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EDITOR'S INTRODUCTION

The Wagner Forum for Undergraduate Research is an interdisciplinary journal which provides an arena where students can publish their research. Papers are reviewed with respect to their intellectual merit and scope of contribution to a given field. To enhance readability the journal is subdivided into three sections entitled *The Natural Sciences and Quantitative Analysis*, *The Social Sciences* and *Critical Essays*. The first two of these sections are limited to papers and abstracts dealing with scientific investigations (experimental, theoretical and empirical) and complex mathematical/ statistical modeling. The third section is reserved for speculative papers based on the scholarly review and critical examination of previous works. As has become a tradition, the fall edition commences with a reprint of the abstracts of papers and posters presented at the Eastern Colleges Science Conference.

Read on and enjoy!

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Section I: Eastern Colleges Science Conference

Effects of the Psychoactive Drug Caffeine on the Behavior of Zebrafish (*Danio rerio*)

Kevin Lipton (Biology) and Dr. Brian Palestis (Biological Sciences)

Caffeine, a psychoactive, plant-based alkaloid is found in a variety of food, which include coffee and tea leaves. Caffeine acts as a stimulant that has the potential to cause dependency if a large amount is ingested and is anxiogenic (anxiety causing). Zebrafish (*Danio rerio*) is an ideal model organism for pharmacological studies and neuro-behavioral studies, due to the homology of their nervous system with that of the human nervous system. This experiment was performed to gain a better understanding of the behavior of zebrafish when exposed to caffeine. This study tested the behavior of adult zebrafish with a concentration of 0.00625% caffeine. The behavior was quantified by counting the number of lines each zebrafish crossed on a grid in 30 seconds, using recorded videos. Out of all the fish that were tested, there was only one fish that was not mobile and did not cross a single line, and this fish was in the experimental group. The range of the number of lines crossed for the control fish was greater than the range for the experimental fish, but the mean number of lines crossed between the two groups did not significantly differ (control: 38.6; experimental: 36.0). This study, as well as other similar studies, can increase knowledge and understanding of how anxiogenic substances affect humans.

Epithelial Lining Turnover in the Rodent Small Intestine Based on Mitotic Indices in the Crypts of Lieberkühn

John Acquaviva (Biology)

The regenerative properties of the small intestine are mediated by a small group of intestinal stem cells (ISCs) within the base of the crypts of Lieberkühn. However, the difficulty in identifying these ISCs in contemporary research limits the information on the division and migration of these cells. In this study, using random histological slides from the rodent small intestine and by capturing digital microscopic images at 100x in oil immersion, the dividing capabilities of the small intestinal cells were analyzed. The identification of mitotic figures of dividing cells and differentiated enterocytes within the crypts allowed for the calculation of the total mitotic index, which was found to be 6.1% for the analyzed tissue samples. The average location of the mitotic figures from the luminal crypt mid-line was 11.916_m. Regarding the morphology of the mitotic figures, only prophase-like and anaphase-like stages could be identified, suggesting a non-typical, amitotic division. Unidentified, distinctive cells among the lamina propria and enterocyte lining of the crypts

were also noticed. We hypothesize them to be intestinal stem cells migrating from the crypt bases. Further research can focus on this type of cell.

Arsenic and Selenium in Human Tissues: The Investigation of Arsenic Contamination in Human Food and Urine Samples

Lejla Bolevic (Chemistry) and Dr. Mohammad Alauddin (Chemistry & Physics)

Metabolic studies have shown that the chemical properties of selenium and arsenic counter the toxicity of one another; therefore the intermolecular interactions between selenium and arsenic has been utilized as a means to protect against the toxicity of arsenic. Through dietary intervention of a group of human subjects in a controlled experiment, the antidote characteristic of selenium was investigated. The determination of the exact levels of arsenic, as well as, selenium in dietary intake was measured through Atomic Absorption Spectroscopy. In a habitat where arsenic free domestic water is unattainable, a simple addition of dietary supplements may ameliorate arsenic toxicity. Analytical research in the ingestion of arsenic is significant in protecting against the widespread toxicity observed in human populations exposed to arsenic through drinking water from contaminated tube wells in West Bengal and Bangladesh. Recent findings from our own collaborative studies in Bangladesh will be presented.

Walking on Eggshells: The Effects of Theobromine on Tooth Remineralization

Anna Cios (Chemistry)

Theobromine, an extract of the cacao bean, has demonstrated a greater effect in the remineralization of enamel compared to fluoride. The enamel of the tooth is naturally demineralized by the onset of acidic plaques within the oral cavity. As the carbonated hydroxyapatite mineral within the tooth structure is dissolved by the acidic plaques coating the tooth, dental caries begin to form. Remineralization occurs when ions in the saliva distribute over the tooth surface. To prevent dental decay, fluoride is added to toothpaste and drinking water. Studies reveal dental and skeletal fluorosis, caused by excessive ingestion of fluoride, lead to over-calcification of the bone with further detrimental situations. Eggshells, primarily composed of calcium carbonate, were employed as enamel-mimicking substrates. The shell fragments were treated with various toothpaste analogs containing theobromine and other xanthine derivatives. The shells were analyzed using Scanning Electron Microscopy before and after treating with the formulated toothpastes.

The porous surface of each eggshell was surveyed for size and population, quantifying the effectiveness of each xanthine derivative.

The Effect of Peer-Comparison in Social Media on Food Selection

Lauren Taibi (Biopsychology)

An independent group's experiment was conducted to test the effect of peer-comparison via Instagram on food selection. Participants included undergraduate women ranging from the ages of 18-20 years old who were randomly assigned to view an Instagram account that either induced peer competition, induced non-peer comparison, or that served as a control. Participants were screened for social media use. Appetite, social comparison, body dissatisfaction, and emotional eating were measured as was BMI. After viewing the feed for five minutes, participants were asked to select foods from a buffet of food images that consisted of 6 unhealthy items and 6 healthy items. Participants high in social comparison who were randomly assigned to the PC condition were hypothesized to show different patterns of eating behavior than other conditions by choosing less unhealthy items, taking fewer bites of unhealthy items if chosen, or by having fewer total bites. It was also hypothesized that those high in social comparison would have higher levels of body dissatisfaction which would be reflected in the predicted food behaviors. Finally, it was predicted that food choice would be predicted by emotional eating score because any stress from the media might impact emotional eaters more.

Global CO₂ Emissions: Sources, Historical Trends, and Links to Economic Growth

Samantha Susi and Jack Leighton

Throughout Earth's history, there has been a cycle of greenhouse gases in the atmosphere, which was mostly self-regulating due to environmental factors such as plant photosynthesis and tectonic plate movement. However, human impact on CO₂ levels began rising since the beginning of the Industrial Revolution. This creates a hotter atmosphere and for years, scientists have suggested reducing CO₂ emissions in an effort to combat climate change. CO₂ is seen as one of the most prominent greenhouse gases that contributes to climate change. Therefore, multiple proposals to control CO₂ levels have been put forward, however arguments against the large costs of implementing them prevented their execution. This project analyzes and presents ways in which to meaningfully reduce CO₂ emissions into the atmosphere at a low economic cost or even possible economic benefit. This project also analyzes proposed alternative methods of producing and consuming energy in different

economic sectors at a lower cost and reduced "carbon footprint". All work and calculations were done using historical data of CO₂ levels in comparison to projected CO₂ levels with the proposed changes, via the Wolfram programming language as part of the Scientific Computing course offered exclusively to Honors Freshman students at Wagner College.

Analysis of Climate Change Data and Predicted Impact on Japan and Surrounding Areas¹

Mara Mineo, Tamar Amirov and Vinh Phuong

Although climate change in the United States has been touched upon in the media, the impact of climate change on the Eastern hemisphere is just as detrimental as in the Western hemisphere. Countries like China and Japan are challenging climate change while their environments are currently suffering. While Japan is the leading country in combating climate change, the devastations are still prevalent in Japan's society today, and will continue to be prevalent in the near future. Since this archipelago stretches across four Mai islands as well as a smaller island chain, Japan is home to numerous climatic zones which will witness the stress of climate change firsthand. Since most of China is less habitable, the majority of the population lays on the eastern coast of the continent facing Japan, aiding in the detriment to the region. This analysis of Japan and its surrounding areas focuses on key points such as sea levels, cultivated fields and crops, and urban heat islands, as well as others. This research was carried out in the freshman-only Honors Scientific Computing course at Wagner College. Computational thinking skills have been utilized to apply functional programming to develop climate change data analysis using the Wolfram programming language.

Dye-Sensitized Solar Cells

Kelsey Savje (Chemistry) and Domenick Palmieri (Chemistry)

Dye-sensitized solar cells (DSSCs) have been the subject of much research in recent years, as the employment of solar energy as a means of generating electricity has drawn increasing interest. Organic dyes are particularly attractive, as it is easier to modify the structure of organic molecules compared to metal-based dyes. This project explores the synthesis of conjugated organic molecules that contain similar structural motifs to dyes reported to have high conversion efficiencies. The first step in the synthesis of the initial target dye was the preparation of 4-butoxy iodobenzene. This reaction used ethanol as a solvent, which is

¹ Received an award of excellence for outstanding presentation.

accepted as a green organic solvent. The alkoxybenzene was then used in a coupling reaction, in an attempt to synthesize a triphenylamine derivative that would serve as the donor region of the target dye. There is no conclusive evidence that the triphenylamine donor has been isolated, so alternative donor regions are being explored. The new targets are based on data from Harvard Clean Energy Project, which lists molecules that have demonstrated high energy conversion based on computational analysis.

Accessing Diynes Containing Thiocyanate and Thiophene End-Groups En Route towards Polydiacetylenes

Oskar Sundberg (Chemistry) and Ireysel Gittens (Chemistry)

Polydiacetylenes, PDAs, are a family of polymers that can access a wide variety of properties by attaching different end-groups. Amongst the most interesting properties is the chromatic color change that occurs when PDAs are exposed to certain external stimuli. This property has caused PDAs to be found in many sensory assemblies, which can be useful in for example the food industry. Although polydiacetylenes have been known of since the 1960s, there is little known about the possible applications arising from attaching different end-groups. The synthesis of thiocyanate- and thiophene-capped diynes is in progress, with the ultimate goal of accessing polydiacetylenes with these end-groups using a host-guest strategy. Both thiocyanate and thiophene end-groups are expected to impact the electronic properties of the polymerized system because of the resonance-stabilization and electronic effects of these groups. Efforts to synthesize thiocyanatoethyne and 1,4-dithiocyanatobuta-1,3-diyne have produced promising results, with ^{13}C NMR data containing peaks that correspond well with predicted spectra. Additional characterization is needed to confirm isolation of this novel diyne. The synthesis of 3,3-(1,3-butadiyne-1,4-diyl)bis[thiophene] was also achieved; however initial attempts towards polymerization are inconclusive.

Effects of Diethyl Phthalate on the Development of *Drosophila melanogaster*

Ellen Reidy (Biology)

The purpose of the present study was to test the effects on diethyl phthalate (DEP) on the development of the classic model organism *Drosophila melanogaster*. DEP is a diethyl ester of phthalic acid, an aromatic dicarboxylic acid commonly used as an organic solvent in the manufacture of fragrances, cosmetics, plastics, detergents and aerosol sprays. Because of its widespread use, the question of DEP toxicity is essential. Several studies suggest that DEP exposure has adverse effects on animals. For these studies, groups of 50

fly eggs were randomly transferred to vials containing either 0 ppm DEP, 1000 ppm DEP, 3000 ppm DEP or 5000 ppm DEP. The number of pupa that formed as well as the number of new flies that eclosed were quantified and the data analyzed using a one-way analysis of variance (ANOVA). The data indicate that chronic exposure to high concentrations of DEP causes a significant delay in fly development.

Global Sea Level Measurements: History, Current Status, and Future Impact

Derek Avery, Zachary Pandorf and Michelle Hernandez (Chemistry)

Sea levels around the globe have been rising rapidly since the late nineteenth century. Various areas around the world are directly affected by these rising sea levels, specifically heavily populated coastal regions. Primary causes of rising sea levels are thermal expansion of oceans and increased melting of glaciers. The melting of ice caps have potential catastrophic effects on the environment. This presentation illustrates the relationship between climate change and past, current, and future sea levels. The research was performed in the Scientific Computing course, a freshman-only honors class at Wagner College. Within the course, computational skills and critical thinking are implemented using the Wolfram programming language. The Mathematica program is essential for largescale data analysis through collection and presentation of sea levels and historical trends. Economic and agricultural impacts exist in most regions, which has an effect on the standard of living in these areas. This will be compared between developed and developing nations. Predictions for future sea levels pose threats to life and development around the globe. Using Mathematica, the presentation displays the projections and trends of sea levels, using a variety of interactive functions. Altogether, the rising global sea levels will be effectively exhibited using computational data analysis.

Antibacterial Properties of Functionalized Melamine

Piper Skinner (Chemistry)

The antibacterial activity of molecules is typically attributed to the presence of long hydrophobic alkyl chains or phenol groups. Attaching such groups to melamine, a aromatic heterocycle, can result in new molecules that possess the ability to resist bacteria. The antimicrobial activity of chlorinated melamine has been reported in the literature. This project focuses on the alkylation of melamine as a means of enhancing antimicrobial properties. Attempts to functionalize melamine with alkyl chains using

substitution reactions are in progress. Bromobutane and bromopentane have been employed thus far, with various reaction conditions under review. Once alkylation is achieved, the compound will be applied to infected agar plates to determine if the colonies of bacteria do indeed decrease. In addition to adding alkyl groups, phenolic substituents will also be explored as a means synthesizing additional melamine derivatives with antibacterial activity.

Analysis of Hurricanes and Cyclones in North America and Asia

Matthew Barreto and Victor Ruan

Climate change has caused an emergence of extreme weather events in the United States and Asia. Most notably, this presentation analyzes the juxtaposition between the effects of hurricanes in the United States such as Hurricanes Sandy and Katrina, and cyclones prevalent in Asia, primarily Typhoon Chan-hom (2015), or Typhoon Falcon in the Philippines. The prevalence of these extreme weather events have caused many effects on the world and human life. Furthermore, this presentation showcases a correlation between the severity and frequency of hurricanes and cyclones with certain factors such as job loss rates, insurance deficits, and public assistance necessities. This research has been carried in the freshman only Scientific Computing course at Wagner College. The computational analysis of the data was carried out using the Wolfram programming language. This research focuses on the severities of hurricanes and cyclones in different parts of the world and how they impact the global economy. Based on these findings, there has been a notable trend in a decrease in amount of extreme weather events, but an increase in their intensities. This data could serve as a precursor for extreme weather events that may occur in the future of North America and parts of Asia.

The Effect of Semi-Precocial Development on Movement of Juvenile Common Tern (*Sterna hirundo*) from the Nest

Monica Valero (Biology)

The objective of this experiment was to observe the effect of semi-precocial development on the movement of juvenile Common Terns (*Sterna hirundo*) as the chicks aged. Semiprecocial species begin to wander away from the nest at around two to three days old. Over the course of two months, two sites in Barnegat Bay, off Long Beach Island, New Jersey were observed to examine common tern chick movement from the nest. Once the chicks hatched, data was collected on the chicks: band numbers, the chicks' distance from the nest, as well as the distance between neighboring nests. The results collected

were expected to reflect semi-precocial development, meaning that as the chicks aged, they would be found farther from the nest. Observations of *S. hirundo* chicks from seven different age groups supported the hypothesis that chicks moved from the nest as they matured. In the first age group of 1 to 3 days, it was found that the median distance from the nest was only 0.10 m away from the nest. In the next age group of 4-6 days, the median distance away from the nest was 0.45 m away. In the age group of over three weeks old, the median distance away from the nest was 6.45 meters; no chicks were found at their nest, and the chicks were about to fledge. Although complications did arise such as storms, predation by gulls, and the chicks moving into dense vegetation, enough chicks were recorded to demonstrate that *S. hirundo* chicks move away from the nest after only days of hatching. Ultimately, the data show that Common Tern chicks are not attached to the nest site, despite continuing to rely on their parents for care.

Chemistry in the Aerosol Interfacial Region: A Computational Study

Gent Prelvukaj (Chemistry)

The chemical reactions caused by atmospheric aerosol particles are involved in radiative forcing, chemical reaction cycles, and human health. The chemical reactions that occur in the interfacial region remain ambiguous. Due to the complexity of the interfacial region, self-assembled reverse micelles (RM) are used as proxies to help develop a complete understanding of the photochemical properties of the region. We performed fully atomistic molecular dynamics simulations to explore the impact of trapped ionic species on the size and shape of reverse micelles. Our simulations of larger reverse micelles from $w_0 = 10, 15, 20$ provide a template for further studies. For each RM size, the ions form layers in the interfacial region. K^+ ions reside near the surfactant head groups and even replace the Na^+ counter-ion of the surfactant while the Cl^- anions are localized in the aqueous core. Density calculations indicate that the interfacial region of the reverse micelles are structured as follows: $R-SO_3^- > Na^+ \geq K^+ > Cl^-$ (Core). Our simulations indicate that the trend in shape of reverse micelles continues for smaller reverse micelles including $w_0 2, 3, 4$, and 6. After running multiple simulations of different concentrations we discovered that there is a threshold concentration.

Section II:
The Natural Sciences &
Quantitative Analysis

Thermal Stresses and Resistive Heating: A Computational Analysis

Adam O'Brien (Physics)¹

In order to drive safely in icing conditions, drivers must be able to clearly see their entire surrounds, including behind the vehicle. This research investigation aims to analyze the degree to which heat spreads through glass containing resistive heating strips and the thermal gradients that result from the uneven warming. Because this problem is mathematically cumbersome, and for many geometries does not remit to an analytic solution, a numerical simulation utilizing finite differences was developed to evaluate the temperature distribution as a function of time. It showed that running rear defrosters for approximately two to five minutes would adequately clear condensation and a thin layer of ice despite convective heat loss in harsh conditions. It also confirmed that the resulting thermal stresses would not be large enough to weaken the glass or cause cracking.

I. Introduction

The addition of heat to a point on a surface is a seemingly simple procedure that occurs frequently across a multitude of applications. Heat flows from hot to cold regions in a physical process known as heat diffusion. The rate at which heat flows across the surface of a material is known as the thermal diffusivity. It, along with ambient conditions and internal heat generation, determines the temperature distribution that results.

Localized heat at precise locations is required across many fields. Doctors performing certain surgical procedures use lasers for a multitude of applications, including removing hair, moles, warts, scars, closing blood vessels to prevent blood loss, and even destroying cells that are cancerous.^{2,3} While the lasers are extremely precise in

¹ Written under the direction of Dr. Gregory Falabella in partial fulfillment of the Senior Program requirements.

² James, W.D., Berger, T.G., and Elston, D.M. "Cutaneous laser surgery", Diseases of the Skin: Clinical Dermatology, 12th ed., Elsevier, 2016, pp. 888-899.

³ Sakamoto, F.H., Jalian, H.R., and Anderson, R.R. "Understanding lasers, lights, and tissue interactions", Lasers and Lights: Procedures in Cosmetic Dermatology, 3rd ed., Elsevier Saunders, 2013, pp. 1-8.

applying energy exactly where the surgeons wish, the heat applied by the laser broadens from the site of application to the surrounding tissues, which can cause serious unintended damage. Laser machining is the process of using lasers to apply heat to shape, cut, and weld metals.⁴ Laser machining hardware does not come in physical contact with the metal it is shaping and therefore provides less wear on the equipment, however, laser machinists face a similar dilemma to laser surgeons.⁵ They must use high intensity lasers to melt and shape metals to a very high degree of accuracy, but heat from the point of application on the metal spreads to the surrounding area and can cause unintended shaping and cutting of the metal.

Laser surgery and laser machining are examples where heat is deposited at localized points during brief intervals to minimize effecting surrounding areas. By contrast, automobile engineers design rear windshield heaters where wire strips heat an entire piece of glass to deice or defog.⁶ Heating strips must be developed and arranged in such a way that allows for efficient heat transfer across the glass without significant thermal gradients that can lead to breakage.

As a material is heated and the kinetic energy of its particles increase, the space between the particles increase slightly, resulting in an overall increase in the size of the material.⁷ This process is known as thermal expansion. Thermal expansions cause thermal stresses, which is the process where the expansion of a material causes the shape of the material to warp and possibly generate cracks or even break completely. For example, railroad tracks and bridges can warp during hot days. Without proper expansion joints that allow the materials to expand without being constrained enough to break, they would fail and cause catastrophic loss of life. Thermal stresses warping railroad tracks caused over forty train derailments in the United States in 2001.⁸ Aircraft do not contain wire strips to heat the aircraft's surface and thwart ice formation because the thermal expansion that the aluminum would incur from such a device would cause excessive

⁴ "What are Laser Cutting Machines?", *Thomasnet*, updated April 2018, <https://www.thomasnet.com/articles/custom-manufacturing-fabricating/laser-cutting-machines>.

⁵ *Ibid.*

⁶ A. Faghri et al, "Modern Applications of Heat and Mass Transfer", Advanced Heat and Mass Transfer, Global Digital Press, 2010, pp. 61-65.

⁷ Duffy, A.G., "Heat Transfer, and the first law of thermodynamics", Boston University, PY105 notes, 1998, <http://physics.bu.edu/~duffy/py105/notes/Heattransfer.html>

⁸ Kish, A., Mui, W., "Track Buckling Research", Tech Report, John A. Volpe National Transportation Systems Center (U.S.), July 9, 2003, <https://www.volpe.dot.gov/infrastructure-systems-and-technology/structures-and-dynamics/track-buckling-research>

stresses and cracks that lead to catastrophic wing and fuselage destruction. Aircraft undergo enough stress from their wings constantly vibrating and ever present pressure and air temperature changes. Adding stresses by using heating elements to de-ice would amplify the problem.⁹

This research investigation aims to analyze the degree to which heat spreads through glass containing resistive heat strips and the resulting thermal gradients that result from the uneven heating. Because this problem is mathematically cumbersome, and for many geometries does not remit to an analytic solution, a computer program will be utilized to evaluate the temperature distribution as a function of time. A post-processor called Tecplot¹⁰ will be used to visualize the results.

II. Theory

The transfer of thermal energy within or between mediums takes place when a thermal gradient (i.e. temperature difference is present). It is accomplished by one or more of three physical mechanisms. The first is conduction. Conduction is the transfer of heat between individual particles in a material.¹¹ As a particle is heated, it vibrates more frequently and subsequently collides with the particles adjacent to it causing them to also vibrate more quickly, or in macroscopic terms, increase in temperature¹². Fourier's law governs heat transfer via conduction is:

$$q = At \frac{T_h - T_c}{R} \quad (1)$$

In the above equation, A is the area of the surface, q is the rate of heat transfer, T_h is the temperature of the hotter object, T_c is the temperature of the cooler object, and R is the thermal resistance of the material to which the heat is being added. The thermal resistance is denoted as L/k , where L is the thickness that is subject to the temperature gradient and k is the thermal conductivity of the material. Note that there must be a difference in temperature between the hotter and cooler objects in order for heat transfer

⁹ Integrated Publishing, "Specific Action of Stresses", Aviation Structural Mechanic (H&S) 3&2 - How airplanes are built and how to maintain them, p. 20, <http://navyaviation.tpub.com/14018/css/Specific-Action-Of-Stresses-32.htm>, accessed April 2018.

¹⁰ Amtec Engineering

¹¹ Duffy, A.G., "Heat Transfer, and the first law of thermodynamics", Boston University, PY105 notes, 1998, <http://physics.bu.edu/~duffy/py105/notes/Heattransfer.html>

¹² Wilson, Buffa, and Lou, *College Physics*, 7th Ed., Pearson, (2010), pp. 373-375.

to occur, as heat must flow from the hotter object to the cooler object as per the second law of thermodynamics.

The second method is convection. Convection involves the motion of fluids surrounding region that is at a different temperature. The equation for heat transfer via convection is¹³:

$$q = hA(T - T_{\infty}) \quad (2)$$

In the above equation, T represents the temperature of the fluid, T_{∞} is the temperature of the medium surrounding the fluid, A is the surface area over which heat transfer is occurring, and h is the convective heat transfer coefficient. Heat is initially transferred to or from the region in question via conduction to the surrounding fluid which, as it is moving, carries the energy further up or downstream.¹⁴ Hence, it is the physical movement of the surrounding fluid that accounts for the majority of the actual heat transfer. Convection is important to analyzing heat diffusion since heat may be lost to the surrounding environment while diffusing through a material, such as heat being lost to the air outside of a rear windshield in a car that is being electrically heated.

The last method is radiation. Radiation is energy transfer by electromagnetic waves. The equation for heat transfer via radiation is known as the Stefan-Boltzmann equation and is given by¹⁵:

$$q = \sigma \epsilon A [T^4 - T_{\infty}^4] \quad (3)$$

In the above equation, σ is the Stefan-Boltzmann constant. ϵ is the emissivity of the radiating object. It has no units and is a value between 0 and 1, where an emissivity of 0 indicates that it radiates none of its energy and absorbs no radiation from other sources. On the contrary, objects with an emissivity of 1 are ideal absorbers and emitters. A is the area of the surface that is radiating or absorbing heat. T is the absolute temperature, usually measured in Kelvin, of the object radiating the heat. T_{∞} is the ambient air temperature. An example of heat transfer via radiation would be the heating of the Earth by the Sun.

