing primary sources. Often students analyze segments of multiple primary sources in research papers. However, my exhibit covered the entire letter in page-by-page detail, due to the page-by-page nature of editing. By taking time to make careful and thoughtful editorial choices and annotations, specific interpersonal information within the text lent itself to larger and more relevant questions regarding the creation of history and Florida historiography within one personal letter. Developing the ability to closely read sources and scrutinize semantic elements that hint at the document's context while editing, I improved both as an editor and as a historian in ways not available in traditional undergraduate coursework.

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Appendix: Replica of Exhibit

A Letter to Defend a Legacy: Ellen Call Long Writes to Edwin Luther Green The Purpose of the Letter

It was approximately the turn of the twentieth century when Ellen Call Long wrote to Professor Edwin Luther Green. Fifty years prior, Florida was granted statehood. In the late nineteenth century, the development of the state was beginning with the construction of railroads. While it would take decades until the majority of the state was developed, the frontier days of Florida were all but over. In the latter half of the nineteenth century, historians and antiquarians worked to research and write the history of the sparsely populated state when it was a frontier for Spanish, English, and American settlers. Long and Green were two such historians, the former having decades of experience writing the history of the state and the latter having recently forayed into Florida history as a young professor.

Ellen Call Long (1825-1905) was a lay historian and promoter of Florida from Tallahassee, Florida. She was the daughter of Richard Keith Call, the two-time territorial governor of Florida. Most of her written efforts were dedicated to preserving his legacy and defending it from dishonor. After the death of her father, she completed the journal he began to detail his life (“Call Journal Description”).

Throughout her adult life, she wrote several articles and biographical sketches on Florida history. Her most famous work, *Florida Breezes*; or *Florida, New and Old*, describes life in antebellum Northern Florida and events in her father’s life through the perspective of a fictional protagonist, offering perspectives of Floridian culture of historical value today. Long dedicated the book to her late father from whose “fireside talks and forest ramblings” she learned about his perspectives and memories to use in the finished text (III). The book’s narrative takes the fictional protagonist from the North to Florida and covers events from the Second Seminole War and the Civil War, with a prominent section dedicated to the Battle of Withlacoochee alone (Long 201-206).

At the time of this letter, Edwin Luther Green (1870-1948) was a relatively young professor from Columbia College, South Carolina, and a self-identified “son of Florida” (Green). His most recent work, *School History of Florida* (1898), was a textbook intended to be used by Florida’s schoolchildren to learn about the history of their state. Throughout his career, he would write several books on American history and at one point considered writing a biography of Richard Keith Call.

In this letter, the pair’s work intersects because of the possibility of Green writing a

biographical piece on Call. Long thought that a biographer of her father needed to know him well, and ideally it would be someone with whom he had a close relationship. She likens this ideal biographer to James Boswell, the close friend of the English writer Samuel Johnson who wrote his biography. Despite this, Long thought that Green might have been able to accomplish a deserving biography of her father if he presented his life “fairly and correctly.”

The Battle of Withlacoochee and Its Relevance

Because of the possibility of Green writing about her father, Long needed to address the event which permanently tarnished her father’s reputation: The Battle of Withlacoochee.

Richard Keith Call (1792-1862) was a man defined by his bold demeanor and actions. He enlisted to fight against Indians at an early age, serving under then General Andrew Jackson. Call became close to Jackson and joined his group of close associates and supporters (Cusick, “Richard Keith Call” 45). After resigning from his military career which spanned the War of 1812 and the First Seminole War, Call made Florida his permanent home in 1822 and entered the law profession. In 1823, he began his term as a delegate of the territory to the United States House of Representatives. Throughout his political career, he would demonstrate his strong loyalty to Jackson. As a reward to his faithful friend, Jackson appointed Call to the position of Florida’s territorial governor for the first time in 1836. The beginning of the Second Seminole War and Call’s military response would characterize this first term.

Duncan Lamont Clinch (1787-1849) was a U.S. military commander from North Carolina who served during the Seminole Wars. He is most known for his involvement in the attack on the fortification known as “Negro Fort” during the

period of violent conflicts between native peoples and U.S. forces after the War of 1812. As an active member of the U.S. military, Clinch was responsible for the regulars from the U.S. Army at the onset of the Second Seminole War. In 1836, not long after the nearly seven-year war had begun, he resigned from his position. He entered politics as a representative of Georgia in Congress in his later years (McCormick).

After a period of unrest between native Seminole groups and white American settlers wanting continued expansion into the Florida territory, the Second Seminole War began in earnest on December 28, 1835, when Major Francis L. Dade and almost all of the soldiers serving under him were killed in a Seminole ambush known as the Dade Massacre. A few days after this first attack, as they were on their way to attack a Seminole stronghold in the area called the Cove of Withlacoochee, Call and Clinch encountered the Withlacoochee River. The river was much higher than expected, and the soldiers had few safe methods that could be used to efficiently cross. After hours of transport, Clinch’s regulars were ambushed by Seminoles led by Osceola while separated from Call and his volunteers by the river. Although many of Clinch’s regulars were able to retreat and survive, the conflict, later known as the Battle of Withlacoochee, was another defeat for U.S. forces (Cusick, “Richard Keith Call” 48).

Months after the battle, Clinch blamed Call and his militia for the defeat. He claimed that Call and the volunteers had not supported him in the battle, which led to the Seminole ambush overwhelming them. He went as far as to claim that Call had prohibited the militia from crossing the river to support Clinch’s troops. James G. Cusick, the curator of the P.K. Yonge Library of Florida History at the University of Florida, notes, “This accusation became so stinging a blot on Call’s record that almost two years after the

battle, he ran a point-by-point rebuttal of Clinch's statements on the front page of *The Floridian*, taking up the entire front page" (Cusick, "Richard Keith Call" 49). Call would highlight the impossibility of transporting his troops over the river quickly enough to support Clinch and would continue to repeat his version of events throughout his life.

Despite this controversy, Call had a chance to redeem his reputation when President Jackson asked him to control U.S. forces in 1836 during the early stages of the Second Seminole War (Baptist 156). As commander, he was able to secure significant victories and invaded further into the Seminole's territory, even though his efforts were plagued by logistical problems. He failed to win what historian C. S. Monaco refers to as "the type of traditional battlefield triumph that he promised the president" and was later relieved of command by Jackson himself (86). Although he would be appointed to the position of territorial governor of Florida again in 1841, his failure to succeed in his campaign against the Seminoles to Jackson's satisfaction would ensure that the affair at Withlacoochee would remain a negative mark on his legacy.

Long would continue the defense of her father's actions at Withlacoochee even after he had passed. In *Florida Breezes*, Call is described as having succeeded in crossing the river in a canoe to aid Clinch in his retreat (Long 204). Long also labels him as a hero for his actions during the battle in her narrative (206). Needless to say, Long inherited her father's bitterness towards Clinch for his account of the battle and Call's actions during it. Defending her father's position that it was impossible for all of his volunteers to cross the river in time to support Clinch, she states that his report was supported by "most honorable witness." She writes that Clinch's first report of the battle was "a most flattering account of volunteers in battle" but highlights that Clinch's

second report was the one which would tarnish her father's reputation. As a consequence of this apparent betrayal, she uses the letter to bring into question Clinch's character, demonstrated by her unflattering portrayals of Clinch's resignation from the army and her accusation that he was "turning a deaf ear to all complaint of cruelty by Indians." In her anecdote regarding Congress' repayment for damage to Clinch's sugarcane crop, she makes sure to note that Clinch had not lived in Florida for long. After criticizing Clinch, she turns her criticism towards some of the most well-known historians of her time.

Long's Criticism of the Existing Historiography of Florida

The historiography of the Second Seminole War and Florida more broadly plays a significant role in the letter. In the final pages of the letter, Long criticizes some of the most highly respected writers of Florida history at the time while she discusses Green's work.

George Rainsford Fairbanks (1820-1906) is the first target of her criticism. He had been born in the North and started practicing law in New York before he moved to Florida in 1842, where he would spend most of his life (Fleming 5). As Long mentions in the letter, he remained in the law profession in Florida, serving as a clerk to Judge Isaac H. Bronson. One of his earliest works as a historian was delivered in the form of a lecture on early Florida to the Historical Society of Florida in 1857 (Fleming 5). In the decades after, he would gain fame and influence from his published volumes such as *The Spaniards in Florida* and *The History of Florida*. In 1902, he helped to found the Florida Historical Society and became its first president (Fleming 7).

Since Fairbanks was a highly respected writer of history books who was still alive and would soon become the president of the Florida Historical Society, his status makes Long's

criticisms of him stand out. She claims that “[Fairbanks’] history is very narrow; we want a real history.” She also asserts that he “knew little of Florida” as someone not from the state, although she admits that his writings came from the “valuable” manuscript collection gathered by Thomas Buckingham Smith.

Smith (1810-1871) was an antiquarian, manuscript collector, and translator who grew up in St. Augustine. He wrote about the Spanish exploration and conquest of Florida to prove that his state had a rich heritage comparable to that of New England (Kagan 98). Long appears to give Fairbanks’ work some credit for using Smith’s work to write his histories, as Smith was a dedicated Floridian.

The other historian that faces Long’s criticism in her letter is John Titcomb Sprague (1810-1878). Sprague was an American military officer from New England who served in the Second Seminole War from 1839 to the end of the war in 1842. He served as an aide to then Col. William Jenkins Worth and later married Worth’s daughter. After the war, he remained in Florida and was in control of Indian Affairs in the territory. He returned to the North in his later years and spent much of the 1860s and 1870s in New York (“Sprague Collection”).

In 1848, he published *The Origin, Progress and Conclusion of the Florida War*. It was the first attempt to write the history of the entire war and would remain the only attempt until a hundred years later (“Sprague Collection”). In this book, Sprague drew more from Clinch’s account of the Battle of Withlacoochee, writing,

“Four hundred and sixty volunteers, under Gen. [R.] K. Call, were spectators of this conflict across the river, excepting twenty-seven, who, under Col. Warren and Lieut. Col. Mills, dashed over in spite of every

obstacle, and by their firmness and activity rendered efficient service” (92).

As the most influential work on the conflict in the nineteenth and much of the twentieth century, Sprague’s account of the Battle of Withlacoochee in the Florida War cemented the incident as a permanent and public mark on Richard Keith Call’s legacy by favoring Clinch’s perspective.

Consequently, Long argues that Sprague’s work is “altogether partial”. She warns Green against trusting *the Florida War*. She questions the credibility of the work by arguing that it was written to benefit Brevet Major General William Jenkins Worth’s political career rather than to simply honestly report the events of the war.

Her criticisms of these well-known writers of history served two purposes. One was the defense of Call’s account of the events at Withlacoochee, which she needed to present to someone considering writing on her father’s life. A failure to address Sprague’s presentation of the battle could have resulted in a biography that would be, in her opinion, unfairly biased against her father’s account. Interestingly, Green’s writing on the battle in *School History of Florida* does not address the controversy over Call’s involvement (Green 239). Still, the uncertainty over his stance on the matter would be enough for this to need to be addressed by Long.

The second purpose of criticizing contemporary Florida historians was to defend Green’s work in *School History of Florida*.

The Defense of *School History of Florida* and Long’s Perception of the Floridian Identity

After criticizing Fairbanks, Long references the criticisms that Green’s “present volume” had received. This “volume” is likely *School History of Florida* as it was Green’s most recent work and his only work on Florida’s history. According to

Long, some had labeled his book “an extract from Sprague and Fairbanks,” saying that Green’s book was more the work of others than the result of his own research. She then appears to identify one of the critics of the book and dismisses the claims by stating that, “W. Sheats is not a Floridian.”

William N. Sheats (1872-1922) was Florida’s first state superintendent of public instruction, who served from 1893 to 1905 and then again in 1913 to 1922. He had previously taught in Florida’s Alachua County and served as superintendent of education there as well (Cusick, “Regarding Long Letter”). Becoming a well-known Southern educator, he succeeded in making educational reforms and increased funding for schools across the state. However, his positive reforms came with the condition that education be strictly segregated. He refused to allow white teachers to teach black students, going so far as to make it illegal in 1895 as part of a high-profile campaign against the Orange Park Normal and Industrial School, which taught both black and white students (Richardson 399). His efforts to enshrine segregation into Florida’s education system remain part of his legacy.

In the preface of *School History of Florida*, Green dedicates his book to Sheats as the person who suggested that he write a history of Florida to be used in schools. Sheats had an interest in a variety of textbooks being available to Florida’s schools. One of the major issues of the 1904 election of the state superintendent, among other issues like racial segregation, was Florida state senator H. H. McCreary’s proposal for textbook uniformity across the state. Sheats opposed the idea because he believed that the Florida educational system would become a monopoly for a few publishers (White 253). For this reason, it makes sense that Sheats would have

encouraged a professor from Florida to write another schoolbook in the years leading up to the election to prevent a monopoly by giving schools another resource that they could use. However, Sheats appears to have been dissatisfied with the completed work to some extent, prompting Long’s refusal to acknowledge him as a Floridian.

The concept of an exclusive Floridian identity is a recurring theme throughout Long’s letter. Long had been born in Tallahassee, Florida, and had lived there most of her life. She identified strongly with her state, knowing without a doubt that she was a Floridian. She goes so far as to state that, “Excepting myself, very few know anything about Florida.” In her mind, only a true Floridian could understand Florida, and the work of non-Floridians was inherently flawed. This explains her favoring Green’s recent article to the work of Fairbanks despite him being an influential and well-respected historian. She draws attention to the fact that he had moved to the state and credits the positive elements of his work to the manuscripts gathered by Thomas Buckingham Smith, who had grown up as a Floridian. While she acknowledges that Green could improve his writing in the future, she rejects the criticism of those who, in her mind, do not truly understand Florida. This was the reasoning behind the statement that, “W. Sheats is not a Floridian.”

Long concludes the letter by giving Green advice to make connections with the *Jacksonville Times-Union* which she thinks would benefit his writing. In the end, it is unclear whether Green ever succeeded in writing about Richard Keith Call’s life. Perhaps, he wrote an article that has been lost to time or remains buried in an archive. However, this letter remains as evidence that such an effort was at one point considered.

