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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.

This issue introduces an expansion of the first section to include not only scientific investigations but also others that involve significant quantitative analysis such as those in finance and risk management. The interested reader will explore the effects of caffeine on the behavior of Zebrafish. This is followed by a rigorous analysis yielding information on how a potential change in a retail chain's SKU (stock keeping unit) system will impact revenues. Moving on one encounters the significance of the 1936-1939 Palestinian revolt against the British, art and female sexuality in Nazi Germany, how hegemonic masculinity is harming humanity, and many more stimulating topics.

Read on and enjoy!

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Section I: The Natural Sciences

The Behavioral Effects of Caffeine on Zebrafish (*Danio rerio*)¹

Michelle DeTomaso (Biology)²

Caffeine is a psychoactive drug that stimulates the nervous system and is found in many drinks and foods humans consume on a daily basis. Caffeine activates dopamine by acting as an antagonist on adenosine receptors and affects behavior by increasing locomotion indirectly through this mechanism. Zebrafish (Danio rerio) is a vital model organism because the ancient body plan is 70% homologous in DNA to humans. Zebrafish can be used to study anxiogenic drug effects on behavior. Anxiogenic drugs stimulate the nervous system, causing anxiety effects in humans and zebrafish. Caffeine affects zebrafish in various ways, such as increased latency to explore the top of the tank, reduced time on top of an experimental tank, erratic swimming and increased freezing time. This study aimed to test adult zebrafish under an acute condition of caffeine exposure. Each fish was tested for 40s in a 0.12% concentration of caffeine and their activity levels were quantified by counting the number of lines crossed on a grid using digital videos. There was a significant difference between the control and the treatment groups. The number of times crossed over for the treatment group ranged from 0-65 while the control varied from 23-110. The results showed significantly (p < 0.05) lower levels of activity for the caffeinated zebrafish compared with the controls. In three trials the treated did not cross any lines, also suggesting that caffeine may reduce activity by inducing freezing. Other studies using various behavioral methods, have also found caffeine effects. The concentration of the caffeine along with the different anxiety levels between wild type and mutant strains may affect behavior. Further studies with varying concentrations and comparisons of strains would be a vital expansion of this study, as it would aid in the further understanding of how caffeine affects animals and humans.

I. Introduction

Caffeine as an anxiogenic drug

¹ This research was presented at the 71st Annual Eastern Colleges Science Conference held in Wilkes-Barre, PA on April 1, 2017.

² Research conducted under the direction of Dr. Brian Palestis in partial fulfillment of the Senior Program and Honors Program requirements.

Caffeine is a known psychoactive drug that stimulates the human nervous system. Caffeine is chemically defined as C₈H₁₀N₄O₂, which is also referred to as 1,3,7trimethylpurine-2,6-dione. Caffeine has a molar mass of 194.19 g/mol and a boiling point of 178°C. Caffeine can be found in coffee, tea, chocolate-associated food, kola beans and soft drinks. Acute or chronic intake of caffeine has not been linked to any major damage to humans (Fredhold et al., 1999). However, caffeine is a competitive antagonist for adenosine and will block the hormone adenosine from functioning. The resulting effects are opposite of adenosine. This competitive nature inhibits adenosine, which indirectly activates dopamine-induced behavior, because of the functional reaction between adenosine receptors and dopamine receptors. This mechanism is consistent with findings that caffeine produces behaviors similar to other stimulants such as cocaine which include increased locomotion (Garret et al., 1997). Methylxanthine, a derivative found in caffeine, reacts with serotonin neurons which induces, dosage dependently, increased movement in animals. Awareness, vigilance and sluggish behavior, can be related to the methylxanthine- related effects of caffeine (Nehlig, 1992). There is evidence that suggests patients with anxiety disorders, who are more sensitive to stressors, have been shown to have increased anxiety and impaired sleep under caffeine consumption (Smith, 2012).

Zebrafish as a model organism

Zebrafish are scientifically classified as *Danio rerio* and are in the family Cyprinidae, which is the largest fish family (Mayden et al., 2007). Their natural habitats include the Himalayan regions of India, Pakistan and Bangladesh in areas ranging from rice fields to ponds. They are common aquatic pets in the United States and are widely used for laboratory research. Zebrafish are omnivorous and will eat aquatic plants and zooplankton. The adult body size varies but mostly stays within the range of 1.5 to 2.5 cm, and their lifespan in the wild is about three years (United States Geological Survey, 2013).

Zebrafish are considered an alternative model for research in the areas of neuroscience, development and therapies in diseases, for example, by studying genetic expression of certain cancers (Craig et al., 2011). Usually rodents are used for these studies, but fish have a large benefit in a multitude of areas as well. Using a fish is beneficial, because fish are of an ancestral decent (the earliest bony fish lived approximately 200-250 million years ago), and most modern vertebrates, including humans, have evolved from this ancient blueprint (Gerlai, 2014). The older ancient body plan of fish is advantageous to use in experiments having to do with understanding

diseases or other issues of interest in terms of humans. Humans are connected to fish as all creatures are related through a common ancestor. The common ancestor of all organisms has fundamental mechanisms that can be considered core traits of life that evolution has built upon through time. The fish can therefore reveal the core mechanisms which can be used to explain complex genotypes of today (Gerlai, 2014).

Zebrafish can be utilized in diverse areas for research, such as studies on human diseases using genomics. The development of zebra fish is rapid and major organs appear after 36 h of initial fertilization (Spence et al., 2007). The precursor to the embryo is called a chorion, which is used in neurodevelopment research to make visualization easy with modern equipment. The ability to make any gene mutant in the genome of a zebrafish makes genomic studies attainable as well and zebra fish are already a viable means of discovering the function of genes in molecular development (Schier, 1997).

Zebrafish have many positive attributes that make them a viable source of information for research. Danio rerio prefers to be clustered close together with their own species, which is called shoaling (Miller and Gerlai, 2012). This shoaling behavior allows the researcher to have numerous fish condensed into one tank. Zebrafish also produce high numbers of offspring per female, allowing for constant replenishment of fish to be used in experiments (Gerlai, 2014). The most important highlight of their usefulness is the possibility of high throughput screening, due to the large amount of eggs manifested by the female. High throughput screening is used to test for the correlation of genes and biomolecules for specific genetic mutations and functional processes. This requires a high coverage or vast number of trials in order to obtain all genes or biomolecules in a given experiment. Zebrafish can be useful for high throughput screening due to the simplicity of their body plan, but are still relevant enough to use for research based on human or mammal tissues (Patton and Zon, 2001). Zebra fish can serve as human models, given that 70% of nucleotide sequences in zebrafish are homologs to human DNA. This means that homologous markers of humans can be found in zebrafish DNA and the function of genes found in these areas may have similar function to human DNA (Howe et al., 2013; Gerlai, 2014).

Anxiogenic and anxiolytic drugs experiments with zebrafish

Anxiogenic and anxiolytic drugs are used to test anxiety behavior of fish. Anxiogenic drugs cause anxiety while anxiolytic drugs are known to decrease anxiety-induced behavior when taken regularly. Anxiolytic drugs like ethanol and nicotine can have anxiety-like symptoms as a result of withdrawal from chronic use (Lin et al.,1999). Anxiogenic drug studies have been performed using ethanol and nicotine. Chronic

exposure to ethanol causes an adaptation to the chemical in the adult zebrafish. The fish are known to have adapted because no anxiety response is viewed during the experiment. This indifference means the fish has become adapted, or used to the ethanol, and the chemical makes no significant difference in their behavior. In acute exposure to ethanol, the zebrafish instead experiences anxiety-driven responses such as increased freeze time and erratic swimming patterns (Gerlai et al., 2006). Kurta and Palestis, (2010) found that the proximity of fish, or shoaling behavior, was tighter in a concentration of 0.125% and 0.25% ethanol as compared to a control. At 1% concentration the nearest neighbor distance was three times that of the control, meaning the fish were farther apart at high ethanol concentrations. There is clearly an effect of ethanol on shoaling behavior and that effect depends on the alcohol concentration.

Chronic exposure to ethanol in zebrafish lowers cortisol levels and has an overall anxiolytic drug effect. Anxiolytic drugs lower anxiety and result in a phenotype that is more able to explore and transition more often from top to bottom in the tank (Egan et al., 2010). Zebrafish have a similar map of stress hormones released from their endocrine system to humans, making them a model organism for research. This cascade of hormones starts with corticotropin releasing hormone (CRH) to adrenocorticotropic hormone (ACTH), and cortisol. Cortisol is used as a primary stress hormone in zebrafish and humans (Barcellos et. al, 2007). Anxiogenic drugs, by contrast, increase anxiety and exploration of the top of the tank is more frequent than normal behavior of the fish would show.

Edgan et al. (2010) compared wild type and mutant strains of zebrafish and found differences in behavior when the fish were exposed to the same concentrations of caffeine. Different strains of fish have differing baseline anxiety thresholds that have to be taken into consideration when studied. Some mutant strains have a higher anxiety baseline which results in an over compensated stimulus response compared to wild type zebrafish.

Recently studies have emerged using zebrafish as a model organism for studying behavior. Using a motion camera, Blaser and Gerlai, (2007) have studied adult zebrafish for various characteristics such as novelty response, response to predators, social behavior and aggression. Levin et al., (2007) studied exploratory behavior in zebrafish and discovered the duration on the bottom of the tank is longer when a threat is detected. Generally, exposure to any new environment is cause for an anxiety driven response. The novel tank diving test is a traditional method of testing the fish for anxiety behavior. Zebrafish can be exposed to alarm pheromone which can be released by their epidermal cells when cell damage occurs or as a fear response. The response from an increase in

pheromone corresponds to increased dwelling on the bottom of the tank, rapid swimming with increased erratic turns, less aggression and increased amount of freezing time (Rehnberg and Smith, 1988).

Caffeine experiments in zebrafish

The anxiogenic drug caffeine is part of the focus of the present research. Barcellos et al, (2007) found that caffeine affected treated zebrafish by reducing the time they spent near the top of the experimental tank, the length of time taken to transition to the top, degree of erratic swimming and frequency of freezing spurts.

According to Wong et al. (2009), caffeine increases overall exploration and erratic movements in the swimming patterns of the zebrafish. The effect of the caffeine also lowered habitual behavior due to increased sporadic anxious behavior. Caffeine increased exploration time, and increased erratic movement more than most other anxiogenic substances tested (Wong et al., 2010). In male rats, caffeine produced significant increases in intracranial self-administration assay, which was equivalent to paraxanthine. Paraxanthine is a stimulant and has a similar affinity for A1 and A2 adenosine receptors like caffeine (Chou et al., 2003). There was a significant effect on frequency and total responses per component in a dose dependent manner (Lazenka et al., 2015).

In addition to experiments with adult zebrafish, developmental effects of caffeine have also been studied using larval fish. Caffeine stunted the growth of the dorsal aorta connection to the dorsal trunk and significantly lowered the amount of dorsal longitudinal anatomic vessels in the 12-36 hour after fertilization group (Yeh et al., 2012).

Caffeine also disturbed the formation of somite boundaries of proteins used for vascular development in groups that were 12- 36 h and 12-60 h post fertilization (Yeh et al., 2012). Somites are bilateral mesoderm cells found on the neural tube of the embryo that are precursors to skeletal muscles and other body structures (DeRuiter, 2010). Yeh et al. (2012), took three different genes involved in the formation of blood vessels and performed gel electrophoresis on the mRNA to see if the levels in the control group and the two groups injected with caffeine differed. With caffeine, the mRNA level increased in the gene *nrpla* while the level decreased in *sema3aa* and *sema3c*. *Nrpla* is a coreceptor of plexin. Plexin is the receptor for *sema3a*, which is part of the pathway of vascular endothelial growth factor (Yeh et al., 2012). The genes that normally play a key role in the development of the vascular system had antiangiogenesis effects from the caffeine.

Which led to physical alterations in somite formation, dorsal longitudinal anatomic vessels and sub-intestinal veins.

Zebrafish can be used to understand behavioral effects of certain drugs such as caffeine. The effect of caffeine on zebrafish is predicted to be increased erratic behavior and increased exploration of the tank. There should be more freeze time and spurts of energy that indicate erratic swimming patterns. The overall effect should be that of anxiety- ridden movement and different rates of movement than the baseline behavior of the zebrafish. This should demonstrate a difference in behavior from zebrafish in tank water to zebrafish being exposed to caffeine. This study, along with others previously published, can be used to understand how caffeine can affect behavioral patterns of organisms. Although many experiments exist with the effect of caffeine on zebrafish embryos, this research is meant to study adult zebrafish. The results can be used to compare adult zebrafish to the embryonic reaction to caffeine and other anxiogenic drugs. This can be further studied to understand even long term exposure on zebrafish both adult and embryonic stages. This can be further applied to how humans react to caffeine both physically and hormonally. Zebrafish can be used to study psychological, hormonal and developmental long term effects of caffeine. The use of small vertebrates that have homologous traits to humans can be a gateway to understanding the effect of caffeine on humans and if regulation of consumption should be considered.

II. Materials and Methods

Procedure

The zebrafish were kept in a 10-gallon tank isolated from the shallow dish fingerbowl used in the experiment. The fingerbowl was filled with 850 ml of tank water and placed on a 3x3 cm grid. Each fish was transferred from the tank to the fingerbowl with a net and given two minutes in the new environment before capturing the movement on a video camera attached to a computer. This allowed time for the fish to adapt to the unknown small tank and minimized the anxiety of capture and of the fish being overwhelmed by a new habitat. The first ten trials were a control using water from the original tank. The second round of trials involved the inclusion of a diluted solution of 98% pure caffeine powder (Sigma- Aldrich) and 6.87 % concentration of caffeine to water. This concentration was achieved by diluting 1.1 mg of caffeine using 16 ml of water. The fingerbowl was filled with 850 ml of water from the original tank and the 16 ml of caffeine solution. The experimental percentage of caffeine/water solution to the tank water was 0.12%. Each fish was placed into the fingerbowl, one fish at a time, for each trial. Each fish was videotaped for 40 s per trial. After all the data were collected,

statistical analysis of the times the fish crossed a grid line was determined. Observations of time spent not moving, erratic behavior and freeze time were recorded as well.