¹³ Cengel, Y. A., Turner, R. H. and Cimbala, J. M. Thermal-Fluid Sciences, 5th edition, McGraw-Hill, 2017, p. 635.

¹⁴ Duffy, A.G., "Heat Transfer, and the first law of thermodynamics", Boston University, PY105 notes, 1998, <http://physics.bu.edu/~duffy/py105/notes/Heattransfer.html>

¹⁵ Wilson, Buffa, and Lou, College Physics, 7th Ed., Pearson, (2010), pp. 378-381.

Thermal gradients in an object subject to uneven heating will spread through the material by conduction, otherwise known as heat diffusion.¹⁶ The rate of heat diffusion varies based on a material's thermal diffusivity, α . This property can be viewed as the ratio of the heat conducted through the material to the thermal energy stored per unit volume.¹⁷ Hence, $\alpha=k/\rho c_p$, where k is the material's thermal conductivity, and ρc_p is essentially the volumetric heat capacity of a material. Every substance, whether it be aluminum, iron, glass, water, or organic tissue have various intrinsic properties that cause differing diffusivity constants to vary greatly.¹⁸ Some applications require a quick even redistribution of thermal energy while others make use of insulating properties. Scientists and engineers use this knowledge when selecting materials for a particular application.

This research investigation focuses on heat conduction which is governed by the heat diffusion equation. This equation can be derived by applying the conservation of energy to a differential control volume.¹⁹

$$\rho c_p \frac{\partial T}{\partial t} = \frac{\partial}{\partial x} \left(\kappa \frac{\partial T}{\partial x} \right) + \frac{\partial}{\partial y} \left(\kappa \frac{\partial T}{\partial y} \right) + \dot{q} \quad (4)$$

The \dot{q} in the above equation accounts for any internal energy generation or loss per unit volume. Assuming constant properties in two dimensions, the equation reduces to:

$$\frac{\partial T}{\partial t} = \alpha \left(\frac{d^2 T}{dx^2} + \frac{\partial^2 T}{dy^2} \right) + \frac{\alpha \dot{q}}{k} \quad (5)$$

Convective losses of heat energy are accounted for by the \dot{q} term.

¹⁶ T. W. Davies, "Thermal Diffusivity", *Thermopedia*, (2016), DOI: 10.1615/AtoZ.thermal_diffusivity.

¹⁷ Pascoe, N., Principles and Practice of Failure Prevention in Electric Systems, Wiley, 2011, p.94-95.

¹⁸ Faghri, A. et al, "Modern Applications of Heat and Mass Transfer", Advanced Heat and Mass Transfer, Global Digital Press, 2010, pp. 61-65.

¹⁹ Incropera, F. and DeWitt, D., Fundamentals of Heat and Mass Transfer, (1985), pp.43-47.

III. Computational Methodology

Closed form solutions for the heat equation in two or three dimensions make use of a technique known as separation of variables. However, the solutions often do not exist or are extremely difficult and time consuming to obtain. In addition, any changes in the boundary conditions or the geometry of the surface being evaluated would result in the need to re-solve the entire problem. As a result, numerical methods are routinely employed. These include finite differences, finite elements, and finite volume approaches. The finite difference method was chosen for this research investigation because it can be employed in a straightforward manner and yields highly accurate results.

Using the finite difference method involves replacing derivatives in a differential equation by finite rates of change that are intentionally very small, but still measurable. The smaller the difference used, the more accurate the answer will be. The downside to using extremely small differences is that smaller spatial divisions and time steps necessitate more computations. For this reason, this research investigation will make use of a computer program.

Consider the definition of a derivative:

$$\frac{dy}{dt} = \lim_{\Delta t \rightarrow 0} \frac{y(t + \Delta t) - y(t)}{\Delta t} \quad (6)$$

The derivative of a function indicates how a variable changes with respect to another variable. Using the definition of a derivative, one can approximate the rate of change, of a function at a specified point. For example, given the function $y=3t^2$, an approximate derivative at the point $y=3$ and using $\Delta t=0.1$, can be found as follows:

$$\frac{dy}{dt} \approx \frac{y(t + \Delta t) - y(t)}{\Delta t} = \frac{3(3.1)^2 - 3(3)^2}{0.1} = 18.3 \quad (7)$$

Using the power rule, $\frac{dy}{dt} \Big|_{y=3}$ would be exactly 18. The above example finds a value of 18.3 which contains a 1.67% error. The reason for the error is the large size of Δt . By using the same equation with $\Delta t=0.01$, a value of 18.03 is obtained which is 0.17% above the actual value. The smaller the Δt , the smaller the error. In order to prevent round-off error at an extremely small Δt , increased precision up to sixteen digits is often necessitated. Also, high order finite difference approximations can be employed. They are obtained through the use of a Taylor series approximation.

$$f(x) = f(a) + f'(a)(x-a) + \frac{f''(a)(x-a)^2}{2!} + \dots + \frac{f^{(n)}(a)(x-a)^n}{n!} \quad (8)$$

The Taylor series approximation can be used to create other finite difference formulas with improved accuracy for a very small Δt . A common finite difference approximation is the central difference approximation:

$$\frac{dy}{dt} \approx \frac{y(t+\Delta t) - y(t-\Delta t)}{2\Delta t} \quad (9)$$

The above equation is derived by taking the linear combination of the Taylor series expansions for $f(t+\Delta t)$ and $f(t-\Delta t)$. A central difference equation for second derivatives also exists:

$$\frac{d^2y}{dt^2} \approx \frac{y(t+\Delta t) - 2y(t) + y(t-\Delta t)}{(\Delta t)^2} \quad (10)$$

The heat diffusion equation can be written in finite difference form using a forward difference for the temporal term and central differences for the spatial terms.

$$\frac{T_{i,j}^{n+1} - T_{i,j}^n}{\Delta t} = \frac{\alpha}{(\Delta x)^2} [T_{i+1,j}^n + T_{i-1,j}^n - 2T_{i,j}^n] + \frac{\alpha}{(\Delta y)^2} [T_{i,j+1}^n + T_{i,j-1}^n - 2T_{i,j}^n] + \frac{\alpha}{\kappa} \dot{q}_{i,j} \quad (11)$$

The superscript $n+1$ refers to the value at time $t+\Delta t$ where as n designates current time t results. i and j denote the grid point in question. Using grid points that are equally spaced in both directions and rearranging terms yields:

$$T_{i,j}^{n+1} = T_{i,j}^n + \frac{\alpha\Delta t}{(\Delta x)^2} [T_{i+1,j}^n + T_{i-1,j}^n + T_{i,j+1}^n + T_{i,j-1}^n - 4T_{i,j}^n] + \frac{\alpha\Delta t}{\kappa} \dot{q}_{i,j} \quad (12)$$

As can be seen, the present values of the temperature in conjunction with the internal heat generation or loss at a given point can be used to ascertain future values at all of the interior nodes. Specification of boundary conditions completes a new temperature profile. Although this approach is straight forward it must be repeated over and over marching through time at a slow rate to ensure both convergence and accuracy. To this end, a C++ program was written and employed (see Appendix A).

IV. Results:

The objective of this research was to evaluate the thermal gradients produced by resistive heating in glass using a two-dimensional model. This would approximate the rear defroster of a typical automobile.

In order to ensure that the computer code works properly test cases were run to validate it. The first set all of the initial temperatures of a square region ($L=0.25$ meter) to an arbitrary value of 20°C . At time $t=0$ seconds the right side was suddenly changed to 100°C and maintained at that value while the other boundaries were kept at the original 20°C . This is a classic textbook case that reverts to the same steady-state separation of variable solution regardless of material properties²⁰. The higher the thermal diffusivity the more rapidly equilibrium is reached. As expected, thermal energy diffused in from the hotter boundary producing the isotherms shown in figure1.

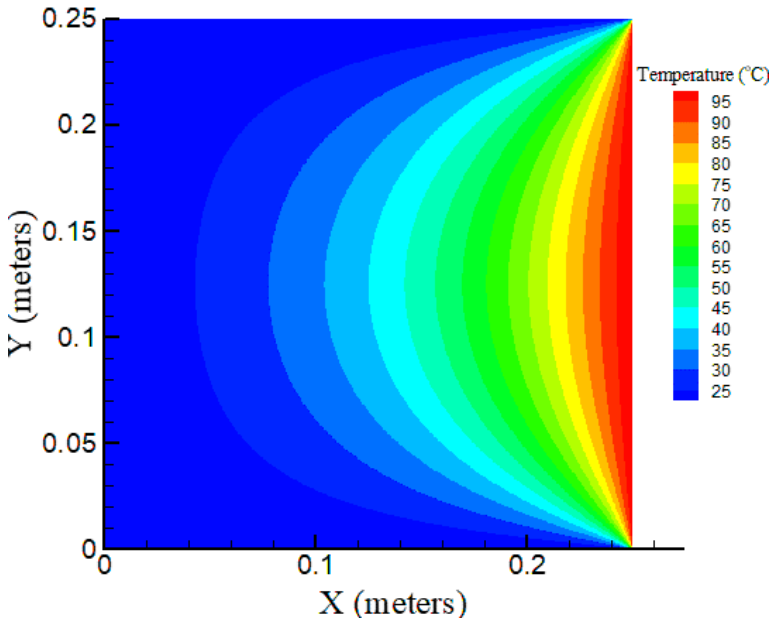


Figure 1: Steady-state two-dimensional conduction.

²⁰ Jaluria, Y. and Torrance, K.E., Computational Heat Transfer, Hemisphere Publishing Corporation, 1986, pp.108-111.

A second scenario with convection taken into account using the heat loss per unit volume term was then tackled. When an aluminum plate was used there was little difference between the solutions with and without convective losses (figure 2). This is because the high conductivity of aluminum provided a low resistance path for the heat to travel through.

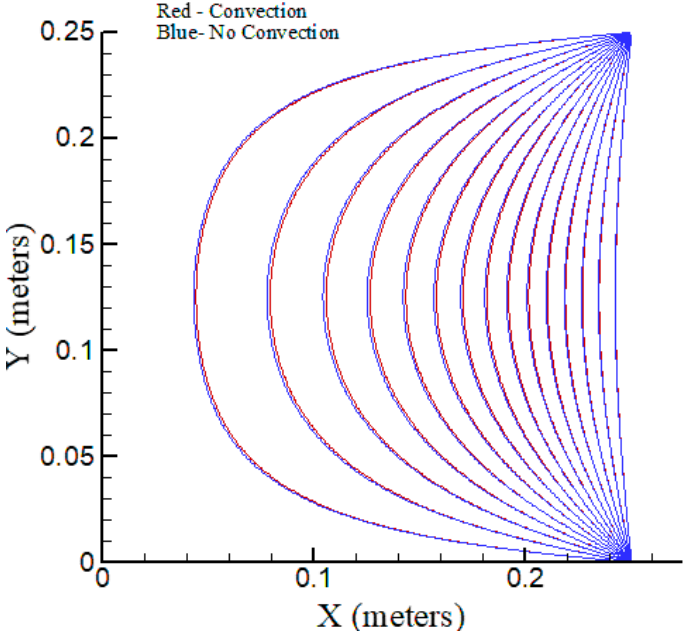


Figure 2: Aluminum plate with convective losses.

By contrast when a glass pane was considered the isotherms changed dramatically (figure 3). The results show that the heat did not spread through the glass considerably. This is because glass has a low conductivity and a small diffusivity making it easier for thermal energy to escape by convection to the air moving over it.

The spacing of the grid points was set at 251 in each direction to provide a spacing of 1 millimeter for the resistance heating strips to be analyzed (figures 4 and 5). No changes in accuracy occurred when doubling or halving this value confirming its appropriateness. The time step was also varied. Glass remitted to a converged solution for $\Delta t \leq 1.3$. For $DT \leq 0.01$ changes of less than 0.1% occurred and at $Dt \leq 0.002$ the solution remained independent of the size of time increments. Aluminum required a time

step that was proportionally smaller due to its higher thermal diffusivity (i.e. $\alpha_{\text{aluminum}}/\alpha_{\text{glass}}=285.6$ so $\Delta t_{\text{glass}}/\Delta t_{\text{aluminum}}=285.6$).

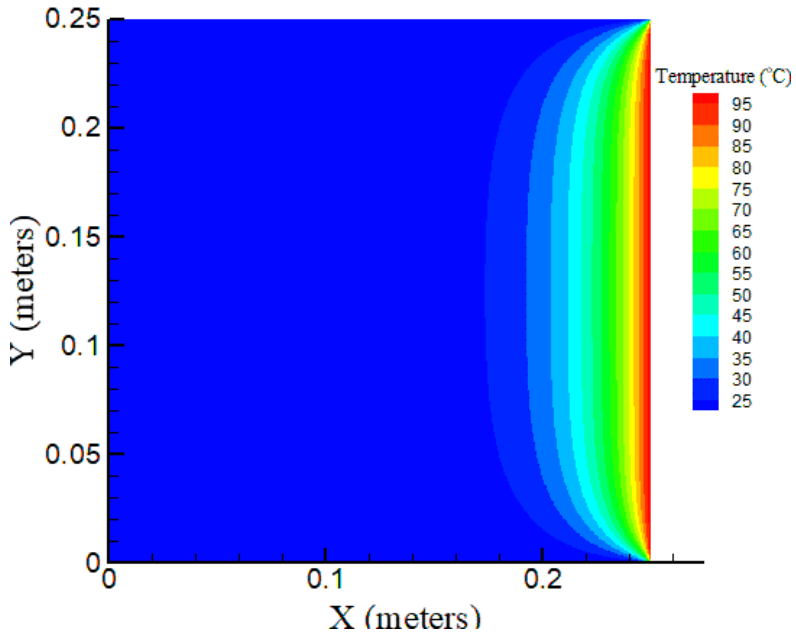


Figure 3: Glass pane with convective losses.

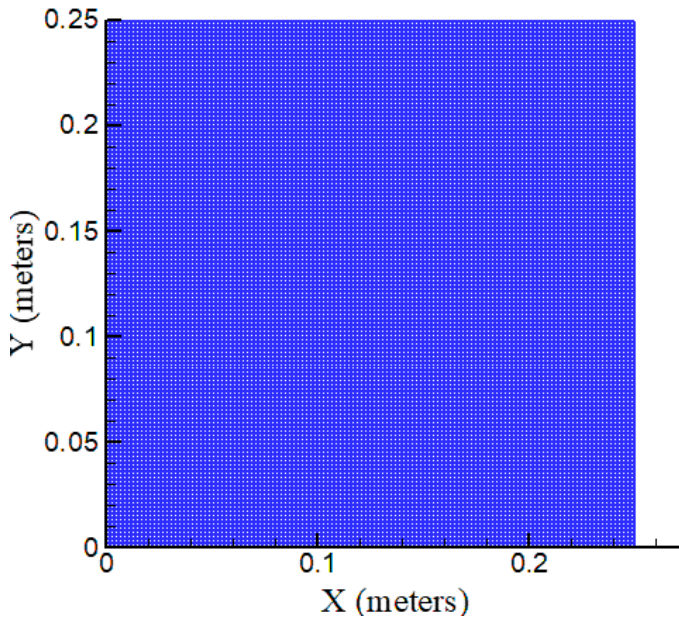


Figure 4: The grid on which calculations were performed.

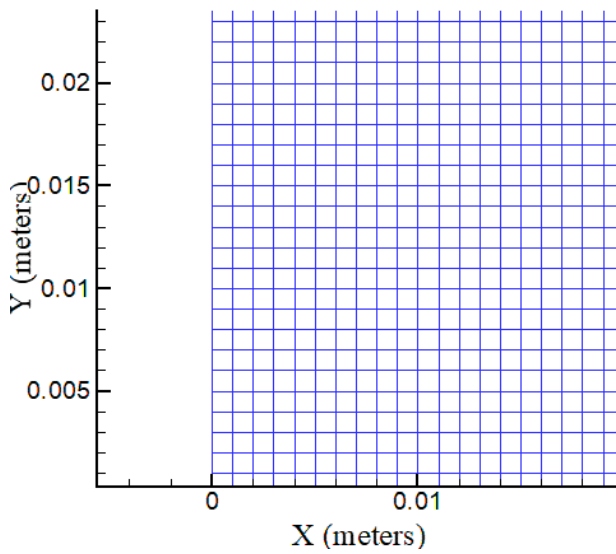


Figure 5: Zoomed in view to better show the spacing between grid points.

With the test cases completed the subject of the investigation was modelled. To accomplish this the regions described by the grid points in eight equally spaced rows generated heat that modelled electrical resistive strips (figure 6). The amount of heat input was varied until a maximum temperature gradient of 25°C resulted. This would be adequate to defrost the window under harsh conditions without fracturing or cracking the glass. For these simulations the ambient temperature was set at 0°C and all of the boundaries maintained at that value. Convective losses were also accounted for as in the test cases.

The virtual defrosters ran for four simulated amounts of time: two minutes, five minutes, ten minutes, and one hour. At two minutes, the heat had not disbursed more than what appears to be 1 cm bands of higher temperatures (10-14°C) centered at the each of the heating strips (figure 7). The regions between the heating strips are almost unchanged from their initial temperature of zero degrees. Although minimal, it would provide a driver with some visibility.

After five minutes a totally different picture emerges. Almost the entire glass pane

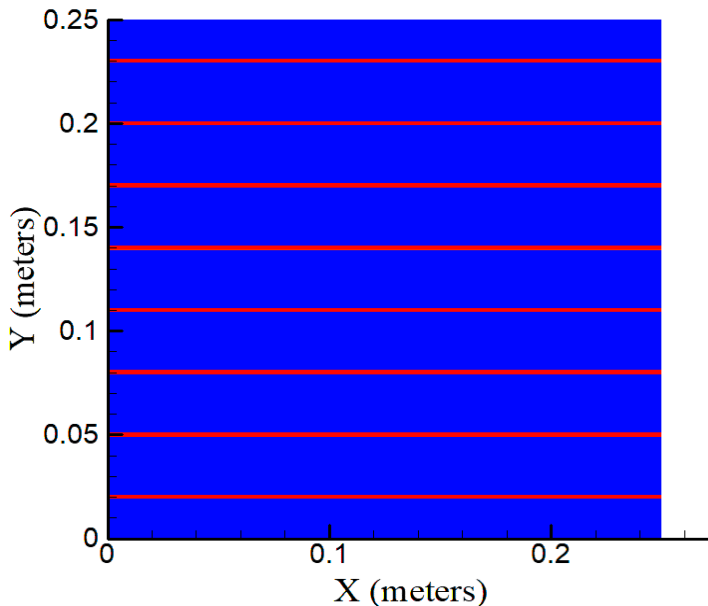


Figure 6: The heat input from electrical resistive strips.

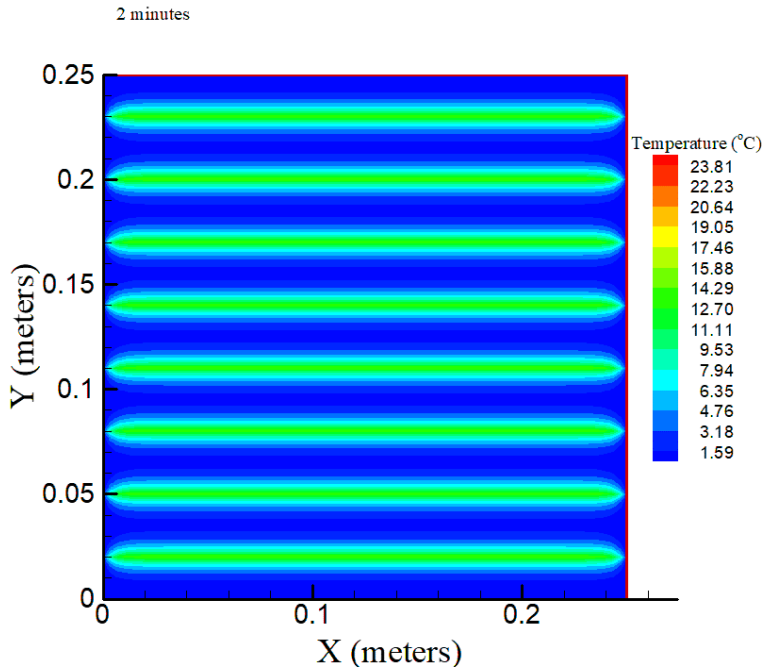


Figure 7: Temperature distribution after 2 minutes of resistive heating.

has experienced a temperature increase of several degrees and approximately half of it is 12 or more degrees above the ambient temperature. Moreover, hot spots of 20°C (the orange coloring) have appeared where at the location of the wire elements (figure 8). Under most conditions visibility through the rear windshield would be quite good at this time. Even in frozen precipitation any ice would begin to show significant melting.

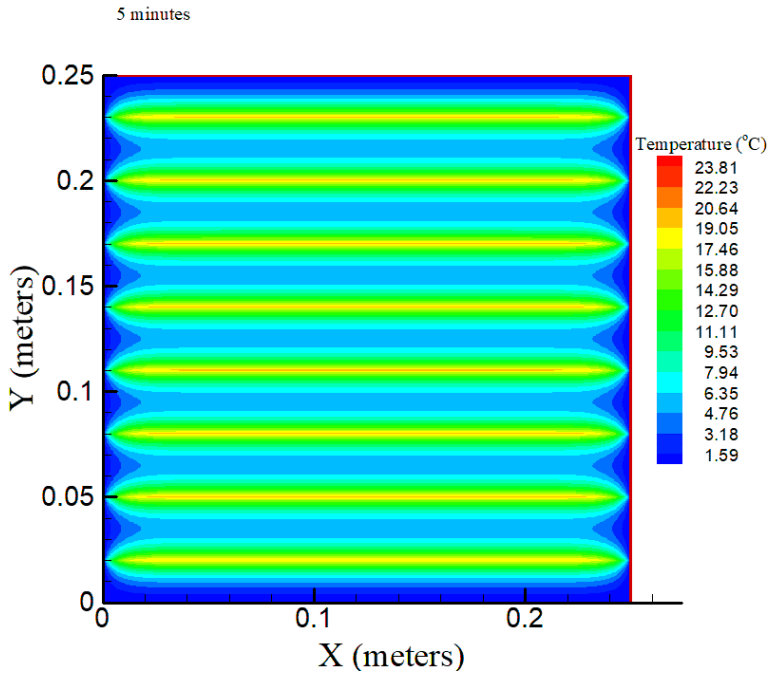


Figure 8: Temperature distribution after 5 minutes of resistive heating.

At ten minutes (figure 9), temperatures immediately surrounding the heating strips near twenty-five degrees. The coldest regions between the strips is approaching nine degrees. Although largely inconsequential, the temperatures at the extreme borders do not show significant change from the five-minute simulation. In a real-world situation, it is likely that almost all of the condensation and ice on the windshield would be gone and, from a rear visibility standpoint, the vehicle would be safe to drive even under harsh conditions.

Once the defroster has been on for an hour it has reached an equilibrium state

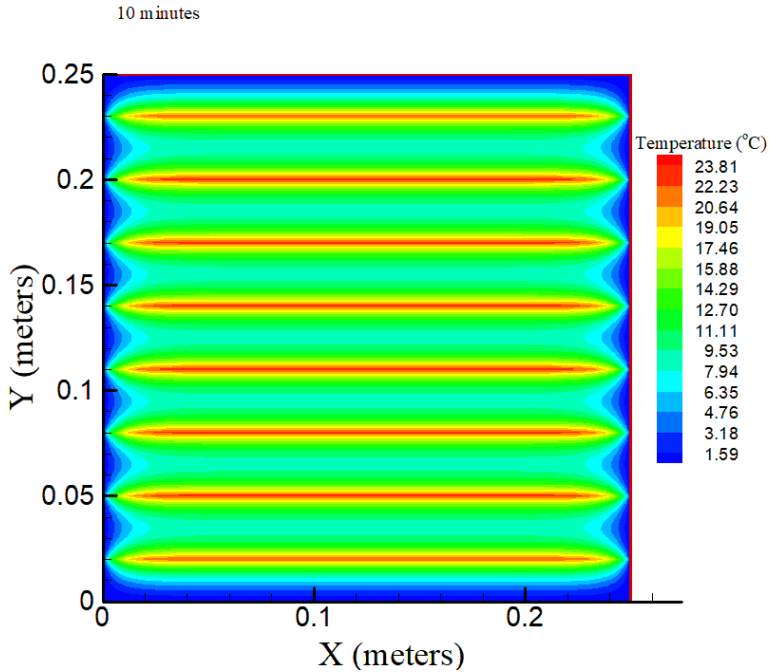


Figure 9: Temperature distribution after 10 minutes of resistive heating.

resulting in an average temperature of 13.1 degrees above the ambient (figure 10). Note that in an automobile the thermostat would have switched off before this point was reached except in extreme cold. Nevertheless, this represents a worst-case scenario for thermal gradients. To facilitate the analysis a vertical slice was taken at the mid-section to better illustrate the variation in temperature as a function of height (figure 11). It shows temperature gradients peaking out at $\Delta T=2.1^{\circ}\text{C}$ from grid point to grid point in the vicinity of the wire strips and 25.3°C over the entire surface. Since glass has a thermal expansion coefficient of $9 \times 10^{-6} \text{ }^{\circ}\text{C}^{-1}$ and a Young's Modulus of 63 GPa²¹, the maximum thermal stress, σ , is 14.3 MPa which is less than $\frac{1}{3}$ of its 50 MPa yield stress²² and therefore will not promote cracking or failure.

$$\sigma = E\alpha\Delta T \quad (13)$$

²¹ Qingsong, Wang et al., "Thermal shock effect on the glass thermal stress response and crack", *Procedia Engineering* 62 (2013), p.720.