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ART SUBMISSION

Meditations

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Artist Statement

Meditations is the second piece in my Meditations Series. I was introduced to meditative or “automatic” drawings in my Drawing II class with Professor McGalliard at the University of North Florida. What resonates so much with me about meditative drawing is the complete freedom in creating art that comes naturally to the movement of a body, the practice of mindfulness, and being in the present. There should be no plan, no thought, no calculations, and no rules when it comes to meditative drawing. It is purely expressive mark-making and therapeutic to the artist’s mind, which often gets tied up in the skill and technique of their artwork. I connected greatly to the process of meditative drawing while using charcoal as my medium. I found charcoal to be very fluid in the motions of application, and I can express all kinds of emotions depending on how I apply the charcoal. As someone who battles anxiety and chronic health conditions, meditative drawing is more than a brief escape from the affliction of reality- it is also deeply healing for the mind and body.



Alyssa Hennigar
Meditations, 2022
Charcoal on Newsprint
18" x 24"

Gender Violence in La Casa de la Belleza by Melba Escobar

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Abstract

During the last decade, there has been a revolution in Colombian literature. Whereas previous literature dealt with women within gender stereotypes, now there are more authors who write from a feminine perspective. One of them is Melba Escobar, author of *La casa de la belleza*. This novel tells the stories of Karen Valdés, a single mother and beautician who, after being raped, suffers symptoms of a mental illness; Sabrina Guzmán, an adolescent whom her boyfriend drugs, rapes, and murders; and Lucía Ramelli, whose ex-husband not only was unfaithful to her, but also took credit for the books that she wrote. The narrator of the novel is Claire Dalvard, a psychologist and client of the beauty salon where Karen works. This essay analyzes the cultural factors within Colombian society that permit the gender violence that Karen, Sabrina, and Lucía experienced, and it argues that the societal problems revealed in the novel are relevant not only to Colombia but to all of humanity.

Durante la última década, ha habido una revolución en la literatura colombiana. Mientras que antes la literatura trataba de mujeres dentro de los estereotipos de género, ahora hay más escritoras que escriben desde la perspectiva femenina (Ricci 146). Una de ellas es Melba Escobar, autora de *La casa de la belleza*. Esta novela cuenta las historias de Karen Valdés, una madre soltera y esteticista que, luego de ser violada, sufre síntomas de un trastorno mental; Sabrina Guzmán, una adolescente a quien su novio droga, viola y asesina; y Lucía Ramelli, cuyo exesposo no solo le era infiel, sino que tomó crédito por los libros que ella escribió. La narradora de la novela es Claire Dalvard, una psicóloga, cliente del salón de belleza donde Karen trabaja. Este ensayo analiza los factores culturales dentro de la sociedad colombiana que permiten la violencia de género que Karen, Sabrina y Lucía experimentan.

A lo largo de la historia, Karen, la protagonista, se transforma de una adolescente feminista a una mujer incapaz de autodeterminación. Durante las sesiones en el salón de belleza, Claire se da cuenta de que cuando Karen era más joven, tenía ideas modernas sobre ser una mujer: Cesó de depilarse las axilas y dejó crecer su pelo crespo porque decidió que no necesitaba complacer a los hombres. Sin embargo, su feminismo no era completamente un producto de su propia determinación, sino de la influencia de un profesor universitario, con quien Karen tuvo una relación sexual y desigual (Fuentes 216). Él tenía sus propias ideas sobre la liberación femenina: le dio a Karen el libro *Me amo*, que la alentó a liberarse, pero que lo benefició a él cuando Karen se permitió a sí misma explorar su sexualidad. Además, justo cuando empezaba a ser una mujer moderna y liberada, su embarazo

inesperado le extrajo el poder (Fuentes 217), y restringió sus oportunidades de trabajo intelectual porque no pudo continuar su educación universitaria. Sobre todo, su madre le impuso ideas tradicionales que Karen nunca logró quitar de su cosmovisión. Su madre estaba enojada con ella por quedarse embarazada, aunque alentaba el sexo desprotegido, diciendo: “Si hay amor, no hay condón” (Escobar 36). Aquí vemos la vinculación entre el catolicismo y el patriarcado porque, por un lado, el catolicismo no permite el sexo sin la meta de procrear, y, por el otro lado, el patriarcado establece que una mujer que se protege con condón es promiscua. Su creencia de que ser mujer era un “maleficio”, y su expectativa de que los hombres abandonan a sus mujeres para que ellas críen a los hijos solas, hacen que Karen ya no crea en la liberación femenina advocada en *Me amo*. Al contrario de vivir independientemente y desarrollar su mente, Karen tiene que criar a su hijo y trabajar como esteticista, cumpliendo así la expectativa de su madre de que su belleza sería “la mejor manera de salir de pobre” (Escobar 34). La transformación de Karen muestra que eventos como el embarazo no planeado le quitan el poder a las mujeres y, en combinación con la ideología sexista, dan como resultado que las feministas vuelvan a obedecer los papeles de género.

Cuatro años más tarde, estos mismos factores – un evento adverso y la ideología sexista – transforman a Karen en alguien aún menos capaz de autodeterminación. Ocurre cuando su casero la viola en presencia de su esposa. La esposa del casero no consuela a Karen, ni la dirige a un terapeuta, ni aboga por justicia, sino que protege a su marido y manda a Karen a ducharse para quitarse “la vergüenza de adentro” (Escobar 106). Pronto Karen adopta la misma actitud sexista; cuando le cuenta el evento a Claire, se culpa a sí misma por llevar ropa ajustada y vivir sola. Muestra que es muy fácil que los demás, incluso los desconocidos, refuercen la ideología

machista. Esta ideología permite la violencia de género porque cuando las mujeres toman responsabilidad de ser violadas, los hombres no son castigados. Además, resulta que Karen es cada vez más vulnerable porque la reducción de su autodeterminación inicia su enfermedad mental. Empieza a practicar comportamientos sexuales peligrosos y autolesión para destruirse a sí misma (Fuentes 216). Ahora que el embarazo, la violación y el machismo la han hecho tan vulnerable, no puede defender sus derechos.

En los casos de Lucía, Karen y Sabrina, vemos la tendencia a poner toda la responsabilidad y la culpa en las mujeres y a excusar a los hombres. Lucía, por ejemplo, justifica a Eduardo por ser infiel y tomar crédito por los libros que ella ha escrito, diciendo que “no fue un mal hombre.” Más bien, tuvo una niñez difícil y “tuvo que aprender a blindarse, a protegerse de la gente” (Escobar 52). Por su lado, Karen y su madre aceptan el deber femenino de criar a los niños, mientras que los padres los abandonan. La sociedad expresa una permisividad para los hombres para preñar a las mujeres que no son sus esposas y abandonar a los hijos, pero demanda que las mujeres tomen toda la responsabilidad de criar a los hijos como “castigo por su transgresión” de no ser puras (Fuentes 218). Es decir, los dos tienen relaciones, pero solamente la mujer tiene que pagar las consecuencias. Esta actitud social se expresa en la novela en la expresión de Yolanda Valdés, la madre de Karen, “Los varones hacen lo que les da la gana, en cambio las hembras hacemos lo que nos toca” (86). En el caso de Sabrina, el sentimiento de culpabilidad es muy fuerte, aunque ella no tiene control de la situación. Su último pensamiento antes de morir es que la situación es su culpa porque no llegó a conocer bien a su novio Luis Armando antes de venir con él al hotel. Aunque es cierto que toma una decisión ingenua, el sentirse culpable de ser violada indica que ella también ha adoptado la ideología patriarcal.

Este doble estándar para las mujeres versus los hombres se debe a los conceptos de marianismo y machismo. Según Dhondt, el marianismo es el ideal de la mujer que es madre, pero al mismo tiempo es pura. En contraste, el machismo es el ideal del hombre como proveedor para la familia, sin el precepto de ser virgen (63). Es más, la pureza en los hombres equivaldría a una falta de hombría. Por eso, las expectativas moralistas son mucho más fuertes sobre las mujeres que sobre los hombres. Fuentes propone que, entre los personajes de la novela, el estatus social de las mujeres depende de la percepción de ellas como seres morales. Según la estudiosa, para hacer cumplir la moralidad, y perpetuar el patriarcado, “la élite política” trata de proteger a las mujeres que siguen el modelo tradicional de lo que la antropóloga Marcela Lagarde llama “madresposa” a través del “sexismo benévolo” (Lagarde) (Fuentes 210). Esta élite de políticos conservadores basa su ideología en la defensa de valores coloniales, como limitar los derechos sexuales y reproductivos (Fuentes 209). Entonces, la política está en connivencia con el patriarcado, y su “sexismo benévolo” es un daño institucionalizado que oprime a la mujer.

Como el “sexismo benévolo” requiere la dominación de los hombres sobre las mujeres, uno de sus efectos más visibles es la obediencia excesiva. En la novela, cuando Claire se encuentra con una de sus pacientes, quien es esposa del ministro, el político insiste en ir a la terapia con ella porque según él: “las inquietudes de mi mujer son también las mías” (134). Aunque parece que le importan las preocupaciones de su esposa, en realidad previene que ella hable con la terapeuta sin reservas. Lo peor es que la esposa no dice nada para defenderse a sí misma. Ha sido entrenada para obedecerle (Fuentes 211). Vemos comportamientos similares en Sabrina y Lucía. Durante la violación de Sabrina, por ejemplo, uno de los factores que le impide tratar de resistirse,

en adición al miedo y al dolor, es la “costumbre suya de obedecer, de agradar, de nunca contrariar” (Escobar 122). Su entrenamiento de sumisión previene que trate de protegerse a sí misma del asesinato. Por su lado, la subyugación de Lucía consistía en la abnegación de sus propios intereses para apoyarlo. La única desobediencia que Lucía se permite es negarle el sexo a su exmarido, quien la busca a pesar de que no viven juntos hace mucho tiempo. Claire asegura que, para Lucía “la felicidad consistía en la negación de los propios deseos, la renuncia a [sí] misma e incluso el castigo” (51). Esta actitud sigue el ideal del marianismo de una mujer sumisa y abnegada, pero hace que las mujeres sean demasiado obedientes para defenderse a sí mismas cuando el sexismo no es “benévolo” sino peligroso.

Karen y Sabrina son especialmente vulnerables debido a su raza y edad, respectivamente. Fuentes explica que, como Karen es indígena y afrodescendiente, es considerada exótica, promiscua y sexualmente disponible pero también pasiva. Este estereotipo la hace más vulnerable a los hombres. Mientras tanto, Sabrina cabe dentro de la fantasía de “la mujer-niña-macho”, en lo cual un hombre hiper-masculino y viril viola a una niña virginal y dócil (Fuentes 219). Dado que Luis Armando verifica que ella es virgen y demanda que se depile antes de “coronarla”, es probable que la juventud e inocencia percibida de Sabrina sean los rasgos que lo atraen a ella. Ricci añade dos factores más que convierten la violencia en una fantasía para Luis Armando: primero, que la violencia sexual reafirma su poder como hombre, y segundo, que tomar la virginidad de Sabrina y consecuentemente reducir su percibida pureza le dan aún más poder (Ricci 151-152). Por eso, ser afrodescendiente, en el caso de Karen, y ser joven y virgen, para Sabrina, hace más factible que sean víctimas de la violencia de género.

Otro factor predominante en la novela que contribuye a la vulnerabilidad de las mujeres es la falta de solidaridad entre ellas. Como el salón de belleza es uno de los únicos lugares donde exclusivamente hay mujeres, uno anticiparía que fuera un sitio donde las mujeres pudieran unirse para defender sus derechos. Sin embargo, las divisiones de raza y clase previenen esto (Fuentes 214). Por ejemplo, cuando Doña Karen, una presentadora de televisión, viene al salón de belleza, se siente incómoda llamando a la estetista por su propio nombre porque eso las haría iguales. Para reforzar la brecha social entre las dos, le da a Karen Valdés, la estetista, el apodo de “Pocahontas”, citando sus rasgos supuestamente indígenas – su “pelo negro”, “ojos almendrados” y “boquita grande”, y la despide con “el saludo de un indio de película gringa” (68). Esta interacción no solo es un ataque racista contra Karen, que es afrodescendiente con posible ascendencia indígena, sino también una humillación pública, ya que lo hace en frente de todas en el salón de belleza. Hay un malentendido por parte de la clase trabajadora también; Karen cree que “a los ricos, varón o hembra, les va igual de bien. O no igual, pero casi” (89). Con su triple marginalidad como mujer, pobre y negra, no cree que los privilegiados sufran, pero sabemos por la violación de Sabrina que incluso las mujeres blancas y de clase alta son víctimas del patriarcado. Sin embargo, la falta de respeto por parte de las clientas y la creencia de las empleadas de que las ricas no experimentan el sexismo previenen que las dos clases se unan para defender sus derechos como mujeres. La clase trabajadora tampoco va a encontrar apoyo entre sí; cuando Susana, otra empleada en el salón de belleza, ofrece ser amiga de Karen, se refiere a las otras empleadas como “gatas envidiosas” (Escobar 62). Esta actitud muestra que las mujeres no se ven a sí mismas como un género

unido, sino como individuos que compiten por la popularidad, la belleza, el dinero o lo que sea (Fuentes 214). Y cuando las mujeres están divididas, son más vulnerables.

Por el contrario, los hombres son más poderosos debido a su solidaridad. Por ejemplo, mientras que Sabrina enfrenta a Luis Armando sola, él tiene la complicidad de su padre quien es congresista y de Eduardo Ramelli. Aun después a drogar, violar y matar a una chica inocente, llama a su padre, que lo consuela y le dice que no hay de qué preocuparse ya que Ramelli “se encargaría”. Entonces Ramelli coordina el retraso de la autopsia que comprobaría que Sabrina fue violada. Mientras que las mujeres no pueden apoyarse entre sí, incluso en los casos de violación, los hombres son cómplices en los actos más horribles. Es más, como observa Ricci, la tradición entre los hombres de pertenencia, lealtad y fraternidad clasifica a las mujeres como “una otredad intrusa” (Ricci 150).