The documented videos were recorded on a desktop computer connected to a camera. Windows Video Maker software was used to edit and view the slideshow of videos. There were four groupings of slideshows, each consisting of either control zebrafish or caffeine-exposed zebrafish. The caffeine treatment group was compared to the control group in terms of number of lines crossed.

Animal Maintenance

The fish were purchased at the Arcadia Pet Store and maintained by the Wagner College Department of Biological Sciences. The maintenance of the organisms consists of feeding daily, and keeping the temperature at optimum median temperature. After the fish were used for the experiment, they were separated from non-tested fish so the same fish was not experimented on twice.

Statistics

SPSS software was used to import an Excel document with the data for both the control and caffeine treated zebrafish. Histograms were constructed to show the range of the data. The Mann-Whitney U-test was conducted to test whether the two groups significantly differed using a significance level of α = 0.05. A non-parametric test was used because of an excess of zero values. The data from the control and treated fish were averaged to find the mean, median, mode, standard deviation, minimum, maximum and percentiles in quartile intervals. The distance and the displacement of each fish was calculated and the data was used to create histograms for easy comparisons of the caffeine treatment with the control.

III. Results

Treatment and control group

The control group was made up of 10 trials that were 40 s each. In each trial a new fish was used to keep the exposure the same length of time for each fish. The number of times crossed over the lines on the grid ranged from 23-110 (Figure 1). The most frequent range of the times crossed over was 60-80 times. The mean (\pm SD) for the control group was 69.8 (\pm 28.1). The treatment group consisted of 13 trials of 40s intervals. The range of lines crossed over for the treatment group was 0-64, which was a lower range then the control (Figures 1, Figure 2). The treatment group had an increased

frequency of zero lines being crossed over (Figure 2). The mean for the treatment group was $26.5 (\pm 21.5)$.

The percentiles for the treatment group were lower compared to that of the control group. The caffeine treated group had a 25th percentile of 2.5 which is approximately 18 times less than the 25th percentile for the control. The three zeros in the data of the treatment group lowered the percentiles (Figure 2). The treatment group had a 50th percentile of 27 and a 75th percentile of 42 while the control had a 50th percentile of 71.50 and a 75th percentile of 93.25. The number of lines crossed differed significantly between the two groups (Mann-Whitney U Test, p < 0.05).

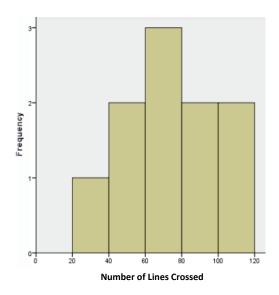


Figure 1: Number of times the fish crossed over the grid in the control group

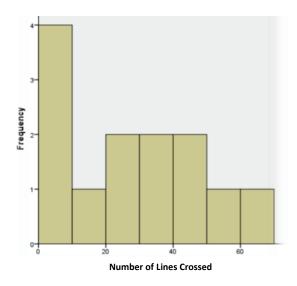


Figure 2: Number of times the fish crossed over the grid in the caffeine treated group

Physical observations

During the observation of the videos, certain patterns were noticed. The control group fish swam precisely and quickly with little to no freezing. The treatment group had increased freezing during the time interval compared to the control group. In the three trials that the fish were motionless, all of them stayed in one position to the left side of the fingerbowl. The one trial of the treatment that only crossed five times also behaved similarly. The movements of the treatment group were jagged and showed broken swimming motions compared to that of the control. The control fish had a fluidity and smooth transitions from one box to another. The fish in the treatment group tended to stay more in the middle of the boxes while the control group fish followed the lines of the boxes more closely. Zig-zagging was seen much more often in this study than darting, but both were found in the treatment and control groups

IV. Discussion

Caffeine experiments are needed to analyze what physiological and behavioral effects anxiogenic drugs have on animals, including humans. The prediction of this research was that caffeine would give the zebrafish anxiety- like behavior such as erratic, fast swimming patterns in the tank. In comparison to the control, the caffeine-treated group was predicted to have larger numbers of lines crossed over during the experimental period. The results were different than hypothesized. The control group had a larger

number of lines crossed over, with a wider range and percentile numbers than the treatment group. The treatment group had three fish that did not move at all during the trial and one that crossed only five times during the trial. The fish moved more swiftly and less erratically in the control than the treatment group. The only detected behavior was obvious freezing or jerky motions when moving that differed from the control. This result is not similar to other studies published using zebrafish exposure to caffeine.

The study done by Egan et al. (2009) demonstrated that caffeine in five-minute intervals affected the zebrafish by inducing an anxiety-ridden state. This included the phenotype of erratic movements and fewer transitions to the top but did not alter the freezing time. This finding could be due to the fact that varying concentrations of caffeine can affect the zebrafish differently. Egan et al., (2009) used 300 mg for 3 L or a 10% concentration, while this study conducted used 0.12% concentration. My research would have had to use 86 mg of caffeine in 860 ml of water to equal the concentration used in the comparative study. The dosage of 250-350 ppm of caffeine for a zebrafish is equivalent to 4,200-5,800 mg/kg for a 1.2 mg fish (Chen et al. 2008). This range in milligrams exceeds the allowed maximum consumption for adults which is 150-300 mg per day (Brent et al. 2011). Caffeine seems to have the largest effect on an individual when given in a 300 mg or higher one-time dose, which is not a realistic concentration. Humans do not exceed 300 mg of caffeine daily and take the drug in smaller doses throughout the course of a day (Lieberman, 1992).

The specific location in the brain where dopamine is released, once a drug is consumed, corresponds to a specific psychological mapping in the brain. The daily consumption of caffeine by humans releases dopamine from the prefrontal cortex which corresponds to reinforcing substances. Other drugs release dopamine from the shell of the nucleus accumbens, which corresponds to addiction and reinforcement. The nucleus accumbens is in the hypothalamus and is a critical action target for abusive drugs. This pathway from the nucleus accumbens is considered an addicting neurological response, while the consumption of caffeine comes from the prefrontal cortex providing a reinforcement pathway of satisfaction but not addictive in hormonal release. The core and shell are distinctive regions anatomically identified (Pontieri et al., 1995). Dopamine released from the shell of the nucleus, and increased cerebral functionality is a key indicator of a drug abusive substance. The cerebral acceptance of dopamine is the center for reward and addiction (Nehlig, 1999). The dopamine being released from a different part of the brain means it has a different physiology than a substance that would be habitual and lead to addiction. The stimulation of the brain is general and most importantly does not adhere to the area of dopaminergic areas that are related to reward

and addiction (Nehlig, 1999). The effect of methylxanthine is co-localized on the dopamine receptor and does not affect the addiction center of the brain but rather the reinforcement area. Xanthines are compounds that are used in metabolism for recycling of GTP and nucleic acids (Franco et al., 2013). Methylxanthine binds to adenosine receptors and the binding results in enhance mood and concentration levels (Nehlig, 2010). Patients who are more sensitive to stressors have had increased anxiety, while in patients who are less sensitive to stressors, caffeine improves abilities such as vigilance tasks and simple tasks when alertness is low (Smith, 2012).

Different ways of analyzing the zebrafish may result in varying results due to the method chosen. In this experiment a grid was used and then the number of times the zebrafish crossed over was tallied. This procedure assessed the movement of the zebra fish under a 40 s time frame during acute conditions of exposure. Other studies observed the transition of the zebrafish from the top and bottom of the tank and the time spent on the upper portion of the tank to analyze response to caffeine (Egan et al., 2009). The division of the tank would show the behavioral specifically instead of just the movement frequency. My research used a fingerbowl which did not provide enough depth to section the tank and observe the areas of behavior accordingly.

Degree of cohesion could also be used to analyze zebrafish in response to caffeine. Zebrafish have a preference for being in a shoal and individuals are socially set up to join a group. This preference for swimming close to other fish and joining a group is called group cohesion (Gerlai et al., 2014). The formation of tight groups of fish is called shoaling and zebrafish prefer this over being alone. There are internal aspects that relate to shoaling including olfactory, auditory and visual cues that zebrafish associate with their group mates (Miller and Gerlai, 2007). The theory of group cohesion in zebrafish may affect solitary individuals, causing an additional stress factor.

The behavior of movement, either the quantification of movement or lack of movement, can still be correlated to anxiety in zebrafish. In the study done by Egan et al (2009), exposure to caffeine displayed evidence of anxiety with a latency in top of tank exploration and erratic movements. The evidence suggests that limited exploration by zebrafish is also an anxiety feature. Different strains of zebrafish have differing baselines in anxiety levels, which can also lead to varying results in anxiety responses. Reduction in exploration by different strains of zebrafish will vary according to the threshold of stimuli needed for the behavior to occur. Mutant strains have a lower tolerance and higher baseline for anxiety than wildtype (Egan et al., 2009). Therefore, the strain of the zebrafish should be taken into consideration. My research involved the wildtype which could mean the anxiety baseline was lower than in the case of mutant strains. Further

research should distinguish between wildtype and mutant strains when comparing behavioral responses to caffeine.

Other factors that could have affected the research include human error in counting the lines of the video, which was minimized by counting multiple times before recording the data. The amount of light in the room, depending on day, may have also skewed the data slightly as the treatment group was recorded with both morning and afternoon light situations. The temperature of the water may have also affected the results, but the same water was used from the original tank to avoid this problem. Further studies can be done using different strains of zebrafish to compare the baseline of anxiety in mutant strains (Egan et al., 2009). Another way to study how caffeine affects the fish is to vary the concentration from 0.12% or lower to 10% and compare responses. Additional assays can be used in conjunction with this grid line examination, such as dividing the tank into upper and lower limits and recording time in each portion similar to other studies (Rehnberg and Smith, 1998; Egan et. al., 2009).

A major result of this study is the behavioral freezing of the zebrafish, especially in the treatment group that was under the effects of caffeine. Freezing in zebrafish means stillness without moving any body part. Freezing with frequent opercular movement can indicate a stress or anxiety-induced behavior (Kalueff et al., 2013). Erratic movements that were found in fish who moved in the treatment group can be defined as a complex behavior which features freezing before or after zig-zagging behavior. This can be evoked by stressors or general fear state from an outside influence (Kalueff et al., 2013). Zig-zagging is consecutive multiple darts that vary in velocity and speed. This movement would change rapidly and seamlessly (Cachat et al., 2011).

The control group had overall increased motion and increased lines crossed compared to the treatment group, which suggests further studies need to be conducted to test the full effects of caffeine. This unexpected result leads to a suggestion that concentration dosage of caffeine may affect the behavioral responses of zebrafish. My research indicates there is an effect in zebrafish that involves freezing, however, more research needs to be done to verify this response and compare using different caffeine concentrations.

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Optimizing Stock Keeping Unit Efficiency in Max Mara's Direct Retail: Analysis of the Effects of Implementing a New Inventory Management Model

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This thesis presents an articulated analysis developed and carried out by the author for the company Max Mara Fashion Group. Max Mara is a luxury fashion company founded in 1951, currently operating in 105 countries around the world with more than 2,300 stores. The organization is considering the possibility to implement a new SKU (stock keeping unit) system to optimize revenues from B2B, direct retail, B2C and potentially also B2E. My task with this project is to understand whether it is worth taking the risk of switching from the old Push model to the new inventory management model, called the Pull model. The aim is to find results in the data analysis and in the simulations of the future model that are significant enough to prove potential beneficial or unfavorable outcomes from the use of the new model. The goal is also to give clear and reliable reasons that explain why the company could benefit from implementing the Pull system, where part of the merchandise is on hold in the main warehouses, instead of being sent directly to the stores. This thesis consists of a quantitative analysis that provides mathematical evidence for conclusions, and is a more theoretical consideration of warehouse and store logistics such as spaces, timings and rapidity of shipments and deliveries. It is divided in two main parts, AS/IS and TO/BE, one analyzing the efficiency of the present model and the other simulating potential results of the new model. Max Mara has 9 brands and 19 collections with different style and price ranges. Since it would be impossible to include every brand and department in the analysis due to the large sizes of the databases, it has been decided to take as samples the two largest brands, Max Mara and Max & Co, the two past seasons, FW 16 (Fall-Winter) and SS 17 (Spring-Summer), and the European geographical area of stores. The data is provided by Max Mara Fashion Group, headquartered in Reggio Emilia, Italy; the initial database will not be published, due the company's policies, but many samples, formulas, result tables and graphs will be included in the thesis, which will be written in two languages, English and Italian. The main results found are that the service level, how much merchandise the customer finds in the store, is slightly lower in the new model, but that the amount of potential lost sales

¹ Supervised by Cathyann Tully and written under the direction of Edward Strafaci in partial fulfillment of the Senior Program requirements.

is also inferior. Stores could therefore be restocked multiple times throughout the season covering potential missed sale opportunities. Max Mara is a luxury company where merchandise is exposed much less than in fast fashion stores and where the number of daily sales is much lower than in other industries.

I. Introduction to Max Mara's Inventory Management

The rapid development of the e-commerce industry, along with the significant impact of social media and the changing consumer shopping patterns are the main reasons for which Max Mara Fashion Group is considering the idea of changing their inventory management system by implementing a new pull model to optimize SKU quantities.

To provide the reader with a better understanding of the subject matter, definitions and explanations are shared multiple times throughout the thesis; these are often not directly quoted due to the fact that they are the result of accumulated knowledge acquired by interning first in one of Max Mara's direct retail stores and then in the logistics department of the company. Colleagues, the company's intranet and internal manuals are therefore the main sources of this thesis.