²² Beer, F.P. and Johnston, E.R., *Mechanics of Materials*, McGraw-Hill, 1981, p.585.

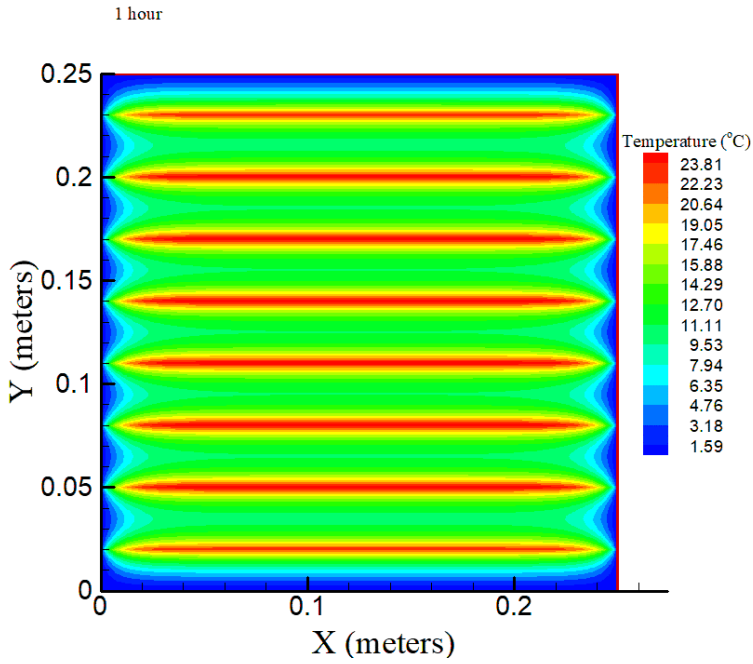


Figure 10: Temperature distribution after 1 hour of resistive heating.

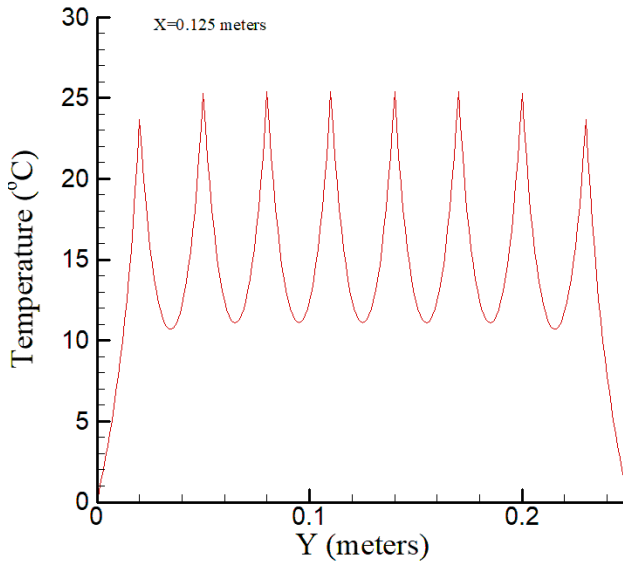


Figure 11: Vertical slice showing temperature variation as a function of height at the midpoint.

V. Conclusions

This research investigation successfully simulated the basic physical principles of heat diffusion using finite differences. It showed that running rear defrosters for approximately two to five minutes would adequately clear condensation and a thin layer of ice despite convective heat loss in harsh conditions. It also confirmed that the resulting thermal stresses would not be large enough to weaken the glass or cause cracking. Future research could entail utilizing a three-dimensional model and varying the wire configuration to increase efficiency.

VII. Acknowledgements

First, I would like to thank my parents, Holly and Frank O'Brien, and my grandparents, Arden and Barbara Kessler. Without their support, my entire academic career, especially my college career would not have been possible. I would like to thank my advisor, Dr. Gregory Falabella, for putting up with me for four years, which, in addition to him being a great professor makes him a candidate for sainthood. I would like to recognize Dr. Otto Raths, Dr. Florin Pop, Dr. Adrian Ionescu, Dr. Zohreh Shavhar, and the rest of my professors for their guidance along the way and for giving me the education that I received here at Wagner. I would like to acknowledge my high school pre-calculus, Mr. David Dannilack for believing in me when I was struggling in math, and my high school physics teacher, Mr. David Klann for showing me that there is more to the world of science than just biology and chemistry. Lastly, I would like to thank the administration, staff, and student body of Wagner College for offering me the opportunities that I was given over the last four years. I will certainly never forget my time at Wagner and I wish everybody here the best of luck in their future endeavors.

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Appendix A

```
// Explicit finite-difference algorithm to solve two-dimensional
// transient conduction with heat addition.
#include <iostream>
#include <iomanip>
#include <fstream>
using namespace std;

int imax;

int main()
{
    double alpha, dx, dt, time, ambient, tfinal, FO, k, h;
    double T[251][251], q[251][251], heatadd, thickness;
    double heatloss;

    int imax, jmax, i, j, counter;
    bool iterate = true;
    // fix the number of grid points in horizontal direction
    imax = 250;
    // fix the number of grid points in vertical direction
    jmax = 250;
    // provide thermal diffusivity (SI units)
    alpha = 3.4E-07;
    // give thermal conductivity
    k = .78;
    // set heat transfer coefficient
    h = 75.0;
    thickness = 0.01;
    // provide grid point spacing (meters) assuming that dx=dy
    dx = 0.001;
    // provide time increments (seconds)
    dt = 0.002;
    // compute the Fourier number
    FO = alpha * dt / (dx*dx);
    // start at time=0 seconds
    time = 0.0;
    // the time at which the simulation ends in seconds
    tfinal = 600.0;
    // ambient temperature
    ambient = 0.0;
    // constant for convection term in finite difference equation
    heatloss = h * dt * alpha / (k*thickness);
    heatadd = heatloss/h;
```

```

// initialize arrays associated w/temperature & heat addition
for (i = 0; i < imax + 1; i++)
{
    for (j = 0; j < jmax + 1; j++)
    {
        // initialize temp to ambient conditions
        T[i][j] = ambient;
        // initialize grid points associated with
        // internal heat transfer per unit volume
        // only every third strip starting from the
        // second will have heat addition
        if ((j + 10) % 30 == 0)
        {
            cout << j << '\n';
            q[i][j] = 35000;
        }
        else
            q[i][j] = 0.0;
    }
}
// begin marching through time
do
{
    cout << time << "\n";
    // solve for new temperature at interior points
    for (i = 1; i < imax; i++)
    {
        for (j = 1; j < jmax; j++)
        {
            T[i][j] = T[i][j] + FO * (T[i + 1][j] +
            T[i - 1][j]+T[i][j + 1] + T[i][j - 1] +
            heatadd*q[i][j] -4 * T[i][j])- heatloss *
            (T[i][j]-ambient);
        }
    }
    // apply top and bottom boundary conditions
    for (i = 1; i < imax; i++)
    {
        T[i][0] = ambient;
        T[i][jmax] = ambient;
    }
    // apply left and right boundary conditions
    for (j = 1; j < jmax; j++)

```

```

    {
        T[0][j] = ambient;
        T[imax][j] = ambient;
    }
    // apply boundary conditions at the corners
    T[0][0] = ambient;
    T[0][jmax] = ambient;
    T[0][imax] = ambient;
    T[imax][jmax] = ambient;
    // is the final time reached
    time = time + dt;
    if (time > tfinal)
        iterate = false;
} while (iterate);

// writing grid to a file in plot3d format
ofstream fout("heat.g");
fout << imax + 1 << "\t" << jmax + 1 << "\n";
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout << fixed << setprecision(4) <<
            (double) dx * i << "\t";
        if (counter % 5 == 0)
            fout << endl;
    }
}
fout << endl;
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout << fixed << setprecision(4) <<
            (double) dx * j << "\t";
        if (counter % 5 == 0)
            fout << endl;
    }
}
fout << "\n";

```

```

fout.close();

// writing temperature distribution to file in plot3d format
ofstream fout2("heat.q");
fout2 << imax + 1 << "\t" << jmax + 1 << "\n";
fout2 << time << "\t" << dt << "\t" << h << "\t"
    << time << "\n";
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout2 << fixed << setprecision(4) << left
            << setw(9) <<
            T[i][j] << "\t";
        if (counter % 5 == 0)
            fout2 << endl;
    }
}
fout2 << endl;
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout2 << fixed << setprecision(4) << left
            << setw(9) <<
            q[i][j] << "\t";
        if (counter % 5 == 0)
            fout2 << endl;
    }
}
fout2 << endl;
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout2 << fixed << setprecision(4) << left
            << setw(9) <<
            T[i][j] << "\t";
    }
}

```



```

        if (counter % 5 == 0)
            fout2 << endl;
    }
}
fout2 << endl;
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    for (i = 0; i < imax + 1; i++)
    {
        counter = counter + 1;
        fout2 << fixed << setprecision(4) << left
            << setw(9) <<
            T[i][j] << "\t";
        if (counter % 5 == 0)
            fout2 << endl;
    }
}
fout2 << "\n";
fout2.close();

// writing temperature distribution at x=125 to file
ofstream fout3("heat.dat");
counter = 0;
for (j = 0; j < jmax + 1; j++)
{
    counter = counter + 1;
    fout3 << fixed << setprecision(4) << left
        << setw(9) <<
        (double)dx *j << T[125][j] << "\n";
}
fout3.close();

//find average temp
double sum;
sum = 0.0;
ofstream fout4("avgtemp.dat");
for (i = 0; i < imax+1; i++)
{
    for (j = 0; j < jmax+1; j++)
    {
        sum = sum+T[i][j];
    }
}

```

```
sum = sum / (251 * 251);  
fout4 << fixed << setprecision(4) << left << setw(9)  
      << sum << "\n";  
return 0;  
}
```

Section III: The Social Sciences

The Role of Overprescription in Antibiotic Resistance among Adult Hospitalized Patients¹

Cathryn Cantyne (Nursing), Claire Johnson (Nursing), Jacqueline Otake (Nursing)²

Antibiotics were once a lifesaving discovery that reduced morbidity rates for numerous illnesses. However, in recent years, antibiotic resistance has become a concern in New York City as well as nationally and globally. Bacteria becomes resistant due to prescriber or patient overuse or misuse. Antibiotics kill sensitive bacteria, allowing resistant bacteria to grow and multiply (New York State Department of Health [NYSDOH], 2017). According to Livorsi, Comer, Matthias, Perencevich, & Bair (2015, p. 7), this multifactorial issue is a result of patient expectation, lack of knowledge and/or uncertainty regarding diagnosis on the part of healthcare providers. This paper explores how nurses help decrease the prevalence of antibiotic resistant bacteria, such as clostridium difficile (CDI) and methicillin-resistant staphylococcus aureus (MRSA) among New York City's hospitalized adult patients.

Community Assessment and Analysis

Hospitals in the United States are analyzed at national, state, and local levels based on their standardized infection ratio (SIR). This measurement compares the number of reported hospital acquired infections to the predicted number of infections. Hospital acquired cases are defined as a positive specimen obtained on day four or later following hospital admission (Centers for Disease Control and Prevention [CDC], 2017c). According to "Medicare Hospital Compare Results" (n. d.), in 2014, New York State's SIR for methicillin-resistant staphylococcus aureus (MRSA) was 1.01, and for clostridium difficile (CDI) the SIR ratio was 0.97. In comparison, the 2014 national MRSA ratio was 0.92, and CDI ratio was 0.9. A SIR value greater than 1.0 means there was a larger number of infections than predicted (NYSDOH, 2017). New York State's higher than national ratios supports the need for new, innovative interventions. To give a few examples, Staten Island's local hospital, Richmond University Medical Center, currently has a MRSA ratio of 1.454 and a CDI ratio of 1.245, both are above national

¹ Paper was presented at the Sigma Theta Tau Collaborative Research/Evidence Based Practice Expo at Staten Island University Hospital and at the Wagner College Senior Poster Presentations.

² Written under the direction of Prof. Josephine Marcantonio for NR400: *Nursing Research*.

averages. Bellevue, the oldest hospital in the city, has lower rates of 0.868 for MRSA and 0.767 for CDI; while New York Presbyterian, has shown higher than normal rates with a MRSA ratio of 0.936 and CDI ratio of 1.046 (“Medicare Hospital Compare Results,” n.d.). Although ratios vary among hospitals in New York City, improvement is important for all.

High SIRs not only decrease hospital quality, but also cause an economic burden. Overall, the national direct cost of healthcare associated infections (HAI) range from 28 to 45 billion dollars annually (Scott, 2009). The average cost of hospital onset CDI per case was an additional \$34,157, with a total annual cost of 6.3 million dollars (Chit et al., 2016). MRSA costs approximately an additional \$60,000 per case and 10 billion dollars per year nationally (Anderson et al., 2009). To incent hospitals to manage these costs better, the Center of Medicare and Medicaid Services established a Hospital-Acquired Condition Reduction Program under the Affordable Care Act. The program identifies and measures two domains: patient safety and health care associated infections. This program reduces payments by one percent to hospitals with quality scores in the lowest 25% (Patient Protection and Affordable Care Act, 2010).

Antibiotic resistant bacteria were initially identified in 1940, but they have only recently been tracked (CDC, 2017b). The Active Bacterial Core surveillance, a section of the CDC’s Emerging Infections Program has nationally measured MRSA since 2005 and CDI since 2012. This program identifies risk factors and monitors effectiveness of interventional programs inside and outside of healthcare facilities. It identifies three main racial profiles: White, Black and other. National rates of MRSA have been decreasing since 2005, but Black Americans consistently have the highest prevalence rates compared to Whites and others. In comparison, the statistics of CDI are almost opposite revealing an increase of national rates and the highest prevalence among whites (CDC, 2016).

The NYSDOH is taking measures to reduce the prevalence rates of antibiotic. They have teamed up with CDC in the educational campaign “Be Antibiotics Aware” to teach health care providers and patients about antibiotic resistance and appropriate antibiotic use. Promotional literature urges patients to not share, save or incompletely take a course of antibiotics. Additionally, patients are instructed to avoid pressuring providers to prescribe antibiotics when it is not indicated (U.S. Antibiotic Awareness Week, 2018).



(CDC, 2018)

In many hospitals, there are antibiotic stewardship programs lead by a pharmacist to ensure the patient is getting the right drug and dose, at the right time (CDC, 2017c). In addition, the NYSDOH has started a New York State Antimicrobial Resistance Prevention and Control Task Force which collaborates among federal, state and local agencies to recommend new initiatives to combat this issue.

Problem in the Community

Globally, there is a rising prevalence of hospital-acquired infections, which particularly affects those living in metropolitan communities. Antibiotic resistant bacteria such as *Clostridium difficile* (CDI) and Methicillin-resistant *Staphylococcus aureus* (MRSA) commonly cause infections that can be deadly, especially when they affect the already vulnerable demographic of hospitalized patients. This antibiotic resistance is an exceptionally urgent issue and needs to be rectified promptly. Additionally, though antibiotic resistant infections typically originate in hospital settings, they can then travel into the community via infected hosts.

Bacterial infections can be spread in several ways: airborne, through fluid droplets, or through physical contact. Within large metropolitan communities like New York City, where people live, work, and commute in close contact with one another, all people are especially vulnerable to all routes of bacterial transmission. This is similarly true of hospitalized patients in contracting antibiotic resistant infections, and although all patients in a medical setting are at risk for infection, some demographics are at a higher risk than others including young children, the elderly, and individuals with a compromised immune system. Other risk factors include: long hospital stays (the longer a patient is hospitalized exponentially increases their chance of acquiring a nosocomial infection), the use of indwelling urinary catheters (which can act as a reservoir for causative bacteria and lead to hospital-acquired urinary tract infections), healthcare workers who fail to use proper hand hygiene and infection control, and the improper use of antibiotics (including inappropriate prescription of antibiotics for viral or fungal infections, or failure of patients to complete the prescribed course of antibiotics). The improper use of antibiotics is arguably the most dangerous risk factor for hospital-acquired infections, as it is directly responsible for breeding potentially fatal antibiotic resistant bacteria (Bureau of Infectious Disease and Laboratory Science, 2018).

A 20-year old longitudinal study of antibiotic resistance in Sweden found that, “the high global use of antibiotics, the rapid spread of multidrug-resistant bacteria and the lack of new, effective antibiotics has led to an imminent threat to health systems and global development” (Mölstad, et al., 2017, p. 1). A study done by the American Center for Disease Control (CDC) found that each year at least 2 million people become infected

with antibiotic resistant bacteria, and as a direct result of these infections at least 23,000 people die annually (CDC, 2017). This is a highly relevant and time-sensitive issue that needs to be addressed, analyzed, and resolved by the global community.

Antibiotic resistance is a global issue, but is particularly prevalent in the United States and metropolitan areas because the way North American physicians prescribe antibiotics, and furthermore because the American healthcare system has not yet fully adapted to combat the rising threat of antibiotic resistance. For example, according to a qualitative study that explored the prescribing decisions of 30 physicians in two metropolitan hospitals in Indianapolis, Indiana,

“many [physicians] admitted to prescribing antibiotics even when the clinical evidence of infection was uncertain. Overprescription was largely driven by anxiety about missing an infection while potential adverse effects of antibiotics did not strongly influence decision-making... there is a physician based culture of prescribing antibiotics, which involves over-using antibiotics and not challenging colleagues’ decisions.” (Livorsi , et al., 2015)

It’s important to note that this culture of overprescription is not specific to Indianapolis and is a growing issue, in fact, roughly one third of all antibiotics prescribed in the United States between 2010 and 2011 were unnecessary, “there was an estimated annual antibiotic prescription rate per 1000 population of 506, but only an estimated 353 antibiotic prescriptions were likely appropriate, supporting the need for and establishing a goal for outpatient antibiotic stewardship” (Fleming-Dutra, et al. 2011), and furthermore, “up to 50% of the time antibiotics are not optimally prescribed, often done so when not needed, incorrect dosing or duration” (CDC, 2017a). The CDC found that many prescribers, when unsure about the etiology of a patient’s symptoms, just prescribed a wide spectrum antibiotic to treat the potential of a bacterial infection, rather than wait for definitive evidence of bacterial infection. This is a dangerous behavior that is responsible for the rising incidence of antibiotic resistance.

If infectious bacteria continue to adapt to antibiotics, all current antibiotics will eventually become obsolete. This is a formidable possibility, because if it occurs humans will have absolutely no defense against causative organisms, which would be devastating to public health worldwide, but particularly to large metropolitan areas where people live in close contact with one another. The problem of antibiotic resistance is incredibly time sensitive and needs to be addressed by both patients and medical professionals immediately.

Proposed Solution

The NYSDOH has developed and published a number of interventions to address the wide-spread national problem of the overprescription of antibiotics. One of their most notable and well-developed hospital efforts is the implementation of Antibiotic Stewardship Programs (ASPs) (NYSDOH, 2017). The CDC defines an ASP as a program that follows all seven of the CDC's Core Elements of Hospital Antibiotic Stewardship Programs. As of 2015, 58.3% of hospitals in New York State, as compared to a 48.1% nationally, enforced CDC-recognized ASPs. The national goal is 100% hospital participation by the year 2020 (CDC, 2015).

The CDC's (2017c) 7 Core Elements of Hospital Antibiotic Stewardship Programs define seven evidence-supported elements that the CDC believe are essential to the success of hospital-instated ASPs: leadership commitment, accountability, drug expertise, action, tracking, reporting, and education. Leadership commitment refers to the dedication of hospital leaders in human, financial, and information technology resources to the enforcement of stewardship efforts. For example, human resource departments incorporate stewardship-related responsibilities, such as stewardship program leader or pharmacy leader, into job descriptions and performance reviews. The accountability and drug expertise elements call for the appointment of stewardship program leaders, such as physicians, and pharmacy leaders as well as the delegation of stewardship-related tasks to other key groups within the hospital. For example, nurses are tasked with obtaining cultures prior to the initiation of antibiotics and inciting discussion among prescribers regarding the indication and duration of antibiotic prescriptions. The fourth element, action, addresses policies and interventions to improve antibiotic use. Documentation of dose, duration, and indication is a simple, yet pivotal and versatile policy that aids stewards in the identification and monitoring of antibiotic prescriptions (CDC, 2017c). In accordance with the Institute of Healthcare Improvement, the CDC has published an "Antibiotic Stewardship Driver Diagram and Change Package," which outlines potential interventions including how to develop a standardized guideline for antibiotic selection and ensure the visibility and availability of patients' antibiotic use histories (Institute for Healthcare Improvement [IHI], 2012). It is recommended that hospitals be critical in selecting interventions that appropriately match an institution's available resources and expertise. The tracking and reporting elements comprise of both monitoring the process of antibiotic prescription as well as analyzing and reporting the outcomes of said processes (CDC, 2017c). The last Core Element, education, focuses on educating staff groups within the hospital with the goal of motivating improved prescribing habits. Strategies include sharing updates of antibiotic-related issues on the local and national

levels and teaching about appropriate antibiotic use through a variety of presentation and messaging platforms. These Core Elements serve as a framework to guide participating hospitals in the creation of successful stewardship programs but also call for flexibility and personalization in their implementation (CDC, 2017c).

While the ASP's Core Elements framework comprehensively and explicitly states that a coordinated multidisciplinary approach is essential to the success of stewardship programs, there is little mention of nurse involvement, with the exception of the obtainment of cultures, and no section specifically addressing patient involvement. Patient education, a primary nursing responsibility, can serve as an invaluable tool to promote patients' development of self-advocacy in hospitals. Specifically, patient-directed education about proper diagnosing, antibiotic prescribing practices, and consequences of inappropriate prescribing not only better equips patients to become self-advocates, but can potentially help to reduce overprescribing trends by tasking patients to question the decisions and actions of their healthcare team.

In addition to being perceived as the most trusted profession by the American public (Gallup, 2016), nurses are at the core of communication among antibiotic stakeholders (American Nurses Association, 2017). Nurses are the key group positioned to educate patients and influence the actions of prescribers. Nurse-led patient educational efforts can be guided by Irwin Rosenstock's Health Belief Model. This model focuses on understanding the health-related perceptions of the individual through analysis and mention of three crucial components: perceived susceptibility to a condition, perceived seriousness of a condition, and perceived benefits of action (Taylor, 2015).

Applied to the problem at hand, the "condition" is the inappropriate prescription of antibiotics in the hospital setting. Perceived susceptibility is addressed through alerting the patient to their risk of being inappropriately prescribed an antibiotic by providing the alarming statistic that 30 to 50% of antibiotics are inappropriately prescribed in hospital settings (CDC, 2017a). Perceived seriousness is addressed by explaining antibiotic resistance and development of bacteria resistant to antibiotics that can occur as a dangerous and costly consequence of antibiotic overprescription. To satisfy the triad of the health belief model, the patient and their family must be equipped with action to take and be convinced that these actions will benefit the problem. Actions include questioning prescribers and individuals administering antibiotics and expressing concern if an antibiotic has been prescribed without the acquisition of a diagnostic culture. Questioning healthcare providers can be very intimidating for some patients, so the National Patient Safety Foundation has created the "Ask Me 3" model as a guide. The three simple questions ask: What is my main problem? What do I need to do? And Why is it important

for me to do this (IHI, 2017)? A complete health belief model requires cues to action that remind the patient to participate in the aforementioned actions (Taylor, 2015, p. 53). These reminders can take the form of flyers or ads within the hospital and in the community.

The NYSDOH has published numerous educational resources and tools targeting patient education applicable in the outpatient setting, but fails to provide resources to educate inpatient populations (NYSDOH, 2017). Fortunately, many of the outpatient-directed efforts can easily be modified and implemented to accommodate the unique circumstances found within New York City's inpatient settings. The first element of inpatient education is an antibiotic educational session guided by the health belief model. This session can be held by the staff nurse or nurse educator and should take place as close to the patient's admission to the hospital as possible. It is imperative that the nurse performing the informational session verifies that the patient understands and speaks English or obtains a translator. The patient and their family will be provided with flyers briefly addressing the three components of the health belief model: the risk of inappropriate antibiotic prescription, the consequences, and the actions that can be taken to prevent it. These flyers will also be posted in patient rooms via posters and educational television channels and around the hospital as computer screensavers. Once a pilot program is run and the flyers are adjusted in accordance to maximize effectiveness, the flyers will be printed in the most commonly spoken languages including English, Bengali, Spanish, Japanese, Arabic, Haitian Creole, Italian, simplified Chinese, Korean, Polish, Urdu, Yiddish, and Russian (NYC Health, 2017).