Las actitudes y acciones de Claire revelan que ella misma es cómplice en el sistema patriarcal. Desde la primera página, critica a las mujeres que tratan de conformar a las expectativas de belleza: odia sus “cabelleras falsamente rubias” y sus “voces chillonas”, entre otras cosas, y las compara a prostitutas o travestis (Escobar 1). Juzga a Karen por su liberación sexual durante la adolescencia, comentando que el libro *Me amo* la distraía “con los argumentos de un libro sustentado en el hedonismo” (37). Luego, acusa a Karen de matar a Eduardo Ramelli, John Toll y Sabrina Guzmán y se refiere a ella como “una puta viciada por la ambición hasta el punto de ser capaz de matar por dinero” (271). Esta acusación refuerza el estereotipo de que las prostitutas son criminales, sugiriendo una asociación entre la pobreza y la feminidad con el crimen (Dhondt 79). Cuando graba la confesión de Karen, Claire hace parte del sistema patriarcal que lleva a Karen a la cárcel y mata a Sabrina (Fuentes 216). Aunque Fuentes

propone que Claire cuenta la historia para revelar la verdad (223), Ricci arguye que su actitud hacia Karen durante la narración es problemática. Narra la historia desde una perspectiva emancipadora, y al mismo tiempo la sexualiza, diciendo, “[F]ui su presa y no supe verlo porque Karen tiene ese poder, ella lo sabe, su belleza es un arma.” Cuando se da cuenta de que cometió un error, no trabaja activamente para rescatar a Karen, sino que se va a Francia, alejándose de la situación (Ricci 157). Así incluso su escritura, con que Claire intenta compensar sus errores, revela su implicación en el patriarcado.

Mientras tanto, a Karen le llaman la atención los síntomas del patriarcado, pero su estatus social no le permite cambiar nada. Observa, por ejemplo, que las clientas que vienen al salón para la depilación siempre lo hacen para complacer a un novio, esposo o amante – un indicio preocupante de la sexualización de los cuerpos prepúberes – pero tiene que ofrecer el servicio para su trabajo. Igualmente, nota que el peso de Rosario Trujillo ya es demasiado bajo, pero, como empleada, no es su papel oponerse al tratamiento adelgazante de su clienta. Además, durante la primera visita de Claire, se refiere al pelo liso como “parte imprescindible de la feminidad” (Escobar 18), aunque antes solía abogar por tener el pelo natural, porque después de justificar su pelo crespo tantas veces, se dio cuenta de que no podía cambiar la expectativa de belleza. Como una mujer negra de clase baja, tiene mucho menos poder que alguien como Claire para cambiar la sociedad.

Como vemos en el artículo de Reindert Dhondt, estudiosos también han evaluado la relación de la belleza en sí con la violencia. Por un lado, la belleza es un símbolo nacional que se presenta como de la bondad para contrastar con la violencia en el país. Por otro, la belleza y la violencia van de la mano debido a la idealización de ambas en la sociedad. Se puede ver, por ejemplo, la presencia simultánea de la

violencia y la sexualización de las mujeres en la novela negra clásica (64-66). La belleza también puede contribuir a la violencia: por ejemplo, la idealización de la belleza europea contribuye a la percepción de Karen como inferior (73). Pero esta violencia es casi invisible porque es el estado normal, es el sistema. Viene de valores culturales que no nos llaman la atención porque son comunes (68).

Una evaluación del estado actual de Colombia revela que el patriarcado descrito en la novela existe en la realidad. Según la Organización de Salud Mundial, 29.8% de las mujeres en regiones de ingreso bajo y medio en las Américas reportan la violencia física y/o sexual por una pareja, y 10.7% reportan la violencia sexual no cometida por una pareja. Por eso, la frecuencia de violación en la novela es similar a la de la sociedad actual de Colombia. Lo interesante es que las tasas son similares en el resto del mundo: las tasas de violencia cometida por una pareja oscilan entre 23.2% en las regiones de ingreso alto a 37.7% en Asia sureste, y las tasas de violencia cometida no cometida por una pareja oscilan entre 5.2% en Europa y 12.6% en las regiones de ingreso alto (World Health Organization 17-19). Igualmente, la investigación de Laura Rueda sobre la violencia psicológica en Colombia muestra que en la realidad las mujeres experimentan el mismo “sexismo benévolo” del que da cuenta la novela de Escobar. Un cuarto de las mujeres encuestadas reportó comportamientos como no incluir a la mujer en decisiones importantes y amenazar con abandonarla o quitarle el apoyo económico (173-175). El primer ejemplo nos recuerda al ministro que se hace cargo de la terapia de su esposa, y los otros dos, del abandono de Karen y su madre por los padres de sus hijos. Así las estadísticas muestran que las violaciones y otros ejemplos del sexismo en la novela representan la realidad para las mujeres no solo en Colombia sino en todo el mundo.

La casa de la belleza nos muestra los ingredientes de la violencia de género: la reproducción social de las ideas sexistas, como las que Karen aprende de su madre y de la esposa del casero que la viola; la expectativa para las mujeres de aceptar responsabilidad y para los hombres de evitarla; el “sexismo benévolo” que les quita agencia a las mujeres; las fantasías sobre ciertos tipos de mujeres que hace la violación deseable;

las divisiones racistas y clasistas entre las mujeres; la fraternidad de los hombres; la complicidad de las mujeres en el patriarcado; y la normalización de violencia. Sobre todo, la novela nos muestra que la violencia de género no solo es un problema de unas mujeres aisladas en Colombia, sino el problema de todas nuestras madres, hijas, hermanas y amigas.

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The Story of Understanding

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Abstract

This paper is an exploration of the role of doubt and sensations in the development of an understanding of an object. Inspired by Charles Sanders Peirce, Martin Heidegger, and Hans-Georg Gadamer, I begin by arguing that understanding is a circular process that begins with a pre-understanding that is then refuted by the intended or inferred as-structure of an object. The belief found to settle the doubt that comes from such a refutation is one's understanding of said object as that object. In the second part of this paper, I explore a method to harness this circular process to facilitate a comprehensive understanding of an object as that object.

Introduction

A story is often a description of the relationship of some character(s) to some other character(s). The author of the story provides meaning to each character by bestowing upon them a role within the world, that is, a part which helps the story become a tale worth telling. In a similar manner, objects are characters in the story of understanding the world around oneself. Much like the characters in a traditional story, objects as such fulfil a role designated by an 'author' who understands his objects as well as those of others through the circular process of understanding.

This paper is an argument for a method of harnessing this process as a means to form an understanding of an object. To this end, I bring a few philosophers into conversation with one another, namely, Charles Sanders Peirce, Martin Heidegger, and Hans-Georg Gadamer. Peirce serves to introduce doubt and its role in the motivation of thought into the pursuit of belief. Despite the power of his ideas, he does not sufficiently explain the process by which thought obtains an understanding. For that,

I turn to Gadamer, who defends a sound and magnificent art of understanding, namely, the hermeneutic circle. In order to better understand Gadamer's position, I bring in Heidegger to articulate the as-structure of an object and one's fore-understanding concerning said object. Although Gadamer provides the framework for the circular process of understanding, it is doubt, in the Peircean sense, that motivates thought to go through the circular process to acquire an understanding of an object as that object. In other words, doubt leads to an understanding. Finally, I argue that the circular process of understanding, with the assistance of what I call the 'how' and 'why' questions, is the method one should use to obtain an understanding of an object.

Part I: Understanding an Object

Peirce

According to Peirce,

[d]oubt is an uneasy and dissatisfied state from which we struggle to free ourselves and pass into a belief . . .

The feeling of believing is a more or less sure indication of there being established in our nature some habit which will determine our actions.

Doubt never has such an effect.¹

Simply put, a belief is thought's attempt to settle doubt: the lack of any thought that can inspire action. In doubt, one has an 'uneasy and dissatisfied feeling' and may find oneself unable to form any thoughts on the matter that raised the doubt. This mental inaction causes thought to begin "a struggle to attain a state of belief," that is, a "calm and satisfactory state."²

Furthermore, ". . . the action of thought is excited by the irritation of doubt, and ceases when belief is attained; so, the production of belief is the sole function of thought."³ The irritation of doubt causes the action of thought which is a struggle that aims to settle doubt into belief. Once a belief is obtained, thought no longer struggles and so it becomes 'motionless,' so to speak. This implies that thought's sole purpose is the formation of beliefs that aim to settle the irritation of doubt. As Peirce eloquently puts it, "[t]hought in action has for its only possible motive the attainment of thought at rest; and whatever does not refer to belief is no part of the thought itself."⁴

Having found a belief that works, "we cling tenaciously, not merely to believing, but to believing just what we do believe."⁵ Whatever belief can free us from the unease of doubt is one we may adopt and be reluctant to let go to avoid the feelings that come with doubt once more. These feelings are like the pain of a headache. The pain, a symptom of the problem, can be alleviated with pain killers. As a result, they allow one to go on with one's day as if nothing were the matter. However, the problem that caused the headache to

begin with is still there. In other words, there is a *reality*⁶ about one's headache that is independent of whether one feels any symptoms indicating the issue. As an example, suppose I was faced with a food that smelt bad to me, but my friends urged me to try it. Here, a doubt could be raised in respect to whether I should trust my negative internal reaction to the smell or my friend's judgement.⁷ If a belief is found and, say, I trust my friends' claim that the food is worth the try, I would no longer be in doubt since I would have decided to trust my friends and take a bite. Just like a pain killer, so long as this belief takes away the symptoms of doubt, I will not be disturbed by the irritation of indecision, at least momentarily.

To demonstrate the point that many such beliefs can be formed, consider the following scenarios. If one of my friends had suddenly passed out, a fire had started, or any sufficiently dramatic event had occurred, a belief concerning whether to give the decision any attention would be found, that is, I would have formed the belief that a decision about the food is irrelevant. This belief would be sufficient to remove the *feeling* of doubt concerning whom to trust. However, the source of the doubt would remain unresolved. This implies that such a doubt could show up at some point in my life. It is worth noting that to Peirce, the absolute resolution of doubt is better than the temporary alleviation of the feeling of doubt since said doubt will no longer rise again. In this way, one would possess an understanding of that which occasioned the doubt. Only by taking a bite of the food can I truly resolve my hesitancy about trusting my nose or my friends for I would form a belief grounded in *sensations* that come from reality.

1 *The Fixation of Belief*, 121.

2 *The Fixation of Belief*, 121.

3 *How to Make Ideas Clear*, 289.

4 *How to Make Ideas Clear*, 291.

5 *Fixation of Belief*, 121.

6 *How to Make Ideas Clear*, 298.

7 It should be noted, here, that the doubt is not in respect to the taste of the food, but rather to the source of authority in deciding to try a bite of the food. In other words, I am in doubt of whether to trust my nose or my friends to make a decision.

Sensations are those elements of consciousness that “are completely present at every instant, so long as they last;”⁸ be it a smell, sight, sound, or touch, there is always something being sensed. On the other hand, like the air in between musical notes, thoughts “are [mental] actions having beginning, middle, and end, and consist in the succession of sensations which flow through the mind.”⁹ In other words, thoughts are those elements of consciousness that depend on sensations and are formed in response to them. As an example, take a moment to place your hands on any surface near you and notice the thoughts that arise. The existence of the pressure you feel in your hands is a ceaseless sensation. Placing your hands elsewhere would only change the quality of the pressure rather than the existence of said pressure. Although the particular feeling one senses changes over time, sensation itself is ceaseless, so long as one lives. Now, recall your thoughts as you felt. What did you first think of as you began to feel? What are you thinking of now? The thoughts, to Peirce, are certainly not the same. The first thought rose up in your mind, then went away, to let another thought appear in your mind. Hence, unlike sensations, thoughts come and go. These prolonged sensations and short-lived thoughts are both needed to understand *reality* in the Peircean sense.

According to Peirce, “. . . we may define the real as that whose characters are independent of what anybody may think them to be.”¹⁰ Real things are those phenomena that are independent from one’s thoughts. This implies that sensations are a part of reality whilst the interpretation of those sensations may either be fictional or truthful. A fiction is an arrangement of sensations in one’s imagination which is completely

dependent on the thinker. Such “[a] figment is a product of somebody’s imagination; it has such characters as his thought impresses upon it.”¹¹ Although the existence of the imagination is a real phenomenon, the elements of the imagination are just expressions of the thinker’s thoughts. Since, to Peirce, the source of one’s doubt lies within sensations and the feeling of being in doubt lies within thoughts, it follows that the feeling can be momentarily alleviated by many beliefs, fictional or otherwise, but the source of doubt can only be resolved by engaging reality.

Response to Peirce

Peirce has, in my opinion, accurately described *why* beliefs are formed and the stimulus needed for thought to begin the struggle for a belief. Being in a state of doubt spurs thought into action to find a belief that will settle that doubt. However, he seems to have overlooked the details of *how* thought forms a belief.

Being more interested in a method that effectively and efficiently produces true beliefs, Peirce answers the ‘how question’ with a brief description:

Images pass rapidly through consciousness, one incessantly melting into another, until at last, when all is over—it may be in a fraction of a second, in an hour, or after long years—we find ourselves decided as to how we should act under such circumstances as those which occasioned our hesitation. In other words, we have attained a belief.¹²

Although brief for the sake of his arguments, the details of the interaction of thought with other mental constituents in the formation of belief is of great importance when thinking of ways to ensure

8 *How to Make Ideas Clear*, 290.

9 *How to Make Ideas Clear*, 290.

10 *How to Make Ideas Clear*, 298.

11 *How to Make Ideas Clear*, 298.

12 *How to Make Ideas Clear*, 290.

the formation of a truth oriented belief, namely, an understanding.

In need of a deeper dive into the formation of such beliefs, I turn my attention to Gadamer's thoughts on understanding.