History of Max Mara and its Inventory System

Max Mara is a fashion company, headquartered in Reggio Emilia, Italy and founded by Achille Maramotti in 1951. It was the first Italian fashion business to produce ready-to-wear clothing, distributing and selling the finished products to its customer (MM Fashion Group, 2012). The founder started producing, storing and selling its products in one single building with a very small and limited number of employees with expert skills. Today the company has become a multinational corporation operating in 105 countries around the world with 2,300 stores and with a workforce of more than 5,000 employees (MM Fashion Group, 2012). Max Mara Fashion Group has 9 different brands, Max Mara, Sportmax, Weekend, Marina Rinaldi, Max&Co, Persona, Pennyblack, Marella and iBluse, which all have different styles, sizes and price ranges. There are moreover 19 different collections within the brands, such as Studio from MaxMara, Inserimento from Weekend, Code from Sportmax and many others. Each collection follows a specific theme, style or trend. This already gives a quick idea of the amount of clothing items, sizes and colors that there are and how complicated distribution logistics can become.

With the brands and collections rapidly developing throughout the years, production, inventory and distribution management logistics changed multiple times. In 2003 the company built a new headquarter and two new warehouses to sustain the increasing sizes of brands, collections, employees and products. Since 1951 Max Mara

Fashion Group hasn't stopped looking for improvements to succeed and strive in the luxury fashion industry and even today the company is still trying to enhance its stock keeping unit system, considering the idea of changing its present inventory management system, switching from a push to a pull model.

SKU models and inventory management methods

It is very important to note that Max Mara is an Italian fashion house operating in the luxury sector; it should therefore not be compared or confused with other fast fashion organizations, since quality, prices and quantities are completely different. If inventory management is very important in fast fashion and in every other industry, it is particularly relevant in the female luxury fashion sector, where fits are very specific, qualities very high, materials very expensive and overall produced and ordered quantities per items are very small. The focus on production, allocation and distribution is therefore extremely important for the company's revenues and profits.

ID- SKU codes

Every item has an ID-SKU, Stock-Keeping-Unit, which is a code of 10 to 12 numbers, each one with a defined meaning. The simple term ID-SKU in the fashion industry describes a specific model of a collection, in a determined color code and its given size. On the other hand when referring to a *Model-ID*, it is narrowed down to the model and its color code. *ID-store-SKU* is used to visualize even more specifically the performance of a certain model-color-size in a given store location. This last ID-store-SKU is very useful to identify which brands and collections are in the greatest demand in given cities and stores. The table below shows three examples of different ID-SKUs that can be used to classify units; these are however not the only ones existing and used, but instead the three relevant to this specific analysis.

Table 1. ID-SKU Nomination

ID-	Description of Code	ID Example	Code Description Example				
Model-ID	Model-Color	624926003-2	model DRY/color blue				
ID-SKU	Model-Color-Size	624926003-2-M	mod. DRY/color blue/size M				
ID-store-	Store-Model-Color-	30103-624926003-	store Berlin/mod. DRY/color				
SKU	Size	2-M	blue/size M				

Figure 1 is an example of the Fall-Winter 2016 dress department database and it gives an idea of how databases are set up. As shown by the horizontal arrow, the first line and the first column of every database and excel sheet used in the analysis is frozen. This is done with the intent to visually associate the data to a specific SKU.

	Store Code	e			
	1 A	В	С	D	E
1	/O-store-SKU	▼ Country	Store 💌	Collection	Model 💌
46621/	901192-5366226906-4-XL	France	Lyon Tournes	WEEKEND 1 [^] EXIT	FAVELLA
46622	901192-9366236306-22-L	France	Lyon Tournes	WEEKEND 1 [^] EXIT	NERIS
46623	901192-5366236306-22-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NERIS
46624	901192-5366236306-22-S	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NERIS
46625	901192-5366236306-22-XL	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NERIS
46626	901192-5366246306 2-L	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CIRILLA
46627	901192-53 66246 306-2-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CIRILLA
40000	192-5366246306-2-S	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CIRILLA
Model Code	19 2- 5366246306-2-XL	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CIRILLA
	192-5366256306-3-1	France	Lyon Tournes	WEEKEND 2 [^] EXIT	AMICHE
46631	901192-5366256306-3-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	AMICHE
46632	901192-5366256306-3-5	France	Lyon Tournes	WEEKEND 2 [^] EXIT	AMICHE
46633	901192-5366256306-3-XL	France	G 1 0 G;	EKEND 2 [^] EXIT	AMICHE
46634	901192-5366276306-6-L	France	Color & Size	EKEND 2 [^] EXIT	ARDA
46635	901192-5366276306-6-M	France	Lyon rountes	we EKEND 2^ EXIT	ARDA
46636	901192-5366276306-6-S	France	Lyon Tournes	WEEKEND 2 [^] EXIT	ARDA
46637	901192-5366276306-6-XL	France	Lyon Tournes	WEEKEND 2 [^] EXIT	ARDA
46638	901192-5366286306-6-L	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NAMUR
46639	901192-5366286306-6-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NAMUR
46640	901192-5366286306-6-S	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NAMUR
46641	901192-5366286306-6-XL	France	Lyon Tournes	WEEKEND 2 [^] EXIT	NAMUR
46642	901192-5366296306-1-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CRIS
46643	901192-5366296306-2-L	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CRIS
46644	901192-5366296306-2-M	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CRIS
46645	901192-5366296306-2-S	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CRIS
46646	901192-5366296306-2-XL	France	Lyon Tournes	WEEKEND 2 [^] EXIT	CRIS

Figure 1. ID – SKU Example Table from FW 16 Coats Department Database

The concept of Model-ID is largely used in the ordering process when it has to be decided how many models of each line should be produced, where they should be allocated and with what breath. The term *breath* is used to describe the quantities of each Model-ID in an order. In the Spring-Summer-2017 season the average Unit-ID breath was of 9.05, meaning that in every store order each Model-SKU was present 9 times, normally one for each size and two or three for middle sizes. The relatively low Model-ID breath is typical for the fashion luxury sector and also simply a choice of the company in order to be able to offer the larger and most sustainable variety of products.

Push Model

The push model that the company has been using until now is certainly the most efficient distribution model for small companies that have a limited number of points of

sale, since most of the produced and ordered merchandise is located in the store; with this model, assuming an item has been ordered in the correct amount of units to meet its demand, the probability that the customer finds the desired item in a specific size and color is very high, even if the same exact item has been sold the hour before. This occurs with the push model because the entire merchandise ordered for a specific location is sent to the store at the beginning of the season; if its demand is very high, it can also be restocked a second time in the season. If an item is demanded by a customer in one location that has not been provided with that specific ID-SKU the store can demand a transfer from either another store or from the main centralized warehouse. However, issues that rise with transfers are many, such as high cost of shipments, long processing times, low sale probability and others. Since shop managers and sale assistants do not have a particular interest in transferring the item, it can often occur that she/he postpones this request even up to a week, after which the item might not be demanded anymore by the original costumer. This is therefore considered not only a lost sale and a wasted shipment but also a misallocation of that item, since once a transfer is made and not sold, it is no longer located in its original pre-established location. Indeed, it emerged from the analysis that only 65% of transfers are successful, meaning that remaining 35% of transferred items are neither sold to the customer that demanded it nor to any other customer before the end of the season. There are two risks associated with transfers, the first one being that the customers might no longer buy the requested item and the second one that the store sending it out may lose a sale due to the lack of that particular ID-SKU.

Each store has a very specific cluster of items from each brand, collection, model and color code, which has been accurately studied and chosen by buyers, who consider it to be the best possible selection for that store, location and its customers. A small town in Italy for example, will have a much greater selection of the *Weekend* brand than a larger city would, since prices are lower and fits are easier. In flagship stores, on the other hand, stylish coats and important *Sfilata* models, which are strongly advertised by the company and have a higher average price due to their appearance in the Milan fashion show, will be prevalent and largely demanded.

Pull Model

In the pull model the quantity of ordered merchandise remains unchanged, but the amount of stock kept behind in centralized warehouses is much greater. This allows the centralized management to analyze trends of each shop, identify popular items, spot missing sizes and restock these immediately with the stock kept behind or "on hold". In this way, transfers between stores would disappear, leaving all restocking and transferring activities to the centralized warehouses. Even if ordered clusters for stores

wouldn't change, there would be more freedom to mix them and allocate individual SKU units in those stores that need it most during a given week in the season. While extremely accurate forecasts of stores' total merchandise allocation are essential in the push model, in the pull system it is mainly important to have a more general forecast of quantities for the season.

The question whether this model actually works in this industry goes back to the point made earlier on, explaining that the luxury fashion business is not only very vulnerable to customers, locations, styles and trends, but also the fact that quantities of a specific model, color code and size are not very large.

II. Variables and Methodology

Database

Databases withdrawn from the general system are divided in departments and seasons. Since the amount of data is too large and the time of the analysis is limited, two seasons and six departments are taken as sample for the entire analysis. In order to analyze and compare the two most recent time periods, the seasons that are chosen as samples are FW-16 (Fall-Winter 2016) and SS-17 (Spring-Summer 2017), while the two chosen brands are Max Mara and Max&Co. The analyzed departments for each season are dresses, coats, knitwear, pants, tops in jersey and footwear, which is considered part of accessories. The same analysis is carried out for each department after which seasonal and annual aggregate results are calculated to make assumptions that lead to general conclusions.

Independent Variables

Independent variables are those initially found in the database and not created or changed for the analysis. Each database has from 80 to 200 thousand Excel lines, representing a model of a collection, in a certain country, store, color and size during a determined week in the season. Each file analyzes 133 direct stores in 10 different countries, 42 exits of 21 collections and 2 brands. These are all considered independent variables. It is then possible to match items and to find aggregate results by creating pivot tables, which do not consider the week, the store or the nation of an item. These can also be considered independent variables, although created by the author for this analysis. Other variables are the number of supplied units of an item, its relative sellout amount, transferred units, transferred sellout amount, sold units, and sold sellout amount. The "maximum-" and "minimum-week" are also important variables representing respectively the last week before sales start and the first week of possible sales when

items are delivered to the store. The analysis and simulation is indeed only possible and accurate if done over this period of time since sales are considered special events in which clothing items are demanded according to different customer trends and patterns, such as the act of prioritizing lower prices. While the Max-week differs for every country, the Min-week changes for every individual item, since Model-SKUs are not necessarily supplied at the same time. Finally, it is also necessary for the analysis to differentiate from transfer in, which are positive numbers, and transfers out, which are negative. The table below (see Figure 2) shows some independent variables that are distributed by column for every SKU.

	А		В		С		D		E		F		G		Н		- 1		J	
1	Country	V	Store Code	v	Store	▼	Year	∇	Week	v	Dep.	₹	Model Code	V	Model	V	Var.	•	Size	\mathbf{v}
143219	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		1226046906		REY		3		38	
143220	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		1226076306		KARIM		4		46	
143221	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		1626016306		KIKU		3		40	
143222	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226056306		NATALIN	1	8		38	
143223	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226056306		NATALIN	ı	8		46	
143224	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226056906		ZINA		3		46	
143225	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		38	
143226	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		40	
143227	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		42	
143228	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		44	
143229	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		46	
143230	Denmark		5101015		Copenhagen AP	Т	2016		46		Dress		9226116906		DAX		12		48	
143231	Denmark		5101015		Copenhagen AP	Т	2016		47		Dress		1226126306		CHIFFON	ı	3		46	
143232	Denmark		5101015		Copenhagen AP	Т	2016		47		Dress		9226066306		ANANIA		1		42	
143233	Denmark		5101015		Copenhagen AP	Т	2016		47		Dress		9226076306		LEPIDO		8		44	
143234	Denmark		5101015		Copenhagen AP	Т	2016		47		Dress		9226156906		CARENA		1		46	
143235	Denmark		5101015		Copenhagen AP	Т	2016		48		Dress		1226076306		KARIM		4		40	
143236	Denmark		5101015		Copenhagen AP	Т	2016		48		Dress		9226066306		ANANIA		1		40	
143237	Denmark		5101015		Copenhagen AP	Т	2016		48		Dress		9226076306		LEPIDO		8		38	

Figure 2. Independent Variables - Example Table from FW 16 Dress Department Database

Dependent variables

Initial Allocation

Initial Allocation or IA is the initial quantity of ID-SKU that is allocated in a store at the beginning of the season excluding all restocked and transferred items. It is the quantity needed to guarantee a determined service level from the first day of the season. The average IA for an ID-store-SKU is three pieces for main sizes and one or two for the remaining ones. Initial allocation quantities are calculated by complex algorithms and then manually influenced by buyers, who are responsible to place the stores' orders.

Stock Level – in store/boxes

The stock level of a store, mathematically represented by SL_w , is calculated weekly and represents the amount of units of a model/color/size still left in a store during

a specific week. In the first week it is calculated by adding supplied and transferred units and subtracting sold units of that item. For all the following weeks it is also necessary to subtract the stock level of the week before, as seen in the formulas below.

Week 1	All weeks $x \neq 1$
$SL_w = s_w + t_w - v_w$ or $SL_w = c_w - v_w$	$SL_{w} = s_{w} + t_{w} - v_{w} + SL_{w-1}$ or $SL_{w} = c_{w} - v_{w} + SL_{w-1}$

(1)

where

$$\begin{split} &w\text{=}w\text{eek}\\ &s_w\text{=}\text{supplied SKU quantity}\\ &t_w\text{=}\text{transferred SKU quantity}\\ &v_w\text{=}\text{sold SKU quantity}\\ &c_w\text{=}s_w\text{+}t_w\text{=}\text{in stock SKU quantity} \end{split}$$

GDO

Gross Domestic Outflow (GDO) is a sale forecast for a ID-store-SKU, store/model/color/size, that projects, if used for future outcomes, or averages, if used with past data, the amount of items sold in a week throughout a specific period. It considers only the weeks where stock is greater than 0. It is an indicator that tells you how many units of an ID-SKU (model/color/size) are going to be sold on average in one week. Calculating GDOs is a very important component of this analysis, because it defines the desirability of a SKU in mathematical terms.

$$GDO_{SKU} = \frac{total\,units\,sold}{No.\,of\,weeks\,with\,SL > 0}$$

(2)

WOC

Weeks of Coverage (WOC) is the number of week over which the target stock level needs to guarantee given quantities; in other words, it represents the period of weeks over which the store should have coverage without replenishing the stock, given the GDO and the initial allocation of a specific item in a specific store location. WOC vary from a minimum of 8 weeks to a maximum of 22 weeks. The WOC variable can be manually changed depending on the frequency with which a store can be physically replenished.

$$WOC = \frac{Initial\ Allocation}{GDO}$$

(3)

Service Level Percentage & Minimum Display Quantity - MDQ

Minimum Display Quantity (MDQ) is the minimum quantity of SKU needed to support at least visual needs in the store and minimum required service levels. It is used to calculate target stock levels and it has to take into account special event, festivities, holidays and other special days for the retail industry. When MDQ equals to one it means that the unit is present in the store. Minimum display quantities are calculated before orders by predefined algorithms.