The community goal is to implement this two-part patient education effort in five ASP-participating New York City hospitals. Prior to starting educational session and distributing flyers, the current rates of antibiotic overprescription per unit will be obtained from these hospitals and will be taken again after a 12-month trial period. Antibiotic overprescription rates will be measured via thorough audit of prescriber's decisions. Success of the program will be determined by a five percent decrease in the rate of overprescription in all five hospitals. If successful, this model should be implemented in accordance with the CDC's national goal of 100% hospital participation in Antibiotic Stewardship Programs by the year 2020 (CDC, 2015).

Conclusion

Overprescription of antibiotics is a main contributing factor to the rising global issue of antibiotic resistance. A particular demographic that requires intervention is New York City's adult inpatient population. Although the NYSDOH and the CDC have established programs addressing this problem, there is a need for increased nurse

involvement. Our proposed solution entails implementing nurse-led patient education to promote patient self-advocacy and empowerment.

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Section IV: Critical Essays

Beautiful Nude Girls: Art and Female Sexuality in Nazi Germany¹

Jordan Gonzales (Art History and Anthropology)²

“In mobilizing leisure, National Socialism encountered one of the last bulwarks behind which the progressive elements of individualism were still alive...In the solitude of peaceful enjoyment, the individual may come to think, his impulses, feelings, and thoughts may be driven to regions which are foreign and inimical to the prevailing order. We mention here only two stimuli of this tendency: *sex* and *art*.”

- Herbert Marcuse, “State and Individual Under National Socialism,” in *Technology, War, and Fascism: Collected Papers of Herbert Marcuse, volume 1*, ed. Douglas Kellner (London: Routledge, 1998), 89, Taylor & Francis e-Library.

It is the aim of this essay to understand how the National Socialist regime used fine art to exercise power affirmatively in order to control the body politic. Sexuality presents a case in which both repression and affirmation play critical roles in the consolidation of state power, particularly as sexuality is often perceived, both historically and contemporaneously, as outside of the realm of control of state institutions. This perception in itself often reflects a discordance with realities of modern Western societies, and the relationship between sex and state power is perhaps most acute and catastrophic in the National Socialist regime. Crucial to the fortification of power derived from controlling sexuality was the utilization of “polymorphous techniques of power”³- meaning the deployment of a variety of methods to exert power in multiple spheres of life. Power can be exercised through written codification in the legal system, verbally through official and unofficial iterations of administrative and popular leaders, and

¹ When this article was originally printed in the spring 2018 issue it contained an additional paragraph that belonged to another article. To correct this error the article has been reprinted here. The editor apologizes for the typo.

² Written under the direction of Dr. Laura Morowitz for AR291H: *Art and Aesthetics in the Third Reich*.

³ Michel Foucault, *The History of Sexuality, volume 1: An Introduction* (New York: Vintage Books, 1990), 11.

visually through art and propaganda. This essay is concerned with the latter, particularly with the subtle propagandistic edification of individuals through fine art.

'Fine art,' or 'high art,' in the Western world is characterized by being steeped in European academic tradition and is associated with class, wealth, and privilege. For these reasons, fine art may constitute a less aggressive form of propaganda, what Propaganda Minister Josef Goebbels called '*unsichtbare propaganda*' - invisible propaganda.⁴ In this way, fine art has the potential to reach more educated and privileged classes that may be more critical of overt or ostentatious approaches to propaganda. Additionally, these same audiences are more likely to be beholden to traditional constraints of behavior, especially sexual mores, characteristic of middle and higher socioeconomic classes. Therefore, messages contained within works of fine art can be posed subtly and amiably, particularly in the realm of sex and sexuality. One particularly relevant and useful case is that of Botticelli's *Primavera* - placed in the sleeping quarters of a Medici bride, the painting abounds in images of fertility. A reading of the painting from right to left shows the scene of the rape of Chloris by Zephyrus, leading to her impregnation and transformation into Flora. Along with the obvious intimation of the bride's responsibility of fertile reproduction, the rape scene provides a subtle reassurance that even if the bride does not desire her husband, she must succumb to him so that she may bear children. In this way, the repeated consumption of images in works of fine art in quotidian experience helps to embed certain messages and ideas about the world and how to behave in it.

In a similar way, fine art created within National Socialism and promoted by its political and cultural leaders proliferated images meant to inculcate viewers about correct ideas and behaviors. Female sexuality was not excluded from the realm of the '*unsichtbare propaganda*' that characterized much (if not all) of the fine art approved by the state. National Socialist artists and art critics appropriated the classical Italian Renaissance genre of oil painting of the female nude to synthesize a quasi-classical aesthetic. Through the appropriated aesthetic and its iconography, the National Socialist regime constructed the ideal, liberated, female sexuality and edified women on this ideal; however, this sexual liberation did not give the individual agency, but rather was a means of subverting sexual behaviors to the benefit and greater control of the state.

The creation of a National Socialist quasi-classical or neo-classical aesthetic is by no means novel or unknown. A whole host, if not all, post-Enlightenment societies utilize the appropriated styles and aesthetics to visually legitimize their power by evoking

⁴ Terri J. Gordon, "Fascism and the Female Form: Performance Art in the Third Reich," *Journal of the History of Sexuality* 11, no. 1/2 (January/April 2002): 170.

a sense of historical constitution and authority, both of which are actually constructions of the institutions and administrations in power at a given time. While the first medium to come to mind might be architecture⁵, the power of classical appropriation is no less true for studio art forms. Accordingly, the National Socialist appropriation of the classical language of the female nude helps to visually legitimize the intervention of the state over the individual body, as well as indoctrinate ‘pure’ German women on virtuous behaviors, appearance, and ideals in accordance with National Socialist Ideology. The evocation of a historically constituted narrative within Germany and within the National Socialist regime is relatively easy to ascertain. The relations of authority and agency which are mediated in the genre of the female nude are more nuanced, in that the images attest to the manipulation of individual female sexuality. Both the history and relations of power evoked in paintings of the National Socialist style of the nude are premised on falsehoods constructed by the state, in service of the state, with no actual regard for the individualism of the viewers.

This essay raises the question of how, in the fine art of National Socialism, the traditionally male gaze is conflated with, even replaced by, the gaze of the state. The possibility of a ‘state gaze’ is proposed as the mechanism of control in the fine art of National Socialist Germany, a gaze which unified works of art in light of unsuccessful attempts of Party leaders to create an official and distinct National Socialist style of art.⁶ In this respect, it would not matter that the viewer have ownership of the subject and her sexuality as they do in the classical genre, but rather the nude subject, and consequently her sexuality, are constructed by and belong to the state, and that it is through the ‘state gaze’ that the viewer understands the subject. Therefore, the relation of power between the subject and average viewer is altered, as the viewer no longer has ownership over the subject and her sexuality, but rather an access that has been permitted by the owner - the state. When the viewer is female, she may identify herself with the subject and the sexuality with which she had been imbued. This is doubly enforced when one considers how art acts as an apparatus of the state’s omnipresent control in individual life, and so through the gaze of the state the female viewer “...comes to consider the *surveyor* and the *surveyed* within her as the two constituent yet always distinct elements of her identity as a woman,”⁷ through which she is free to experience the subject’s sexuality as both her

⁵ Frederic Spotts, *Hitler and the Power of Aesthetics* (New York: Overlook Press, 2003), 311.

⁶ Olaf Peters, “Genesis, Conception, and Consequences: The ‘Entartete Kunst’ Exhibition in Munich in 1937,” in *Degenerate Art: The Attack on Modern art in Nazi Germany, 1937*, ed. Olaf Peters (Munich: Prestel, 2014), 107.

own and belonging to the state. Attempting to identify how a ‘state gaze’ was imposed on German art may prove to be more successful and revealing in understanding the importance and role of fine art in the Reich than attempting to identify a distinct style of National Socialist art.

The concerted efforts on the part of Hitler and Josef Goebbels to create an official category of National Socialist art largely failed because there were no standards established by which to judge works of art, although there was a more clear distinction of what was considered unacceptable. General ideas about the importance of realism were perhaps the only commonality among works chosen, and state-appointed juries generally exalted “works that were not exactly ideologically motivated but rather mainly landscapes, genre paintings, and paintings of animals. Other than that, they primarily featured depictions of women, especially nudes vaguely modeled on antiquity.”⁸ Works deemed acceptable by these juries and other administrators were showcased in the *Haus der Deutschen Kunst* (House of German Art), meant to house the best of German art and serve as the “beginning of the end of the stultification of German art and the end of the cultural destruction of [the German] people.”⁹ One artist involved in the attempts to visually stylize National Socialism and to be showcased in the *Haus der Deutschen Kunst* was Adolf Ziegler, who also served as president of the *Reichskammer der bildenden Kunst* (Reich Chamber of the Fine Arts) - his triptych *Die vier Elemente* (The Four Elements) [see *Figure 1*] was even bought by Hitler and hung above his fireplace at the Führerbau in Munich.¹⁰

In this kitschy appropriation of the classical nude, Ziegler imbued his female subjects with a sexuality that was not entirely dependent upon the assumed male viewer, but rather which was constructed in accordance with state ideology. Paradoxically, however, his subjects were not endowed with agency over their sexuality and implicitly accompanied sexual behaviors- these were to be channeled in service of the *volk*, a cause more important and virtuous than a woman’s own individual desires. In this way, Ziegler was able to edify women on their sexuality and how to behave as sexual beings not for the sake of sex itself, but in service of the Reich. Such sexual ideologies as portrayed in these paintings conform to the hypocritical and paradoxical nature of the National

⁷ John Berger, *Ways of seeing* (London: British Broadcasting Corporation, 1973), 46.

⁸ Peters, “Genesis, Conception, and Consequences,” 108.

⁹ “Hitler’s Speech at the Opening of the House of German Art in Munich (July 18, 1937),” German History in Documents and Images, accessed November 28, 2017, http://germanhistorydocs.ghi-dc.org/docpage.cfm?docpage_id=2374

¹⁰ Peters, “Genesis, Conception, and Consequences,” 110.

Socialist regime, and attest to the cacophony of policies and attitudes towards the role of women and their sexuality in National Socialist Germany.

National Socialist attitudes and policies regarding sex and sexuality deserve particular scrutiny because of the way in which “sex was not something one simply judged; it was something one administered.”¹¹ That is to say, sex and sexuality under National Socialism was not just restricted and repressed for some groups, but simultaneously promoted and proliferated for one group in service of the nation, that group being healthy and racially pure Germans. The nature of power in modern Western society is to be repressive, especially in regards to the repression of “useless energies, the intensity of pleasure, and irregular modes of behavior”¹² like those stemming from sex and sexuality. It cannot be contested that the National Socialist repression of ‘deviant’ and ‘perverse’ sexualities, behaviors, and relations were firmly founded in eugenics. Such repression of deviance is certainly elucidated by the desire to extinguish any and all behaviors which would subvert the ideologies and agenda of the National Socialist party. However, when one considers what may be implied as the opposite of this - that is, the promotion of energies, pleasures, and behaviors which are useful to the state - then National Socialist attitudes towards sexual liberation begin to make sense.

Sexual desires and their fulfillment in the realm of and for the sake of the individual are threatening to society and to the state. Within the realm of the individual, the satisfaction and happiness which are derived from the fulfillment of sexual desires is impervious to the intervention of external agencies and institutions, and therefore creates a division between the individual and society grounded in the inability of the state to fulfill those desires. In a fascist regime of the intensity of National Socialism, such division undermines the authority and autonomy of the state over individual bodies and the body politic, and constitutes a waste of time and energy on behaviors which do not serve a virtuous purpose. By socializing the individual and their sexuality, the state can reconstitute its authority and channel sexually fulfilling behaviors to be ‘useful’ in society. In the National Socialist regime, “the individual [was] ‘socialized’ in the distorted sense that society itself [took] over his [or her] oppressed and deteriorated instincts and interests and [asserted] then on an international scale...”¹³ This assertion fell

¹¹ Foucault, *The History of Sexuality*, 24.

¹² Foucault, *The History of Sexuality*, 9.

¹³ Herbert Marcuse, “State and Individual Under National Socialism,” in *Technology, War, and Fascism: Collected Papers of Herbert Marcuse, volume 1*, ed. Douglas Kellner (London: Routledge, 1998), 90, Taylor & Francis e-Library.

under the label of 'sexual liberation,' and is very much framed within the context of National Socialist racial policies and eugenic agenda.

Employing Foucault's theories of sexuality and power is useful when examining the dichotomy of sexual repression and sexual liberation in the ideologies and policies of the National Socialist regime, and how the latter pair were successfully transmitted through art. To begin, unlike other forms of repression, state repression of sex and sexuality is often publicly acknowledged, and even lauded as a virtue of 'civilization.' In this way, sexual repression of 'racially impure,' non-heterosexual relations provided the regime with a publicly acceptable means to exert control over deviants within the body politic. This also made more subtle expressions of this control through art all the more effective and nonsuspect. However, in order to exert comprehensive control over sex and sexuality, sexual repression alone is insufficient.

Repression worked in conjunction with methods focusing less on exterminating measures and more on the employment of "a policing of sex: that is, not the rigor of a taboo, but the necessity of regulating sex through useful and public discourses,"¹⁴ such as visually through the arts. Such policing characterizes the proliferation of discourses on what sex should be and its greater purpose for the *volk*. It is in this context that sexual liberation acted as a positive exercise of power, in that the promotion of certain sexualities and sexual behaviors - in this case among racially pure, heterosexual men and women - and their liberation from traditional mores promoted the control of the state over the body politic, and in fact created the perception of this control as amicable to the individual.

It must be admitted that "the working of socio-psychological mechanisms [of the National Socialist Party] cannot be verified by official or semi-official documents; it must be elucidated by careful interpretation of the behavior and utterances of National Socialist groups in certain characteristic situations."¹⁵ Artistic creation can be understood as one such utterance, one whose subjectivity permits the interpretation and reinterpretation of meaning and message which can help to penetrate the complexities of human existence at any given moment in time. Art under National Socialism lends itself well to such interpretations as even Hitler himself attested to the necessity of integrating art into daily life so as to reconcile the individual and the masses with the world as it was, or at the very least as Hitler wanted it to be.¹⁶ Through its efforts to bring 'fine' or 'high'

¹⁴ Foucault, *The History of Sexuality*, 25.

¹⁵ Marcuse, "State and Individual Under National Socialism," 87.

¹⁶ "Hitler's Speech at the Opening of the House of German Art in Munich (July 18, 1937)," German History in Documents and Images, accessed November 28, 2017,

art into the everyday lived experience of the body politic, the National Socialist administration successfully employed fine art as *'unsichtbare propaganda.'* The style and subjects of such art, however, was meticulously selected so as to reflect the ideals and vision of the Party - idyllic scenes of "beautiful nude girls"¹⁷ in an appropriated, quasi-classical style were among the favored.

With Hitler's and the National Socialist Party's efforts to bring art into the everyday lives of the German community, eroticized images of the female nude acted as affirming and normalizing agents which reached a larger audience than might have normally been exposed to the genre. Repeatedly seeing images of the nude figure "acts as a confirmation and provokes a very strong sense of relief...[the viewer is] overwhelmed by the marvelous simplicity of the familiar sexual mechanism."¹⁸ It follows, then, that there might have existed comfort in the validation and reassurance of seeing young, beautiful, Aryan women in the National Socialist appropriation of the genre of the nude. This was perhaps further reinforced by the state's explicit and implicit endorsement of such images in fine art, images meant to attest to the racial perfection and superiority of the German *volk*, and to the usefulness of sexual behaviors, traditionally deemed as immoral misconduct, for the state. Through these artistic images, the viewer could be reaffirmed of their relation to the subjects and their sexuality as they were oriented within the mechanisms and ideals of the state.

It is imperative at this point to identify more explicitly the specific attitudes and policies of the National Socialist administration which characterized sexual liberation, and how liberation actually served as a means to greater control of the state over individual and collective bodies. Most generally, the National Socialist party advocated for a liberation from the "the Christian precepts of chastity, monogamy, and the sanctity of the home,"¹⁹ around which so much of Western morality was and continues to be built. The National Socialist Party achieved the rejection of and liberation from these sexual mores through ending stigmatization and discrimination of illegitimate mothers and children, through the promotion of extra-marital sex between healthy, heterosexual, Aryan Germans, through introducing a new cult of nudity in art and entertainment, and through dissolving the traditional, private responsibilities of the family unit and the destruction of patriarchal and monogamous standards of individual, interpersonal relationships.²⁰ Furthermore, sexual liberation only created the veneer of individual

http://germanhistorydocs.ghi-dc.org/docpage.cfm?docpage_id=2374

¹⁷ Marcuse, "State and Individual Under National Socialism," 87 & 92.

¹⁸ Berger, *Ways of seeing*, 59.

¹⁹ Gordon, "Fascism and the Female Form," 166.

autonomy and agency over the use of sexuality, but the reality was that “the state instituted a politics of the body that rendered the individual body a public site whose purpose was to further the larger social organism.”²¹ Sexual liberation, then, became a privilege and perhaps even a right of those citizens subjects who belonged to the National Socialist *volks-gemeinschaft*, as these were the citizens who could (re)produce the Aryan race and the German nation. Not only was this privilege affirmed politically by National Socialist leaders, but it was affirmed and normalized culturally through the arts via images of ideal Aryan bodies that constituted the cult of the body and the cult of nudity of the time.

The argument and the questions raised in this essay must be contextualized within this cult of nudity and the obsession of the National Socialist Party with the body of the Aryan race; in order to understand images of nudity in fine art the precedent must be understood of how these images operated in other spheres of visual culture and artistic expression. Most fundamental to all of this is the National Socialist “notion of the healthy body as a microcosm for the healthy state.”²² In this regard, the Aryan body must be exalted and venerated for its naturally superior vigor and beauty, and to see these bodies nude is not shameful, but celebratory. In following this, sexual acts leading to the creation of these bodies and the continuation of the race were to be equally exalted. This cult obsession with nudity and the Aryan body is most manifest in film and the performing arts, and much of the literature of the National Socialist cult of nudity focuses on these areas of artistic production.²³ Leading National Socialist race-theorist Dr. Hans Endres attested to the usefulness of near-pornographic images of German men and women in film as a means to “propagate a new way of life in Europe” in which Aryan youth may “become proud of their bodies and enjoy the natural pleasures of sex without being ashamed.”²⁴ It is not without precedent, therefore, that the imbue-ment of nude subjects in with a real and natural sexuality occurred intentionally in the fine art of National Socialist Germany. However, the relationship between nudity and sexuality in the fine art of the regime differs from the classical genre of the female nude, and these differences are slight but significant.

While the usefulness of emulating the classical female nude is necessary to understanding the relationship between art, sexuality, and the National Socialist state, as

²⁰ Marcuse, “State and Individual Under National Socialism,” 84.

²¹ Gordon, “Fascism and the Female Form,” 164.

²² Gordon, “Fascism and the Female Form,” 165.

²³ Gordon, “Fascism and the Female Form.”

²⁴ Endres quoted in George W. Herald, “Sex is a Nazi Weapon,” *The American Mercury* 54, no. 222 (June 1942), 661.

important is considering ways in which the appropriated, quasi-classical style deviated from the tropes of the classical nude and the effect of such deviation. In appropriation, deviating from the original creates a cognitive dissonance between what the viewer expects based on prior experience with the original style, and what they actually see in front of them in the new work. At the very least, the effect is to disrupt the viewer's experience of the work, whether the interruption be positive or negative. To the more critical viewer, this disruption calls attention to what has changed and why, and prompts the viewer to consider the effect of that change stylistically and interpretatively. Generally, the National Socialist style of the nude oil painting deviates from the classical genre in the way in which it creates a distinct subject both in the formal style and the attributes of the nude subject.

Whereas the idealized rendering of the classical nude was meant to evoke the sublime perfection of the Greek and Roman pantheons, the distinctive realism of the National Socialist style was meant to attest to the natural beauty of the ideal German woman. Hitler's mandate that only true and great art could depict natural forms in the highest degree of realism is reflected in the "...the stimulating distinctness with which National Socialist artists expose the erogenous zones of the body. Hitler established the combination of 'expediency and beauty' as the highest principle of art," and demanded that male and female bodies be presented with absolute realism and correctness. This realism served as a celebration and exaltation of the German body, and reflected the racist ideology and population politics of the National Socialist Party. Only the most perfect Aryan forms were worthy of extolment and immortalization in the medium of fine art, and only these bodies were worthy of reproduction (that is, both artistically and physically).

Framing 'racially pure' German women as the subjects in the artistic tradition of the nude provided German women a history they could potentially identify with, since in the National Socialist model, "women had no history at all... Because they exerted no force in politics and economic change, women would provide a constant backdrop to men's history."²⁵ In the same way that emulating classical architecture evokes the idea of ancient origins of power for the state, appropriating the classical nude with the undeniably Aryan woman as the subject evokes the idea that this breed of woman has existed and been exalted since antiquity, and therefore is justified as an ideal standard. In a society that gave women a scathingly limited role as active participants, creating this

²⁵ Claudia Koonz, "The Second Sex in the Third Reich" in *Mothers in the Fatherland: women, the family, and Nazi politics*, ed. Claudia Koonz (New York: St. Martin's Press, 1987), 178.

sense of historical narrative vindicated the state's view of women by giving them images asserting their descent from these ancient, if not timeless, subjects.

Instrumental to enabling identification with the historical narrative of the genre was painting women who looked undeniably Aryan. Take, for example, the four women in Ziegler's triptych *The Four Elements* [fig 1]. The facial features of each woman conform distinctly to the ideal of the Aryan woman, yet their features are not so idealized that they become nondescript or detached from reality, as the mythological figures of classical nude paintings are often rendered. This ideal yet identifiable depiction gives the female viewer a sense of a glorified place in the cultural history of Germany. It also gives her a sense of the timeless and natural existence of her exalted sexuality which comes from being a member of the Aryan race, thereby validating her own sexual desires and contextualizing them as necessary to the development of German culture.

The distinction with which the faces of these subjects are painted approaches portraiture. In this way, the nude subjects possess a degree of personhood or identity that is normally absent in the generic beauty of the classical and Renaissance nudes. Allowing the subject to possess her own identity disrupts the passivity characteristic of the classical nude, and reinforces the idea that the woman is permitted to actively cultivate and exercise her sexuality. However, this individuality is limited by the non-specificity of the bodies of the subjects, as is apparent in *The Four Elements* [fig. 1] - all four of the women appear distinct in their facial features, but their bodies bear little, if any, individuality. It almost appears as if the artist has taken portraits and transplanted them onto the same body, and the effect is disorienting. Even so, the contrast illuminates how these paintings at the very least attempted to mediate the paradox of simultaneous affirmation of female sexuality while claiming the agency over that sexuality for the state rather than for the individual. And although distinctive faces facilitated identification of the viewer with the subjects, by associating the sexuality of the subject with a generic image of femininity, sexuality becomes something which is not conflated with or constituted by individualism, but rather is seen through the homogenizing gaze of the state. Still, despite the non-specificity in rendering different images of the feminine form, these images were painted with acute consideration for the real and natural beauty specific to the German female body.

If the German female form was to be appreciated and celebrated in its totality for its superior natural vigor and beauty, then true depictions of the female form could exclude nothing, not even pubic hair. In this respect the National Socialist quasi-classical genre of the nude deviates once more from the classical style in a subtle yet impactful way. The convention in classical painting to exclude pubic hair from the female nude

reinforced the construction of the subject as a passive sexual object because “hair is associated with sexual power, with passion. The woman’s sexual passion needs to be minimized so that the spectator may feel that he has the monopoly of such passion.”²⁶ This is not to say that National Socialist artists intentionally included women’s pubic hair for the sake of reflecting her sexual passion. Rather, the emphasis on the showing the naturalness of the German female form inadvertently led to the incorporation of the sexuality inherent in that form.

Likewise, the viewer of these highly realistic images does not possess a ‘monopoly’ of the subject’s passion, as that monopoly belongs exclusively to the state. In this case, the subject’s sexuality does not necessarily require mediation by the omnipresent state - it is clear that this sexuality comes not from the woman as an individual, but is the result of the vigor of her superior Aryan body. Furthermore, the sexuality which is evoked by endowing these figures with the utmost realism serves, perhaps to a greater extent, to titillate the viewer in order to encourage sexual behaviors which lead to the propagation of the German *volk*.

The appropriation of the classical genre of the nude by the National Socialist regime was an intrinsically ironic practice when one considers how “the nude in European oil painting is usually presented as an admirable expression of the European humanist spirit,” and how “this spirit was inseparable from individualism.”²⁷ National Socialism was by nature vehemently anti-individualist, but the creation of such works concealed this nature by promoting a false image of humanism through the female form while subtly dictating the ideals of the Aryan woman for the agenda of the state. Rather than creating a distinct category of ‘National Socialist art,’ this subtle edification and propagation was achieved through a state-constructed gaze which permeated fine art and dictated modes of seeing and interpreting images. In this way, images of female subjects endowed with sexuality transformed “stimuli for protest and rebellion into stimuli for coordination” and reconciliation of the paradoxical ideals and ideologies of National Socialism.²⁸ Through the medium of fine art, the National Socialist party was able to penetrate into one of the most private spheres of individualist society and transform those desires and actions embedded within it into a means by which to propagate the state and the German *volk*.