Gadamer In Consideration of Heidegger

Similar to Peirce, a confrontation of one's understanding from the engagement of an object or, for Gadamer, a text must occur for the process of belief formation or, in his case, understanding to begin. In other words, Gadamer maintains that understanding follows the hermeneutic circle.¹³ Initially, one has a "pre-understanding"¹⁴ of a text, that is, certain *prejudices* and *fore-structures*¹⁵ – fore-having, fore-sight, and fore-conception – one uses to make sense of a text. Then, upon being confronted by an unfamiliarity within the text, one's pre-understanding thereof is challenged which leads to the formulation of a new and so more comprehensive understanding of the text. This new understanding would then become one's new pre-understanding of the text. Here, the circle begins anew.

Since the fore-structures of understanding depend on Heidegger's understanding of an object *as* that object, that is, the *as-structure*¹⁶ of an object, I begin this section by investigating said *as-structure*. Heidegger understands the "world as ready-at-hand" which means that an object has a significance with respect to the interpretation one has of the function of the object.¹⁷ In other words, the meaning of an object is *in-order-to*¹⁸ do something. For example, a pen *as* a pen can be interpreted as *in-order-to* write by hand. Also, a bicycle as a bicycle can be interpreted as *in-order-to* take a person from place to place. In general,

the *as-structure* of an object is "the manner or purpose for which" one makes use of an object.¹⁹ The significance of an object *as* that object depends on one's "articulating or emphasizing the *in-order-to* of a particular object, which is to see the object *as* that object."²⁰ In other words, the meaning of an object is the interpretation of the object *as* that object. With this being established, I move one to Heidegger's *three* fore-structures.

Fore-having is the "prior awareness as to the function and purpose of the parts" of an object "for the *as-structure* to become explicit."²¹ One possesses a pre-understanding of the parts of an object which allow these parts to be made manifest to consciousness if needed. In the case of a pen, one ignores the ink, the tip, the gel, and so on because one treats the pen as a means to express a message rather than a collection of separate objects. However, pressing down on the button that brings out the tip demonstrates that one possesses a pre-understanding of the different parts that make the pen work. This pre-understanding is one's 'fore-having.'

The ability to be able to turn one's attention to a particular part of an object for some reason is *fore-sight*.²² Only when a significant event occurs is attention drawn away from the object as said object and towards the parts which are potential causes of the event. For example, if a toaster does not heat up when set in action, attention turns away from 'making toast' to the different parts of the machine, "which are based on [one's] knowledge of how the [toaster] operates."²³ This "isolation of the possible problem area is called "fore-sight" by Heidegger."²⁴

The interpretation of an object that makes the *as-structure* of the object explicit to consciousness

13 *The Hermeneutic Circle*, 232.

14 *Making Space for Knowing*, 70.

15 *A Commentary on Heidegger's Being and Time*, 95-97.

16 *A Commentary on Heidegger's Being and Time*, 94-95.

17 *A Commentary on Heidegger's Being and Time*, 95.

18 *A Commentary on Heidegger's Being and Time*, 95.

19 *A Commentary on Heidegger's Being and Time*, 95.

20 *A Commentary on Heidegger's Being and Time*, 95.

21 *A Commentary on Heidegger's Being and Time*, 96.

22 *A Commentary on Heidegger's Being and Time*, 97.

23 *A Commentary on Heidegger's Being and Time*, 96.

24 *A Commentary on Heidegger's Being and Time*, 97.

is one's fore-conception. "That is, the as-structure is, in the fore-conception, made explicit."²⁵ If a toaster does not heat the bread then the "attitude or disposition" that leads one to interpret the unplugged cable as the source of the problem would be fore-conception.²⁶ If it were plugged in and the toaster still did not work, then one might think that the cable is not functioning *as* a cable because some wire, a component of the cable, is not functioning *as* it should. Here, the as-structure of the cable and the wire are being made explicit to consciousness. In this way, the fore-conception is the pre-understanding of an object that makes the as-structure of that object explicit.²⁷

The fore-structures in addition to what Gadamer calls prejudices forms the totality of the pre-understanding of an object. A prejudice to Gadamer is a judgement cast on an object, text, or practice prior to the engagement of a particular matter. For example, "the fundamental prejudice of the Enlightenment is the prejudice against prejudice itself, which denies tradition its power."²⁸ In the attempt to seek the truth, the Enlightenment established as a self-evident truth that no prejudices be allowed in the pursuit of knowledge. This self-evident truth is a judgement made prior to the engagement with the world. Hence, it is a prejudice on the manner in which one ought to investigate the world.

Prejudices, in addition to fore-structures, create an anticipatory understanding of something yet to be engaged. In the case of a text, "[one] projects a meaning for the text as a whole as soon as some initial meaning emerges in the text."²⁹ That is to say, one has a *fore-projection* of the text. The initial understanding of the words, phrases, and paragraphs *as* these elements is fore-having.

The initial perspective³⁰ that allows one to engage the particular parts of the text is fore-sight. Finally, the initial interpretation of the text *as* a text, the individual parts (words, phrases, paragraphs, etc.) *as* those parts is fore-conception. The totality of these fore-projections constitutes one's overall understanding of the text before engaging the text. To Gadamer, this fore-projection works in conjunction to one's prejudices in the hermeneutic circle when attempting to understand a text.³¹

To begin the hermeneutic circle, one "must be on guard against arbitrary fancies and the limitations imposed by imperceptible habits of thought" which are one's prejudices.³² These prejudices guide the interpretation of a text and so are cause for a misunderstanding of the text. When reading a word, one naturally interprets the word in the context in which it was originally learned. By not making the initial understanding of the text conscious, one fails to grasp the intended message of the text. Hence, one must "be aware of one's own [prejudices] so that the text can present itself in all its otherness and thus assert its own truth against one's own fore-meanings."³³

Eventually, if the text is sufficiently foreign, one will be "pulled up short by the text."³⁴ That is to say, there will be a word, phrase, or notion that challenges one's pre-understanding of the text. This will be cause for pause and reconsideration of one's fore-projections and prejudices. Finally, one will form an understanding of the text that allows engagement without pause. This new understanding will then be a new set of fore-projections and prejudices upon engaging the text once more. Here, the circle begins anew.

25 *A Commentary on Heidegger's Being and Time*, 97.

26 *A Commentary on Heidegger's Being and Time*, 97.

27 *A Commentary on Heidegger's Being and Time*, 97.

28 *The Hermeneutic Circle*, 235.

29 *The Hermeneutic Circle*, 233.

30 *Making Space for Knowing*, 70.

31 *The Hermeneutic Circle*, 235.

32 *The Hermeneutic Circle*, 233.

33 *The Hermeneutic Circle*, 234.

34 *The Hermeneutic Circle*, 233.

Response to Gadamer and Heidegger in Consideration of Peirce

Gadamer, with the assistance of Heidegger, has provided the framework that I shall use to describe the way thoughts, in the Peircean sense, go from doubt to an understanding. In particular, one begins with a pre-understanding of an object, said pre-understanding is then refuted by a new experience which creates doubt and so leads thought to the production of a belief. Said belief will be one's new understanding of the object or objects in general. This new understanding will in turn be the pre-understanding when engaging objects anew. Here, *the circular process of understanding* has the potential to begin again. A reader may think that this is the hermeneutic circle with Peirce's thought³⁵ added in. This is not so since the hermeneutic circle is a method more so than a process of understanding since it requires one to 'be aware of one's own prejudices,' as quoted above. I do not disagree with such a requirement; however, at this point I am not interested in the most effective process of understanding. Instead, I am concerned with the process thought goes through to obtain an understanding of an object. Hence, to prevent potential confusion I refrain from using the phrase 'hermeneutic circle.' Before describing the step by step process, I begin by explaining certain concepts, namely, meaningful objects, inferences from sensations, and prejudices concerning an object.

Meaningful Objects. Although Gadamer's work is in reference to a written text, a circular process of understanding also holds for the understanding of an object. As mentioned above, Heidegger's description of the significance of objects has to do with the meaning of an object

as a text.³⁶ This description of an object allows for one object to be delineated from another object. A car as a car is not a bottle as a bottle because the function, or meaning, of the former is not the same as the latter. Consequently, all objects as such can only be viewed as meaningful since an object is only identifiable as such when a function is assigned to it.

One might contest this claim and argue that an object can be identified without reference to function, and so meaning, but rather to sensations in the Peircean sense. One might go on to say that an object viewed as a distinct collection of sensations implies that said object is meaningless. For example, the sight and touch of the keys on which one types are sensations that are distinct from the sight of black and touch of softness one receives from a couch. Surely, the keys and the couch are identifiable by the distinct sensations received from them rather than their functions. Furthermore, as Peirce mentions, these sensations are independent of what one thinks of them. The fact that one *sees* what one sees and *feels* what one feels is independent of any thought. This further emphasizes the point that objects understood as distinct collections of sensations are meaningless. Although one could question the integrity of the interpretation of these sensations as 'keys and a couch,' the sensations are independent of the interpretation of them as meaningful objects since they are a part of reality, in the Peircean sense. Hence, objects as a collection of sensations are meaningless.

This can appear quite convincing; however, the observation that one set of sensations is distinct from another undermines the very position being argued for. When this past

³⁶ Here, a text includes any object that is 'readable,' that is, an object that presents a meaning that can be interpreted such as a garbage can or a pen. Both of these objects have, as Heidegger would endorse, a significance with respect to the interpretation of their as-structures.

³⁵ No pun intended, but much appreciated.

interlocutor senses, he categorizes his sensations in relation to certain functions. The keys as such are only so because he is typing on them. The couch as such is only so because he is sitting on it. Neither one of these objects exists as such within the sensations themselves.³⁷ Rather, the object is a projection of meaning by the interpreter's thoughts onto sensations. In other words, the delineation of one object from another one is in respect to the significance³⁸ each object has in the thoughts of the interpreter of the sensations. Although it is true that sensations are independent of the thinker, it is the thinker that organizes sensations into an object by bestowing a function to a group of sensations. Consequently, raw sensations are without meaning but all objects are meaningful. Without such objects, we are left with the ceaseless totality of all sensations. This is certainly not the world of identifiable objects and so no discourse concerning distinct entities could be had.³⁹ Instead, to discuss objects is to discuss the different functions we infer from and project upon sensations.

Inferences from Sensations. The inference comes from one's interpretation of what the as-structure of an object should be given the sensations received. From the discussion above, it can be understood that an object as such only comes into existence within the thought of the interpreter. This is so since an object is meaningful, and meaning is dependent on thought. This assigned meaning is the function one assigns a collection of sensations. In this way, when one encounters a new object there is an act of 'authoring' on the part of the interpreter.

37 The descriptions of colors and pressures felt would be associated to the function of the object rather than descriptive of what the object is.

38 That is, the interpretation of the as-structure of the object in one's thoughts.

39 Perhaps such a silence would prove to ultimately be the most appropriate way to be truthful in our speech.

An 'author' of an object would be the person that either intends to arrange separate as-structures into a singular as-structure or infers an as-structure from a particular collection of sensations. For the former, consider a ball point pen. The spring, the ink barrel, the gel, and the like all come together and are intended to be understood as a tool to write. In this way, the spring *as* a spring, the ink as ink, and the gel *as* gel disappear to become the intended pen *as* a pen. This intended 'message' can be understood by one with an understanding that has adapted itself to a culture, community, and tradition where a pen exists as an object, that is to say, where the as-structure of a certain object is identified as being a tool to write with ink that is stored within itself.⁴⁰ In this way, similarly to a text, one 'reads' an object as a means to understand the message of the author, he who organizes separate as-structures in such a way that a person within his community would recognize not only a collection of objects, but a singular object with an intended meaning.⁴¹

In the case of inferring an as-structure, the author's intuition indicates to him a potential function that a collection of sensations may serve. In this way, he *infers* the function of the collection of sensations. This inference then becomes, to him, an object. From then onward, the object would have an *intended* as-structure which may or may not be inferred or 'read' by others.

40 It is important to note that there are various types of pens which are reasonably understood as distinct that share the as-structure I have just defined. I simply use this example for the purposes of my paper, but I do recognize the importance of describing the rich history and context that should be provided for an accurate description of the as-structure of an object.

41 To better understand this idea, consider a word. Presumably, the distinct letters that make up 'word,' disappear and are understood as a singular object, namely, a *word*. In this way, objects can come together and disappear into a larger object. As another example, consider the parts of a pen versus the actual pen.

Prejudices Concerning an Object. The inference one makes to 'author' an object or the meaning of an object one has already inherited can be understood as prejudices concerning the function of the object. In other words, thought can inform one's conclusion about the as-structure of an object prior to future engagement. For example, I can presume that bottles can only be as such if they are used to drink a liquid of some sort. However, this prejudice can be confronted by a change in or an additional use for a bottle. For example, one may use a bottle as such to be a container of small stones and pebbles. Being confronted by such a foreign use of a bottle would challenge my prejudice of the as-structure of a bottle strictly meaning the consumption of a liquid. As an additional example, I was sitting in a patch of grass by a lake and noticed that some of what appeared to be blades of grass were growing flowers. Here, my long held prejudice that blades of grass as such were unable to produce flowers was challenged.⁴² The examples above serve to indicate that one can have prejudices concerning the meaning of a certain object which implies that one can have prejudices about the as-structure of an object. Consequently, approaching an object, one has a pre-understanding of the object since one has both fore-structures and prejudices in respect to the object.

At a similar point, Gadamer goes on to say that one will be 'pulled up short by the text,' as quoted above, which will initiate the development of understanding. Unlike a text that 'speaks' for itself, so to speak, an object does not always articulate its own intended as-structure. The question then is, how can an object confront the pre-understanding of the object without stating in words something that challenges the prejudices?

In other words, how does one get pulled up short by an object?