Service level is a percentage that indicates the average satisfaction of a customer when entering the store and the service that is offered in a specific location and moment in time. Service level is a mathematical and objective variable and it should not be confused with the actual and subjective service offered by sale assistants or by the physical facilities of the store. In other words, it indicates how many times the consumer finds an ID-SKU (model/color/size) when desired. Mathematically it is calculated by dividing (1 – GDO) over the Initial Allocation of the SKU.

Service Level_{SKU} =
$$\frac{1 - GDO}{IA} * 100_{(4)}$$

In-Season Processes

The *in-season process* analyzed in this thesis is composed by three main planning processes Target-Stock-Level (TSL), Replenishment and Reorder, which coordinate and control the SKU management during the retail season, defining sales revenues, customer satisfaction and the brand's general performances.

Target Stock Level - TSL

Target Stock Levels (TSL) refers to the process that controls the optimal quantity needed to support sales in each different store location and their warehouse. It includes the calculation of the optimal stock level according to the desired goals of the management and the inventory management model in use. It is initially based on the preestablished sales expectations and on the stores' coverage necessities, but since these change as the retail sale season develops parameters of TSL quantities need to be changed and adjusted throughout the season. More simply the TSL is a process matrix that responds to the questions *what* will be needed, *when* – at what time in season – and *where* or in which store location. It is generated in the ordering process and is essential for the general stock distribution. Mathematically the TSL is calculated weekly for every SKU combination with the following formula:

$$TSL_{w} = Round.up \left(Max \left(MDQ_{w}, \sum_{i=w}^{w+WOC-1} GDO_{i} \right) \right)$$

(5)

Replenishment

Replenishment is the process that focuses on the already produced and available stock situated in stores or in centralized warehouses. Replenishment operations are responsible for balancing and controlling stock quantities and clusters of merchandise in final retail locations. The replenishment process follows five main planning criteria:

- 1. Standard replenishment is the standard replenishment method where produced merchandize is transferred from main warehouses to stores.
- Rationing is used in case of time scarcity when main warehouses are not able to satisfy requirements and when it is more convenient to replenish stores from the closest local warehouse; these are normally located in a main city such as London, Milan, Rome, Paris, Madrid and some others.

- 3. Push replenishment, not to confuse with the *Push Model*, occurs when excess merchandise is situated in centralized warehouses and therefore has to be "pushed-out" to the stores.
- 4. Store-to-store Transfers is a method to fulfill individual requirements of stores and customers and it consists in transfers from one store to another, normally within a country.
- 5. Consolidating consists in replenishment operated primarily to give consistency to a collection, look or brand; e.g. when skirts matching to its blazers are no longer available.

Table 2 summarizes when and how these criteria are used.

Table 2. Logistics of In- Season-Process	From main warehouse	From other stores				
Beginning of season	Replenishment	Store to store transfers				
During season	Rationing	Store to store transfers				
End of season	Push	Consolidation				

Reorder

The reorder process overlooks general stock levels and the demand of products. If it is necessary and logistically possible, additional SKU units will be reproduced and supplied a second time during the season and strictly before reduced-price sales start.

III. Analysis AS/IS

Ordering and Screening of Database (AS/IS)

The first step of the AS/IS analysis is to clear the databases from all the information that could be considered misleading inputs to the analysis. First, it is important to delete all the ID-SKUs that were transferred, stocked or sold during reduced-price sale weeks, considered abnormal weeks in the retail industry since they do not follow average sale patterns, sellout prices and much more. Another major database screening step is to combine and match all codes and names of identical ID-SKUs, which have been changed by the information technology systems that keep track of the

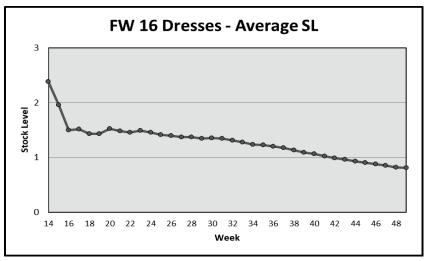
company's inventory and stock. When an ID-SKU item is restocked or replenished to the store during the season due to its high demand and desirability, the code is changed and one letter or symbol is also added to the name. For example, if the model DRY with ID-SKU code 624926003-2-M is highly demanded it will be restocked with the name *DRY and code 956926335-2-M. This is an essential change and correction that has to be made to the database prior to any calculation to avoid that identical ID-SKUs are considered in the analysis as completely different items. Finally in the database screening process transfers have to be divided into transfers-in, received transfers, and transfers out, sent transfers, in order to distinguish the 'given' and the 'taken' units.

Analysis of Current Performances of Push Model (AS/IS)

Once the database is cleared from misleading and incorrect inputs, it is possible to proceed to the current performance analysis, which leads not only to the identification of the strengths and weaknesses of the current push mode but also to ability of comparing current results to the simulated performances of the new pull model. The four main steps that are carried out in the current performance analysis are the calculation of first the stock level, then the GDO and WOC of every store-SKU, followed by the formulation of service levels that items are able to provide, and finally the calculation of stock quantities kept on hold in centralized warehouses. The reason for keeping items "on hold" is to be able to uniformly distribute this stock throughout the season.

Calculation of Stock Levels (AS/IS)

As explained above, the Stock Level (SL) is the quantity of an ID-Store-SKU that is still in the store during week x. To calculate and display the stock level of an item for every single week as shown table 3, it is necessary to create a pivot table in excel that calculates the SL of a specific week considering the SL leftover from the prior week. The first week starts with a SL of zero. It is important to take into account different first weeks (Min-week), since every ID-SKU can be delivered and therefore available for sale in separate weeks according to internal production and inventory management decisions. This is why cells prior to the min-week are not considered and left empty instead of having a SL=0.



Graph 1. Average Stock Level - Fall Winter 2016 Dress Department

The graph above shows the average stock level of the Fall Winter 2016 dress department. Week 14 corresponds to the 14th week of the year that goes from 04/04/2016 to 04/10/2016 and represents the first week of the FW 16 season. The average stock level goes down throughout the season when SKUs are sold, but it does not reach zero at week 49, since it is not the last week of the season but instead the last week before reduced-price sales start.

The calculation of stock levels is an essential step in the analysis making it possible to calculate GDOs, WOCs and missed sale opportunities. By telling how many SKUs are present in a store's stock during every week, it is possible to see when and where a determined clothing item in its color and size is no longer available. As seen in the figure below, the cells representing the weeks after delivery, in which the SL of an SKU unit is equal to zero, are highlighted in yellow with conditional formatting in order to bring to the attention the potential missed sales opportunities due to stock outs.

4	Min. Week	IA																		Stoo	k Le	vel p	ier w	eek															
5			ld Store-SKU	11	12	13	14	15	16	17 18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33 3	34 3	5 3	6 3	7 3	3	9 4	0 41	42	43	44	45	46	47	48 49
47013	18	5	100200-5086026906-2-40							5	5	5	4	4	4	4	4	3	3	3	3	3	2	2	2	2	2	2	2 7	2	2	2 2	2	2	2	2	2	2	1 0
47014	18	4	100200-5086026906-2-42							4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4 4	4	3	3 3	3	3	3	3	3	3	3 3
47015	18	3	100200-5086026906-2-44							3	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2 2	2	2	2	2	2	2	2 2
47016	18	3	100200-5086026906-2-46							3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2 :	2	2	2 2	2	2	2	2	2	2	2 2
47017	18	2	100200-5086026906-2-48							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2 :	2	2	2 2	2	2	2	2	2	2	2 2
47018	18	1	100200-5086026906-2-50							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 :	1	1	1 1	1	. 1	1	1	1	1	1 1
47019	18	3	100200-5086016906-12-36							3	3	3	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47020	18	3	100200-5086016906-12-38							3	2	1	1	0	0	0	0	0	0	0	3	3	3	3	3	1	1	1 () ()	0	0 0	0	0	0	0	0	0	0 0
47021	18	4	100200-5086016906-12-40							4	4	3	3	3	3	3	3	2	1	1	4	4	4	4	4	4	4	4	4 4	4	4	3 3	3	3	2	1	1	1	0 0
47022	18		100200-5086016906-12-42							3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2 :	2	1	1 1	1	1	1	1	1	1	0 0
47023	18		100200-5086016906-12-44							2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1 :	1	1	1 1	1	1	1	1	1	1	1 1
47024	18	2	100200-5086016906-12-46							2	2	2	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1 :	1	1	1 1	1	. 1	1	1	1	1	1 1
47025	18	1	100200-5086016906-12-48							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 1	1	. 1	1	1	1	1	1 1
47026	19		100200-5086046906-16-36								3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2 :	2	2	2 1	1	. 1	1	1	0	0	0 0
47027	19	4	100200-5086046906-16-38								4	3	2	2	2	2	4	3	3	3	3	3	3	3	2	2	2	2	2 7	2	2	2 2	1	. 0	0	0	0	0	0 0
47028	19	4	100200-5086046906-16-40								4	4	4	4	4	4	4	4	4	4	3	3	3	3	2	2	2	2	2 7	2	2	2 2	2	2	2	2	2	1	1 1
47029	19	3	100200-5086046906-16-42								3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3 3	3	3	2	2	2	2	2 2
47030	19	2	100200-5086046906-16-44								2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2 :	2	1	1 1	1	. 1	1	1	1	1	1 1
47031	19	1	100200-5086046906-16-46								1	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1 :	1	1	0 0	0	0	0	0	0	0	0 0
47032	19	1	100200-5086046906-16-48								1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 :	1	1	1 1	1	. 1	1	1	1	1	1 1
47033	23	4	100200-5016016906-9-36												4	4	4	3	3	2	2	1	0	0	0	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47034	23	4	100200-5016016906-9-38												4	4	4	2	2	2	0	0	0	0	0	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47035	23	4	100200-5016016906-9-40												4	4	3	3	3	3	3	3	2	0	0	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47036	23	2	100200-5016016906-9-42												2	2	2	2	2	2	2	2	2	1	1	1	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47037	23	2	100200-5016016906-9-44												2	2	2	2	2	1	1	1	1	1	1	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0
47038	23	1	100200-5016016906-9-46												1	1	1	1	1	1	1	1	1	1	1	1	1	1 () ()	0	0 0	0	0	0	0	0	0	0 0
47039	23	1	100200-5016016906-9-48												1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 :	1	0	0 0	0	0	0	0	0	0	0 0
47040	23	4	100200-5086056906-2-40												4	4	4	4	4	4	4	4	4	4	4	4	4	4	4 4	4	4	4 4	4	4	4	4	4	4	4 4
47041	23	3	100200-5086056906-2-42												3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2 2	2	2	2	2	2	2	2 2
47042	23	2	100200-5086056906-2-44												2	2	2	2	2	2	2	1	1	1	0	0	0	0 () ()	0	0 0	0	0	0	0	0	0	0 0

Figure 3. Stock Level per Week - Example Table from FW 16 Dress Department Database

Table 3. Stock Level Calculation

Sto	Stock Level per Week																		
14	15	16	17	18	•••	36	37	38	39	40	41	42	43	44	45	46	47	48	49
				2		2	1	1	1	1	0	0	0	0	0	0	0	0	0
				1		1	0	0	0	0	0	0	0	0	0	0	0	0	0
				1		1	1	1	1	1	1	1	1	1	1	1	1	1	1
				1		1	1	1	1	1	0	0	0	0	0	0	0	0	0
				1		0	0	0	0	0	0	0	0	0	0	0	0	0	0
													1	1	1	1	1	1	1
									1	1	1	0	0	0	0	0	0	0	0
									1	2	1	1	1	0	0	0	0	0	0
									1	1	1	0	1	1	1	1	1	1	1
													1	1	1	1	1	1	1
						1	1	1	1	1	1	1	1	1	1	1	1	1	1
						2	2	2	2	2	2	2	2	1	1	1	1	0	0

The method and formulas used in excel to calculate stock levels of a SKU for every week of the analyzed season, as shown in Figure 3, are described in the following table:

Table 4. Stock Levels Calculation in Excel

Excel Formula		Description
=IF(CG\$5<\$CD6;"";G6-AQ6)	→ week 1.	If week x is less that min week than the cell has to be empty, otherwise c(x)-v(X) (in stock ID-SKU-sold ID-SKU)
=IF(CH\$5<\$CD6;"";(CG6+H6-AR6))	→ weeks x ≠ 1	If week x is less that min week than the cell has to be empty, otherwise c(x)-v(x)+SL(x-1)

Calculation of GDO & WOC (AS/IS)

Calculating GDOs on past data is much easier than forecasting it for future data, since no forecast is really needed. Indeed, the project supervisor Carlo Capoferri clarified that if the term GDO is used for calculations with past data, it has to be clearly stated that it is not referred to a forecast but simply to the number of sold SKU units over the number of weeks with stock level greater than zero, as shown in the formula (2).

From the analysis it emerges that the average GDO of all departments from the season FW 2016 and SS 16 was of 0.1, meaning that on average 0.1 store-SKU units (store-model-color-size) were sold in one week. While the GDO is relatively low, as it is common in the luxury fashion industry, the WOC has a high average of 19.5 meaning that the stores are normally covered with a SKU item for nearly 20 weeks, without stock replenishment.