Attempting to conceive art and sexuality as working in harmony with the agenda of the National Socialist administration is difficult, but it is still important to pose such

²⁶ Berger, *Ways of seeing*, 55.

²⁷ Berger, *Ways of seeing*, 62.

²⁸ Marcuse, “State and Individual Under National Socialism,” 92.

questions in order to understand how the regime was able to irrationally harmonize enormously dissonant ideas and behaviors to achieve their goals. It might not be discernable to what extent the edification of women on sexuality through fine art was actually effective, however it must at least be considered in order to understand the extent to which National Socialist control intervened in every possible sphere of individual and collective life. Likewise, it might be erroneous to draw such conclusions in hindsight, but this essay does not propose to find conclusive answers. Rather the goal is to open up possibilities for further exploration in order to understand the mechanisms of National Socialist power more profoundly.



Figure 1. *The Four Elements* by Adolf Ziegler, Oil on canvas, 1937

<https://www.sartle.com/artwork/the-four-elements-fire-water-and-earth-air-adolf-ziegler>

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Eréndira and her Heartless Grandmother: Gabriel García Márquez's Political and Social Allegory

Jacquelyn Thorsen¹

Gabriel García Márquez was well known throughout Latin America for his use of the postcolonial narrative technique of magical realism. Magical realism varies between authors because each author includes magical features unique to their own culture. As described by Dhanabal, “The variable features of the magical realist novel are local or native narrative traditions that are brought by the practitioners of this literary genre into contact with and incorporated into the European realistic novel” (46). In his homeland of Colombia, Márquez lived in the coastal area, where he was exposed to an array of cultural influences: colonial Spanish culture, native Indian culture and the Afro-Caribbean culture. This mixture of cultural influences was the reason for his “distinct, hybrid reality”, that was so prominent in his works of magical realism (Dhanabal 48). The supernatural factors of Caribbean culture played an important role in the written works of Márquez, as he seamlessly intertwined magic with the realistic everyday life of his characters. None of his characters expressed bewilderment when they witnessed a supernatural incidence. This tension of reality and magic, that was accepted by Márquez and his characters, was mostly rejected by the “Western” sense of reality (Dhanabal 53). According to Dhanabal, “García Márquez uses magical realism to attack the assumptions of the dominant culture... By equating magic with realism, García Márquez sabotaged the notion that Western realism is superior to the myth and magic of the colonial nations” (51, 54). Throughout many of his works Márquez used magical realism to reject and expose dominant features of Colombian culture that he disapproved of.

In the film *Eréndira*, which is based on Márquez's short story *The Incredible and Sad Tale of Innocent Eréndira and Her Heartless Grandmother*, Márquez used his magical realism to point out the excessive violence and confusion of Colombian politics (Dhanabal 51). Márquez lived through La Violencia, which was the Colombian civil war between the Conservative Party and the Liberal Party. Therefore Márquez's short stories during and after the ten year civil war, were inspired by the political and social turmoil in Colombia. They served as political and social allegories that exploited the use of magical realism. He also used other tactics, like symbolism, hyperboles, and metaphors, to

¹ Written under the direction of Dr. Marilyn Kiss for SP213H: *Hispanic Literature in English Translation*.

coincide with magical realism in achieving the goal of criticizing Latin American society and politics, as well as rejecting the notion that some foreign countries and their policies are superior. His rejection of foreign superiority stems partly from the tendency of first world countries to keep third-world countries, like Colombia, as debtors. This criticism, as well as the criticism of social injustices, is symbolized through the relationship of Eréndira and her grandmother. The photographer also served as a vital part of his political criticism, as did the Senator. Through the use of symbolism, Márquez allowed for different interpretations of his short-stories. Marquez's short stories served as social and political allegories that applied to multiple aspects within Latin American society.

One interpretation of Eréndira and her grandmother's relationship is that it is symbolic of the relationship between Latin America (Eréndira) and the United States of America (grandmother). In the film, Eréndira burns down her grandmother's house, thus leaving them both homeless and poor. This fire sparks a change in the grandmother; she becomes vindictive and cruel. She decides to exploit the fruit of her granddaughter's youth in search of payment for the damages Eréndira caused her, thus entrapping Eréndira in an endless cycle of remorse and debt. The debt that Eréndira owes her grandmother is symbolic of the debt that Latin America owes the United States of America. The United States's tendency to come to the aid of Latin America, although helpful at the time, now leaves Latin America struggling financially, as they owe the United States a great deal of money. This debt will always be hovering above Latin America's head, inhibiting all financial expansion until the debt is paid. This is exemplified by how Eréndira's debt will always be held over her head by her grandmother. In the film the grandmother states "My poor child, life won't be long enough for you to pay me back for this mishap" (Márquez 7), thus inferring that Eréndira will owe her grandmother for the rest of her life, just as Latin America will always owe the United States some time of debt. Márquez expresses that due to the remorse that Eréndira feels, her grandmother is able to exploit her and take advantage of her sexuality without her refusing, just as the United States does to Latin America. As pointed out by Barbara Manyarara, "García Márquez uses stories of female sexual abuse as a metaphoric figure of Latin America's continued exploitation by foreign powers" (158-159). Throughout the film Eréndira's grandmother is always in some way increasing Eréndira's debt to her. For example if Eréndira doesn't meet the daily quota of men she is supposed to have sex with, then her grandmother increases the debt that she owes her. As explained by Diane Marting, "The Abuela has no intention of letting Eréndira repay the debt and continually finds ways to pocket the fruit of her labor. In this sense, a comparison with the foreign debt of third world countries has been sustained" (183). This endless cycle of exploitation and increasing debt is Márquez's way of exposing

the maltreatment of Latin America that he believes the United States performs. Just as Eréndira's grandmother will never allow for her to pay off her debts, Márquez believes that the United States will never make it possible for Latin America to pay off its debt.

Márquez believed that the circumstances from which Latin America's debt to the United States came about, were due to small human errors or something out of Latin America's control. In the film, *Eréndira*, who is representative of Latin America, accidentally set the house on fire by leaving a lit candlestick near a curtain: "A short while later the wind of her misfortune came into the bedroom like a pack of hounds and knocked the candle over against the curtain" (Márquez 7). This small human error, of leaving a lit candle, led to Eréndira's eternal debt to her grandmother. Philip Swanson makes the observation that "this man-made disaster is presented not as the result of a disastrous human or social decision but rather in terms of a natural disaster or human error, that is, something which cannot be helped" (140). A parallel can be drawn between the actions and consequences of Eréndira and of Latin America. Márquez believed that Latin America's punishment of eternal debt to the United States is due to a small error or due to an event that was out of Latin America's control. He believed that the debt is too steep of a price to pay when considering the actions and or situations that led to it. Through the relationship between Eréndira and her grandmother, Márquez wished to exaggerate the enormity of Latin America's debt and to expose the fact that the United States took advantage of the situations from which the debt came about.

The reason why Latin America allowed for the United States to take advantage was because they had done it before. A pattern had developed where the United States continually exploited Latin American political and social turmoil, thus establishing a dominance over Latin America. This is symbolized by the early relationship between Eréndira and her grandmother. The grandmother had taken advantage of her position of caregiver over and over again by making Eréndira her house slave. She had asserted her dominance over Eréndira for so many years, that when Eréndira made the mistake of burning the house down, instead of refusing the wishes of her grandmother for her to become a prostitute, she gave in to her grandmother. The only reason was because she had learned a pattern of submissive behavior and therefore did not question her grandmother's wishes no matter how unethical they were. Her loyalty to her grandmother is exemplified throughout the film, one example being when she willingly returns to her grandmother after leaving the covenant. Another example is when Ulysses asks Eréndira to run away with him and her response is, "No one can go anywhere without the permission of her abuela" (*Eréndira* 1:03:00-1:06:00). As described by Bülent Cercis Tanritanir and Melike Çaliskan, the grandmother is an oppressive presence in Eréndira's

life, they go so far as describing her as a dictator (218). It is because of this that Eréndira feels an unvanquished loyalty to her grandmother throughout the film up until the end. Just as Eréndira remains loyal to her dictator, Latin America remains loyal to the United States. In this oppressor-oppressed relationship between Eréndira and her grandmother, Márquez wished to emphasize the oppressed nature of Latin America. Every action that Latin America takes is guided and controlled by the watchful eye of the United States. Eréndira states that she cannot go anywhere without her grandmother's permission; this is symbolic of how Latin America must get permission from the United States to engage in foreign affairs. Every decision regarding foreign involvement must be scrutinized and accepted by the United States before Latin America can act. This is because the United States has a financial interest in Latin America, just like how the grandmother has a certain investment in Eréndira that she wishes to see through.

The grandmother viewing Eréndira as an investment rather than a person is one way in which Márquez exposed a social injustice that he witnessed in Colombian society: child prostitution. In the film, Eréndira is forced into prostitution, as a young teenager, by her grandmother. Her grandmother was her sole caregiver, therefore she had to choose between being homeless and alone or being a prostitute. This situation is a prime example of child abuse at the hands of their guardian, which is a societal issue that Márquez hoped to draw attention to. Diane Marting explains, "The circumstances of Eréndira's becoming a prostitute emphasize the two adults' abuse of their legal, moral, physical, and magical power over a child...the Colombian's protest against injustice becomes the salient feature"(182). The grandmother was the only person that Eréndira felt that she could trust and her grandmother took advantage of that. She exploited her granddaughter's body for her own financial gain. The grandmother, filled with greed and vengeance, was going to do whatever it took to become rich and prominent once more, even if it meant sacrificing Eréndira's health and well-being. She no longer saw Eréndira as a human, but rather as a good. As described by Thomas Kiely, "When the merchant buys Eréndira's virginity, he first weighs her and then haggles with the old woman over a price. The equation is clear: Eréndira is the goods; the merchant a consumer...The point is that the man purchases sex not from Eréndira but from the grandmother, who is the controlling presence throughout this scene". It is at this point that the viewers first see the decay of Eréndira's human value in the eyes of herself and her grandmother. She is no longer an independent human being, but rather her grandmother's possession. Prostitution wasn't the only example of child abuse that Márquez wished to expose. In a more symbolic sense, "In the metaphor of prostitution, the author describes the vast proportions of the exploitation of human liberty" (qtd. In Rockey 39). He stood up for all human liberties and sought to expose

societal practices that devalued them. By using symbolism in most of his stories he was able to stand up for a plethora of human and civil liberties without specifically naming every single one. He also was able to expose multiple industries under the mask of symbolism.

One industry that Márquez attacked in his political allegories was the media industry. He believed that the media not only had the means to expose corruption, but also had the information to. Instead of using what resources they had and doing further investigation, they decided to sit back and let it happen. Children and women, like Eréndira, suffered great injustices at the hands of society for decades in Colombia. People saw it occurring, but no one wished to express their voice, as it was not a society of free speech at the time. Women and children had no say in the fates they suffered. Female and child prostitution was common. It was a matter of means rather than choice. Adult women may have had the choice at one point, but as their economic status declined they were forced to find some way to provide for themselves and for their family, if they had one. Some children were forced into prostitution by their guardians, like Eréndira was, as a way to help provide for the family since they were too young to work any other way. As described by Diane Marting, “Eréndira does not ‘choose’ prostitution: for a man, for economic survival, to feed her children, or for gain. She is unequivocally forced by the shopkeeper and the *Abuela*” (182). All of these injustices were occurring right under the nose of the journalists and reporters of the media industry and yet they decided to do nothing about it. This was because they wanted to please politicians and escape persecution and backlash from the male-dominated public. The photographer in the film is Márquez’s representation of the media. The photographer follows Eréndira’s entourage around the country. He makes his living by photographing Eréndira’s male suitors, thus making a profit from the practice of paedophilia at the expense of Eréndira’s sexual exploitation. In the film he states “I haven’t seen a thing”(Eréndira 1:09:57-1:10:10), inferring that he will continue to not say or do anything about what he is witnessing. The photographer had the information and the means of spreading the word about Eréndira’s sexual exploitation at the hands of her grandmother and yet he did nothing about it. As explained by Barbra Manyarara, “The photographer does not use his professional insights to expose the abuse and his violent death by gunshot from precipitate police action speaks of García Márquez’s disapproval of his opportunism and covert form of non-sexual child commercial exploitation and the practice of paedophilia” (158). By violently killing off the photographer, rather than killing off Eréndira’s male suitors, Márquez expresses that observing horrific injustices, like the sexual abuse and exploitation of Eréndira, and not doing anything about it or anything to help, is just as appalling as if the person was

committing the crime themselves. As a result of the media's inactivity, Márquez took it upon himself to expose societal issues. He stepped up in the place of the media and used his literature to bring to light to these inhumane issues. As well as to bash and embarrass the media for not doing anything to expose these societal issues.

Another group of people that Márquez wished to criticize within his literature were politicians. He believed that they had the authority and influence to change society for the better and yet, just like the media, they did nothing about it. They allowed society and politics to carry on in a downward spiral fashion. They swept social and political injustices under the rug and they themselves performed acts of cruelty, as well as corruption. In the film the Senator is representative of politicians. Throughout the film the Senator performs multiple acts of corruption, the first being his relationship with Eréndira. The act of being with Eréndira, an underage prostitute, sexually is a crime within itself. He then goes on to accept a bribe from the grandmother. The bribe is that he will be given the key to Eréndira's chastity belt, so long as he allows the grandmother and Eréndira to conduct their business without interference from the police. This exposes the tendency of politicians to use what power they do have, in the wrong ways and for the wrong reasons. They use their power only to reap personal benefits. Another criticism that Márquez makes is that politicians make empty promises. When running for election, politicians' platforms are filled with policies that they hope to put into effect and goals they hope to achieve during their candidacy. Márquez believed that politicians often promised things that they had no intention of actually doing or they promised things that just weren't physically capable of doing. In the film, during the Senator's speech he states, "In the realm of thirst and bad climate, exiles in our own land, we will be different. We will be great, and be happy. We'll have machines to make rain. We'll distill oil of happiness at home. Vegetables will grow in saltpeter and bougainvillea in the windows. That's how it will be ladies and gentlemen. That is how it will be" (Eréndira 0:51:00-0:53:00). Márquez clearly exaggerated the extent to which a politician is willing to make an empty promise, by having the senator promise things like controlling rainfall and the growth of plants. The senator obviously cannot control nature, but Márquez does this to emphasize the absurdity of some of the promises that politicians make. It also emphasizes that politicians are really willing to say whatever it takes in order to win over the general population. This criticism also serves a cautionary purpose. Márquez hoped to warn his audiences of the potential danger of blindly following the words of politicians without thinking critically.

Gabriel García Márquez was a man of many roles. He served as an author, a critic, and a muckraker. He sought to expose the political and societal indecencies when

no one else would. His works of magical realism served more of a purpose than to just install two separate views of reality in his audience's eyes. Through his magical realism he sought to expose and critique Latin American society, including the media and politicians. He did so through the use of symbolism and hyperboles in his work of *The Incredible and Sad Tale of Innocent Eréndira and Her Heartless Grandmother*. Through the creation of the relationship between Eréndira and her grandmother, as well as character traits of the Senator, and the photographer, Márquez was able to criticize aspects of Latin American society and politics that he saw as unjust. He created these works of political and social allegories because he wished to help his society in ways that those before him never could. The well-being of Latin American citizens and the prosperity of Latin America was always in his mind when writing his works of literature. As described by Matt Reimann, "García Márquez's work is not only Latin American in origin; it is inextricably Latin American in mood, setting, and perspective". He was a nationalist that was influenced by Latin America in every way possible. He absorbed the culture that surrounded him and included it in his literary works. It is said that "The legacy of García Márquez, the man described by his president as 'the greatest Colombian to ever live,' appears to be getting brighter by the day" (Reimann). Márquez, through his magical realism and allegories, gave Latin America a sense of pride, as well as a sense of urgency to correct the wrongs of society.

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Nazi Cinema: Ideology and Politics in Romantic Melodrama

John Badagliacca (Government & Politics and International Affairs)¹

Political undertones were quite common in works of art within the Third Reich - particularly within film. The Nazi government wasted no opportunity in using culture as a weapon for advancing its ideology and platform. In some cases, the social messages embedded into a work of art can be quite covert. They exist as a sort of subconscious propaganda - an attempt to distribute the ideology of the Nazi Party without being explicit in its aims.

Common Themes in Romantic Melodrama

“Melodrama” is a genre of film which typically displays an over sensational or emotional story, frequently utilizing romantic plots. While this aforementioned tactic of inexplicit propaganda was used in various artforms, its use in melodrama was particularly notable due to the genre’s seemingly apolitical nature. Nevertheless, there was no such thing as “apolitical” in the Third Reich. Even these films had their content examined and approved by the Nazi government and themes can be found promoting various ideologies such as the doctrine of Blood and Soil, emphasizing the “proper” role of women in the Third Reich or directing hate against particular groups (as will be discussed later in this analysis). Author Laura Heins, in her book *Nazi Film Melodrama*, writes “Third Reich films were intended to have a strong emotional effect upon spectators of both sexes, but this effect was never supposed to appear so carefully calculated that audiences would become aware of the workings of ideology. The propaganda minister, as Sabine Hake has pointed out, watched carefully over film projects to make sure that they did not have a boomerang effect: “any excess of representation might threaten the precarious balance between aesthetic and political intentions and give rise to dangerous forms of ‘reading against the grain.’” Melodramas proved to be particularly problematic for Goebbels, because their emotional effects sometimes led in the wrong direction” (Heins p. 23)

Films are capable of exerting emotion from the viewer and provoking thought. The government utilized this power to control the flow of thought in their favor. This raises the question: just what *kind* of ideology was promoted within melodrama? The answer, however, would depend on the sort of melodrama that is being discussed. In the

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context of romantic melodramas, Heins writes “Her [The heroine’s] desires are multiple and mutually exclusive and thus impossible within the economy of the classical film narrative, or they are forbidden by some generally accepted moral code. The melodramatic narrative thus attempts either to limit her desire and focus it on one object or to purge her of illicit desires. In this way such narratives may serve a pedagogical or ideological function by warning of the consequences of illicit acts or by training desire to attach itself to the ‘correct’ object. Romance can thus be recruited for political service; even if it does not name an external enemy, as does the most original form of the melodrama, it can form desire in ideologically useful ways” (Heins p. 48).

Control of the flow of thought, as practiced by the Nazis, was an undertaking reliant on emotion. Manipulation of human emotion to direct the masses into what is “proper” was therefore highly important. Mary Elizabeth O’Brien, author of *Nazi Cinema as Enchantment: The Politics of Entertainment in the Third Reich*, writes “Enchantment as practiced by National Socialism is heavily dependent on intense emotional involvement. Precisely because emotions are non-rational and subjective, they do not require explanation. One simply feels the rightness of an event or a relationship, and this sentiment functions as a moral compass to evaluate the world and establish a point of orientation. The underlying principles of classical cinema, identification with characters and stars, emotional attachment and affective involvement in narrative outcomes, and the ability to transform reality through a sense of magic and make-believe all contributed to the enchantment of reality essential to the success of National Socialism” (O’Brien, p. 4).

Being able to control what is considered desirable is a powerful force. The government is thus capable of creating an idea of sexual appeal and icons in popular culture. Romantic melodramas construct the notion of an “ideal lover,” one who is rewarded in some way by film’s end or demonstrated to be, in some way, morally or humanly superior. Alternatively, the inverse may be true, as they may also construct the notion of an “unideal lover,” or one who embodies qualities which are painted in a negative light within the context of the film. The audience is thus instructed in their partner choice and a culture is created where a particular, “correct” brand of lover is created.

The heroines of Nazi romances often varied. Generally, however, they were adventurous, lively and energetic in keeping with the popular ideals of the global World War II era. While the Nazis did emphasize domestic servitude and empowerment for women within the sphere of the home, melodramas rarely depicted this ideal. They carried a fixation on upper-class fantasies and thus many women within melodramas had servants who perform domestic activities for them. Without the shackles of homebound

servitude, the melodrama heroine is capable of exploration beyond her traditional sphere. She often utilizes seduction and ends up in a love triangle - a prominent staple of the romantic melodrama genre. This notion of an adventuring woman manages to contradict the Nazi ideal of empowered domestic servants while at the same time conforming to it. The melodramatic heroine is entirely defined by her relationships and lovers. While she is often conquering and imperious, usually ending up with a cadre of multiple lovers, she nevertheless is frequently defined by these relationships with male characters and her actions therein. These films, as a result, create an image of German women as both modern yet also an extension of their male lover.

Die Goldene Stadt

Veit Harlan's 1942 film *Die Goldene Stadt* is one such melodramatic work which makes use of the aforementioned ideological motifs as well as others unique to it. The film revolves around Anna, the daughter of farmer Jobst. Anna longs for a life in the city of Prague, away from her simple countryside life - much to her father's disapproval. Over the course of the movie, Anna has romantic relations with three men: Thomas, a farmer on the countryside; Leidwein, a Prager engineer working on the Jobst farm; and Toni, Anna's charming cousin living in Prague who only loves her in a bid to inherit the family's farm. Of these three, the latter two are the most important figures in Anna's life. Leidwein is depicted as a good-natured and caring man, representative of the beautiful city which she longs to one day visit. Toni, on the other hand, is manipulative and deceitful. He is a womanizer who seeks only to financially get ahead. Anna ultimately ends up pregnant with Toni's child and dies, drowning in the same swamp near her family's farm where her mother had died. Following Anna's death, Jobst passes the farm onto Thomas, the farmhand whom Anna was to marry at the film's beginning.

Anna's desire to travel to Prague and her multitude of lovers makes her quite similar to the typical melodramatic heroine. She strives for modernity and is filled with wanderlust and chooses to act on those desires to achieve them. Anna moves from lover to lover, each one marking a different period in her life during the film. When she was to marry Thomas, the message is that she is still wrapped in rural life. Her affair with Leidwein demonstrates her move toward achieving that idyllic vision of the "golden city" while her eventual relationship with Toni represents the harsh reality of city life settling in and eventually taking its toll. As a result of these interactions, Anna is a character entirely defined by her lovers. Her death at the end of the film seals the overall ideological message of the journey from one man to the next. Stephen Lowry, in his article *Ideology and Excess in Nazi Melodrama: The Golden City* writes "In Anna's death, the film affirms the given ideology: social restraints clearly triumph over her

desires. This conclusion, to be sure, comes as no surprise. As soon as Anna meets Toni, it is clear to anyone even vaguely familiar with melodramatic convention that this relationship, and most likely the film as a whole, will not end well” (Lowry p. 137-138).

These events would likely be apolitical to the layman who simply seeks a movie on its entertainment value. However, they are laced with political and ideological undertones. The consensus on the specifics of these undertones is, however, inexact. Lowry writes “Assessments of the film's politics range widely. Many film historians argue that it abounds with familiar emphases of Nazi ideology: anti-Czech nationalism and anti-Slavic racism, *Blut und Boden* anti-urbanism, and misogyny” (Lowry p. 134). All of these assessments, however, seem plausible even if they're less than overt within the film itself. Regarding Toni and his mother, Lowry goes on to write “They also can be seen as caricatures of the Czechs. Toni and Maruschka are egoistic, calculating, mercenary, and deceitful. Each character contributes directly to Anna's downfall. The two figures possess the negative traits associated with villains in popular fiction. Similarly, they reflect the same negative features that the Nazis attributed to their enemies, particularly to the Jews” (Lowry p. 146). In effect, the film reinforces the Nazi's government's consensus on Slavs and depicts them as an unscrupulous people willing to use each other to get ahead.

Although, while the film certainly contributes to the racial politics employed by the Nazis, a racist message is not its central focus. The film is quite broad in the messages it draws upon. As Lowry noted, another popular interpretation on its message is the focus on the relationship between the countryside and the city. He writes “The Golden City is hardly an exemplar of *Blut und Boden*. Were that the case, the farmer Jobst - a paradigmatic *blubo* character, bound to the land and tradition - would have to prevail. But he does not. In fact, he cedes his inheritance and power to the representative of a younger (and modern) generation” (Lowry p. 144). While this is true to an extent, another interpretation of this exchange is that Anna's entire family was punished as a result of her betrayal of her countryside origins. As Lowry pointed out, Jobst indeed did not emerge as the victor of the film as he too was punished by having to bear his daughter's death and eventually ceded his land away to Thomas. However, his victory is not necessarily needed to promote a message of *Blut und Boden*. Anna's selfishness which guided her to trade in her rural life for one of urban excess was the indirect cause of her eventual death and, as a result, suffering for her father. She sought to break out of her family but ultimately broke her family instead. The moral here would thus serve as a warning to the viewers of the dangers of leaving the countryside for both themselves and

their respective families - a notion which would therefore be in line with the *Blut und Boden* ideology employed by the Nazis.