The Circular Process of Understanding. The pre-understanding of an object can be confronted by the refutation of the prejudices concerning the as-structure of the object. I shall call this a new experience. Suppose that a pen one 'reads' through the senses is secretly a shocking device someone has planted as a prank. Convinced of one's own pre-understanding of this object as a tool to write, one picks it up and presses down on the button. In doing so, one's nerves and beloved prejudices receive quite the shock! This unanticipated refutation of the pre-understanding of the as-structure of the object would be cause for pause. Here, the Peircean doubt would be raised, and thought will 'spring' into the pursuit of a belief to settle the irritation that has begun. The doubt that thought will attempt to resolve would be concerning the intended as-structure of the pen.

Here, thought would recognize the inconsistency between one's pre-understanding and the intended as-structure of an object inferred from the sensations, in the Peircean sense, received. In the case of the shock pen, one can infer that the intended as-structure of the 'pen' is to be a device that shocks. Since doubt was raised as a result of the engagement of reality, that is, the sensations one received, it follows that thought would settle one's doubt by adjusting the pre-understanding to match the inferred intended as-structure of the object. The reasoning is as follows.

Since the doubt was caused by an unfamiliar sensation, thought has a constraint on what belief could satisfy this irritation. If thought finds a belief that only removes the feeling of doubt, then the source of doubt would not be addressed. Unless one never interacts with the object again, the same doubt could be raised. Thought would need to form a belief that sufficiently corresponds to the present sensations received from the object in order to completely settle the doubt.

42 Whether blades of grass can truly produce flowers depends on the accepted meaning of 'a blade of grass' by the community of people that bestow meaning to this life form.

Since the aim of thought is to settle doubt, as Peirce rightly argues, it follows that this belief, an informed understanding, should eventually be found. Hence, thought will form a belief that would adjust one's pre-understanding to match the inferred intended as-structure of the object. In particular, thought may conclude that this so called 'pen' is actually a pranking device. Such an adapted understanding would be sufficient to cause the object to become familiar and so settle the source of doubt.

In the case one has never encountered such an object, thought will 'author,' as described above, the new object in respect to what one infers the as-structure of the object to be.⁴³ Thought will define the object in such a way as to prevent the object from refuting one's prejudices again. Returning to the example above, one will not think of the object as a tool to write, but surely as something else that sufficiently captures the sensations received so as to prevent doubt from being raised when engaging the object again.

One's newfound understanding of the object will then become a part of a new pre-understanding of objects. Such a pre-understanding will then either be confronted by an unexpected intended as-structure that can be recognized by oneself or a collection of sensations with the potential for an as-structure to be inferred. Here, the process described above repeats in response to doubt and ultimately settles when all possible objects corresponding to said doubt are comprehended.

Part II: Harnessing the Circular

Process of Understanding

As an initial step, similar to the hermeneutic circle, the prejudices concerning an object and the nature of understanding must be made conscious

to the greatest extent possible. This should be done through an attempt to articulate one's beliefs. At any point in the articulation where one is in a possible contradiction or is clueless on how to proceed, doubt shall be raised, and thought will form a belief. Since one is engaging thought, the prejudice(s) which is accepted as the way to make apparent one's beliefs would be invisible to oneself. Surely, many other similarly profound prejudices would not be visible despite their influence on one's perspective. These will remain hidden until some new experience refutes them. Nonetheless, to ensure one can begin understanding an external object, expectations and prejudices must be made conscious to the greatest extent possible.

Doing so will allow for any incompatibilities between thoughts and the intended as-structure of an object to become apparent. Noticing such an incompatibility will cause doubt concerning the comprehensiveness of one's understanding. This doubt will spur thought to find a belief. Since thought's aim is simply the formation of any belief that will remove the feeling of doubt, it is important that once the doubt has been raised, one engages further with the object. Leaving the object after the doubt had been raised will result in susceptibility to a rationalization of the incompatibility as a means to settle the feeling of doubt. Consequently, the 'understanding' of the object will be a fiction rather than a meaningful idea. As mentioned above, this is no way to resolve the source of doubt which is ultimately the source of understanding. Hence, continued engagement with the object is of great importance.

Initially, one should engage an object with one's senses until one achieves a sufficiently comprehensive understanding of the object. Upon first engagement, doubt, in the form of reflexive questioning will rise about each new sensation detected. Thought will promptly answer each question. Since the object is in 'view,' so to speak,

⁴³ In this manner, people bestow meaning onto the world and create the realm of objects, that is, the meaningful organization of sensations.

thought will not be able to concoct a fiction that is independent of the sensations. Although the beliefs it forms may not be ultimately true, they will be justified. Although the perfection of understanding may not occur with this simple engagement, through a sufficient number of cycles of the circular process of understanding described above, one's understanding and the object would seemingly become one in the same. That is to say, one will sufficiently understand the intended as-structure of the object. As a result, there would be no more motivation for thought to uncover potentially hidden worlds⁴⁴ within the object. Since nonintentional engagement through the senses is exhausted, the next step in this method would be the intentional engagement of the object through experimentation and two types of meaningful questions.

The first of these questions is what I call the 'how question,' that is, *how would this object interact with another object?* Before considering this question in depth, I define the source of the possible answers, namely, intuitions. An intuition is any member of the set of all possible arrangements of sensational expectations and prejudices through habits of mind. A sensational expectation, as I define it, is an anticipation of the sensations to be received from an object. According to Peirce "[t]hat which determines us, from given premises, to draw one inference rather than another, is some habit of mind, whether it be constitutional or acquired."⁴⁵ In other words, a habit of mind is either an internal disposition or a learned 'mental behavior' that makes us interpret experiences one way rather than other. These habits constitute the initial understanding of an object since they are thoughts that lead to a response to a stimulus, namely, the sensations from the object. When the how question is posed,

one will naturally have an intuition of a possible answer, that is, one will have an idea of what may occur given one's past experiences, prejudices, and habits of mind.

As a requirement, one must then make the two objects interact in a way that aims to make the intuitions real. If the interaction matches one's intuitions, then the intuitions can be considered part of the understanding of the object and its properties. If, on the other hand, the interaction refutes one's intuitions, then doubt would be raised, and thought would be on the pursuit of an understanding since thought is being motivated by sensations. However, to further ensure thought expands understanding rather than formulates a fiction as a means to preserve one's prejudices during the process of belief formation, one must ask the following question: *why, given sensational expectations and prejudices, did such an interaction occur?* I call this the 'why question.'⁴⁶

The why question will lead thought to directly reconsider expectations and prejudices (for brevity, I use the term 'pre-understanding' to capture both ideas) about the object. Given the arguments presented above, the reader might think that thought would have already done so to begin with. This is not necessarily true because thought could form a fiction that would preserve one's pre-understanding. The 'why question' provides thought with an orientation and boundary to compensate for the lack of present sensation of the interaction just had. The reader might grow suspicious here and claim that I have contradicted myself. Stating that I previously claimed that sensations prevent thought from concocting a fiction, whilst here I claim that thought can concoct a fiction despite the sensations received from the interaction mentioned above. This would be a fair

⁴⁴ These could be the separate objects that are held together in some way to make a singular object.

⁴⁵ *Fixation of Belief*, 120.

⁴⁶ The prejudice involved in the question that interactions happen for a mechanical reason serves as a productive boundary for thought.

charge if I had not been careful to specify that thought, bounded by present sensations, would not formulate a fiction. Once a sensation has passed into memory, it is no longer present and so thought would have no boundary preventing the formulation of a fiction to settle the feeling of doubt. Here, the common saying ‘out of sight, out of mind,’ would take on real force. Since the sensations are ‘out of sight,’ thought may conclude that they should be ‘out of mind.’ As Peirce demonstrated, such a conclusion will only result in a fiction. The ‘why question’ reduces the possibility of a fiction by providing a boundary for belief formation, namely, the memory of past sensations. By placing this memory in the forefront of one’s mind, along with one’s pre-understanding, thought can form an understanding of the interaction observed.

Per the circular process of understanding, this understanding would become one’s new pre-understanding concerning the object. As a next step in the method of obtaining an understanding, one would need to ask a modified ‘how question.’ In particular, one would need to

ask: *how will this object react to other objects given one’s new pre-understanding?* As with the previous ‘how question,’ one will have intuitions about possible answers. Through experimentation, one could sift through each intuition. If the object reacts as expected, then nothing need be done. If the object reacts in a way that refutes all of one’s intuitions about the object, then another ‘why question’ should be asked as a means to orient thought to the formulation of yet an even more comprehensive understanding of the object. Said understanding will be a part of one’s new pre-understanding. Here, the cycle repeats and should continue to the satisfaction of all doubt or for other reasons such as ethical concerns.

The final part of this method would be the articulation of one’s understanding in a way that is understandable to others. This step is important because another perspective can serve as a refutation to the prejudices that are invisible to oneself. However, the details of such a step are beyond the bounds of this paper and so are left for some future date.

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The Chernobyl Nuclear Meltdown and Health Complications Among the Citizens of Pripyat

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Abstract

On April 25, 1986, reactor number 4 in the Chernobyl Nuclear Power Plant near the city Prip'yat went into a catastrophic meltdown. In the aftermath of the atomic disaster, the Soviet government misrepresented the severity of the danger to those who lived in the immediate area near the plant. This paper uses medical studies and firsthand accounts to argue that the meltdown at the Chernobyl Nuclear Power Plant and the delay of government involvement resulted in lifelong negative impacts on the lives and health of Prip'yat citizens and neighboring towns.

Introduction

“Our children are dying. Help!” This plea was heard from many mothers after the deadly meltdown that occurred at Chernobyl reactor-4 in Prip'yat, Ukraine.¹ Once a symbol of power and advancement in energy, the Chernobyl Nuclear Power Plant (CNPP), quickly became the site of lifelong devastating tragedy and a stark reminder of what can occur when scientific discovery meets human error and miscalculations. Additionally, while most tyrannical governments have track records of lying to their people to save face, the Soviet government’s misrepresentation of health complications became egregious, even on the world stage.² As a result, dozens of lives were lost in the early weeks following the meltdown, and

many more were chronically affected, despite reassurance from the Soviets that health risks were minimal to the community. Health has been misreported and ignored by the government before, what is stopping it from happening again? I argue that the meltdown at Chernobyl reactor-4 and the delay of government involvement brought forth lifelong negative impacts on the lives and health of Prip'yat citizens and neighboring towns.

To develop this argument, I will analyze an array of primary and secondary sources pertaining to mental and physical health and the association with Acute Radiation Syndrome (ARS). This information is derived from peer-reviewed journals, personal accounts and interviews, photography and videography, and medical data that dates from the night of the meltdown at the CNPP to the present day. These scientific and personal accounts directly conflict with the reports from the Soviets and show both a decline in

1 Alla Yaroshinskaya, *Chernobyl: the Forbidden Truth*, trans. Julia Sallabank (Lincoln: University of Nebraska Press, 1995).

2 International Atomic Energy Agency. 1988. *Medical Aspects of the Chernobyl Accident*. (IAEA-TECDOC-516). Austria: INIS Clearinghouse. http://inis.iaea.org/collection/NCLCollectionStore/_Public/20/075/20075974.pdf. 9.

health after the meltdown and an increase of general distrust towards the government.³

Historical Background

The rise of nuclear power in the Soviet Union did not reach the level we associate it with today until around the late 1950s. Until this time, the Soviet government predicted that “the country faced no imminent energy crisis, [as] existing hydropower, coal, gas, and oil-fueled plants produced electricity and the ample energy resources available didn’t necessitate a shift to nuclear power.”⁴ This was not just seen in the Soviet Union, but all over the world, energy demand rose and nuclear power became one of the leading contenders to fill the energy gap. Unlike the rest of the world, however, the Soviets handled their nuclear energy in a very

bureaucratic way. While many Western countries used the “free market” as a way to promote nuclear energy, the Soviet bureaucrats made decisions, committed resources, and oversaw the implementation of economic plans concerning the plants.⁵ There is heavy debate over whether Chernobyl was the result of human error, Soviet mismanagement, or reactor design flaw, but a definitive cause has yet to be determined.⁶ To further understand why this question cannot be answered simply, one must look at the events leading up to the meltdown.

The construction of CNPP began in 1977, with all four reactors completed in 1983, only three years prior to the meltdown. It is important to note that this plant’s reactors (and many others throughout the Soviet Union) did not have containment structures. These structures were common in Western power plants as they were “designed to be strong enough to not only survive a serious accident but to also prevent the release of radioactive material during a mishap.”⁷ The Soviets opted to bypass the construction of a concrete containment structure due to the cost and “because the [Soviets] did not think it was essential.” On the evening of April 25, 1986, plant operators entered the control room to run a routine test.⁸ This test proved to be anything but routine. The operators were instructed to test the plant’s power supply in the event that the turbines

3 Svetlana Alexievich, *Voices from Chernobyl*, trans. Keith Gessen (Ireland: Dalkey Archive, 2005); Serhii Plokhyy, *Chernobyl: the History of a Nuclear Catastrophe*, (United States: Hachette Book Group, 2018); Alla Yaroshinskaya, *Chernobyl: the Forbidden Truth*, trans. Julia Sallabank (United States: University of Nebraska Press, 1995).; Volodymyr G. Bebesko, Alexander N. Kovalenko, David A. Belyi, Dimitry A. Bazyka, Anatolij A. Chumak, Victor A. Sushko, and Vasyl M. Gayiday. “Medical Monitoring Results of Survivors with Acute Radiation Syndrome after Chernobyl Disaster.” *International Congress series* 1258 (2003): 115–122. Science Direct.; Maureen Hatch and Elisabeth Cardis. “Somatic Health Effects of Chernobyl: 30 Years On.” *European Journal of Epidemiology* 32, no. 12 (2017): 1047–1054. Springer Link. <https://link.springer.com/content/pdf/10.1007/s10654-017-0303-6.pdf>; Johan M. Havenaar, Evelyn J. Bromet, and Semyon Gluzman. “The 30-year Mental Health Legacy of the Chernobyl Disaster.” *World psychiatry* 15, no. 2 (2016): 181–182. PubMed Central. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911770/>; Evelyn J. Bromet. “Mental Health Consequences of the Chernobyl Disaster.” *Journal of Radiological Protection* 32, no. 1 (2012): N71–N75. IOPScience. <https://iopscience.iop.org/article/10.1088/0952-4746/32/1/N71/pdf>.