Calculation of Service Levels (AS/IS)

Service level is calculated in the AS/IS analysis with the intent to find how well the current push model is able to satisfy the final customer. Service level varies depending on the collection, brand and department of the SKU and it is a very important parameter to keep under control especially in the luxury industry where customers expect high service levels. Even if having a service level of 100% is always desired and preferable, the current push model is able to provide on average 94%, which is considered relatively high in the industry.

Calculation of Stock on Hold (AS/IS)

Stock on Hold is a variable that indicates how much inventory is kept in main warehouses to be restocked later in the season. It is one of the most important variables of the study since it is voluntarily going to be changed in the new pull model, with the assumption that the more stock is kept on hold at the beginning of the season, the more managerial freedom there will consequently be to allocate this remaining stock when and where it is most needed. While stock on hold is very low in the push model, since most of the units are immediately delivered to stores, or as the term says "pushed" to the stores, it is supposed to be much higher in the pull model. Today only 5.6% of stock is kept on hold in main warehouses.

The table below (see Table 5) is an example of the AS/IS analysis results for the FW 16 Dress department. In this example, the average GDO is 0.1 and the average service level is 93.07%, meaning that on average about 0,1 dresses of every SKU are sold per week and that 9 times out of 10 the customer finds the dress, in the color and size she needs it. Furthermore, in the Fall-Winter 2016 season 89,690 dresses were initially

delivered and stocked in all European stores, while only 5.26% of the total amount of produced units was later transferred and restocked.

Table 5. AS/IS Cur	rent	Perform	ance Results –						Stoc	Stock	#
FW 16 Dress Depa	rtme	nt			GDO	woc	Service Level	IA	k on Hol d	on Hold %	weeks SL=0
ld Store-SKU	Co unt ry	Store	Collection	Model		- 20.1 8	93.07%	Σ 89, 690	Σ 5,2 65	- 5.87 %	Σ 344,47 4
101062-626116906-1-44	UK	London Harvey Nichols	MAXMARA 1^ Exit	OLBIA	0.00	15	100.0%	2	0	0%	9
101062-626116906-1-46	UK	London Harvey Nichols	MAXMARA 1^ Exit	OLBIA	0.00	16	100.0%	1	1	0%	13
101062-626116906-1-48	UK	London Harvey Nichols	MAXMARA 1^ Exit	OLBIA	0.00	22	100.0%	1	0	0%	0
101062-626156906-2-38	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	19	100.0%	1	0	0%	9
101062-626156906-2-40	ик	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	23	100.0%	1	0	0%	21
101062-626156906-2-44	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	18	100.0%	1	0	0%	8
101062-626156906-2-46	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.20	10	90.0%	2	0	4%	6
101062-626156906-2-48	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.10	10	90.0%	1	3	3%	1
101062-626156906-5-38	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	9	100.0%	1	0	1%	0
101062-626156906-5-40	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.14	14	92.8%	2	0	0%	2
101062-626156906-5-42	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.14	14	92.6%	2	0	0%	9
101062-626156906-5-44	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.06	32	96.8%	2	0	0%	0
101062-626156906-5-46	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	26	100.0%	1	0	0%	0
101062-626156906-5-48	UK	London Harvey Nichols	MAXMARA 1^ Exit	GOLF	0.00	24	100.0%	1	0	0%	9
101062-626176906-2-44	UK	London Harvey Nichols	MAXMARA 1^ Exit	MITIC O	0.07	14	92,6%	1	1	0%	7

IV. Analysis of Lost Opportunities

In order to calculate and analyze when and how often there are lost sale opportunities in the current push model, it is necessary to create two tables that highlight the frequency of possible missed sales and the probability of that sale actually happening in the week where the item is not present in the store. The first table (see Table 6) shows how many times an ID-SKU was needed and how probable the missing sale actually was. The second table on the contrary (see Table 7), highlights how many times a store could have given an SKU away to some other direct point-of-sale that needed it more. When the cell is equal to zero it means that the SKU was neither needed nor available to be transferred.

Table 6. Missed Sale Opportunity "to-take" – Example Table from FW 16 Coats Department

SKU to Take - Missed S	ale Op	port	unity	1												
ID-SKU	16	17		37	38	39	40	41	42	43	44	45	46	47	48	49
10011-126016906-7-36		0		0	0	0	0	L	L	L	L	L	L	L	L	L
10011-126016906-7-38		0		L	L	L	L	L	L	L	L	L	L	L	L	L
10011-126016906-7-40		0		0	0	0	0	0	0	0	0	0	0	0	0	0
10011-126016906-7-42		0		0	0	0	0	L	L	L	L	L	L	L	L	L
10011-126016906-7-44		0		L	L	L	L	L	L	L	L	L	L	L	L	L
10011-126066306-5-38										0	0	0	0	0	0	0
10011-126066306-5-40						0	0	0	L	L	L	L	L	L	L	L
10011-126066306-5-42						0	0	0	0	0	ML	ML	ML	ML	ML	ML
10011-126066306-5-44						0	0	0	L	0	0	0	0	0	0	0
10011-126066306-5-46										0	0	0	0	0	0	0

Table 7. Missed Sale Opportunity "to-give" – Example Table from FW 16 Coats Department

SKU to Give - when SL >=	1																
ID-SKU	15	16	17	18	 37	38	39	40	41	42	43	44	45	46	47	48	49
10011-126016906-7-36				L	 L	L	L	L	0	0	0	0	0	0	0	0	0
10011-126016906-7-38				L	 0	0	0	0	0	0	0	0	0	0	0	0	0
10011-126016906-7-40				L	 L	L	L	L	L	L	L	L	L	L	L	L	L
10011-126016906-7-42				L	 L	L	L	L	0	0	0	0	0	0	0	0	0
10011-126016906-7-44				L	 0	0	0	0	0	0	0	0	0	0	0	0	0
10011-126066306-5-38											L	L	L	L	L	L	L
10011-126066306-5-40							L	L	L	0	0	0	0	0	0	0	0
10011-126066306-5-42							ML	ML	ML	ML	ML	0	0	0	0	0	0
10011-126066306-5-44								L	L	L	0	L	L	L	L	L	L
10011-126066306-5-46												L	L	L	L	L	L
10011-126066306-2-42												L	L	L	L	L	L

The formula that has been used is:

It presents 5 possible scenarios:

- 1. If the week in charge is prior to the week of delivery then cell is empty;
- 2. If the SL is higher that 1 then the there is 0 chances of losing a sale;
- 3. If the GDO is lower or equal to 0.1 than the probability of losing a sale is low, L;
- 4. If the GDO is lower or equal to 0.2 than the probability of losing a sale is medium low, ML;
- 5. If the GDO is lower or equal to 0.4 than the probability of losing a sale is medium high, MH;
- 6. If the GDO is higher than 0.4, all other cases, than the probability of losing a sale is high, H;

Each parameter is then added together for each department in order to find which percentage of the total SL in Europe is considered a misallocation of stock and could have been responsible for a missed sale opportunity. The summary table below (see Table 8) shows the results of the missed opportunity analysis of the FW-16 Coats department; from 1.5 million possible sale combinations 10.4% (158K) can be considered missed sale opportunities, 3.3% of which have a high probability of occurrence. This means that the current stock management system is not able to optimize sales' efficiency probably due to the lack of control that it has on 94% of the merchandise that is entirely sent to the stores at beginning of the season. The downside of the current model described above brought the company to question the push system and the reason for which Max Mara decided to analyze the benefits and the downsides of a different inventory management model.

Table 8. TOTAL Missed Sale Opportunity – Example Table from FW 16 Coats Department

	Total Combination	Missed Sale Opportunities	% Missed Sale Opportunities
	1,530,729	158,825	10.4%
Н	1,530,729	50,447	3.3%
МН	1,530,729	47,428	3.1%
ML	1,530,729	60,950	4.0%

V. Analysis TO/BE

Analysis Performances of Simulated Pull Model (TO/BE)

The TO/BE analysis is the heart of this study and is a simulation of the new pull model. It starts from the AS/IS database on which inputs are changed in order to achieve greater stock efficiency and more beneficial sales outcomes. Simulations are made with data of the Fall-Winter 2016 season in order to compare actual performance of the push model with potential results that could be achieve with the pull model.

Simulations of IA, GDO, WOC & Service Level in the new Pull Model (TO/BE)

Since the pull model predicts a much lower initial store stock, the first variable that is changed is the initial allocation of every SKU, which is calculate with the real collection-based GDO and the desired WOC. The collection-based GDO is a brand-collection average calculated from the AS/IS model, and therefore nearly identical to the GDOs of the push system; it is simply more accurate to use for future simulations because abnormal events and special trends of certain SKU units that have very particular

GDOs due to their design, price or style, are not taken into account. Weeks of coverage on the other side are deliberately decreased since stores will have more frequent replenishments and need to be covered for a smaller number of weeks. The pull model assumes that the store is covered for about 8 to 10 weeks, about half of the WOC in the push system. Initial allocation for the pull model is calculated multiplying the weekly sale probability of the item's collection (GDO) times the weeks over which the units need to cover the store (WOC). Mathematically speaking it is obtained with the formula below:

$$IA = WOC * GDO_{collection} \gg to the nearest decimal place_{(6)}$$

Predicted and simulated initial allocations cannot be in decimal form, since they are actual supplied quantities of units. Due to the complexity of the formula, it is necessary to calculate first a general IA that rounds the value to the nearest whole number, and in a second time a more accurate one that takes into account the minimum display quantity (MDQ) and the higher allocation needed for middle sizes. The more general initially allocated (*gen. IA*) quantity is calculated with the following

- If $GDO * WOC \le 2 \rightarrow then gen.IA$ rounds upwards
- If $GDO * WOC > 2 \rightarrow then gen.IA$ rounds downwards

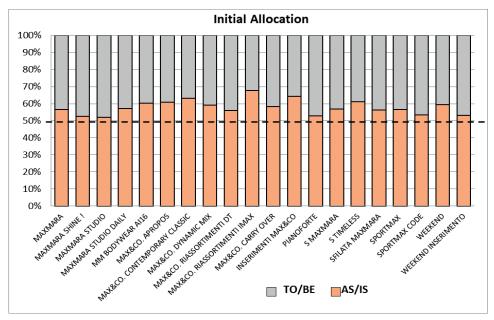
It is then necessary to increase initial allocation quantities of the European middle sizes 42 and M, which have a higher average GDO.

• If $gen.IA = 1 \rightarrow then IA = 2$

criteria:

- If $gen.IA = 2 \rightarrow then IA = 3$
- If $gen.IA > 3 \rightarrow then IA = gen.IA$

By changing this input the total initial allocation automatically decreases since the aim is to keep only the minimum necessary stock in the stores. Since the weeks of coverage in the pull model are more than halved, from an average of 20 weeks to about 8 or 10, the new system predicts that stores will be much less stocked than in the push model (see Graph 2). This does not imply that stock is missing and causing missed sales, but on the contrary that inventory carryover is reduced and profits are optimized. In the graph below it is possibly to see the difference of stock quantities between the two models.

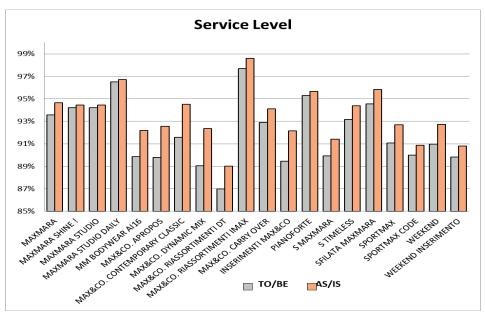


Graph 2. Initial Allocation by Collection – AS/IS & TO/BE

Even if the initial allocation is carefully calculated so that the store is fully covered for 8 weeks with a balanced distribution of SKU units, it is impossible to predict which collections, models, color or sizes are going to have the highest demand and GDO; it is therefore inevitable that with less initial allocation the service level, also calculated with the collection-average GDO, is going to be slightly affected in the new pull model. As seen in the graph below (see Graph 3) service levels would all decrease by 2%, from 93.3% in the current model to 91.5% in the future inventory management system.

Calculation of Exit-Speed (TO/BE)

Exit-Speed is a parameter that is calculated in order to define the correct or minimum number of weeks that a certain initial allocation quantity can cover. This calculation finds the percentage of Model-SKU that has a fast exit-speed, meaning a much higher GDO during the first four, six or eight weeks from when the Model-SKUs are delivered to the stores, in relation to all the other weeks. It has been found that only 7.9% of merchandise has very high exit speed within 8 weeks, which is a sufficiently low percentage to allow 8 weeks of coverage (WOC) to be a sustainable amount.



Graph 3. Service Level by Collection – AS/IS & TO/BE

Table 9 below summarizes and outlines TO/BE and AS/IS results. The bottom line represents the changes that would occur if the company decided to switch from the push to the pull model. While the decrease of initial allocation is not necessary a negative change, the decrease in the percentage of service level is certainly not a desirable factor.

Table 9. GDO, WOC, IA & Service Level results AS/IS & TO/BE

	GDO	WOC	Initial Allocation	Service Level
AS/IS	0.1	19.7	83,656	93.3%
TO/BE	0.1	8.00	61,362	91.5%
From AS/IS to TO/BE	=	→	y	→

Calculation of Stock on Hold (SoH) (TO/BE)

Once initial allocation is defined for the pull model, it is possible to calculate the amount of stock that is kept on hold for more accurate replenishment during the season.

Depending on how drastically the company is willing to adopt the push model, it is sufficient to change the week of coverage length, which consequently increases the IA input and decreases the stock on hold.

If the minimum preferable WOC period for the pull model is 8 weeks, a more mild approach would be maintaining an average of 10 weeks of coverage (WOC). To calculate the new stock on hold, the initial allocation quantity of the pull model is subtracted from the initial allocation plus the stock on hold of the push model, as shown in the formula below.