Zu Neuen Ufern

Hans Detlef Sierck was among the “giants” of Nazi and American melodrama. However, he was ideologically opposed to the Nazi government. Eric Rentschler, in his article *Douglas Sirk Revisited: The Limits and Possibilities of Artistic Agency* writes “[Sierck] fused ‘the traditions of Weill, Ophuls, Brecht and Sternberg’ - and managed to do so while being monitored by the Nazis. Seen in this light, Detlef Sierck's Ufa films represented rare and surprising indications of aesthetic resistance against the Hitler order” (Rentschler p. 153). Not all of Sierck’s films, however, fall under this umbrella of “aesthetic resistance.” One of Sierck’s popular works, *Zu Neuen Ufern* (1937), is well in line with Nazi ideals and ideology - a reminder that even a man who is not in line with the Nazi government’s message must still kowtow to its strident film standards in order to have any sort of presence in the world of film.

Zu Neuen Ufern tells the story of the relationship between English singer Gloria Vane and aristocrat Sir Albert Finsbury, a couple hailing from 19th century London. When Finsbury must leave for Australia to join the New South Wales Regiment, Gloria (unbeknownst to Finsbury) accepts responsibility for one of his crimes in England in order to be sent to the penal colony after her lover. When Finsbury finds Gloria in chains in Australia, he refuses to marry her (which would free her from her imprisonment) due to the cost that would come to his career. Gloria later meets Henry Hoyer, an Australian settler who she agrees to marry only as a way to escape her prison. Gloria tries to find Finsbury after her release only to learn that he is now engaged to the Governor’s daughter. Gloria and Finsbury later engage in a painful meeting which leaves Finsbury filled with remorse for his actions, prompting him to shoot himself on the eve of his wedding. Gloria later finally has her delayed wedding with Hoyer at the film’s end.

Author Andrew G. Bonnell, in his article *Melodrama for the Master Race: Two Films by Detlef Sierck (Douglas Sirk)*, demonstrates the various ideological messages rooted in Sierck’s film. One of the implicit messages pointed out by Bonnell is the notion of pronatalism. He writes “On [Gloria’s] dark prison uniform is a large white number 218 shines clearly, over her left breast. The semiotic significance of this may seem obscure to an English-speaking audience today, but to a German audience in the 1930s the sight of a woman in prison uniform in connection with the number 218 would inevitably evoke associations with Paragraph 218 (§218) of the German criminal law code, the law which prohibited abortion. . .” Thus, Gloria Vane's identity is reduced to her number, a number

which every member of a German audience would associate with the law which singled out women for punishment for abortion. She can, however, gain redemption through obtaining a legitimate marriage. Here a pro-natalist population policy becomes an act of mercy for women, offering them a second chance through becoming lawful wives and mothers” (Bonnell p. 212). This analysis is especially interesting given that the topic of abortion is never actually explicitly raised within the film. The pronatalist undertones are, nevertheless, far too prominent to be dismissed as mere coincidence. Gloria’s prison number is prominently displayed in such a way that the film makes it quite obvious that the viewer is intended to see it. The strongly pronatalist Nazi government was strongly against abortion in an effort to keep the German birth rate high and the population growing. The implicit, almost subliminal pronatalist message imposed by the film is therefore in accord with the prevailing ideology of the state.

We also see propagation of the *Blut und Boden* ideal. This is presented in the form of the eventual pairing of Gloria and Henry Hoyer at the end of the film. Bonnell writes “In the happy ending, Gloria and Henry Hoyer are reunited, and the well-matched couple are able to start a new life on Hoyer's farm in the countryside: a 'blood and soil' idyll far removed from corrupt urban life. The opposition between a fundamentally healthy rural society, which formed the indispensable basis for a strong and healthy race, and the corrupt city, where race-mixing and degeneration were ever-present dangers, was one of the most basic and common tropes of Nazi discourse” (Bonnell p. 213). Hoyer is the film’s underdog champion, the honest rural man who eventually wins the love of Gloria. He contrasts the dishonest, city-dwelling Finsbury and is ultimately rewarded for it with a happy relationship. The film paints a clear, positive picture of rural dwellers using this characterization.

The film also uses its characters to highlight an anti-English and anti-capitalist statement. Bonnell writes “It is true that the film presents a sociologically differentiated treatment of the British upper classes: a decadent aristocracy; grasping, materialistic merchants, and their upwardly mobile sons, who are caught between slavishly aping the aristocracy and resenting the latter’s effortless social superiority; and hypocritically moralising *petits bourgeois*. . . .” The Englishness of these characters is constantly stressed, something which cannot be said of Gloria or Henry Hoyer, who are free from such stereotyping treatment. If viewed in isolation, it is possible to see the film as conveying a critique of national stereotypes in German cinema at the time, the film fits seamlessly into the pattern of anti-English propaganda familiar from later, wartime films such as the Boer War historical drama *Ohm Kruger*” (Bonnell p. 213). This would therefore be in line with the government’s aims. The Nazi Party was vehemently anti-

capitalist and abhorred the English especially after their role repressing the German people following their victory in the first world war. Depictions of the English as a decadent people who are slaves to the aristocracy would thus fall into the realm of the party's aims. Reinforcing desired perceptions, even in such subtle ways, is key to the victory of propaganda.

Comparisons

The similarities between *Die Goldene Stadt* and *Zu Neuen Ufern* may come as quite obvious. Both melodramas seek to promote similar ideological goals. They are both proponents of the *Blut und Boden* ideology although in different ways. *Die Goldene Stadt* demonstrates punishment for turning against rural life while *Zu Neuen Ufern* demonstrates reward for conforming to it. Anna ultimately met her demise while Gloria achieved a happy marriage by their respective film's ends.

Additionally, we also see similar themes in the role of women in society. Anna and Gloria both are traveling, adventurous and modern women who take a journey in the name of romance. They are, however, ultimately still defined by their relationships with the male characters and cannot achieve happiness unless they are in ideal relationships. To that effect, women are stressed as "champions of the birth rate." The expectation in the era of the two films was for women to seek out relationships and bear children for the reich. Both of the melodramas carry a message for women that happiness cannot exist without a good man in which to form an eventual family and creation of a new generation of Germans. Therefore, while the films do paint a picture of "modern women" using the characters of Gloria and Anna, they ultimately still reinforce traditional expectations and values regarding their purpose.

Lastly, both films depict a negative image of the enemies of the Nazi state. They both utilize negative stereotypes in order to stoke unpopular sentiment against said enemies. In *Die Goldene Stadt's* case, the subject of these stereotypes are the Czech whereas in *Zu Neuen Ufern*, it is the English. This method of reinforcement adds credence to the popular perception of these groups as deceitful and slavishly materialistic, respectively. The ultimate goal of these unflattering depictions is to make it easier for the state to justify hatred against them. It is far easier to paint a group as evil when the first images to come to mind in the popular conscious are consistently negative, dehumanizing traits.

Conclusion

The popular genre of melodrama, while frequently perceived as apolitical, was actually anything but. The propagation of popular Nazi themes and motifs managed to

leak their way into the genre and hide under the guise of subtext. As Harlan's *Die Goldene Stadt* and Sierck's *Zu Neuen Ufern* demonstrated, even films created with the primary purpose of "simple entertainment" may actually serve to forward a far more nefarious agenda frequently without the audience's knowledge. The melodrama genre was, therefore, not immune to the politicization of art under the Third Reich and, like other mediums of artistic expression, became an instrument of ideology by the state.

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“A Luminous Language”: The Paradoxical Role of English as a Remnant of Colonialism in Chimamanda Ngozi Adichie’s *Half of a Yellow Sun*

Elena Rotzokou (English)¹

Within the framework of a postcolonial discourse, it can be argued that the English language paradoxically poses as a point of disconnection as well as connection between the characters of Ugwu and Odenigbo in Chimamanda Ngozi Adichie’s *Half of a Yellow Sun*. In this paper, I will primarily indicate how, on one hand, the knowledge of English has propelled the demarcation of academic as well as class boundaries between the two characters in question, thereby creating a disconnection between them on both an intellectual and socioeconomic, practical level, in addition to, consequently, inhibiting the two from forging a human relationship, as well as generating individual anxiety in Ugwu. Subsequently, by way of extension to the latter, I will indicate that Odenigbo’s privileged position as a Nigerian whose knowledge of the English language, thus access to western education, and in turn, induction into the Nigerian bourgeoisie that was created during British rule and persisted upon the country’s independence (Griswold 225), breeds a type of colonialist dynamic between him and the uneducated, lower-class Ugwu, a certain kind of inner conflict whereby they seem to strongly embody the roles of colonizer and colonized, respectively. Then, I will argue that, on the other hand, knowledge of the English language seems to simultaneously paradoxically function as a connective force, as the intellectualism it invests Odenigbo with allows him to bond with Ugwu through, practically, transgressing the class boundaries established between the two as a result of colonial influence in the past. Also, as a consequence of this connection, Ugwu benefits from his anglicization not only in that his intellectual curiosity is awakened, but additionally, in that his indoctrination into western education ultimately enables him to realize Odenigbo’s dream of decolonization, by utilizing his knowledge to write his own story as a black Igbo man. Hence, I will conclude my over-arching argument by thus indicating how this paradoxical role of the English language in the relationship between Ugwu and Odenigbo ultimately amounts to a greater paradox in Adichie’s novel, suggesting that westernization can lead to mental decolonization.

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Primarily, it is important to trace the integration of the English language into Nigerian society, in the colonial era, as this explains the language's firm presence upon the country's independence. According to Safiya Garba, prior to the officialization of the English language, pre-colonial education in Nigeria was fundamentally dissimilar to the changes that it underwent over the course of British rule, as it was much more attuned to the several tribes' traditional village cultures. With its "emphasis on functionalism", this type of education was not framed on the basis of schools, but rather on practical knowledge. That is, boys would normally be sent to "masters or apprentices" in order to learn various vocations, while girls were expected to remain at home, for the purpose of getting habituated to performing domestic chores successfully, preparing themselves for motherhood. With the absence of any sort of "intellectual training", this type of education was ostensibly aimed at being of practical "relevance to Nigerians" (55). This remnant of pre-colonial habits is seen through Ugwu in the novel, whose family sends him to work as Odenigbo's houseboy, the latter becoming his "Master." As soon as the three tribes of the region were officially unified into comprising one single nation, following the implementation of British rule at the end of the 19th century, "western education" came at first in the form of "Christian missionaries", mostly prevalent in the southern part of the country (Garba 56). In contrast to the typical pre-colonial type of training, this new, western-oriented education was much more intellectually invested, emphasizing the acquisition of skills pertinent to reading, writing, and religion, while the English language became official, in the government, as much as in schools. Gradually, in the early 20th century, those Christian schools were being increasingly supplanted and preponderated by those so-called "government schools," which were designed specifically to produce teachers, people who would be able to utilize the kind of western-oriented, extensively British education that they had received in order to continue "enlightening" other "backward" Nigerians (Garba 57). Overall, access to education promised "higher prominence" in social circles, as well as conferred a certain kind of status (Sekhar 115).

Firstly, on a practical level, the access to intellectual cultivation that knowledge of the English language allows, determines, by extension, social stratification in post-colonial Nigeria. This inner discrepancy that is created owing to the power of a single language and its pathways is delineated by Adichie in the relationship between Ugwu and Odenigbo. As Henning Melber writes, the Nigerian middle class that rose in the country's colonial years, and persisted upon its independence, to which of course Odenigbo and Olanna subscribe, "grew out of three intersecting processes," with "the introduction of Western education" being one of them (23). This type of mainly British-oriented education, to which Nigerians had access either by means of "formal schooling," like

Olanna's, or through individual endeavors, as in Odenigbo's case, who is an autodidact, "fundamentally altered power relationships and forms of social stratification in communities" (23). These "new sources of wealth and influence" were derived from education, in addition to "administrative posts" favored by the British, a case in point being Olanna's and Kainene's father. Therefore, a major determinant for the configuration of the Nigerian "elite" was now knowledge of the English language, and thus education, regardless of whether it was originally characterized by an "established social status" (23).

In the novel, I would argue that Adichie delineates this discrepancy between Ugwu's lowly social status, and Odenigbo's higher own status, thereby in turn indicating the determinant force of the English language and education in a society that has been subjected to colonialism. More specifically, as conveyed effectively through the use of free indirect speech in the figure of Ugwu, Adichie draws attention to the class disparity between the two characters, by mentioning that Ugwu "had never seen anything like the streets that appeared after" he and his aunt "went past the university gates, streets so smooth and tarred" (3). The social status that Odenigbo's English education has accorded him, since it has permitted him to work as a university professor of mathematics in a naturally English-speaking university of Nigeria, is tellingly indicated in the above passage. However, it should be noted that, at least in this instance, Ugwu does not particularly exhibit or seem to feel any sort of intimidation at being confronted with this rather westernized sight, as it is mentioned that "he itched to lay his cheek down" on those tarred streets, as well as that he marveled at those "polite well-dressed men" around him (3). I would argue that this can be regarded as indicative of the novel's overall partly favorable attitude toward the influence of western culture on Nigerian society. This difference in regards to class is further suggested through the use of palpable sensory, specifically tactile, imagery. For instance, Ugwu is described as wanting to reach out and "touch the cement wall" of Odenigbo's house, to see "how different it would feel from the mud walls of his mother's hut that still bore the faint patterns of molding fingers" (4). Also, Ugwu's hunger, another indicator of the contrast between his and Odenigbo's socioeconomic status, is registered through visual imagery, with him being taken aback by the house's fridge, this "white thing" that was "almost as tall as he was," as well as subsequently starting to eat chicken "until he had only the cracked, sucked pieces of bones left in his hand" (6). Once again, in addition to shedding light on this socioeconomic disparity, determined largely by this one factor of language, Adichie does not really present Ugwu as being particularly resentful or daunted. Rather, the reference to him having "opened it [the fridge] and gasped as the cool air rushed into his face,"

mostly suggests his marveling at this array of “oranges, bread, beer, soft drinks,” all “arranged on different levels” (6). This implies Ugwu’s, and, I would argue, the text’s positive attitude toward the privileges brought about by the presence of the English language in Nigeria, despite in the same instance, drawing attention to its creation of social disparities, with Ugwu being depicted as “quickly stuffing the food in his mouth while his heart beat as if he were running,” hurriedly slipping “extra chunks of meat” into his pockets (9). Once again though, a rather critical attitude on social divisionism is expressed by both Ugwu, and the narrator, with Ugwu’s observation of the “wasted space” of Odenigbo’s garden in comparison to “the tiniest plots” farmed by the people in his village, containing solely “useful vegetables and herbs” (18), furthering the text’s discourse on socioeconomic disparities as a remnant of colonial and societal changes. However, it should be again noted that the text intimates Ugwu’s simultaneous attraction to Odenigbo’s modernized lifestyle and household, as he is portrayed as luxuriating “on this [his] new bed that was nothing like his hand-woven raffia mat,” the “springy softness of the mattress” (10-11). Although the ambivalent role of post-colonial Nigeria’s westernization in general is not the focus of this paper, it is vital to demonstrate the suggested positive, even connecting influence of western influence in the lives of the novel’s characters, as in a fashion it prefigures Ugwu’s attraction to and benefiting from his exposure to western education.

Nevertheless, on another level, this class divide brought about by the degree of accessibility to Western education, as dependent upon knowledge of the English language, has created some internal conflict, not solely of a socioeconomic nature, but also one of disruption of human relationships. Indeed, to substantiate this claim, according to April Gordon, in the colonial and postcolonial years in Nigeria, following the creation of the country’s middle class, there was “understandable hostility” between “traditional Nigerians” and “educated” ones. From the point of view of the former, this “new class” was seen as “a bunch of low-status, foreign upstarts,” who, “embracing the white man’s ways,” were “considered to be unrepresentative of most Nigerians, who were illiterate and rural or village-based peasant farmers” (81). Garba also draws attention to this intratribal conflict, stating that “western education created a dichotomy in the status of the people,” with “the difference between the rich and the poor becoming clear” (58), while Walter Rodney writes that the new western-oriented systems were not “designed to give young people confidence and pride as members of the society, but sought to instill the sense of difference in the society” (58). On the basis of the above statements, I would extrapolate into arguing that the relationship between Ugwu and Odenigbo in the novel not only is exemplary of this newfound socioeconomic divide that

the above writers allude to, but also, is one indicative of a certain disruption in human relationships. The fact that it is composed, as I see it, of certain elements that even remotely resemble colonial practices suggests the presence and impact of perennial mental remnants of colonialism in the postcolonial years in Nigeria. More precisely, although ideologically a tribalist who advocates the “decolonization” of Nigerian education (25), Odenigbo’s behavior toward Ugwu strongly presents him as an incarnation of the figure of the colonizer. Despite his egalitarian exhortation of Ugwu to suspend with formalities and call him by his name instead of “sir,” as he believes in the fluidity of power boundaries, meaning that Ugwu “could be the *sir* tomorrow” (16), his employment of him as a houseboy comes across as a kind of cognitive dissonance, since, as Ugwu observes, he is so “youthfully capable,” looking “as if he needed nothing” (6). Furthermore, the colonial practice of erasure of speech seems present in the relationship between Odenigbo and Ugwu, with the latter immediately addressing the former “in English” upon first meeting him (4), adamantly demanding of him to speak English instead of Igbo (22), as well as referring to him as a “stupid ignoramus” whenever he fails to speak English satisfactorily (17). Moreover, Odenigbo’s appellation of Ugwu as “my [his] good man,” an old-fashioned British affectation, seems to mark a codeswitch to the colonial language, thereby enhancing this idea that the dynamic between the two characters in a way indicates the percolation of colonial relationships into those that posed once as the colonized. Odenigbo’s act of deculturation, as I would suggest, of Ugwu, is further demonstrated by his rather coercive urging of him to read western books, in addition to sending him to attend an elite secondary school, as well as to subsequently “send him to university”, and deciding that “he would not marry until he had become like Master, until he had spent many years reading books” (221). The above is clearly akin to the typical pattern of deculturation and forced re-acculturation of western countries inflicted upon their colonies, with Odenigbo imposing upon Ugwu a western-oriented cultural and linguistic influences. As Emmanuel Ngwira observes, Odenigbo’s behavior toward Ugwu, in concert with his use of “my good man,” betrays his internalization of Western education” (47), thereby allowing for the claim that the character’s paradoxical privilege, determined by his conformity to western-instilled cultural elements, and the advantage entailed by that in regards to his position in the social gradient, creates a rift between him and the uneducated, traditionally Igbo Ugwu, as well as confers upon him, paradoxically, the status of the oppressor.

The mental effects of this inner divisionism left from colonialism, manifesting itself in the form of power dynamics that resemble the old colonizer-colonized dichotomy is further indicated through Ugwu, namely by his suggested inner anxiety, as well as by

his internalization and acceptance of what seems to be the figure of the “oppressed.” In the first instance, Mukoma Wa Ngugi views Ugwu as “a victim of colonial education,” since “language becomes a source of anxiety” for him (23). I would concur with this observation, suggesting that the psychological dissonance inflicted by the powerful role of the English language is intimated when Ugwu nervously wonders whether “Master [would] send him home because he did not speak English well,” or “did not know the strange places Master named” as a result of his superior education (12), while he is also depicted anxiously trying “to appear as alert as he could” as soon as Odenigbo indignantly starts raving about his father not having borrowed money to send him to school, “because of the wild shine that had appeared in Master’s eyes” (13). Furthermore, in another instance, Ugwu is shown “awkwardly” standing next to Odenigbo, while he is passionately expounding on a white man deemed to have discovered River Niger, with Ugwu silently wishing “that this person called Mungo Park had not offended Master so much” (14), while it is subsequently mentioned that he was “convinced that Master was mad” (14). Lastly, I would argue that the divisive as well as psychologically disturbing effects of the English language are further intimated in the novel, although not directly pertinent to the characters of Ugwu and Odenigbo and their relationship, yet with some underlying significance. In one case Olanna addresses Ugwu in English, and “because she hardly spoke English to him,” “it sounded cold, distancing” (302), while in the second case, the narrator summarizes Odenigbo’s educational and class-related privilege, stating that “he was the master, he spoke English, he had a car” (311), in the context of asserting his clout over the traditional, uneducated Arize. The above examples point toward the immense power conferred upon those who have been molded by British colonialism’s westernization, education, and class re-constitution, as well the role of the English language as, perhaps, a barrier, a marker of “distance” between people themselves even in the years following the termination of colonial rule. Furthermore, the role of English as appropriating one’s culture is symbolically conveyed, I would argue through the allusion to Robert Browning’s well-known British poem “The Pied Piper of Hamelin”, which Odenigbo has asked Ugwu to memorize (106). The speaker’s feeling of being “bereft” about not having been led to this Eden-like place where “waters gushed” and “fruit trees grew” by the Pied Piper, like “he said”, like he had “promised me [him]” as well, (106), can be paralleled to the sinister effects that Ugwu’s “strange and new”, “luminous” (28) education is having of him, divesting him of his own culture, as well as mentally enslaving him.

In the second instance, I would argue that Ugwu’s internalization and acceptance of his status as Odenigbo’s inferior and servant reinforces this idea of

language and its re-fashioning of class boundaries as well as mental enslavement due to its intellectual implications, as a barrier. As far as class disparities are concerned, Ugwu is mentioned as “wanting to do more [work], “to give Master every reason to keep him, and so one morning he ironed Master’s socks” (17), while he is referred to as “determined to please Master” (7). On an intellectual level, Ugwu’s passive acceptance of his subservience is implied when it is mentioned that he would utter the word “sah” in reference to Odenigbo “proudly”, being attracted to “the crisp power behind the word” (16). More importantly, his belief in the putative superiority of the English language is strongly suggested when he thinks of it as “magic,” as this “superior tongue,” this “luminous language,” and being enthralled by its musicality and “easy perfection” (28). In the same vein, Ugwu is shown deciding to use a grammatically correct English phrase, “because it sounded better,” “because it would impress her [Olanna] more” (28). I would argue that the above two instances suggests a form of mental conformity on Ugwu’s part, meaning that his belief in the luminosity and greatness of the English language, renders him highly reminiscent of typical associations of oppressed, colonized people, with a sense of almost juvenile ignorance and childlike admiration for the putative majestic and superlatively intellectual grandiosity that they are confronted with, aching to emulate it, if not perhaps rather a stereotypical trope thereof.

Nevertheless, on the other hand, the apparent ambivalence with which Ugwu and Odenigbo are both treated lends itself to the suggestion that the English language, in fact, perhaps also functions as a binding factor between the two, in addition to marking a certain social as well as intellectual disparity. Indicators of its role as a connector is, firstly, the fact that Odenigbo, with his persistence and fixation regarding English and western education seems to indeed succeed in stimulating Ugwu’s intellectual curiosity, at least in principle, denuding him in a manner of his Igbo language and culture. Examining the aforementioned instances through an alternative lens, Ugwu’s attempt “to appear alert” upon seeing a “wild shine” in Odenigbo’s eyes while discussing the former’s discontinuation of attending school (13) could be construed as Ugwu not so much suggestive of the breach inflicted upon human relationships by the advent of the English language, as well as of Ugwu’s anxiety, but, in fact, of Ugwu feeling positively motivated. Odenigbo’s reprimand of him over not attending school seems to pique his pride, implying that he is sensitive to how he is perceived, thereby now being prompted to appear “alert” and show interest. Also, Ugwu’s determination to “learn how to sign forms” (16) further implies the intellectually stimulating effect Odenigbo has had on him. Even his pride about calling Odenigbo “sah,” as well as his “scrubbing the doors daily” and “wiping the louvers until they sparkled” (16) can be regarded, I would argue, not

necessarily as an indication of Ugwu's internalization of subservience, thereby introducing the discourse regarding a divisive colonizer-colonized dynamic discussed above, but rather, of his curiosity to learn. As Adichie writes, the radiogram with the English "strange flutelike music" would reach Ugwu's ears (17) while he was performing chores, which is subsequently juxtaposed next to the phrase that he "wanted to do more" so as to "to give Master every reason to keep him" (17). In this instance, the English language is arguably presented as a point of aesthetic and intellectual attraction for Ugwu. Likewise, it attracts Ugwu to Odenigbo as much as it distances him from him. Even the boy's alert response "Sorry, sah!" to Odenigbo's somewhat invectively calling him a "stupid ignoramus" (17), may be seen as part of Ugwu's determination to "please his Master" (6) in order to remain in this house that so attracts him. It may also be seen as illustrative of his admiration for what Odenigbo, in fact embodying, by extension, a rather stereotypical facet of the "oppressed" as childishly ignorant and obsequiously venerating. Furthermore, Ugwu's view of English as this "luminous" and "superior" language (28), as well as his determination to use it correctly because "it sounded better" (28) can be seen as portrayed in a positive light, meaning as part of the poor houseboy's fascination with a new piece of knowledge, as opposed to a lamentable sign of his deculturation and mental enslavement. His boosted sense of self-worth as a result of his exposure to learning is further implied by the fact that it is mentioned that, overhearing Olanna's observation to Odenigbo that Ugwu "has such an innate intelligence", the latter phrase "became Ugwu's favorite expression" (107).