4 Sonja D. Schmid, “Envisioning a Nuclear-Powered State,” in *Producing Power: The Pre-Chernobyl History of the Soviet Nuclear Industry*. Inside Technology Series, (Cambridge, Massachusetts: The MIT Press, 2015). <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=e000xna&AN=959724&site=ehost-live&scope=site>. 26.

5 Schmid, “Nuclear-Powered State,” 26.

6 Schmid, “Nuclear-Powered State,” 26. The nuclear catastrophe at Chernobyl triggered public debate over the authority, credibility, and expertise of government officials, planners, and scientists.

7 Thomas Filburn and Stephan Bullard. “Chernobyl Accident,” in *Three Mile Island, Chernobyl and Fukushima*. SpringerLink, (Stockholm: Springer International, 2016), 58. Note: it is presumed that had the Soviets built a containment structure around the Chernobyl reactor, the contamination would have been greatly reduced. This is assumed because containment structures at Fukushima and Three Mile Island (TMI) helped prevent the release of radioactive material.

8 Filburn, “Chernobyl Accident,” 58.

shut off and the generators needed to start up.⁹ At 11:25 p.m., reactor staff began attempting to raise the power level in the reactor, not realizing that the “reactor had already entered the period of xenon poisoning, during which raising the power level is difficult if not impossible.”¹⁰ At 1:23 a.m., a control operator hit the emergency shut-off button and ended the test.¹¹ The operators on duty had removed almost all the control rods from the reactor’s core, leaving the equivalent of eight or nine rods instead of the required fifteen control rods needed in the core at any given time.¹² Because of this mistake, once the operators initiated the automatic shutdown, “more than 200 control rods started inexorably lowering,” causing additional radioactivity to be introduced into the reactor’s core.¹³ By this point, nothing could be done to stop the action, as the system was automated. What followed happened incredibly fast and changed the way the world viewed nuclear power.

Once the control rods were halfway down their path through the reactor’s core, operators in the control room received the first warning of a ten-fold rise in power; the second warning signal came only three seconds later--indicating a one hundred-fold rise in power.¹⁴ The operators on duty claimed to have heard what they described as a sound “resembling a human moan.”¹⁵ This was the sound of the first explosion destroying the reactor, and a second explosion followed,

destroying the reactor building.¹⁶ The result of these explosions was devastating to the biological and environmental aspects of Chernobyl’s satellite city of Pripjat. These explosions caused lethal amounts of graphite to be ejected into the neighboring reactor, reactor-3, and set the rest of the area on fire.¹⁷ At this point, the air, ground, and people around the site of the meltdown were to some degree now contaminated by radiation.

Historiography

It is due to Soviet secrecy and cover-ups that early information on Chernobyl is sparse. However, despite some original worries, I was surprised to find a wealth of information that pertained to the argument: the meltdown at Chernobyl reactor-4 and the delay of government involvement brought forth lifelong negative impacts on the lives and health of Pripjat citizens and neighboring towns. The idea that Chernobyl and its release of radioactivity had negative effects on society is nothing new, and thanks to present-day researchers, one can now evaluate the full impact of the meltdown. One such article, “Clinical Aspects of the Health Disturbances in Chernobyl Nuclear Power Plant Accident Clean-up Workers (liquidators) from Latvia,” published in the journal *Inflammopharmacology*, was written by a group of Ukrainian researchers and functions as an invaluable source for this research, as it looks at data entries of cleanup workers exposed to

9 Sonja D. Schmid. “Chernobyl,” in *Producing Power: The Pre-Chernobyl History of the Soviet Nuclear Industry*. Inside Technology Series, (Cambridge, Massachusetts: The MIT Press, 2015). <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=e000xna&AN=959724&site=ehost-live&scope=site>. 138.

10 Schmid, “Nuclear-Powered State,” 138.

11 Schmid, “Nuclear-Powered State,” 139.

12 Schmid, “Nuclear-Powered State,” 139.

13 Schmid, “Nuclear-Powered State,” 141.

14 Schmid, “Nuclear-Powered State,” 141.

15 Plokhly, *Chernobyl: the History of a Nuclear Catastrophe*, 32.

16 Schmid, “Nuclear-Powered State,” 141. The first explosion was a hydrogen explosion, while the second one was a nuclear explosion. The result of these explosions resulted in the deposition of 100-250 tons of radioactive material (i.e., dust and debris) into the surrounding area. This is around one hundred times more radiation than that of the atom bombs dropped by the Allies on Hiroshima and Nagasaki.

17 Schmid, “Nuclear-Powered State,” 142.

radiation at the time of the cleanup at the Chernobyl Nuclear Power Plant (CNPP).¹⁸

Additionally, “The 30-year Mental Health Legacy of the Chernobyl Disaster,” published in the journal *World Psychiatry*, and “Mental Health Consequences of the Chernobyl Disaster,” published in the *Journal of Radiological Protection*, were valuable finds, as these articles argue that mental health has been the widest public health issue since the Chernobyl nuclear meltdown.¹⁹ Other scholars, such as Thom Davies in “A Visual Geography of Chernobyl: Double Exposure,” take—as he calls it—a “visual approach on an invisible issue,” by using photography to examine life in the shadow of Chernobyl.²⁰ A final portion of scholarship that is critical to the argument regarding health after Chernobyl deals with the long-term effects of ARS. This is some of the most easily accessed scholarship when looking at Chernobyl health effects. Works such as Maureen Hatch and Elisabeth Cardis’s article entitled “Somatic Health Effects of Chernobyl: 30 Years On” and Volodymyr G. Bebesko and his team’s work, “Medical Monitoring Results of Survivors with Acute Radiation Syndrome after Chernobyl Disaster,” both analyze the long-term (or chronic) health effects of ARS on Chernobyl workers and

surrounding residents.²¹ It is with the help of these sources and articles that I formulate my argument.

Short-term effects of Acute Radiation Syndrome

This brings me to my first point. This area of research relies heavily on the accounts of Chernobyl victims and survivors. If it were not for their testimonies, little would truly be known about what happened in the following days, weeks, and months post-Chernobyl. One official document, organized by the USSR Ministry of Health, reads: “One must say definitely that we can today be certain that there are no effects of [the] Chernobyl accident on human health.”²² Yet in *Voices from Chernobyl*, journalist Svetlana Alexievich interviews survivors whose firsthand accounts directly contradict the claims that the Soviet government was making. One of the first accounts listed in her book retells the last days of a Chernobyl first responder, Vasily Ignatenkoy, and provides a vivid account of ARS.²³ The story is told from the perspective of his wife, Lyudmilla Ignatenkoy, and according to Lyudmilla, the initial symptoms of ARS start small and then quickly change. Throughout much of this process, from Vasily’s diagnosis of ARS to the time of his death (approximately 14 days), the Soviet officials were very careful to never tell the family too much about what was happening.

Vasily Ignatenkoy and his team of firemen

18 M. E. Eglite, T. J. Zvagule, K. D. Rainsford, J. D. Reste, E. V. Čurbakova, and N. N. Kurjane. “Clinical Aspects of the Health Disturbances in Chernobyl Nuclear Power Plant Accident Clean-up Workers (liquidators) from Latvia.” *Inflammopharmacology* 17, no. 3 (2009): 163–169.

19 Johan M. Havenaar, Evelyn J. Bromet, and Semyon Gluzman. “The 30-year Mental Health Legacy of the Chernobyl Disaster.” *World psychiatry* 15, no. 2 (2016): 181–182. PubMed Central. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4911770/>; Evelyn J. Bromet. “Mental Health Consequences of the Chernobyl Disaster.” *Journal of Radiological Protection* 32, no. 1 (2012): N71–N75. IOPScience. <https://iopscience.iop.org/article/10.1088/0952-4746/32/1/N71/pdf>.

20 Thom Davies. “A Visual Geography of Chernobyl: Double Exposure.” *International Labor and Working-Class History* 84 (2013): 116–39. doi:10.1017/S0147547913000379.

21 Maureen Hatch and Elisabeth Cardis. “Somatic Health Effects of Chernobyl: 30 Years On.” *European Journal of Epidemiology* 32, no. 12 (2017): 1047–1054. Springer Link. <https://link.springer.com/content/pdf/10.1007/s10654-017-0303-6.pdf>; Volodymyr G. Bebesko, Alexander N. Kovalenko, David A. Belyi, Dmitry A. Bazyka, Anatoliy A. Chumak, Victor A. Sushko, and Vasyl M. Gayiday. “Medical Monitoring Results of Survivors with Acute Radiation Syndrome after Chernobyl Disaster.” *International Congress series* 1258 (2003): 115–122. Science Direct.

22 International Atomic Energy Agency, *Medical Aspects of the Chernobyl Accident*, 9.

23 Alexievich, *Voices from Chernobyl*, 1–23.

received the call out to the CNPP only moments after the second explosion occurred. These men did not have the proper uniforms to protect against radiation, but Lyudmilla recalls that the men were not informed of the dangers; they were told it was “for a fire, that was it.”²⁴ Without notice, Ignatenko found out that the firemen—including her husband—had been taken from the local hospital and moved to Moscow for treatment, as it was determined that they were too injured to be treated there. In her interview with Alexievich, she recalls her husband’s face being “all swollen and puffed up,” to the extent that she “could barely see his eyes.”²⁵ During the following days, the swelling subsided and though he had chemical burns he seemed normal. In the following weeks, Ignatenko remarks that each day her husband changed and she would “[meet] a brand-new person.”²⁶ The radiation burns began to come to the surface of his skin and she describes the skin of his mouth and tongue coming off in layers.²⁷ His hair, as Lyudmilla recounts, came off in clumps on his pillow when he would turn his head.²⁸ She describes his skin beginning to change colors from blue, to red, to a grayish-brown, and then it began to crack or boil.²⁹ The radiation began attacking his internal organs in the second week, causing him to produce multiple stools that contained blood and mucus.³⁰ No morphine or medication could be administered because his veins and skin ripped and ruptured from needles and/or medical tape. During the last weeks of Vasily’s life, many Soviet scientists came in and took photographs of

his body—a practice Lyudmilla found cruel and inhumane.³¹ It is important to note, though, that these photos were used for scientific research only and not shown or broadcasted to the public.

There were a total of six firemen in Ignatenko’s unit who died within two weeks of the meltdown due to ARS, but they were not reported on as many news stories were heavily censored.³² Many of these men received large radiation burns that reddened or charred the skin.³³ Additionally, in the months following her husband’s death, Lyudmilla gave birth to a girl who died four hours after her birth. Doctors determined that the child had suffered from congenital heart disease and cirrhosis of the liver, due to radiation exposure.³⁴ Children and fetuses are among some of the most vulnerable groups when exposed to ARS, as “cells in children and fetuses divide rapidly, providing more opportunity for radiation to disrupt the process and cause

24 Alexievich, *Voices from Chernobyl*, 6.

25 Alexievich, *Voices from Chernobyl*, 6.

26 Alexievich, *Voices from Chernobyl*, 11. It was also during this time that doctors informed Lyudmilla that her husband and the other five firemen in the radiation unit could no longer digest the food she was making for them.

27 Alexievich, *Voices from Chernobyl*, 12.

28 Alexievich, *Voices from Chernobyl*, 13.

29 Alexievich, *Voices from Chernobyl*, 12-13.

30 Alexievich, *Voices from Chernobyl*, 13.

31 Alexievich, *Voices from Chernobyl*, 17. Lyudmilla recounts that when she would leave the room they would photograph her husband’s decaying body. He would be entirely naked with only a small sheet to cover him. By the end of the day, that sheet would be covered in Vasily’s blood and bodily fluid.

32 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, Ix-xvii. A note on Yaroshinskaya: Yaroshinskaya was also a journalist at the time of the CNPP meltdown. Her work covers stories from civilians in surrounding areas that were affected by Chernobyl and the radiation fallout. Her work and interviews with the public were censored by her news outlet when she presented them to try and get true stories about what was really happening out into the world.

33 William Zoller, *Chernobyl: the Destroyed Reactor*, “Radiation Burns on Firefighter.” Seattle: University of Washington Dept. of Chemistry, 1993. <https://digitalcollections.lib.washington.edu/digital/iiif/chernobyl/249/full/full/0/default.jpg>. (accessed April 11, 2022).; William Zoller, *Chernobyl: the Destroyed Reactor*, “Toes and hands of people exposed to radiation.” Seattle: University of Washington Dept. of Chemistry, 1992. <https://digitalcollections.lib.washington.edu/digital/iiif/chernobyl/249/full/full/0/default.jpg>. (accessed April 11, 2022).

34 Alexievich, *Voices from Chernobyl*, 6.

cell damage.”³⁵ With regard to children, many who lived in or near the exclusion zones near the CNPP were becoming ill. In the town of Narodichi, a town about 97 kilometers west of Pripjat, approximately “one in every two school children was reportedly absent from school at any time due to illness.”³⁶ It was not uncommon for mothers to have to take their children to hospitals for “weakness, pains in their joints, low hemoglobin counts, enlarged thyroid and lymphatic glands, headaches, stomach aches, [and] nonstop throat infections.”³⁷ The Soviet government, however, continued to mislead their people and systematically conceal many victims’ medical information.³⁸

Long-term Effects of Acute Radiation Syndrome

The long-term effects of Chernobyl are developing each day. Considering that the meltdown at Chernobyl is recent in history, many of the survivors are still alive and their conditions and response to ARS are still being monitored. An article entitled “Clinical Aspects of the Health Disturbances in Chernobyl Nuclear Power Plant Accident Clean-up Workers (liquidators) from Latvia,” examines some of the earliest evidence of ARS following the Chernobyl meltdown, and compares these numbers with more recent survivor test results. The Ukrainian team of researchers uses many investigative measures to conduct this study, including the Latvian State Register, passport data (information showing when/how long these workers were present at the site), and questionnaires given to the workers to evaluate the

long-term effects of ARS.³⁹ This study analyzes over 6,000 liquidators, most being men of reproductive age, who experienced radiation exposure for 1-6 months.⁴⁰ While this information has been recorded since the clean-up efforts in 1986, it has only “been recorded in the Latvian State Register” since 1994.⁴¹ With analysis of the data, the team found that changes in the health of CNPP accident clean-up workers over the observation period 1987–2007 showed that “morbidity exceeds that of age- and sex-matched non-exposed population with a trend for increase.”⁴²

Additionally, the articles entitled “Medical Monitoring Results of Survivors with Acute Radiation Syndrome after Chernobyl Disaster” and “Somatic Health Effects of Chernobyl: 30 Years On” conclude that poor response time in evacuating civilians from exclusion zones resulted in an increased risk of or deaths from nervous system issues, endocrine system problems, thyroid cancers, and heart disease.⁴³ Many Soviet officials attempted to downplay the effects of ARS and cited ARS as one of many factors along with: “heavy smoking, poor nutrition, the pollution of air and water by heavy industrial plants, and the likes of Chernobyl” as a cause for increased health issues.⁴⁴ This is contradicted by the increase of--most notably--thyroid cancer cases.