Stock on
$$Hold_{pull} = (SoH_{push} + IA_{push}) - IA_{pull}$$
(8)

According to the formula (8) and due to the fact that the initial allocation of the pull model includes much smaller quantities, it is logical that the stock on hold of the pull model will increase. While stock on hold is currently of 5.7%, the pull model would hold back on average 32.1% of the total produced items as seen in table 10.

Table 10. Total Stock on Hold AS/IS - TO/BE

B2C/B2	E – MM & MC – 1	FW 2016	
AS/IS		TO/BE	
Stock on Hold Units	SoH %	Stock on Hold Units	оН%
52,246	5.7%	290,973	2.1%

VI. Spaces Analysis

Given that much less stock is kept in local and stores' warehouses with the new pull model, and that about the same quantity has to be allocated between stores, boxes and main warehouses, it is important to analyze and consider in advance physical spaces available, that will be in surplus or shortage. Boxes are actually found within the main warehouse and they refer to stock that is physically divided and reserved for stores that a have a low space capacity. In 2016 in Europe, MaxMara and Max&Co covered in total 54,610 square meters (m²) of direct store and stock area, 34.2% of which were occupied by stores' warehouses and 65.8% by retail space. This total area was able to hold a maximum capacity of 822,220 clothing items, 90,170 on display in sale area and 732,050

in warehouses. However, for both safety and quality reasons the company decided to hold in store's warehouses an average capacity of only 643,100 items.

Table 11. Total Store Area – Retail & Stock Surface

	Area in m²											
	Total Area	Sale Area	Warehouse Area	% Retail	% Warehouse							
Total	54,610	35,942	18,668	65.8%	34.2%							
MaxMara	41,027	27,290	13,737	66.5%	33.5%							
Max&Co	13,583	8,652	4,932	63.7%	36.3%							

From the AS/IS analysis it also emerged that as it is now, the two brands have a density of 34 items per square meter including accessories, hanged items and laid out units. This last variable however, has a relatively high standard deviation of 82.12 meaning that some stores have a much higher and more significant density than others. In order to spot stores that have a high density and that need space attention, conditional formatting has been applied as seen in the example table below (see Figure 4).

	A6	\$	⊗ ⊘ (fx Max Ma	ıra					
_	Α	В	С	D	R	S	Т	U	V
1	Stores						Wareh	ouse Density	SKU/mq
2						AS/IS	T	O/BE	
3	Brand	Store Code	Store		Int WH	Int+Ext WH	Int WH	Int+Ext WH	Takes from:
4									
5	Total				34	31	28	25	
6	Max Ma	ara	,	ļ	32	29	27	24	
7	MAX&C	o.			40	37	29	27	
36	MM	100045	Roma via Condotti	Г	37	37	22	22	Box Reggio Emilia
37	MM	100046	Venezia		27	27	20	20	·
38	MM	100047	Bari		75	32	70	30	Ext. floor, same building
39	MM	100058	Udine		19	19	18	18	
40	MC	100059	Rimini		51	51	39	39	
41	MM	100065	Milano via Cuneo		26	26	25	25	
42	MM	100066	Varese		24	24	22	22	
43	MM	100069	Asti		26	26	24	24	
44	MC	100070	Padova		21	21	17	17	
45	MC	100071	Roma Cinecittà		127	29	106	24	External Warehouse
46	MC	100072	Parma		24	24	21	21	
47	MM	100075	Rovigo		38	38	35	35	
48	MM	100076	Firenze via Tornabuoni		245	33	182	24	External Warehouse
49	MC	100080	Torino		35	35	23	23	
50	MC	100081	Milano corso Vercelli		54	54	44	44	
51	MC	100083	Milano corso Vittorio		45	45	26	26	Box Reggio Emilia
52	MC	100084	Pavia		25	25	23	23	
53	MC	100087	Bologna		52	52	38	38	
54	MM	100091	Macerata		12	12	11	11	
55	MC	100093	Macerata		21	21	19	19	
56	MC	100095	Roma via Condotti		35	35	21	21	Box Reggio Emilia
57	MC	100100	Palermo via Ruggero Settimo		51	51	39	39	
58	MC	100101	Palermo via Sciuti		77	35	62	28	External Warehouse
59	MM	100103	Roma via Nazionale		12	12	11	11	
60	ММ	100104	Napoli piazza Trieste e Trento		17	17	16	16	
61	MC	100107	Verona		33	24	23	17	Ext. floor, same building
62	MC	100100	Mossina	Щ	14	1/	11	11	

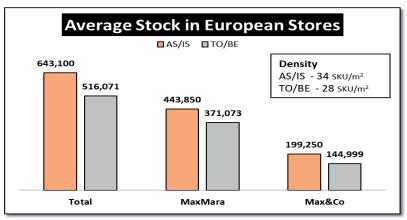
Figure 4. Warehouse Density – AS/IS & TO/BE

The significant part of this sub-analysis is the TO/BE simulation of spaces that calculates how much physical store and warehouse surface could be saved or is needed with the pull model. Since the average utilized store and stock-area capacity is decrease by 19.8%, 127,029 items are not physically present anymore in stores' warehouses and 3,528 squared meters are therefore freed (see Table 12). The 17% of warehouse space that is not occupied anymore, could be either used to spread out items and accelerate the searching process of sale assistant, which would be the case of stores with very high density, or could be possibly invested and transformed in display and retail surface. In a third case scenario, when the pull model is fully implemented and if warehouses are correctly managed, the possibility of closing some of the external and secondary warehouses that are not need anymore could also be considered.

Table 12. TO/BE Stock on Hold Simulation

TOI	BE Simulation of	WOC 8	
% Stock on Hold	Stock on Hold	Freed m ²	% Freed m ²
19.8%	127,029	3,528	17.0%
16.4%	72,777	2,186	14.2%
27.2%	54,251	1,342	25.1%

As it is possible to see in the graph below the average density of stores decreased from 34 to 28 SKU per square meter. This change in density is caused by the drop in the total allocation of stock in all direct stores.



Graph 4. Average of Total Allocated Stock in all European direct stores It is important to clarify to the reader that this specific part of the TO/BE simulation is slightly less accurate and harder to do, since it is not possible to know how exactly stores' warehouses are laid out and what they are used for. Some external warehouses for example are only used for windows' material, office space or other furniture. Moreover, at the beginning of the winter season the capacity of warehouses is inferior due to the higher volumes of winter clothing items. It is however interesting to have a general idea of how much space will be freed and if the utility of some external warehouses and boxes can be reexamined.

The two diagrams below (Figure 5 & 6) give an outline of the push and pull models. While secondary warehouses in Paris, London, Rome and other large cities are extremely important in the push model, since a large amount of stock is kept and distributed from there, their use is questionable in the new system, where a large portion

of the stock is now kept "on hold" in main warehouses. In the pull model boxes in main warehouses would disappear since stock not initially allocated is left pending and is not yet in any store's property and control. Its final allocation will be internally decided throughout the season depending on its GDO and the location where the SKU in question is most demanded and desired. Finally, the length of the arrows and the area of the stores (N squares) symbolically represent the initial allocation quantity of SKU that every store receives, explaining why in the second diagram these are much shorter and smaller.

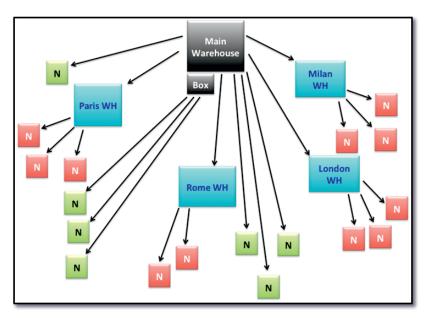


Figure 5. Push Model Diagram

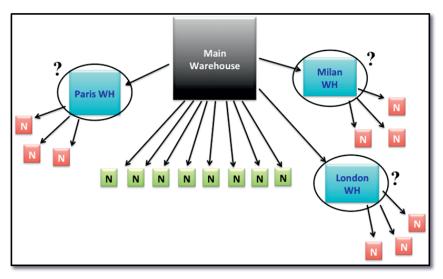


Figure 6. Pull Model Diagram

As seen in the diagram above (see Figure 6) the main warehouse is much larger than in the push systems since 25% more stock is now "on hold" within the warehouse. This brings to the conclusion that enlargement of the warehouse is necessary and has to be considered prior to the implementation of the system.

VII. Transfers Analysis

Until today transfers from store to store have been a major help and a significant portion of additional revenue to the company, giving to sale assistants the possibility to requests from other stores items that are desired by customers, but not present in that particular location. This helps not only to increase sales and revenues but also to fulfill the customers' satisfaction and provide the best possible service. In 2016 45,632 units were transferred in Italy only from the two brands MaxMara and Max&Co, which equals to 3.6% of the 1,272,720 total supplied items. However, transfers are not always successful and indeed only 62.1% of the transferred items are actually sold within two weeks (see Table 13 & Figure 7).

Moreover, from the total 66,706 total transfers, 24.7% were denied due to logistics problems such as shipping times, preordered items in stores or simply the store manager's decision to keep the item in his/her own store. Of these 16,473 not transferred items, only 5,680 or 34.5% are sold within two weeks in the initial store, meaning that

65.5% of these items could have been transfers without creating any problem in the original location.

Table 13. Total Received Transfer Requests

	Total Received Requests				
Transfer Requests AS-IS Italy 2017	Total Supplied	Received Transfers	% rec/sup	Sold within 2 weeks	% sold/rec
Total	1,272,720	45,632	3.6%	28,328	62.1%
Max Mara	730,116	35,335	4.8%	21,481	60.8%
MAX&Co.	542,604	10,297	1.9%	6,847	66.5%

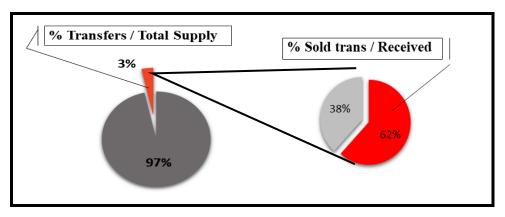


Figure 7. Percentage of Sold Transfer from Receive Transfers

Table 14. Total Denied Transfer Requests

	Denied Requests				
Transfer Requests AS-IS Italy 2017	Total	Denied	% den/req	Sold within	%
	Requests	Transfers		2 weeks	sold/den
Total	66,706	16,463	24.7%	5,680	34.5%
Max Mara	50,896	11,732	23.1%	4,003	34.1%
MAX&Co.	15,810	4,731	29.9%	1,677	35.4%

B2E/B2C Effect on Transfers

Business-to-consumer (B2C), more generally called e-commerce, occurs when businesses sell directly to consumers, through the internet and their webpages. This model, also commonly called "online shopping", was adopted by the Italian fashion house in 2014 and was a significant step in the e-commerce world since a very important priority for companies in the luxury industry is to provide to consumers a unique customer experience during their purchasing process (Maramotti, 2017). Luxury fashion brands strongly rely on direct and personalized service and customers' desirability.

Business-to-employee (B2E) is similar to the B2C model because it also uses information technology systems to facilitate retail operations, but it has the difference that the employees are primarily responsible for the sale, while the final consumer is not directly involved in the digital purchasing process. MaxMaraFashionGroup has only recently started to use this model in pilot stores with the goal in the first place to decrease store-to-store transfers and in a second time to increase sales and revenues. When a customer demands a SKU that is not available and present in the store momentarily the sale assistant asks the customer if she/he wants to digitally buy the item from the store's I-pad with the aid of the sale assistant. The customer is then invited to try the clothing unit(s) at home when it is delivered and bring it to the store for any possible problem such as size issue, pant length, additional look suggestions and others. If the item does not satisfy her expectations, she can either give it back to the store or send it back to the warehouse, as it occurs in B2C.

Operating B2E is not always as easy at is sounds and often both sale assistants as well as customers are hesitant to offer and accept this business option. This however, does not imply that the system doesn't work; on the contrary data has proven that in 2017 in Italy 8.4 items were transferred on average weekly in every MaxMara and Max&Co store. As seen in the table below (see Table 15) Max Mara stores transfer about 10.2 items per week while Max&Co only 5.8; this is mainly due two major factors, the first being the higher luxury desirability of the MaxMara brand, and the second due the much lower number of different Model-SKU that Max&Co has. As seen in the summary table below (see Table 15) B2E decreased transfers between Max&Co stores by 24% and it is therefore possible to assume that the digital commerce model is bringing positive results. In MaxMara stores on the other hand, physical transfers increased by 1% regardless of the implementation and availability of the B2E system. This means that there is still much improvement to be done and that transfers should not be stopped until B2E is fully active and effective.

Table 15. Impact of B2E on Transfers – Italy

		Transfers & B2E		
	B2E Italy 2017	Weekly Received	Impact of B2E	% Impact of B2E
BZE Italy 2017		Transfers	on Transfers	on transfers
Total		8.4	-0.5	-6.0%
Max Mara		10.2	0.1	+1%
MAX&Co.		5.8	-1.4	-24.5%

One of the main problems that also emerges from B2E and on which managers are strongly working, is the lack of control that the company has on franchisee stores. Non-direct stores are often not willing to use B2E due to the scarce margin that they make from it; items bought from B2E are indeed not voluntarily ordered by them in the wholesale process and if the customer brings the item back to the store they are left with an item that is not of their property. Two immediate solutions to solve this problem are to ask the franchisee to send the item back to the company in the case of unsuccessful sale or to buy it at the wholesale price and add it to their inventory. In the first case however, franchisees have to take a risk, and even if they accept to install the B2E system, there is no incentive for them to actually use it due to the small or inexistent profit margin that they make. The second option presents a better scenario but still does not balances the interest of the franchisees and the company, since there is always the risk of having to keep the additional item in stock if the customer decides to bring it back. The only reason for which they should therefore operate B2E is the willingness to satisfy their customers' demands, hoping that they become "returning customers".

In order to give real incentives to franchisees to use B2E it is necessary to give them a profit margin in each case scenario, which could be the difference between sell-in and sell-out price when the customer is satisfied with the item, and the option to send the item back to the company if the customer brings it back to the store.