Even on the part of Odenigbo, his attitude toward Ugwu can be seen not suggestive of his embodiment of the figure of the "colonizer," due to his paradoxical privilege, but, in fact, as transgressive and disruptive of the extant class-related and intellectual boundaries between the two, especially in view of Odenigbo's own trajectory from a poor background in a village to a westernized university. Odenigbo's conduct toward Ugwu does not seem as paradoxical when considering it in view of his socialist as well as anti-colonialist political beliefs, as, on a practical level, his treatment of him seems to flout conventional class boundaries. His protestation to Ugwu about ascribing to him the "arbitrary" word "sir", when in fact "you [he] could be the *sir* tomorrow" (16) can be seen as flouting the boundaries between master and servant. Likewise, even his not so polite calling Ugwu a "stupid ignoramus" is, in fact, meant to reprehend the latter about having ironed the former's socks (17), thus, curiously, about having endeavored to conform to the typical role of a servant. Also, in the former instance, Odenigbo's implied belief in class mobility, which ostensibly derives from his exposure to such ideologies through his western education, counterintuitively, enables him to act toward the

transcendence of this social disparity between him and Ugwu, created by colonialism. His education and place in this newfound privileged Nigerian middle class allows him to contribute toward the disruption of such class boundaries. On a similar note, Odenigbo's appellation "my good man", in addition to arguably being reminiscent of the tone of hypocritical ingratiating quality embedded in colonial codes of communication, can also be viewed, according to Daria Tunca, as connoting "a form of respect" (23), since "it is typically used when speaking to adult males rather than young teenagers" (23). Hence, this vocative "recognizes the existence of class boundaries even as it challenges established social conventions" (23), linking again to my over-arching argument about the ambivalent and paradoxical relationship of both connection and disconnection between the two characters. This ambivalent attitude as far as class discrepancies are concerned has already been indicated on the part of Ugwu, in the sense that his intimidation sense of distance stemming from his impression of Odenigbo's household seems simultaneously peppered with awe, while it can also now be seen as standing more to reason, in consideration to his motivated attraction to Odenigbo's representation of a middle-class, educated, adequately westernized yet nationalist Nigerian discussed above. To make a link back to Odenigbo, on an intellectual plane, his obsessive and somewhat comically portrayed preoccupation with Ugwu's education and use of the English language may be regarded as suggestive of his affinity for him, as again, he ostensibly hails from a similarly humble background, thus creating a bond between them, as opposed to marking an intellectual rupture, or even sense of superiority on Odenigbo's part. Also, his active interest in Ugwu's western-oriented education can be accounted for in consideration of it, paradoxically, as a means of aspiring to decolonization, as will be subsequently indicated. In that light, it is possible that the fact that Odenigbo has Ugwu memorize Robert Browning's poem, and specifically "*think*" about what "it is really saying" (106), can be interpreted as him being in fact aware of the poem's sinister undertones and its plausible parallelism to the wily advent of British education and influence in colonial Nigeria and its long-term effects, thereby perhaps endeavoring to make Ugwu memorize the verse for a reason, in order to arrive at some kind of comprehension, and even take action, which, in fact, he does.

This rereading of my argument about the conjoining power of the English language and its access to education in terms of Ugwu's relationship with Odenigbo, but also, the former's connection to his Igbo culture, is perhaps best justified by looking at Ugwu's initiative to write a book to tell his own story, a fact which gives rise to an even greater paradox. With Odenigbo's tribalist and socialist ideology as well as his personal sympathy and understanding having academically incentivized Ugwu, they have also

evidently ultimately amounted to instilling a similarly anti-colonialist ideology in him. Having come across Frederick Douglass's *Narrative of the Life of Frederick Douglass, an American Slave* (360) while serving as a Biafran soldier, Ugwu feels "sad and angry for the writer" (396), sympathetic towards the "black man's" survival of the clutches of colonialism, and about his right and power to tell his own story. He is thus instigated to start writing his own narrative account of his experiences of the Biafran War. As Maik Nwosu and Obiwu Iwuanyanwu observe, Douglass's narrative "provides Ugwu with a form and a language for claiming liberation and authorship for Biafra as well as himself" (181). I would extend this argument into positing that indeed, the English language and thus his entire indoctrination into western education, function as an invaluable tool for Ugwu, enabling him to demythologize himself as much as others about, paradoxically enough, his Igbo ethnic and even cultural identity. Moreover, on a less ideological, more personal level, Ugwu's act of crafting his own narrative further suggests that his experience with Odenigbo has acted as an intellectual trigger for him as a personality, allowing to ultimately realize his "own literary ambition", as Nwosu and Iwuanyanwu point out (181). His self-actualization and mental or ideological intersection with Odenigbo are accomplished through his anglicization.

In conclusion, the English language's paradoxical role in *Half of a Yellow Sun* lies, on the one hand, in its creating class, intellectual, and even interpersonal barriers between the characters, especially as exemplified through Ugwu and Odenigbo, as well as inner conflict and anxiety, in addition to loss of identity, in the case of the former. Moreover, it can ultimately lead the perpetuation of a type of intra-tribal conflicting dynamic between colonizer and colonized. On the other hand, though, its knowledge and resulting access to western education provides, on a practical level, middle-class, relatively privileged Odenigbo with the ability to comprehend socialist ideology, which he can communicate to Ugwu, thereby amounting to them not only, in fact, connecting to one another, but also enabling the transcendence of those class boundaries that divide them. On an intellectual level, Odenigbo's somewhat forceful indoctrination of Ugwu into British education not only arouses Ugwu's intellectual curiosity, as well as increases his sense of personal worth, but also, ultimately, enables him to both realize and utilize his own potential, as well as to both mentally decolonize himself, and contribute toward his culture's own mental decolonization, through writing his own account of the Biafran War. In that respect, he can also realize Odenigbo's idealism and vision, thereby indicating the bond Ugwu's westernizing experience has effected between the two as well. That route, therefore, that the now quite anglicized Ugwu ultimately follows constitutes the greatest paradox delineated in the novel.

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Genocide in Myanmar: The Plight of the Rohingya People

Ethan Meyer (History)¹

During the closing weeks of the Second World War, Allied armies witnessed for the first time Nazi Germany's Final Solution. The reports made, and the pictures taken by the Allied soldiers, clearly indicated that the Nazis had committed the largest genocide in human history, killing up to 12 million people. In a letter to the Archbishop of Canterbury, Sir Winston Churchill, Prime Minister of the United Kingdom, had this to say: "Free men and women denounce these vile crimes and when this world struggle ends with the enthronement of human rights, racial persecution will be ended."² Despite Mr. Churchill's powerful words and even with the establishment of the United Nations (U.N.) as a global peace keeping force, the world has seen three more genocides since the end of World War Two. Despite well-documented proof of genocide in Cambodia (1976-1979), Rwanda (1994) and Bosnia (1995), the U.N. has done little to nothing to stop this.

Shockingly, yet another genocide started in 2017, this time in the South East Asian country of Myanmar. The Rohingya, a Muslim ethnic minority has been under attack by Myanmar's Buddhist ethnic majority for the last year. The Buddhists have brought forth legislation to remove the rights of Rohingya and committed acts of violence such as destruction of property, rape, and mass murders against the Rohingya. Based on the existence of anti-Muslim propaganda, legislation preventing citizenship, satellite imagery showing the destruction of Rohingya villages and the large number of refugee camps in Bangladesh, the atrocities committed against the Muslim-Rohingya in Myanmar clearly represent the qualifications necessary for the United Nations to label the persecution of the Rohingya as a genocide, thus warranting international intervention.

The United Nations defines genocide as

any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: killing members of the group; causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; imposing measures intended to prevent

¹ Written under the direction of Dr. Lori Weintrob for HI 334: *Nazi Germany and the Holocaust*.

² Sir Winston Churchill, *Letter to the Archbishop of Canterbury* (The Sir Winston Churchill Archive Trust, 1942), 1.

births within the group; [and] forcibly transferring children of the group to another group.³

This paper will explain the historical implications that caused the genocide, the atrocities suffered by the Rohingya, the perpetrators and their motives, and what the United Nations and free people of the world should be doing to end the plight of the Rohingya people.

Although the current genocide itself only started last year, the Rohingya have been under attack in Myanmar for decades, with the roots of the genocide buried deep in the age of European colonialism. During the 19th century, when Myanmar was known as Burma, the British fought a series of wars to subjugate the country, incorporating it into British India. After consolidating their power in the region, the British set to the task of stripping the land of its resources, that being timber, rice, rubies and in true British fashion, tea. But as all colonial empires do, the British wanted “MORE”. This meant they needed more laborers and the source of this labor would come from the west coast of Burma from predominantly Muslim people who traced their heritage back to the 13th century Arakan Kingdom, known as the Rohingya people, meaning “People from Arakan.”⁴ The British would bring more Rohingya to Burma from Eastern British India, what is today Bangladesh, to meet their labor quotas. Although, many Rohingya had lived in Burma for centuries at this point in history, the Rakhine, the local Buddhist population on the Burmese west coast who also trace their ancestry back to the Arakan Kingdom, came to associate the presence of the Muslim- Rohingya with oppressive imperial rule since the British had brought more of them to Burma and till this very day the Rakhine view all of the Rohingya as intruders, in what they consider to be their land.

The events of the Second World War would only exacerbate the Rakhine’s hatred of the Rohingya. In December of 1941, the Japanese Imperial Army invaded British Burma through the south of the country. Many native Burmese rose up in rebellion against the British, treating the Japanese as liberators. The Rohingya however, stayed loyal to the British, fighting alongside them against the Burmese.⁵ The Rakhine and other Buddhist revolutionaries would consider the Rohingya traitors for this action and this would directly lead to the start of state sponsored discrimination against the Rohingya in the years following the end of World War II.

³ Office of the U.N Special Advisor on the Prevention of Genocide, *Legal Definition of Genocide* (The United Nations, 1948) 1.

⁴ Eleanor Albert, *The Rohingya Crisis* (Council on Foreign Relations, 2018) 1.

⁵ Agence France-Presse, *Tracing history: Tension between Rohingya Muslims, Buddhists date back to British Rule* (Hindustan Times, 2017).

The Post-War era in Burma would see the greatest increase in hatred toward the Rohingya as The Union of Burma was declared an independent republic in 1948. During this time Burma's citizenship laws excluded the Rohingya from the 1950 list of self-identifying people groups, leading to a vast majority of the Rohingya population lacking legal documentation, thus they were locked from any social or political freedoms within the new republic.⁶ As the 20th century carried on, things would only get worse for the Rohingya, as in 1962, the republic was overthrown by the Military Junta, effectively turning the country into a military dictatorship. This new autocratic government dismantled the country's constitution and barred the Rohingya of their citizenship in the 1982 Citizen Act, claiming that the Rohingya people were illegal immigrants from Bangladesh. The Junta Government also used Buddhist Nationalist propaganda to help assert their authority. This propaganda included changing the country's name back to its pre-British title, Myanmar, and also troves of anti-Muslim rhetoric directed at the Rohingya, using them as a scapegoat for the cause of the country's poverty. In reality, the blame for Myanmar's poverty is at the feet of the Junta themselves as 40% of the national budget was spent on the military.

The first act of violence that was committed against the Rohingya was done by the Military Junta in 1978 during "Operation Dragon King," when the Junta used rape and violence to try and drive the Rohingya out of Myanmar, but this attempt failed. In 1991 the Junta would launch a second campaign against the Rohingya with the stomach curling title of "Operation Clean and Beautiful Nation," causing 250,000 Rohingya to flee to Bangladesh, however this operation was unsuccessful as well because many Rohingya simply returned to Myanmar afterwards.⁷ This 50 year period of violence and propaganda only further exacerbated the Rakhine's previously aforementioned hatred towards the Rohingya, as the Rakhine were now heavily influenced by both the Junta's anti-Muslim propaganda and ethnic cleansing campaigns, turning them into Buddhist Nationalists.

In 2011, the Junta, under foreign pressure, allowed the return of a democratic government in Myanmar. One would think the return of democracy to Myanmar would end the oppression of the Rohingya, but in cruel twist of fate, it would only see the persecution of the Rohingya continue. Any attempt by Myanmar's government to liberate the Rohingya was stopped by the manipulation of the democratic system by Buddhist Nationalists. For example, Buddhist Nationalists out voted a bill that would issue ID

⁶ Albert, *The Rohingya Crisis*, 2.

⁷ Sam Ellis, *The "Ethnic Cleansing" of Myanmar's Rohingya Muslims Explained* (Vox, 2017).

cards to the Rohingya, which would have reversed the 1982 citizenship law. In the state of Rakhine, (AKA the Arakan State), the disputed homeland of both the Muslim-Rohingya and Buddhist-Rakhine peoples, the Buddhist Nationalists won a majority in the state assembly, giving them the power to keep in place the discriminatory laws of the Junta era, meaning even in a democratic system, the Rohingya still had no rights.⁸

Violence broke out again in 2012 when three Muslim men were accused of raping and then murdering a Buddhist woman in the State of Rakhine. These men were then tortured and executed by Buddhist Nationalists. As if this was not enough, the Nationalists then killed ten unarmed Rohingya men in cold blood, which caused the Rohingya to riot in Buddhist neighborhoods. The Buddhists Nationalist launched a brutal retaliation with the support of the government security forces and burnt down any Muslim neighborhoods and villages, displacing a similar number of Rohingya to that of “Operation Clean and Beautiful Nation.”⁹ These attacks only lasted for a couple of months and after the violence had ended the Rohingya again returned to Rakhine State. It was after this event, based on the “restrictions on marriage, family planning, employment, education, religious choice, and freedom of movement” placed upon them by the government and suffering from violent persecution from Buddhist Nationalists, Human Rights Watch officially labeled the unfolding events in Myanmar as ethnic cleansing, an action the United Nations considers to be just one step below genocide.¹⁰

The current conflict started on August 25th 2017, when The Arakan Rohingya Salvation Army (ARSA), a Rohingya militant group - considered a terrorist organization by Myanmar - attacked a border station, killing 15 Rakhine officers. In response, the Myanmar security forces and Buddhists Nationalists retaliated against not just the ARSA but all the Rohingya people. This started with the destruction of Muslim neighborhoods and villages and soon escalated to rape, and mass murder like in 2012, but unlike the 2012 attacks that lasted from only June to August of that year, the August 2017 attacks have carried on into April of 2018 with no end in sight. This has resulted in far more destruction of Rohingya property with 288 villages being destroyed within the first month alone. Evidence for this resides in the comparison satellite imagery of Rohingya villages from June of 2017 to September of 2017, showing the burnt husks of hundreds of Muslim houses. Since September the number of Muslim villages burned in the Rakhine State is now at nearly half.¹¹ Aung San Suu Kyi, who is basically Myanmar’s George

⁸ Albert, *The Rohingya Crisis*, 2.

⁹ Ellis, *The "Ethnic Cleansing."*

¹⁰ Albert, *The Rohingya Crisis*, 3.

¹¹ BBC News, *Myanmar Rohingya: What you need to know about the crisis* (British

Washington, addressed these images in December of 2017. She said that more than 50% of the villages were still intact and gave no comment on how the government would respond to the attacks. This address was critiqued by the Deputy Director of the Human Rights Watch Asia Division, Phil Robertson, who said “in any school I went to, 50% is a failing grade.”¹² The destruction of these villages since August of 2017, have caused the deaths of around 7,000 Rohingya, with at least 730 of them being children. Additionally, 680,000 Rohingya have become displaced, almost three times as many that were displaced in 2012. For perspective, there were only around one million Rohingya living in the Rakhine State before the 2017 attacks, meaning around 68% of their population has been forced to flee the country, with some going to Thailand and Malaysia, but the vast majority fleeing to Bangladesh. Eight huge makeshift refugee camps have sprung up in southern Bangladesh, with the largest hosting over 240,000 people. Due to the strong influence of Buddhist Nationalists within the government, Myanmar has thus far refused to let United Nations human rights investigators to enter the country, making further investigations extremely difficult.

These acts of violence are being committed by the Rakhine’s Buddhist nationalist party, the Arakan National Party, who hold a majority in the Rakhine State Assembly. The nationalists have a variety of excuses as to why they are committing these atrocities against the Rohingya. The most common is the historic excuse that the Rohingya are illegal immigrants from Bangladesh and that they don’t belong in the country. The Rakhine also use the existence of Rohingya militia groups like the ARSA, to give a reason why they are “defending themselves” from what they perceive to be an internal threat. They believe that the problems caused by these groups serve as justification for their actions and that the removal of the Rohingya is necessary for the stability of the state. Furthermore, the Buddhist nationalist party and their former leader Aye Maung argue that their violent actions against the Rohingya are in self-defense and have little to do with the fact that the Rohingya are Muslim. This argument is contradicted by other Buddhist nationalists like the head priest of the Abaya Yakheta Monastery in the Rakhine state capital of Sittwe, U Nan Daw Ba Tha, who believes the Rohingya Muslims present a threat to the Buddhist traditions and ideals of the country, which he says must be preserved so Myanmar does not become Muslim country.¹³ This claim is further supported by a quote from Dr. Aye Chan, a Rakhine historian and democracy activist who says “Our land (Myanmar) is a strong land and we cannot share

Broadcasting Company, 2018) 4.

¹² Ellis, *The "Ethnic Cleansing."*

¹³ Al Jazeera Investigates, *The Hidden Genocide* (Al Jazeera English, 2013).

it with illegal Bengali aliens...both the country and state have a responsibility to protect Buddhism and the welfare of the people.” Dr. Chan also co-authored a paper that de-humanizes the Rohingya titled *Influx Viruses: The Illegal Muslims in Arakan* which argues the Rohingya are viruses infecting the Rakhine homeland.¹⁴ In addition, cartoons of machete-wielding Rohingya babies have circulated on social media, further showing how the nationalists have tried to de- humanize the Rohingya.¹⁵

If any of this sounds familiar, it is because the Nazis’ actions during the Holocaust were very similar. They argued that the Jews were a threat to the German race, believing that Jews and other “non- desirables” would bring about the destruction of the German people, just as the Rakhine fear Islam for their Buddhist traditions. The discriminatory laws introduced to remove the rights of the Rohingya are also eerily similar to those that preceded the Holocaust in Nazi Germany. In 1935, the Nazis introduced the Nuremburg Laws, which stripped the Jews of their citizenship. There is no doubt that the exclusion of the Rohingya from the 1950 list of self- identifying peoples and the 1982 citizenship law is the Rohingyas version of the Nuremburg Laws as both these pieces of legislation stripped the rights of their respective minority groups.

Not only does persecution of the Rohingya share similarities with the Holocaust, but it also fits the definition of genocide perfectly. Dr. William Schabas, a member of the International Association of Genocide Scholars, states that it is appropriate to call persecution of the Rohingya a genocide because “the actions are carried out with the intention to remove or destroy the group.”¹⁶ Dr. Schabas’ statement linking action to definition, combined with the aforementioned evidence of anti- Muslim propaganda, discriminatory laws, acts of violence and the existence of refugee camps, coupled with its similarities to the events of the Holocaust, is irrefutable proof that the persecution of the Rohingya MUST be considered a genocide by the United Nations. It is imperative that the United Nations intervene in Myanmar in order to liberate the Rohingya people from the Buddhist- Rakhine Nationalists, who must be arrested and tried in International Court, so they can be held responsible for the crimes against humanity. It is also important to remind the free people of this world that they have a responsibility to denounce these vile crimes, so that the enthronement of human rights can finally end racial persecution, as Sir Winston Churchill once boldly proclaimed. For if we do not denounce these vile crimes and we do not hold those responsible for these vile crimes accountable, then

¹⁴ Al Jazeera Investigates, *The Hidden Genocide*.

¹⁵ Francis Wade, *Myanmar: Marketing a Massacre* (NYR Daily, 2017) 2.

¹⁶ Al Jazeera Investigates, *The Hidden Genocide*.

humanity is doomed to repeat the mistake of Genocide over and over again. End the Plight of the Rohingya NOW!

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“Nobody Returns:” Exploring the Limitations of Derrida’s Hauntology in Edwidge Danticat’s *Claire of the Sea Light*

Glen MacDonald (English)¹

On the day of her birth, Claire Limyè Lanmè lost her mother, altering her life forever. Born into a community haunted by issues ranging from the personal to the political, they label her as a *revenan* as a result of her tragic origins. Through an exchange of life for death, Claire’s mother will forever haunt her daughter despite never even knowing each other. Claire’s spectral struggle is merely the focal point in the novel of multiple hauntings. Edwidge Danticat’s *Claire of Sea Light* explores the complexities of hauntings, demonstrating the literal effects on both individuals and the community as a whole. Danticat’s text engages with Jacques Derrida’s theory of hauntology.

In *Specters of Marx*, Derrida coined the term hauntology to describe a state of simultaneously being and non-being. This perspective is seen as nostalgia through a supernatural reverence for past or potential futures. The idea explains how contemporary society recycles older tastes and cannot escape social traditions. Ideologies such as Marxism would haunt the Western world, regardless if the ideas were successfully implemented into society. Derrida explains this is done paradoxically through “ghosts” and demonstrates what creates a ghost and defines their function.

Derrida provides a “spirited” definition of hauntology; “Repetition *and* first time: this is perhaps the question of the event as question of the ghost. *What* is a ghost? What is the *effectivity* or the *presence* of a specter, that is, of what seems to remain as ineffective, virtual, insubstantial as a simulacrum? Is there a *there*, between the thing itself and its simulacrum, an opposition that holds up? Repetition *and* first time, but also repetition *and* last time, since the singularity of any *first* time makes it also a *last* time. Each time it is the event itself, a first time is a last time. Altogether other. Staging for the end of history. Let us call it *hauntology*” (Derrida 10). For Derrida, a ghost is a personified event, feeling, or ideology, either from the past or future, which returns to “haunt” individuals in the present. The notion of hauntology is present in all cultures, especially those under colonial rule. Entire nations of people, including Danticat’s homeland of Haiti, still struggle with hauntings of a tragic past and a grim possible future

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Christian televangelist Pat Robertson also views Haiti from a hauntological perspective, albeit entirely inappropriate. Commenting on the 2010 earthquake which devastated the nation, Robertson claimed Haitians earned the tragedy through occult dealings. On his television program the *700 Club*, Robertson told his audience, “..Something happened a long time ago in Haiti, and people might not want to talk about it. They were under the heel of the French. You know, Napoleon III and whatever. And they got together and swore a pact to the devil. They said, ‘We will serve you if you will get us free from the French.’ True story. And so, the devil said, ‘OK, it's a deal.’ And they kicked the French out. You know, the Haitians revolted and got themselves free. But ever since, they have been cursed by one thing after the other. Desperately poor... Dominican Republic is prosperous, healthy, full of resorts, et cetera. Haiti is in desperate poverty. Same island” (James). Robertson absurdly claims the spectres which haunt Haiti stem the moral failings of the oppressed yet he does not acknowledge the original failings of colonialism which continues to haunt the Haitian people in numerous ways. As evidenced by Danticat’s novel, the specters of colonialism create even more spectres to haunt the Haitians, both privately and publicly.

Edwidge Danticat’s hauntological perspective demonstrates how in postcolonial systems, hauntings become a literal struggle for the former colonized. The community featured in the novel is haunted by numerous elements from their past which delays their appreciation for the present and they are thus unable to secure an improved future. The most prevailing example is the community’s focus on death and ghosts. Hauntings affect not only the greater political realm but also family life throughout the novel. These political hauntings create a wide array of systemic issues, stemming from Haiti’s historical colonial order. Meanwhile, the hauntings of family life deeply affect how a family member views themselves within the community- such as a father, mother, or child. While Derrida’s theory of hauntology is present both civic and intimate relationships, this thinking leads to the misery of the individual. Many of the characters wish to rectify their present situation yet remain focused solely on an imagined future crafted by memories of the past.

In Claire’s town, death and corruption run rampant. The novel frequently mentions horrific tragedies, often spurred by local corruption. The political world of *Claire of the Sea Light* is unable to function as a fair democracy because the business world haunts the community’s leaders and institutions. The prime example is Albert Vincent, an undertaker and mayor. When Vincent is first introduced to the novel with a humorous yet troubling observation- “He kept both positions, leading to all of jokes about the town eventually becoming a cemetery so he could get more clients” (Danticat 4).

Vincent simultaneously maintaining the roles of political leader and businessman is problematic as it divides his interest between civic responsibility and personal profit. While it is evident Vincent engages in crony capitalism, his breed of corruption stems from darker periods of Haitian history.

The character of Albert Vincent is a haunting portrayal of Haitian dictator François “Papa Doc” Duvalier whose corruption greatly influenced the nation, even years after his death in 1971. Duvalier profited as leader while his citizens became further impoverished, helping himself to the enormous sums of international relief (Abbott). Likewise, Vincent, as undertaker, profits from the deaths of his citizens thereby providing no incentive to improve the systemic problems. A death from police brutality, gang violence, the crumbling infrastructure, or inadequate access to healthcare increases Vincent’s personal wealth. This issue is made explicit in the text; when a fisherman goes missing and a search party ensues, “one of the fishermen around the bonfire said loudly enough for everyone to hear that the mayor part of him was investigating a disaster, but the undertaker side was trolling for corpses. In fact, Albert Vincent was looking around him, as if searching not just for a corpse, but a ghost” (Danticat 29). Vincent’s personal business haunts his practices as a politician. His “search for ghosts” signifies his concern with shallow ventures, such as his own personal profit or amassing power for the wealthy elite. As Vincent/Duvalier exists in both the political and economical realm, the leaders are unable to effectively provide for the Haitian people. However, while Duvalier’s rule is strictly totalitarian, Vincent’s reign is more closely linked to the colonial masters who previously presided over Haiti.