35 United States Environmental Protection Agency, “Radiation Health Effects.” EPA. April 14, 2021. <https://www.epa.gov/radiation/radiation-health-effects#:~:text=A%20very%20high%20level%20of,known%20as%20%E2%80%9Cradiation%20sickness.%E2%80%9D>.

36 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 134.

37 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 134.

38 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xvii.

39 Eglite, et. al, “Clinical Aspects of the Health Disturbances in Chernobyl.”

40 Eglite, et. al., “Clinical Aspects of the Health Disturbances in Chernobyl,” 164.

41 Eglite, et. al., “Clinical Aspects of the Health Disturbances in Chernobyl,” 163.

42 Eglite, et. al., “Clinical Aspects of the Health Disturbances in Chernobyl,” 165.

43 Bebeshko, et al., “Medical Monitoring Results of Survivors,” 116; Hatch. “Somatic Health Effects of Chernobyl.” 1051.

44 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv. This information was provided by Evgeny Demidchik, director of the Thyroid Tumor Clinic. This clinic is a part of the Byelorussian Institute of Oncology. Demidchik is a lead researcher of adolescent thyroid cancer and has been studying the effects of this cancer through the institute since 1966, when one of the first cases was reported and registered.

The highest rate of issues pertaining to thyroid diseases and cancers is seen in children who grew up in or around contaminated zones.⁴⁵ The study of thyroid cancer in children did not begin until 1966, as this was a rare disease with only approximately one case per year.⁴⁶ After the incident at Chernobyl, cases rose to more than fifty cases a year, seen mostly in children in exclusion zones.⁴⁷ By 1993, 260 had been documented, and most of these came from the regions most affected by Chernobyl.⁴⁸ This is compared to only six cases that were registered from regions outside of the contaminated zones.⁴⁹

The Mental Health Effects of Chernobyl

The study of mental health effects of the disaster is ever-evolving as well. Many mental health accounts were not taken into consideration until decades after the meltdown. “The 30-year Mental Health Legacy of the Chernobyl Disaster,” published in the journal *World Psychiatry*, and “Mental Health Consequences of the Chernobyl Disaster,” published in the *Journal of Radiological Protection*, were valuable finds.⁵⁰ These articles further elevate the argument that mental health has been the widest public health issue since the Chernobyl nuclear meltdown.⁵¹ Much like the previous source, the researchers focus their data pool specifically on liquidators who worked

between April and October of 1986.⁵² Havenaar’s “The 30-year Mental Health Legacy of the Chernobyl Disaster,” also includes women who were either pregnant or had young children in 1986 in their research.⁵³ By using registry studies and general population samples and surveys from affected areas, these papers conclude that the mental health consequences continue to be a concern and that mental health treatment in these areas is inadequate.⁵⁴ In “Mental Health Consequences of the Chernobyl Disaster,” Bromet also concludes that one leading factor of poor mental health (other than fear surrounding radiation) was connected to exposure dosage.⁵⁵

While these studies conclude that mental health is, in fact, still poor in these regions due to the meltdown, they also touch on distrust towards the government. In the months following the meltdown, families in surrounding areas began to be evacuated from their homes, oftentimes into poor conditions.⁵⁶ Some villages, such as the village of Rudnia-Ososanya, did not get evacuated for nearly four years after the meltdown and had little to no knowledge of its danger.⁵⁷ Recounts from survivors mention that

“on April 27... neither the radio, the television, nor the newspapers had mentioned the explosion... [the] media only made the announcement two days later,”

45 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv.

46 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv.

47 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv.

48 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv.

49 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, xiv-xv.

50 Havenaar, “The 30-year Mental Health Legacy of the Chernobyl Disaster.”; Bromet, “Mental Health Consequences of the Chernobyl Disaster.”

51 Havenaar, et al., “The 30-year Mental Health Legacy,” 181.

52 Havenaar, et al., “The 30-year Mental Health Legacy,” 181.; Bromet, “Mental Health Consequences of the Chernobyl Disaster,” N71.

53 Havenaar, et al., “The 30-year Mental Health Legacy,” 181.

54 Havenaar, et al., “The 30-year Mental Health Legacy,” 182.; Bromet, “Mental Health Consequences of the Chernobyl Disaster,” N71.

55 Bromet, “Mental Health Consequences of the Chernobyl Disaster.” N71. A note on mental health monitoring from Bromet: “Since mental health is a leading cause of disability, physical morbidity, and mortality, health monitoring after radiation accidents like Fukushima should include standard measures of well-being.”

56 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 24.

57 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 24.

and oftentimes they received their news about Chernobyl from foreign news broadcasts.⁵⁸ Most of the information these smaller villages received came from neighboring villages or from people who were evacuating the villages, rather than the official Soviet government.⁵⁹

Conclusion

The meltdown at CNPP is an event that is regarded as the first of its kind. While the number of lives lost due to the meltdown stayed static at only thirty-two lives during the time of the USSR, the effects of the meltdown are still ongoing today. Children who were not administered iodine tablets early enough now live with the risk of or have died from cancers associated with ARS.⁶⁰ Liquidators, plant

operators, and firemen risked their lives to put out the fires and encase the radioactive structure in its “sarcophagus,” only to be awarded with a medal from the Soviets, then forgotten about.⁶¹ Loved ones of those lost still long for answers that they may never receive.⁶² While the explosion at reactor-4 on the night of April 26, 1986, may have happened in seconds, the results have lasted a lifetime and will not dissipate for many more. Whether the biggest threat was the invisible radiation to the bureaucrats running the operation is unknown. What is known, however, is that with proper safety techniques and truthful health updates, a disaster as devastating as this one may be alleviated in the future.

58 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 16-18.

59 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, 17.

60 Yaroshinskaya, *Chernobyl: the Forbidden Truth*, Xiv-xv.; Hatch. “Somatic Health Effects of Chernobyl.”; Alexieich, *Voices from Chernobyl*.

61 Alexieich, *Voices from Chernobyl*; Filburn, “Chernobyl Accident,” in *Three Mile Island, Chernobyl and Fukushima*.

62 Davies, “A Visual Geography of Chernobyl: Double Exposure,” 117; Alexieich, *Voices from Chernobyl*.

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Demons & Droids: Nonhuman Animals on Trial

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Abstract

Nonhuman animal trials are ridiculous to the modern sensibilities of the West. The concept of them is in opposition to the idea of nonhuman animals—entities without agency, incapable of guilt by nature of irrationality. This way of viewing nonhuman animals is relatively new to the Western mind. Putting nonhuman animals on trial has only become unacceptable in the past few centuries. Before this shift, nonhuman animal trials existed as methods of communities policing themselves. More than that, these trials were part of legal systems ensuring they provided justice for all. This shift happened because the relationship between Christian authorities and the nature and consciousness around them changed significantly. As this piece argues, this relationship was based on an underlying personification that was lost due to two key theological/philosophical ideas, being the status of nonhuman animal's rationality and the status of their diabolical nature. This personification—this personhood—formed the basis for allowing nonhuman animals to be tried. According to some legal systems and lawyers, the capability of being on trial, of being part of a legal proceeding, is essential to personhood.¹ The concepts are inextricably linked; the marker between property and person. Knowing why this shift occurred can allow for a greater understanding not only into the ethics of human beings' relationships with nonhuman animals, but also how Christianity has interacted with nature.

Background

To better understand the context of nonhuman animal trials in Christian Europe, one can examine their pre-Christian history. Early in the Western Canon, the ancient Greeks would put nonhuman animals on trial. All living things, and anecdotally nonliving things as well, that had committed crimes against the community were considered to produce a kind of pollution that would arouse the *furies* and bring about all kinds

of ills.² It should be stated that the institution of nonhuman animal trials was not singular in its reasoning, neither for the Ancient Greeks nor the rest of Medieval Europe.³ However, this belief in criminal nonhuman animal's "pollution" producing ills continued to be held by European authorities well into the Renaissance. Though the belief itself was held, the reasons behind

1 Katie Sykes, "Human Drama, Animal Trials: What the Medieval Animal Trials Can Teach Us about Justice for Animals," *Animal Law* 17, no. 2 (2011): pp. 273-311, 275; Steven M. Wise, "Legal Personhood and the Nonhuman Rights Project," *Animal Law* 17, no. 1 (2010): pp. 1-11, 2.

2 Edmund P. Evans, *The Criminal Prosecution and Capital Punishment of Animals*, version #43286 (London: William Heinemann, 1906), <https://www.gutenberg.org/files/43286/43286-h/43286-h.htm>, 9.

3 Anila Srivastava, "Mean, Dangerous, and Uncontrollable Beasts: Mediaeval Animal Trials," *Mosaic: An Interdisciplinary Critical Journal* 40, no. 1 (March 2007): pp. 127-143, 133.

it changed. After all, ecclesiastical authorities could not continue referring to pagan *furies*, and so demonic influence became a chief concern in nonhuman animal trials.⁴ Even though the explanations for the prosecution of nonhuman animals were constantly changing, there was something underlying all of them: personification. There was an idea of what scholars like Cynthia Willett call solidarity.⁵ Solidarity is a relationship not based on sympathies or stewardship but rather a recognition of agency.⁶ In Greco-Roman sacrificial practices, nonhuman animals had to ritually “consent” to their role, and within medieval European communities secular and ecclesiastical authorities treated nonhuman animals (domesticated and feral) as members of their community.⁷ As members of the community, they had certain rights, rights also held by their human compatriots. The right to a lawyer, to a trial, and to fair consideration were all afforded to nonhuman animals in these courts.⁸ Court proceedings were carried out carefully and meticulously, the rights of any defendant, even the nonhuman, were not to be violated. One particularly famous example is the defense of rats by Bartholomew Chassenée. Chassenée managed to delay a trial long enough for the case to be dismissed by arguing his clients were not properly summoned, had trouble traveling, and had been intimidated by their mortal enemies (cats).⁹ Chassenée was intent on all those he defended receiving justice, even nonhuman animals.¹⁰ These arguments were accepted by the courts because Chassenée’s beliefs were a commonly held sentiment. It was also held that

all manner of nonhuman animals lived in their own communities and were accustomed to having their own laws, providing more reason for them to be held accountable.¹¹ Further, observed guilt in nonhuman animals was taken as a sign of distinguishing right and wrong.¹² In modern Western society, this is no longer the case. As this piece demonstrates, this is no longer the case because the consensus in Western society concerning nonhuman animals lost the underlying personification that had been key to trying, defending, and convicting nonhuman animals. This was caused by two specific arguments concerning nonhuman animals’ nature gaining traction amongst European thought: the likening of nonhuman animals to machines and the likening of nonhuman animals to demons. To analyze and understand these arguments, various nonhuman animal trials will be examined.

Hermeneutics

The way to examine these nonhuman animal trials is simply by taking them at their word. No doubt context and overarching historical themes of their times are important, and should be carefully considered, but it is best to, first and foremost, trust the account of those present as authentic. It is easy to fall into a trap of seeing the potential contradictions between papal bulls, court decisions, and larger movements of Christian people throughout Europe as a reason to try and look at these trials through materialist and reductionist lenses. These lenses have their places; indeed, they have been used already in examining the development of nonhuman animal trials. By looking at them purely as a means by which a community cleanses itself, as a communal function for a society to reduce their fears and ailments, these trials were reduced to an act that

4 See note 2.

5 Cynthia Willett, *Interspecies Ethics: Communitarian Justice and Cosmopolitan Peace* (New York, NY: Columbia University Press, 2014), 38.

6 See note 5.

7 Willett, 34.

8 See note 7.

9 Evans, 18-19.

10 Evans, 20.

11 Evans, 35.

12 Evans, 247.

was potentially very sacred and/or religious to functions of psychology and practicality. Going forward, these trials are examined and accepted at face value. In doing so, more will be revealed about the complicated texture of beliefs held by Christian authorities at large. Potential cognitive dissonance of colonial decrees and trial verdicts should not be dismissed as human moral failings, but as examples of complex opinions informed by a world of factors and listening to these sources as “truth” helps accomplish that.

The Paradoxical Nature of Nonhuman Animal Trials

The court case that best demonstrates the tensions within Christian beliefs is a trial in 1575 Savoie, France, where weevils were accused of destroying vineyards on Mont Cenis. The weevil’s appointed lawyer, Pierre Rembaud, did not try to use court proceedings to defend them like Chassenée had. Instead Rembaud asked for a summary judgment, declaring that, yes, his clients did eat the grape leaves, but that they had a solemn right to do so.¹³ He did so through a theological argument, noting that God had created nonhuman animals for humans and had promised them “all of the grasses, leaves and green herbs for their sustenance”.¹⁴ His arguments relied on concepts of original ownership, of the weevils having prior claim to the land. He won. This is strictly opposed to arguments made by scholars about the theological roots of Christian colonialism and exploitation of nature.