The complexity of the process could appear discouraging at first, but it gives franchisee stores, who already have a smaller selection of models and SKU units, the possibility to offer the customer a valid alternative for receiving the desired item. While in direct stores for example, individual sale assistants are rewarded when completing a B2E sale, it is not possible to do the same in franchisees. Although franchisee stores are a minority, especially in Europe, this is an issue that needs close attention because centralization of operations and services is essential in retail. When the customer is aware of a service that the brand offers, he/she expects to receive the same service level in every

store of that brand. The flow diagram below shows all possible options that the company and the franchisee have if the B2E system is provided and installed in a franchisee store.

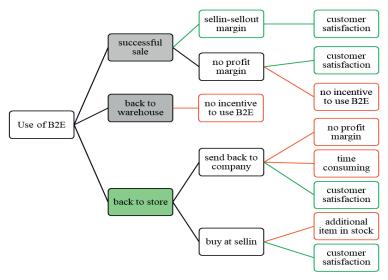


Figure 8. Implementation of B2E in Franchise Stores

VIII. Conclusion

After having carefully analyzed, considered and compared data results of the AS/IS and TO/BE analysis, it is possible to conclude that the implementation of the pull model would almost certainly optimize SKU and sales efficiency in Max Mara's direct retail, especially if carefully managed by specialists and controlled with advanced information systems. On one side, the pull model would increase the number of sales and reduce the possibilities of missed sale opportunities, but on the other hand it would increase costs of shipments, time required in stores to receive and scan deliveries, as well as create costs linked to the management and to the enlargement of the central warehouses.

As it is today, the company does not have the facilities to provide a fully functioning and effective pull inventory management system based on eight weeks of coverage, and the risk of switching to something that has never been done before in the company would be unreasonably high. However, if the company decided to implement the pull model despite its downsides, it would be suggested to slowly and partially implement the system step by step, starting from an intermediate 12-WOC model and

then gradually switching to the ideal 8-WOC pull model, which has been simulated in the analysis.

From the AS/IS analysis it emerged that 94% of the total stock is initially allocated in retail points and is sufficient to cover stores for more than 19 consecutive weeks. The TO/BE simulation brought to the conclusion that 32.1% of stock is on hold, and therefore ready to cover possible missed sale opportunities in every location. Even if service levels went down by 2% from the old inventory management system, the pull model would still benefit retail operations increasing customers' satisfaction throughout the season.

The implementation of the pull model needs to be done very carefully not only due to the slightly lower service levels in the new system, but also due to the drastic logistical changes. Indeed, this project opened many other cost-related issues and logistics questions that could not have possibly been analyzed in this study since time was limited and the focus of the analysis was on direct retail. Given that the company is aware of both downsides and benefits of the new inventory management system, the question that emerges is whether managers would be willing to implement the new pull model, which optimizes efficiency on the retail side but increases costs and logistics issues on the other end.

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Section II: The Social Sciences

The Difference is in the Tales: The Relationship Between Insurance Regulations and Accessible Abortion Care

Emma J. MacDonald (Sociology)¹

This pilot study was conducted in order to determine the correlation between restrictions on federal, state, and private insurance in regards to abortion and the accessibility of abortion care for women in the United States. While working on a storytelling project for the advocacy organization Physicians for Reproductive Health, patterns in the stories about insurance coverage and abortion care were noticed. Many women, despite having insurance, either through a private provider, the government, and/or their employer, were forced to pay some or all of the cost of the abortion care they sought. This necessity was largely due to policies such as the Hyde Amendment, which prevents federal funds from being used for abortion care except in the cases of rape, incest, and immediate danger to the mother's life. The Hyde Amendment mainly affects Medicaid users and those who use state equivalents. Indirectly, the Hyde Amendment affects women in marginalized social groups, such as women of color, poor women, disabled women, LGBTQ+ women, women living in rural communities, and others. These women already have trouble accessing safe and affordable health care because of the systemic disadvantages they face.

I. Introduction

"She asked me, 'What is different from the last one?'

I replied, 'A heartbeat.'"

This is a conversation between a doctor and their patient when the latter discovered that her insurance company would not cover her second abortion. Both pregnancies she had were not viable, but the difference in detail – the heartbeat of the second fetus – prevented her from receiving affordable abortion care.

Every day since the administration of the 45th president has taken office in the United States, a story has been shared as part of a Physicians for Reproductive Health project. These stories come from individuals all over the country – patients, providers, and advocates alike – through an online submission form. These accounts shed light on how individuals are affected by policies to show resistance against said policies and laws

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¹ Written under the direction of Dr. Bernadette Ludwig in partial fulfillment of the Senior Program requirements.

that pose a threat to safe and accessible reproductive health care. The stories that are submitted are tales of loss, love, gratitude, determination and indignant righteousness. Women share their experiences with abortion and organizations such as Planned Parenthood, while providers share the stories of the women they have cared for and the reaffirmation they feel that they have chosen the right profession, especially when their right to practice is challenged every day by politicians.

However, restrictions on insurance in the context of abortion care can produce heart-wrenching moments such as the one above. While many women have health insurance, policies such as the 1976 Hyde Amendment – a law that prevents federal funds from being used for abortion care – as well as state and more local legislation regulate under what conditions, if any, an abortion may be paid for by an insurance company. These laws and policies affect women nationwide, but affect women in marginalized social groups in particular. These women are often systemically prevented from easily accessing safe and affordable abortion care. An insurance company's obligation or decision to deny coverage for abortion care can put the health of women at risk, despite the supposedly well-meaning policies and values they stand on.

II. Literature Review

Individual access to reproductive health care, specifically abortion services, is restricted as a result of a number of federal and state regulations on funding. Most prominently, the Hyde Amendment,² which was passed in 1976, prohibits Medicaid³ insurance from covering abortion procedures, except in the cases of rape and incest, or if a physician determines that the life of the mother is immediately endangered. According to the Guttmacher Institute (2017), ten states have laws that make it illegal even for private insurance companies to cover abortion services. 21 states pose restrictions on abortion coverage for individuals who work in the public sector, such as federal, state, and local governments. Similar to the rules of the Hyde Amendment, these restrictions,

² No federal funds and no trust funds that the federal government is authorized to use may be expended for abortion or health benefit plans that cover abortion. No federally owned or operated health care facilities, nor any individuals employed by the federal government may provide abortion services. State Medicaid funds are also restricted in this manner (House of Representatives, 2014).

³ Eligibility for Medicaid is "based on modified adjusted gross income (MAGI) as required by the Affordable Care Act." Eligibility levels vary in each state relative to the federal poverty guidelines, as of April 1, 2016 (Centers for Medicare and Medicaid Services, 2017).

under the most liberal of circumstances, cover abortion care only if the pregnant individual was raped, is a victim of incest, or if the health or life of the mother and/or the fetus is severely threatened (Guttmacher Institute, 2017). There are also cases where abortion services are not covered under insurance plans because private insurance companies or individuals' employers simply choose to not cover it.

These regulations have been shown to have the most significant negative impact on women from poor or low-income households, women of color, young women – ranging from their adolescent years to their mid-twenties, queer women, disabled women, and/or women who live in rural locations (Jackson, 2007; Jones, et al., 2011; Jones, et al., 2013; Ely, et al., 2010; Hussey, 2010; Jones, et al., 2010; World Health Organization, 2012). Women belonging to these demographics are more likely to be recipients of Medicaid, which, as has already been established, limits a woman's access to abortion unless she is seeking the procedure under these very specific circumstances.

Despite these limitations, studies have found that abortion rates are higher among women of these marginalized demographics (Jones, et al., 2011; Finer, et al., 2011; Hussey, 2010), and/or women who are covered by Medicaid insurance (Jackson, 2007; Jones, et al., 2013; Hussey, 2010). Some scholars speculate that the reason for these increased rates of termination are due to the financial stress that bearing and raising a child would create (Jones, et al., 2013; Hussey, 2010; Jones, et al., 2010), while others argue that the initial cost of the abortion procedure is too great for many women, and they are therefore more likely to carry the pregnancy to term (Finer, et al., 2011; Hussey, 2010; Dennis, et al., 2011). Jones, et al. (2013) add that "the financial costs of accessing abortion services [extend] beyond paying for the procedure. Two thirds of patients [report] that they incurred additional expenses for transportation... lost wages... [and] childcare" (p. 176). Ely, et al. (2010) and a publication by the World Health Organization (2012) support this finding. These additional expenses are multiplied in states where abortion care is required to include a waiting period or pre-procedure counseling. In 27 states, there is a mandatory waiting period, typically 24 to 72 hours, between a consultation and when an abortion can actually be performed, which often necessitates multiple trips to a clinic or a hospital; and in 14 states, in-person counseling also necessitates more than one trip (Guttmacher Institute, 2017). This means that in addition to the cost of an abortion procedure, travel, lodging, and childcare costs are also necessary for more than one day. Van Doorslaer, et al. (2006) suggest that those with less disposable income will not follow through with an abortion procedure. They state, "...[G]iven need, higher-income people are more likely to seek specialist care than lowerincome people" (p. 180). In other words, if an individual has more money to spend on

specialist doctors' visits, they are far more likely to make and follow through with those appointments than someone who has a lower income. This means that insurance restrictions on abortion care are classist and, by extension, racist. Poor women are subject to greater financial difficulty in either circumstance – having an abortion or carrying the pregnancy to term.

Noteworthy is that while many women in the United States, including poor and low-income women, have some form of insurance coverage, a majority of those who both have insurance and underwent an abortion procedure did not use their insurance to pay for the service. This was found to be true because their insurance plans typically did not cover the abortion for one reason or another, whether because of regulations or by choice (Jones, et al., 2013; Dennis, et al., 2011; Jones, et al., 2010). Many individuals were also unsure if their insurance plans covered abortion, so they did not use insurance. This means that a majority of women paid out-of-pocket – an average of \$485 for first-trimester abortions and an average of \$854 for second-trimester abortions (Jones, et al., 2013) – in order to cover some or all of the cost of this aspect of reproductive health.

As the research shows, federal and state regulations surrounding insurance coverage of abortion procedures have an undeniable impact on certain demographics in the United States. Marginalized groups such as queer women, transgender men, women of color, disabled women, women in low-income households, as well as many others, are more heavily impacted by the lack of coverage for abortion care than their straight, white, middle class, and/or able-bodied neighbors. While many regulations do not explicitly limit access for certain social groups, the indirect results impact the groups greatly.

III. Data and Methods

This pilot study was conducted to gain a better understanding of how individual access to reproductive health care, specifically to abortion services, or lack thereof is restricted by insurance regulations in the United States.

From January 20th until early March 2017, stories were collected through a storytelling project run by Physicians for Reproductive Health.⁴ In the process of editing and tagging the stories, patterns in content were recognized. There were over 100 stories that recounted the impacts of insurance regulations on reproductive health care. Many of the individuals who shared their tales lamented over the fact that they ended up needing to pay for their abortion care despite the fact that they were under some form of insurance coverage.

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⁴ This is an ongoing project. Physicians for Reproductive Health vows to keep publishing stories until reproductive rights are no longer under threat.

A total of 319 stories were submitted. 45 stories explicitly discussed abortion care and insurance regulations. This subsample of 45 stories was used for this study. The following themes were identified: a) if the individuals had insurance coverage, b) if their insurance fully covered the cost of their abortion procedure, and c) what state the individual was from. It was also determined whether or not the individual had private insurance or was covered under state or federal Medicaid. Stories from the various states were grouped together by region and division of the country based on the divisions put forth by the United States Census Bureau. With this information, data was gathered on which regions and divisions of the country had the greatest access to full insurance coverage for abortion care. One of the 45 stories that were analyzed was not accompanied by an identifying state. As a result, the percentages discussed in the findings were out of 44.

IV. Findings

Out of the sample size of 45, 40 individuals (88.9%) were reported to have some form of insurance. Ten of those 40 (25%) were recipients of federal Medicaid or their state equivalent, while the rest had insurance through private companies or their employers, which include the government and the United States military. 28 of the 40 individuals with insurance (70%) reported that their abortion procedures were not fully covered under their insurance plan, for one reason or another. It was unclear if two of the 40 (5%) individuals' abortion procedures were fully covered by their insurance or not.

Coverage by Location

Table 1 shows the number of stories submitted from each region and the divisions within those regions. The data show that only one story (2.3%) was submitted from Division 1, and this individual had insurance, but it was unclear if the abortion procedure was fully covered or not. 13 stories (29.5%) were submitted from Division 2: five stories reported the individuals having insurance and having their abortion care fully covered; six had insurance but did not have their abortion care fully covered; one had insurance, but it was unclear if the abortion was fully covered by the insurance; and one had no insurance at all. In Division 3, 11 stories (25%) were shared, three of which reported full insurance coverage, and eight reported having insurance but not having their procedure covered. Division 4 reported one individual (2.3%) having insurance but not having abortion care coverage for their insurance plan. Division 5 had five stories (11.4%): one with full insurance coverage for their abortion, three with insurance but no coverage for abortion, and one entirely without insurance. There were no stories from Division 6. From Division 7, one individual (2.3%) reported having insurance but not being fully

covered by their insurance for abortion care. Division 8 was home to two stories (4.5%) of having insurance but a lack of coverage, and Division 9 hosted ten individuals (22.7%), one with full insurance coverage, six with insurance but no coverage, and three with no insurance at all.

These statistics imply that states on the East Coast and West Coast generally have more liberal policies on abortion care, allowing women to get insurance coverage for the procedure. Two of the four states with the lowest median annual household income (less than \$45,000 per year), Alabama and Mississippi, are part of Division 6, a subdivision of the southern region, from which no stories regarding abortion care and insurance coverage were submitted. Policies tend to be more restrictive in this region, as well, as was stated by an anonymous affiliate of Physicians for Reproductive Health in an interview about abortion care, and these factors contribute to the lack of abortion providers in these states. According to the Guttmacher Institute (2017), in 2014, Alabama had nine abortion providers in the state, and Mississippi only had two. In comparison, California had 512 abortion providers, New York had 218, and Massachusetts had fortythree. In other terms, Alabama had one provider for every 113,887 women; Mississippi had one provider per 321,215 women. There was one provider per 16,723 women in California; one provider per 19,632 women in New York; and in Massachusetts, there was one provider for every 33,689 women. Despite the significantly higher populations of women in California and New York, especially, the disparity between the number of women and the number of abortion providers is far greater in the southern states.