The remains of the colonial masters still haunt the community. For example, an unfinished castle looms over the town; “The castle, one of the town’s most remarkable relics, had been left unfinished in 1802, when Pauline Bonaparte’s husband died from yellow fever and she sailed with his body back to France. Some of its stone walls remained, although no one had seen fit to make any type of official monument out of them” (Danticat 47). By leaving the castle unfinished, the French colonizers create a haunting reminder of French rule over Haiti. Also, as one of the town’s “most remarkable relics” the unfinished European castle overshadows the oppressed Haitian culture and history. Obviously, the community struggles to accept this as a part of their shared story because “no one had seen fit to make any type of official monument out of” the colonizers. There is no reason for a monument because the spirit of the colonizing Bonapartes never left the island, their exploitive values still an active force within the community.

In the 18th century, France colonized Haiti and profited of the island's many resources. Formerly known as the Pearl of the Antilles, Haiti became the richest islands in the French empire. However, the massive sums of wealth resulted from exploiting more than 800,000 enslaved Africans (Henley). While Vincent does not echo the horrors of slavery, he does profit from a similar economic exploitation of Haitians. As slaves were treated like cattle in order to produce profit for the French empire, Vincent is incentivized to treat his citizens as "clients" for his undertaking business. The specters of slavery, colonialism, and crony capitalism continue to haunt the politics affecting townspeople in Danticat's novel. These hauntings, reminiscent of Haiti's darker periods, limit the functions of government, causing the wealthy elite and impoverished public to reenact a master-slave relationship.

The town's haunted politics establishes a wealthy elite capitalizing off the suffering of others. Louise, a radio DJ, reveals how the those with power and influence exist beyond the reach of the law. After learning that Max Ardin Junior, a member of a prominent family, raped Flore, his maid, Louise laments the futility of the town's justice system- "What good would it have been done to have filed a police complaint against Max Senior's son? A few dollars to some low- or high-level police official would get Max Junior off. Case in point, one of Max Senior's best friends was the current mayor" (Danticat 174-175). The sexual exploitation of Max Junior's servant is hauntingly reminiscent of slave owners raping their female slaves with no repercussions. Despite slavery being illegal in Haiti, Flore is subjected to the specter of the practice. Flore is at first unable to stop working at her rapist's house as she must work to pay her mother's rent. Through the crony capitalism, Flore finds herself "enslaved" to the Ardins. It is only through Max Senior's hush money that Flore is able to remove herself from the traumatic situation. Essentially, Flore is only given her freedom via the willing participation of her master. Under a political rule marred by business incentives, Flore receives limited rights and legal protections from abuse such as rape or other forms of exploitation. The specters of colonialism still haunt individuals via crony capitalism. Additionally, this haunting negatively influence the legitimacy and efficiency of the town's justice system.

As Louise previously revealed, the police force will not persecute members of the town's elite. However, as Vincent's selfish choices haunts the town's politics, fundamental qualities such as justice become commodified. For example, Gaëlle Lauvaud, a wealthy fabric vendor, wishes to bring her husband's killers to justice but is not ignorant of the town's corruption, acknowledging, "Her husband's murder was never going to be solved. That she knew. There would never be a proper trial. Bribes and corruption would keep anyone from being brought to justice" (Danticat 145). As a result,

Gaëlle must purchase, as she puts it, “another type of justice” by hiring two Special Force policemen to track down and murder the men who killed her husbands. Gaëlle’s actions are troubling for two reasons; firstly, this option is only available to people like Gaëlle, whose inherited wealth and privilege allow her to take the law into her own hands. Secondly, even blood split in vengeance, the deaths did not bring any peace to Gaëlle. Rather, the assassinated men only profit Albert Vincent, whose leadership, tainted by his funeral business, only encourages civil unrest and division.

Another result of the hauntings of colonialism via crony capitalism is the vicious gang, known as *chimè*, or ghosts. The novel describes the gang as “street children who couldn’t remember ever having lived in a house, boys whose parents had been murdered or had fallen to some deadly disease, leaving them alone in the world” (Danticat 65). The novel’s use of ghostly imagery to name the gang hints at their hauntological inception. The shortcomings of Haiti’s corrupt system by way of crony capitalism results in dozens of vicious orphaned children inhabiting the streets. The sins of previous generations negatively influence a portion of the children in the novel, introducing them to a life of crime. Disturbingly, older people continue to take advantage of the “ghosts.” For example, people like “ambitious business owners as well as politicians used them to swell the ranks of political demonstrations, gave them guns to shoot when a crisis was needed, and withdrew them when calm was required” (Danticat 65). Once again, the business world bleeds into the political realm to exploit the disadvantage. However, these individuals were already a result of the corruption through the conflicting marriage of business and government. The town’s nefarious elite creates a disadvantaged, orphaned class via corruption then proceeds to exploit them to complete their own goals of personal wealth and authority. The name “ghosts” signifies how the children exist outside of time. Without any parents or guardians, the children have no history to cling onto. Likewise, with no civic programs to provide them with an adequate quality of life, the children are rejected a promising future.

This injustice does not go unnoticed by other characters in the novel. For example, Bernard, a radio DJ and activist, uses his radio program (also called *Chimè*) to expand the definition of “ghosts” from not just the gang members but to everyone who felt abused by the corrupt system. Bernard planned to open his show “with a discussion of how many people in Cité Pendue had lost arms, legs, or hands. He would go from limbs to souls- to the number of people who lost siblings, parents, children and friends. These were the real ghosts, he would say, the phantom limbs, the phantom minds, phantom loves that haunted them because they were used, then abandoned, because they were out of choices, because they were poor” (Danticat 82). Bernard is arguing to shift

the focus of ghosts from a historical or fringe menace to an actual, current issue which plagues the community as a whole. However, despite his advocacy for the improvement for the community, Bernard is shot when caught in the crossfire of Gaëlle's hitmen. Even though the incidents were unrelated, the community's vast corruption quickly disposed of any attempt to rectify these issues. The general corruption which haunts the town is so invasive it is able to almost immediately snuff out any individual who presents a challenge to said corruption. This ensures corruption remains the order for the community. Without awareness to the corruption, the specters of colonialism continue to enslave the people.

The only people to benefit in the community is the elite. While wealthy individuals Albert Vincent and Max Senior may yearn for a prosperous future, it comes at the cost of the vastly corrupted present via harmful, historical practices such as slavery or colonialism. Hauntology is also seen affecting those on a more intimate scale, concerning family life.

In Danticat's novel, even positive forces such as love possess the ability to haunt. For example, family life depicted in the novel is haunted by the same love that binds the characters together. Every member of a family is affected by love, whenever it would be romantic or sexual or reciprocal or unrequited or ancestral or current. This love then haunts an individual, shaping them throughout the course of their life. This haunting between an historical self and present self creates tensions for the novel's children.

Perhaps the most unfair notion of familial hauntology in the novel is the belief of the *revenan* which describes the mother haunting the child. This notion is disturbing because it upsets the sequence of time. The inherent hauntological perspective of motherhood is that the child exists in an unlife status during the gestation period. While the child is present in the moment it does not receive their autonomy under months later and cannot fully exist without assistance from the mother. In many ways, the child haunts the mother. However, the community insists the mother also haunts the child, as implied by the term *revenan*. The term describes "a child who entered the world just as her mother was leaving it. And if these types of children were not closely watched, they can easily follow their mothers into the other world. The only way to save them is to immediately sever them from the place they were born, even for a short while. Otherwise they will spend too much time chasing a shadow they can never reach" (Danticat 16). This superstition makes the community view the *revenan* not as an individual self but rather as a self-entangled with the ghost of their mother. What is even more problematic is the proposed remedy for a *revenan*- "to immediately sever them from the place they were born." As if punishment for killing their mother during birth, the child must be

removed from present society to absurdly reconcile with a tragedy from the past. It is this dissociation with the past which causes the children of *Claire* to be haunted.

As a *revenan*, the child cannot access the ancestral love which is frequently referred to in her community. However, while ancestral love is noted, it is not revered. The remains of the community's ancestors rest on a location known as Mon Inital or "Useless Mountain." In the novel's final chapter, it is revealed there is a possibility that the community's ancestral space will be plowed over, making room for luxury estates for the wealthy elite. At one point in time, the community of *Claire* had reverence for their ancestors, as evidence by the special burial place. While pre-colonized ancestors seem to honor the dead, the specters of capitalism seem to have eradicated this tradition. Currently, a death is not opportunity to honor an individual but an opportunity for the wealthy, like Mayor/undertaker Albert Vincent, to enrich themselves. Without access to ancestral love but forever being reminded by it via the community, the children in *Claire* become haunted by the ghosts of the family they never met or had. The most prominent example is Claire and how she views herself as a *revenan*.

What clouds Claire's self-image is how she is struggling to see past the tragedy in her past as she continues to go through life. While a healthy connection with her ancestors could solve her issues with identity, Claire's haunting by her mother keeps her from receiving any resolution. Even though Claire's mother is by all accounts a compassionate woman, her love for Claire is used against her. Claire is unable to avoid any comparison with her mother, as the town further the idea of the mother haunting the daughter. For example, the vendors of the community remark how similar Claire is to her mother, although this notion causes Claire some confusion- "Every now and again, one of the vendors would shout, 'Just like her mother!' and she would ask herself what else she might do to make them say even more often that she was just like her mother. Besides dying, that is" (Danticat 213). The greatest tension for Claire is she is forever compared to a dead woman who is still very much a present force in her life. Claire struggles to emulate someone she can never forget, nor never met. The inability to satisfy this perception causes Claire to be miserable.

In another example, Claire reveals she is hurt by her father's recounts of her mother's last words were to her. Her mother says a single word, "*vini*" or "come," to welcome her to the world. While this is a tender, compassionate moment, the haunting of her mother does not allow Claire to fondly reflect on this fact as it is tainted by her father's misery. The novel reveals "The way he told the story always made [Claire] feel like someone who had shown up uninvited somewhere, as if she shouldn't have come. As if her mother's death were her fault" (Danticat 218). The haunting of her mother bothers

Claire because while her mother is no longer physically present, she will forever exist through her daughter. Like her mother who carried her in the womb, Claire is forced to carry the memory of her mother with her for the rest of her life. She must subject herself to a spectral pregnancy, with the sequence in time forever reversed. Even Claire's immediate caregiver, her father Nozias, struggles to view her as Claire the child, not Claire the mother. Nozias describes Claire as a "...loose-jointed and gangly, heartbreakingly, a smaller version of her mother" (Danticat 25). The haunting of Claire's mother negatively affects the relationship between Nozias and his daughter. As Claire is said to be haunted by her mother, Nozias is unable to reconcile with her death and therefore unable to maintain a close relationship with his daughter, the cause of his wife's death.

Unsurprisingly, to escape her deeply haunted life, Claire hides in the mountain in which the ancestors' remains are buried. She treats the area as her sanctuary and briefly decides to live there among the spirits. By doing so, Claire attempts to reconnect with the ancestral connection she missed out in her previous years. Although this could be viewed as a positive homecoming for Claire, this is also deeply troubling. Claire plans to stay on the mountain and observe her father from afar- "He would be sad, but maybe he wouldn't leave the beach or (the town). Maybe he would stay, just as he had when she was living with her mother's family. He might stay close, waiting, hoping for her to return" (Danticat 234). Essentially, Claire plans to haunt her father. As this is a result by the haunting of Claire's mother, this only leads to more familial haunting, affecting every member of the family. The ghostly imagery concerning this scene continues- "She's heard some of the fishermen's wives say that the spirits of those who'd been lost at sea would sometimes come ashore to whisper in their loved ones' ears. She would make sure he felt her presence too... She would go away without really leaving, without losing everything, without dying" (Danticat 234-235). The only way for Claire to find peace is to actual replicate the haunting of her mother. By doing so, she feels a better connection to not only her ancestors or mother but also her father. In this capacity, she is able to engage in a meaningful relationship with Nozias who is no longer haunted by his wife via his daughter. If both become ghosts, Nozias is no longer tormented and able to reconcile with the tragedies of the past. However, the community's encouragement of the *revenan* concept limits the potential for individuals, particularly children, to live full, satisfactory lives.

This type of haunting also affects the aforementioned gang of parentless children, or the *chimè*. While the gang is also a result of greater political hauntings, the immediate cause of their situation is a dissociation with an ancestral connection. Haunted

by what they never had, the children must rely on themselves and their limited opportunities, usually leading them to a life of crime. By addressing them as “ghosts” the town is not inclined to acknowledge their actual suffering.

Like Claire with her *revenant* status, the perceived haunting associated with the gang puts the responsibility on the children, not on the circumstances which created a roving band of dangerous children. Even Max Senior, a member of the elite, is somewhat aware of how his generation’s poor influence on the community’s children. When concerned for his own son, Max Junior, he muses, “There was something tragic about a generation whose hopes had been raised, then dashed over and over again. Had they been poisoned by disappointment? Their leaders and elders- including himself- had made so many promises that they’d been, for whatever reason, unable to keep... Maybe his generation was the problem. They’d built a society which was useless to their children” (Danticat 186-187). The self-investments of ambitious elite men like Max Senior and Albert Vincent haunt the children of the community. The unholy marriage between business and politics, creates a corrupt system which does not properly function and is therefore “useless.” In a classist society, the poorer children suffer the most, through political and familial neglect, thus imbuing them with ghostlike qualities. However, this notion affects all of the children in Danticat’s novel, including children of the wealthy elite.

An example of this is the character Max Junior. While both of his parents are alive, Max feels a dissociation concerning his parents. Although Max Junior is able to impress his father through his scholarship, he still recognizes a disconnect between them. Max Senior routinely voices his personal criticism with anything unfamiliar, particularly involving the feminine. Subjects like a woman’s piercing, a woman hosting her own radio show, or a woman’s attempts to discipline disagree with Max Senior. Max Senior’s sexist ideology haunts Max Junior, who is modeled after his father. However, the key difference is the son does not share the same sexual appetite as his father. As a closeted gay man, Max Junior is haunted by his father’s traditional, pro-male agenda.

The Ardin men share the same first name, similar to Claire and her mother. The relationships haunt each other. Max Junior is haunted by Max Senior’s sexism. As evidence by his distaste of independent women, Max Senior disagrees with any type which challenges the capitalistic ideals which allowed him to thrive. Therefore, Max Senior views outliers such as female independents as threats to his way of life. In the community depicted in *Claire*, gay men are perceived as feminine, as exemplified by community’s mocking nickname for Max Junior- “Madame.” As Max Junior becomes associated with a subject which his father detests, Max Junior rebels against this

perspective. Haunted by his father's sexism, Max Junior rapes Flore in a warped attempt to gain his father's respect. Danticat makes his motivations explicit- "He had foolishly wanted to prove something to his father that night, that he could be with Flore. He wanted his father to hear her screams" (196). Earlier in the novel, it is realized that Max Senior has no issues with sleeping with an employee, as he does not develop any romantic feelings with his partners. In fact, despite Max Senior participating in numerous affairs, he never regards his lovers in any romantic sense. Max Senior's methodical manipulation of women is point in which Max Junior tries to emulate. This is why Max, who is usually described as a thoughtful and gentle child, is able to commit such a horrid act on another person. His actions towards women are the haunted reflection of the Max Senior's history of women.

Conversely, Max Senior is haunted by Max Junior. Multiple times in the text, Max Senior declares how his son will ultimately return, imbuing his son with revenant-like imagery. The belief that Max Junior will "return" to his father demonstrates how Max Senior's son and his actions will be an extension of himself. Despite having no control over another autonomous individual, Max Senior believes his role as father is to defend the family's legacy. When pondering about his grandson conceived by his son's rape, Max Senior projects his own parental hauntings onto his grandson and Flore- "Let her school him on legacy, how one should defend it at all cost. Let her learn one day how to forgive him and eventually to forgive himself" (Danticat 184). Here it is revealed that Max Senior is also haunted by ancestral love. Unlike Claire who has no connection with her ancestors, Max Senior is able to identify himself through his legacy. He understands it is through his legacy which will maintain his comfortable lifestyle. The relationship between the ancestral and the capitalistic becomes entwined. In this regard, Max Senior allows for the colonial/capitalistic system to haunt his perception on family life. This is the case for most of the men in the novel. As the various hauntings associated with pregnancy and childbirth are optional to men, many opt to instead be haunted by the spectres of colonial system. While this haunting is still troubling, it allows men like Max Senior to gain personal wealth. Even men in lower economic classes, such as Nozias, are not required to engage in the more intimate hauntings concerning motherhood. To escape his heartache after his wife's passing, Nozias throws himself into his work as a fisherman, thereby providing for his family without having to explicitly deal with the complexities of raising a daughter. As men are encouraged to participate in the colonial system more than women, hauntings of family life mostly shape a family's women and children.

These biased, patriarchal hauntings resulting in namely women to deal with the complexities of familial hauntings. For the men in the novel, the family life is not as much an intimate affair as it is for the women. Throughout the novel, the mother role is closely associated with misery (such as the loss of the child, conceiving a child by rape, or dying via childbirth). The society in *Claire* practice a solemn reverence towards motherhood, yet the same definition greatly limits the lives and fates of the mothers in the novel. For mothers, the role itself haunts them.

The troubling depiction of motherhood stems from the supernatural perception of the role. The novel shares many superstitions involving childbearing- the most prominent being that motherhood is the gateway between life and death. This perception adds a cosmic amount of weight on the role of the mother regarding the outcome of a child. However, as Danticat's text demonstrates, the role of the mother is mostly arbitrary in regards to the chaos of the world. While this perception treats mothers like goddesses, it does not accept their mortal anxieties and situations. Danticat's writing depicts the actual version of the community's mothers; scared, confused, and suffering from pregnancy pains. Particularly for Gaëlle, pregnancy is not the cosmic journey involving life and death but rather a tragic, nine-month slog in which a possible future growing in their womb tantalizes the mother.

During Gaëlle's pregnancy, she is told her child will not survive yet she decides to carry the baby to term, "to see the whole thing through" (Danticat 50). For her entire pregnancy, Gaëlle is haunted by the more than likely possibility of her child dying during birth. This knowledge is stressful to Gaëlle who does not know how to respond to the complicated hauntings of an unborn, dying child. Without the ability to properly identify with the child growing inside of her, Gaëlle begins to hate herself and her baby. For example, "Among the many dreadful, difficult things about her pregnancy after the doctor's dire verdict, was that she had grown to hate the smell of her own body. Most days she smelled like a latrine. The very air that floated around her disgusted her. And sometimes, even though she had decided to keep it, the child growing inside of her repulsed her too" (Danticat 59). Like Claire, the hauntings create a negative self-image for Gaëlle. Yet while Claire is haunted by the past, Gaëlle, as a mother, is haunted by the future. Gaëlle possesses much love for her unborn child. Yet as the child exists in an even more extreme definition of unlife, she struggles to successfully express this love for the source of her hauntings.

The community's encouragement of the hauntological aspects of motherhood results in women no longer being autonomous with their bodies. Pregnant women are not regarded as individuals but rather as passive vessels for spirits. This is furthered revealed

when Gaëlle swallows the corpse of a dead frog. Once consumed, Gaëlle reflects how “Two types of animals were now inside of her, in peril: her daughter, Rose, and now this frog. Let them fight it out and see who will win” (Danticat 59). The ambivalence in this passage reveals how Gaëlle is no longer invested in her present situation, as she is too preoccupied with the future. Additionally, she names her daughter after one of her ancestors. In this way, Gaëlle is also haunted by the past as well. Therefore, with no actual connection to the present, Gaëlle begins to think less of herself as a person and more as a bloated, organic receptacle for souls.

This is not the only time in the novel where a woman’s body is regarded in such a manner. After Claire’s birth, the community finds it odd for Claire’s mother to perish in childbirth despite being a healthy woman- “People assumed that a battle had taken place and the one with the stronger will had won. Nozias like to think of it, though, as kind of loving surrender. Only one of them was meant to survive and the mother had surrendered her place” (Danticat 16-17). This perspective is not an honest account of what happened. To infer the mother’s body as a spiritual battleground glorifies her agony and pain. Nozias describing her death as a “loving surrender” unfairly renders his wife as passive character. Too pure for this world, Claire’s mother must only exist as a ghost. By imbuing mothers with passive, ghostlike qualities the community creates an entirely new class of spectres, adding to the town’s growing population.

The greater colonial hauntings directly target the lives of women in Haiti. Patriarchal traditions, implemented by colonialism, shape how men view the women of the community. For example, Max Senior dislikes when younger women, such as his son’s friend Jessamine, express their own individuality. Max Senior closely examines Jessamine; “She was a stunning girl with an African mask of a face, all high forehead and high cheekbones, giant loop earrings, and one gold stud on either side of her cheeks. She was obviously one of those modern girls, the kind of girl from whom frankly he didn’t think he would be able to welcome with open arms into this family, with her cheek studs and hippie tunic and the word *POP* tattooed in red-link calligraphy across the insides of both her wrists” (Danticat 182). Max Senior’s depiction of Jessamine is one of the few explicit mentions of race throughout the novel. Immediately identifying her by her African descent, Max Senior’s exclusive attitude is troubling. He struggles to welcome her into his family, wishing to segregate himself and his legacy from the unfamiliar. He dislikes independent females, or “modern girls,” because they pose a threat to the traditions set in place by colonialism. In order to continue successfully exploiting women within the colony, the elite must continue to depower women’s roles within society.

This move only allows women to express themselves through certain roles approved by the elite. As an American college student, Jessamine does not fit into an exploitable category in agreement Max Senior's haunted colonial perspective. With an education and personal wealth, Jessamine is able to express herself through body modifications and tattoos as she is not subjected to the same degree of colonial oppression. The Haitian women of the community do not possess the same options as Jessamine because they exist within a system which limits their access to education and personal wealth.

Scholar Gayle Rubin identifies the complexities of this struggle in her essay "The Traffic in Women." She demonstrates how certain societal systems treat the individual female as a commodity. Focusing on the practice of marriage, Rubin explains how women often find themselves being used as an exchange. Rubin writes, "There are systems in which there is not equivalent for a woman. To get a wife, a man must have a daughter, a sister, or other female kinswoman in whom he has a right of bestowal. He must have control over some female flesh" (Rubin 918). The Ardins engage in this practice of controlling the female flesh. Max Senior frequently sleeps with his employee, Louise. Through this relationship, intimacy occurs between the two of them. He exploits this to his advantage by pressuring her to work certain jobs and to deal with the issues he wishes to avoid. Through their intimate relationship, Max is able to get Louise to do things she would not choose to do for herself, thus successfully stripping her away of her autonomy. Similarly, Max Junior maintains control over Flore while under his father's employment. As mentioned previously, Flore must continue working for the Ardins despite being raped by Max Junior because her family is in desperate need for money. Thus, like any commodity, Flore is able to be exploited. The colonial hauntings allow for men like the Ardins to take advantage of the women they employ, without immediate legal consequences due to a corrupt justice system. Through these hauntings, the specters of colonialism still commodifies women.

Derrida's theory of hauntology employed by the community in *Claire* damages both core political/familial relationships and the individual's own self-image. Danticat's novel directly speaks against the misconceptions created by hauntology. Towards the end of the novel, Gaëlle talks to Claire and attempts to dismantle the significance concerning *revenan*, stating, "That *revenan* talk is superstition. Nobody *returns*. That is not real. You're gone. You're gone. Back in God's hands, and no one can pull you back. Not you. Not you, Claire" (Danticat 162). Although not a entirely religious person, Gaëlle invokes the figure of God to demonstrate issues concerning the sequence of time are beyond individual's control. The idea of haunting, although seemingly supernatural, is created by

the human desire of immortality, by remaining simultaneously in the past, present, and future. However, Gaëlle vehemently disagrees with this idea, declaring “Nobody returns.” This idea is suppose to bring comfort to Claire and others who feel haunted. By no longer concerning themselves with the past or future, these haunted individuals are allowed to live entirely in the present.

However, while Danticat’s text provides an empowering message to citizens of her homeland it does not remedy their situation. Supernatural folk tales such as the *revenan* do not exist, yet the ghosts of Haiti’s colonized past continue to haunt the nation. The phantoms of colonialism, capitalism, slavery, and patriarchy haunts individuals of every class. However, the community instead chooses to respond dramatically to the minor, personal haunting of Claire and her mother rather than their greater political hauntings. Similarly, Pat Robertson would rather acknowledge Haiti’s superfluous relationship with the occult than admit the nation’s continued problems stem from colonial hauntings. While some choose to view Haiti as a “shithole” or a hive of doomed devil worshippers, this perspective does not take into account the lingering corrosive elements in Haitian history. Danticat’s engagement with Derrida theory of hauntology demonstrates how those under a postcolonial system suffer through multiple hauntings, all stemming from the original sin of colonialism, thereby affecting Haiti’s past, present and future.

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