It does run opposite of the famous papal bull of *Inter Caetera*, which divided South America between Spain and Portugal, with little regard for

the native inhabitants.¹⁵ This was also in 1493, a century before Rembaud’s victory. This was one of many papal bulls and laws passed that would form the so-called “Doctrine of Discovery”, which was anathema to concepts of original ownership and prior claim. It was the loss of a cosmopolitan solidarity that was an important factor in the eventual domination over the arguments of Montaigne, Rembaud, Chassenée, and others like them.

Looking more in depth at the weevil trial in St. Julien, Savoie, France, more granularity is revealed. Though Rembaud made arguments about original ownership, citing Genesis and commandments from God, he also states that it is ridiculous to bring civil and ecclesiastical law against “brute beasts”, who are subject not to reason but instinct and natural law.¹⁶ It should not be assumed however that Rembaud positions nonhuman animals necessarily below humans, as his response to the prosecution’s claim that “lower animals” have been made subject to human beings is a fiercely opposed one. Rembaud argues that this positioning of nonhuman animals is neither true nor relevant to the case.¹⁷ With these facts and the trial’s verdict in mind, this case can be understood as a focal point in the development of how the Church viewed nonhuman animals and by extension nature.

Rembaud can simultaneously argue that nonhuman animals, lacking reason, are simply acting by instinct as well as arguing that these nonhuman animals are most assuredly not made subject to humans. This ordering of the cosmos, accepted by the court, is one that both uplifts humans with their reason while also placing

13 Jason Hribal and Jeffrey St. Clair, “Fear of the Animal Planet: The Hidden History of Animal Resistance,” in *Fear of the Animal Planet: The Hidden History of Animal Resistance* (New York, NY: AK Press, 2011), pp. 1-20, 4.

14 See note 13.

15 Alexander VI, “The Bull *Inter Caetera*,” in *European Treaties Bearing on the History of the United States and Its Dependencies to 1648*, ed. Frances G. Davenport and Charles Oscar Paullin (Washington, D.C.: Carnegie Institution of Washington, 1917), pp. 71-78.

16 Evans, 42-43.

17 Evans, 43.

weevils on something of the same level. If humans are not these weevil's sovereign but are still clearly set apart and endowed with reason—something positive within the systems of the time—then there is a clear tension in the relationship between humankind and nature in this cosmos. In a similar vein is the tension that exists from the system surrounding nonhuman animal trials themselves: ecclesiastical courts, which did not deal with singular, individual nonhuman animals, primarily punished those creatures found guilty with excommunication.¹⁸ Excommunication implies membership in the Church, with all the metaphysical qualities that came with it. These tensions are recognized by different theologians, and the ways they were often resolved resulted in greater loss of personification of nonhuman animals, the primary factor in the shifting concerns of animal trials. The ways it has been resolved have also differed from each other significantly while still ending at the same loss of personification (and thus an eventual cessation of animal trials). The topic of nonhuman animals having rationality, counter to Rembaud's argument, is contentious within the Church but seemingly necessary for a just and proper trial.

Nonhuman Animals as Irrational Machines

Scholars agree that a focus on the rationality of nonhuman animals was a key factor in the shifting notions around nonhuman animal trials. Anselm Oelze argues that there was a paradigm shift due to new theological arguments about cognition.¹⁹ Susan Pearson argues that this shift happened because of a new

prevailing philosophy in Europe: Rationalism, or, perhaps better phrased: Enlightenment era thinking.²⁰ Enlightenment rationalism changed the place of nonhuman animals within human communities.²¹ This is possibly best illustrated by Rene Descartes' arguments that nonhuman animals are like machines.²² Descartes argued that nonhuman animals were automata that, due to lacking a rational soul, are feelingless, senseless, instinct-driven beasts. Similar to modern beliefs concerning machines and automata, nonhuman animals were made to be tools to be used to further human goals. Descartes was not unique in proposing this idea either, with the Spanish philosopher Gomez Pereira positing much the same a few decades earlier.²³ The historian Lynn White recognizes this shift and points to innovations with plows as a possible factor in it. With the advent of a new plow that generated much more friction, peasant farmers, used to subsistence farming with two oxen, now could till the soil much better with eight.²⁴ Most farmers, lacking this amount of oxen, had to pool their resources as well as distribute the fruits of their (and the oxen's) labor in accordance with their contribution.²⁵ White argues this fundamentally shifted the relationship humans had with not only nonhuman animals, but nature in general. He writes, "Thus, distribution of land was based no longer on the needs of a family but, rather, on the capacity of a power machine to till the earth... Formerly

18 Peter Dinzelsbacher, "Animal Trials: A Multidisciplinary Approach," *The Journal of Interdisciplinary History* 32, no. 3 (2002): pp. 405-421, <https://doi.org/10.1162/002219502753364191>, 408-409.

19 Anselm Oelze, *Animal Rationality: Later Medieval Theories 1250-1350* (Leiden: Brill, 2018), 23-25.

20 Susan J. Pearson, *The Rights of the Defenseless: Protecting Animals and Children in Gilded Age America* (Chicago: University of Chicago Press, 2011), 9.

21 See note 7.

22 Rene Descartes, *Meditations on First Philosophy*, trans. John Veitch, 1901.

23 Evans, 66-67.

24 Lynn White, "The Historical Roots of Our Ecologic Crisis," *Science* 155, no. 3767 (March 10, 1967): pp. 1203-1207, <https://doi.org/10.1126/science.155.3767.1203>, 1205.

25 See note 24.

man had been a part of nature; now he was the exploiter of nature.”²⁶

In the relegation of nonhuman animals to the status of machine—of automata, there is a resolution to the tensions arising in Rembaud’s defense. The stripping of will and agency from nonhuman animals made trials unreasonable as well as continued the trend White discussed in his famous essay.

As was said by Rembaud: If “brute beasts” live by nature’s instinct alone, lacking experience and sense of reason, how could they stand under canon and civil law? This defense was made elsewhere, especially as The Enlightenment further solidified its hold over European thought. In trying to defend nonhuman animals from punishment through this stripping of reason, attorneys subjected nonhuman animals to worse conditions by increasing the removal of personification.

This can be seen well in one trial concerning problematically burrowing bunnies. The first argument of the defender of these rabbits was that they, lacking reason, could not be culpable and therefore could not be put to trial in the first place.²⁷ He states that the whole process would mean that “the parties summoned are endowed with reason and volition and are therefore capable of committing crime”, which he quickly argues against with various legal and theological texts.²⁸ The theological arguments made stem from both nonhuman animals lacking immortal souls (and therefore not being members of the Church, which the apostle Paul said was required to be judged) and nature, through God, doing nothing in vain (and the bunnies being able to explain their reasons, if only they were rational and could speak).²⁹

The court sided with the plaintiff, but it should be noted that the prosecutor’s response to these arguments did not refute the underlying premises (that nonhuman animals were irrational beings lacking immortal souls), but rather stated that the courts had the right to prosecute them anyway, given their ability to arrest and punish the insane. More importantly, the prosecutor highlights the actions of the accused: “doing harm to man by eating and wasting the products of the soil designed for human sustenance”.³⁰ This focuses not on whether the creatures act maliciously, or consciously, or even their culpability, but rather their direct effects on human beings. This highlights the arguments made by scholars like Cynthia Willett and Lynn White, the courts recognized and accepted many of the arguments made by the prosecutor but—perhaps given the nonhuman animals irrational and profane nature—went with the more “practical” route that placed humans on top and as the primary focus. The personhood that the beasts may have had was gone.

Nonhuman Animals as Demons

One of the other ways the tensions found in Rembaud’s case were resolved can be found earlier in a ninth century plague of locusts in Rome. After widespread failed extermination efforts, the locusts were finally dealt with by copious amounts of holy water from Pope Stephen VI being used to expel the pests.³¹ The usage of holy water is vital here. It raises questions about the nature of locusts and other nonhuman animals. How they relate to the divine is shown in prayers concerning this plague. Their nature is all but assured: “insects, mice, moles, serpents and other foul spirits”.³² This demonic character is emphasized in other prayers, which gives locusts (and other “pests”)

26 See note 24.

27 Evans, 98-99.

28 See note 27.

29 Evans, 98-101.

30 Evans, 103.

31 Evans, 64-65.

32 Evans, 65.

both a malicious character and direct line to “the wiles of Satan”.³³ In this instance there is an acceptance that nonhuman animals have malice, and attribute it to Satan. Nonhuman animals are granted agency and reason; it is simply the incarnation of evil spirits/demons.

In the centuries following Descartes’s and Pereira’s arguments that nonhuman animals were simple automata—machines without reason, this demon-animal confluence became something of the response to it. A Jesuit priest, one Père Bougeant, asserted that nonhuman animals could not be simple automata.³⁴ His argument mainly relies on one principle: The reasoning that other human beings are intelligent and conscious applies to nonhuman animals as well. With this, nonhuman animals could not only have emotions and reason (and therefore guilt and culpability), but also have a spiritual principle. A spiritual principle that, practically speaking, does not differ very much to the human soul.³⁵ This kind of solidarity, however, ran into the same issue other conceptions of nonhuman intelligence ran into: Orthodoxy.

Bougeant recognized this problem. He found that nonhuman animals might have an immortal soul and could be worthy of redemption, retribution.³⁶ This conclusion meant that “Beasts, in that case, would be a species of man or men a species of beast, both of which propositions are incompatible with the teachings of religion.”³⁷ How could theologians who were staunchly within a Christian framework with little desire to break out of it reconcile nonhuman animals being more than machines? The answer reflects what was seen in Rome. Nonhuman animals were incarnations of demonic spirits. Bougeant mentions the exorcism of demon(s) Legion into

the swine at Gersaene as an example of this, believing that the swine ran off the cliffs not because a demon was introduced to a host, but because not even a swine could contain more than one demon.³⁸ Bougeant’s conclusion, and its demonic slant, does two things. Firstly, it allows for nonhuman animals to continue being guilty or not guilty. Culpability requires a will in these courts, and this explanation, unlike the more materialist explanations of Descartes and Pereira, gives nonhuman animals agency. Secondly, it further entrenches nonhuman animals as *lesser*. It deprives nonhuman animals of the personification that might have been granted to them by virtue of having a will and having culpability. While they can still be guilty or not guilty, at their heart they are still demonic. Demons who are not worthy of redemption, only retribution. As had been determined numerous times within the Church, Satan and his cohort of demons were irrevocably damned.³⁹ Even early influential Church fathers such as Origen who opposed this line of thinking had been declared heretics. Either nonhuman animals took on this position of damnation, or they were relegated to being automata.

Opposition to Loss of Personification

This loss of personification was a large factor in the decline of putting nonhuman animals on trial as well as the way humans have interacted with them since. Though this loss of personification (through both the rendering of nonhuman animals as automata or as demons) became the dominant line of thinking within Europe, it did not lack opposition. Michel de Montaigne, who lived just a few years before Descartes and who was a contemporary of Pereira, is an example of a prominent thinker who did not seek to strip the personhood of nonhuman animals. Montaigne, in his essay *On Cruelty*, outright says: “I abate a great

33 See note 32.

34 Evans, 66.

35 See note 34.

36 Evans, 67.

37 See note 36.

38 Evans, 68-69.

39 Evans, 67-68.

deal of our presumption, and willingly resign that imaginary sovereignty that is attributed to us over other creatures.”⁴⁰ He writes that even if there was a sovereignty of humans above other creatures, there is a “certain respect” and a “general duty of humanity” not just to the nonhuman animals, but to all nature, trees and plants included.⁴¹ Montaigne connects this concept of a respect and solidarity-filled relationship with a long tradition of various Western civilizations treating nonhuman animals with respect and care. He points towards the Roman public care of Geese, the Athenian care of mules, and the Turkish hospitals for nonhuman animals.⁴² It is important to point out this opposition because it shows that the thought surrounding the relationship that humans and nonhuman animals had was granular and not hegemonic, even with Catholic philosophers and theologians like Montaigne.

Conclusion

Despite opposition like this though, the “question” on nonhuman animal trials was answered. The tensions found within Rembaud’s case which simultaneously saw nonhuman animals as peers as well as uplifted humans above the rest of the nature were resolved. It was after

the development of two key ideas that these kinds of trials fell out of favor and nonhuman animals found themselves in a position lacking personification. The first idea, defining of nonhuman animals as irrational “machines”, can be seen with Enlightenment philosophers and the burrowing bunnies trial. The second idea, nonhuman animals being diabolical in nature, can be seen in the arguments made by thinkers like Bougeant and the Church’s response to various pests. These ideas were both theological and secular in nature but were still either in the direct context of the Church, as in the case of ecclesiastical courts, or in the indirect context of the Church, as in the case of the (Catholic) Christian religion dominating the philosophy of the discussion. In all cases, the consensus on the personhood of nonhuman animals changed greatly and granularly as these shifting ideas of nonhuman animals being demons and droids were spread and accepted.

40 Michel Montaigne, “On Cruelty” in: *The Essays of Michel De Montaigne*, trans. Charles Cotton, 1913.

41 See note 40.

42 See note 40.

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ART SUBMISSION

Scrubbing off the Grime

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Artist Statement

This piece is centered around isolation and caring for one's inner child. The inner child is someone each of us has, and it is our job as the adult, to look after, keep safe, and protect this child. Growing up as an Asian American in the southern region of the United States, I felt an immense amount of isolation and lack of belonging. From a young age I felt alone, weird, strange, and out of place. I knew I looked different than most of my classmates, I knew my packed lunch was different, and I knew my last name was long and difficult to pronounce. All these factors contributed to a hyper awareness of myself. Over time I used this feeling of isolation as one of my greatest gifts, finding joy in my own company and using independence as a mode of aggressively caring for myself. The scene created uses fast and immediate brush strokes to capture the sense of aggression I feel at times from being independent. The rubber duckie's direct eye contact with the viewer challenges their gaze as a reminder to look after your inner child, mine often feels afraid and scared-- and being in the bath, gives a sense of calm and ease to nurture and sooth all parts of myself.



Angelena Chaishowarat
Scrubbing off the Grime,
Oil on cradled wood
16" x 20"



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