Table 1: Story Locations

Region	Division	Number of Stories
Northeast	1	1
Northeast	2	13
Midwest	3	11
Midwest	4	1
South	5	5
South	6	0
South	7	1
West	8	2
West	9	10

Struggling for Funds

The data alone show the negative effects insurance restrictions have on access to abortion care; but the stories of women illustrate this impact on a more personal level. For example, one provider's story tells of a patient who was forced to carry a fetus with "a significant brain abnormality that would have resulted in nearly constant seizures, profound disability, and likely very early death." As a federal employee, the patient's health insurance would not cover the cost of abortion care.

Jackie and Brad⁵ struggled to come up with the thousands of dollars needed to have the procedure in the hospital, and after three weeks of trying to collect the money, they gave up. Dejected, they decided to just wait for their baby to be born or to die in utero. Many weeks later, Jackie stopped feeling fetal movement, and an ultrasound confirmed that her baby had died. Her only option at that point was to labor and deliver her dead daughter.

However, in some circumstances, insurance coverage was the only way individuals could financially proceed with an abortion, despite the hindering regulations. One couple for whom this was the case also faced the heartbreaking news of fetal anomaly. While there was little risk of the fetus dying in utero, it was likely that once the child was born, she would not survive, and she certainly would not survive without severe disability.

They chose to end the pregnancy. Kristen was now 23 weeks pregnant. Her insurance company did not cover abortion unless it was medically necessary. Because Kristen was healthy, she and her doctor had to go to great lengths to convince the insurance company that the procedure was medically necessary for the baby. Ultimately Kristen was able to have her insurance cover the abortion, but if she had been on Medicaid or worked for the state or federal government, she and Steve would have been left with overwhelming medical bills.

Despite the fact that Kristen was ultimately able to have her abortion procedure covered, the amount of convincing it took for the insurance company to cover it would have been utterly unnecessary if there were no restrictions on access to abortion care at all.

Indirect Impacts

These regulations on abortion care are implemented by both federal and state governments. The Hyde Amendment already limits access to abortion care by nature, but

⁵ All names changed for privacy.

an anonymous affiliate of Physicians for Reproductive Health explains restrictions on another level:

There are so many hoops that you have to jump through to prove rape by the standards that the government requires in order for it to be deemed... an abortion that can be covered because of rape. There have to be police charges, rape kits have to be completed. There are so many things that women... [must] go through just to prove that they've been raped.

There are also some states that have laws restricting private insurance companies' ability to cover abortion. For example, "...in North Dakota, no one can get an insurance plan that covers abortion care... It just doesn't exist. There are no private insurance plans in North Dakota – in the state – that cover abortion care," as an anonymous affiliate of Physicians for Reproductive Health explained.

This data indicates that the restrictions placed on insurance companies and insurance policies do, in fact, impact individuals' ability to access abortion care. The fact that even with insurance, many people still end up paying for some or all of their abortion procedure is evident in the statistics: the rates at which individuals cannot use their insurance to cover the cost of an abortion are startlingly higher than the rates at which insurance plans do cover abortion care. The lack of stories from certain divisions and overall regions can also be indicative of how accessible abortion care is to individuals; if abortion care is not at all accessible, it is more difficult to be able to share stories and gather statistics about the extent of the care and insurance coverage.

V. Conclusion

The restrictions placed on insurance companies, insurance policies, and women's bodies, such as the Hyde Amendment and similar, more local laws, severely impact the ability of women from varying walks of life to access abortion care. This pilot study shows that even though a vast majority (88.9%) of the sample size have some form of health insurance, on average, over two out of three women must pay for some or all of the cost of their abortion. These regulations have a larger impact on women of color, poor women, and/or disabled women. Little research has been done on the accessibility and comprehensiveness of reproductive health care for transgender men, so it is difficult to say exactly how insurance regulations on abortion care affect them.

While the sample for this pilot study was small and specific information on the women's demographics (e.g. age, race, socio-economic status) are not available, the findings are important. The sparse abortion care in some states, the cost of terminating a pregnancy, and the indirect impacts of insurance regulations cannot go unnoticed or

unchanged. In an effort to expand the data on this issue and to hopefully implement positive change, more in-depth research should be conducted. The use of an online submission form limited the sample population to individuals who have access to and knowledge of social media platforms, implying a certain level of socioeconomic standing and, potentially, age, education levels, and physical and/or mental ability. With more research including a more diverse sample population, this issue is likely to become more recognized and the individuals and social groups who are most affected will be acknowledged. Greater awareness of this social problem will mean greater progress in guaranteeing safe and accessible abortion care for women across the nation.

VI. Acknowledgements

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Section III: Critical Essays

The Palestinian Revolt against the British, 1936-1939: Empowering Palestinian Voices and the Effects the Revolt had on the Creation of Israel

Hadeel Mishal (History)¹

Following the collapse of the Ottoman Empire after World War I, the Middle East was broken into clusters. The League of Nations was quick to seize power in Palestine, and established the British Mandate of Palestine in 1920, which thereby relinquished the Palestinians' power to self-govern, and affirmed a British presence in the region. From 1936-1939, in an act of anti-imperialist and anti-Zionist institutions, Palestinians revolted against the British. This Revolt has been lost in history, overshadowed by the creation of the State of Israel in 1948 and the ongoing genocide of the Palestinians. However, this essay will argue that the Palestinian Revolt was significant for empowering the Palestinian people, particularly as a peasant-led movement, and that the repression of the revolt indirectly facilitated the establishment of the state of Israel. When the British were fighting back, they used their dominance to exile and murder many Palestinian leaders who were especially resistant to imperialist powers. The violent British imperialist policies, by silencing indigenous Palestinian voices, created a vacuum of power and ultimately led to the capacity for Israel to be established.

I. Background Information

In order to grasp the roots of the Palestinian Revolt against the British, a few key points need to be deconstructed and explained. Some of these essential points are Zionism, The Balfour Declaration, the British stance on a Jewish Homeland, and the historic origins of Palestine. These terms, documents, and politics all inter-link in the way that imperialism prevailed in Palestine, and the ways in which the British did not give the Palestinians autonomy to govern themselves.

Zionism is the movement which aims to establish a Jewish homeland in Palestine, using the rationale that this was the place where Jews believe they are destined to be. The spread of Zionist ideology was prevalent during the end of the 19th century, and into the 20th century in large part because of the rampant anti-Semitism that was

¹ Written under the direction of Dr. Lori Weintrob in partial fulfillment of the Senior Program requirements.

present in Europe. The movement gained momentum when Theodor Herzl published *The Jewish State* in 1896, a book about escaping European anti-Semitism through building a Jewish state in Palestine.² For example, the Russians and Romanians were taking part in pogroms aiming to kill and exile Jews from their homes. Many fled to other nations or regions, including to Palestine.³ In 1882, the population of Jews in Palestine was 24,000, or 5% of the population. Following a wave of migrations in 1914, this number increased to 85,000.⁴ Between 1922 and 1931, this number was further increased to 175,000.

It is important to note that this movement was largely rooted in European Jews, not the indigenous ones of the Middle East, who had been living in the region for centuries before. In fact, "of the 716,000 Jews living in the new state six months after it declared its independence, 463,000- that is, nearly two-thirds- had been born abroad, according to the November 11, 1948 census." Furthermore, Zionism was backed by European nations, where either leaders or right-wing groups played up fear of Jewish and foreign influences. Francis Nicosia, an American scholar on the Holocaust and the Arab World, discusses this idea further:

Within Germany, Hitler actively intervened in the debate over Palestine in 1937 and early in 1938. He insisted on the stepped-up promotion of Jewish emigration and deportation by all possible means, regardless of destination. According to Hitler, Palestine was to continue as a prime destination for German Jewish refugees and became an even more significant factor in Nazi emigration policies in 1938 and 1939 as the Gestapo collaborated with underground Zionist organizations in the "illegal" immigration of Jewish refugees past the British blockade in Palestine.⁶

Nicosia's commentary on Hitler and his views on encouraging migration to Palestine show that Zionism was an idea that was pushed forward by people who were anti-Semitic

³ Victor Kattan, From Coexistence to Conquest: International Law and the Origins of the Arab-Israeli Conflict, 1891-1949, (London, England: Pluto Press, 2009), 9.

² Wendy Pearlman, *Violence, Nonviolence, and the Palestinian National Movement*, (Cambridge, MA: Cambridge University Press, 2011): 27.

⁴ Neville J. Mandel, *The Arabs and Zionism before World War I* (Berkeley: University of California Press, 1976: xxiv.

⁵ Gilbert Achcar, *The Arabs and the Holocaust*, (New York, NY: Metropolitan Books, 2009): 11.

⁶ Francis Nicosia, "Arab Nationalism and National Socialist Germany, 1933-1939: Ideological and Strategic Incompatibility," *International Journal of Middle Eastern Studies* 12, no. 3 (November 1980): 358-359.

in order to get rid of their Jewish populations. This is significant, because it is essential to grasp the idea that Zionism was started as a movement to escape persecution for Jews, but which resulted in the diaspora of millions of Palestinians.⁷ These connections are important, because they show how different groups of people are interconnected, and how frequently history manages to repeat itself.

When discussing the Palestinian-Israeli Conflict, one of the first questions to come up is, who does Palestine belong to? This is a valid question, especially for an audience that may not be well-versed on the politics and happenings of Palestine during the 20th century. In 1920, there were 77,000 Christians, 76,000 Jews, and 547,000 Muslims in Palestine. There is large debate over who settled in the land first, who has ownership over the land, and what should be done with it. Although this concern is valid, it erases the bigger picture. To narrow such a large, controversial, sensitive topic to who lived in Palestine first, is to insult the history, integrity, and struggle of the Palestinian people. This is because analyzing the conflict from this lens invalidates the painful experiences of the Palestinians. Let us say that a scholar came up with the conclusion that the Jews were there first, and they therefore have the right to push Zionist ideals and build their homeland, does this happen at the expense of the Palestinians? Is their suffering and genocide worthwhile, because the land historically belonged to Jews? The answers to these questions may vary, but the point is that this is a relatively modern issue, because it happened in the 20th century. At this point in history, it is essential to leave people with their humanity, and genuinely grasp an issue by seeing the different perspectives of people, and how these perspectives influence the lives of millions.

To say that Palestine belongs to the Israelis because they were in the region first oversimplifies the history, culture, and being of Palestinians, because it takes away their right to exist peacefully in the place they have called home for centuries. In 1915, when Palestine was still a part of the Ottoman Empire, the population was 78% Muslim (590,000), 11% Christian (82,498), and 11% Jewish (83,794).8

The Balfour Declaration of November 2nd, 1917 is a pivotal point in understanding the roots of the Palestinian Revolt against the British. This letter expressed Great Britain's support of a Jewish Homeland in Palestine to Lord Rothschild, a member of one of the most prominent Jewish families in the world. The letter was written by British Foreign Minister, Arthur James Balfour, and stated that "His Majesty's Government view with favour the establishment in Palestine of a national home for the

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⁷ Kattan, From Coexistence to Conquest, 2.

⁸ "Demographics of Israel: Population of Israel/Palestine," jewishvirtuallibrary.org, n.d.

Jewish people, and will use their best endeavors to facilitate the achievement of this object...I should be grateful if you would bring this declaration to the knowledge of the Zionist Federation." Balfour goes on to refer to "the non-Jewish communities," beginning to erase the identity of the Palestinians by othering them as non-Jewish people. In this document is significant in understanding the British Revolt, because it reflects the lack of consideration that the British had for the Palestinians. By not even referring to them by their nationality, Balfour strips the Palestinians of their identity and sets the precedent for how the British and Zionists will treat the Palestinians. Rashid Khalidi, author of *Iron Cage: The Story of the Palestinian Struggle for Statehood*, explains that this Declaration resonated with the British support of a Zionist state:

The mandatory power was specifically called upon to extend all possible assistance to the growth and development of this national entity, notably by encouraging Jewish immigration and "close settlement on the land." The tiny Jewish community of Palestine, composing about 10 percent of the country's population at the time, was thereby placed in a distinctly privileged position. By contrast, the Arab majority, constituting 90 percent of Palestine's population, was effectively ignored as a national or political entity. While the Mandate's twenty-eight articles included nine on antiquities, not one related to the Palestinian people per se: they were variously and vaguely defined as a "section of the population," "natives," or "peoples and communities." As far as Great Britain and the League of Nations were concerned, they were definitely not a people.¹¹

Here, Rashidi captures the way the British were consistent with their treatment of the Palestinians, which shows why the Palestinians felt the need to revolt against them. By stripping them of their identity, and by extent, their humanity, the British allow for the Palestinians to be treated as second class citizens. The British, in other official documents, begin to refer to the Palestinians by their names, but generally with a negative connotation

II: Analyzing Sources

⁹ "Balfour Declaration: Text of the Declaration," jewishvirtuallibrary.org, n.d.

¹⁰ Rashid Khalidi, *The Iron Cage: The Story of the Palestinian Struggle for Statehood* (Boston, MA: Beacon Press, 2006), 32.

¹¹ Khalidi, The Iron Cage, 33.

For this thesis, a plethora of resources were used. One source which has proven useful to the construction of this thesis is *The Iron Cage: The Story of the Palestinian Struggle for Statehood* by Rashid Khalidi. In his book, Khalidi is able to contextualize the Palestinian-Israeli conflict through the lens of the struggle for statehood. However, he sets up his book to provide a solid history, which serves as the foundation of his book. *Iron Cage* becomes useful to the thesis because it contains important information on the Revolt, as well as a means of making a concise, comprehensive understanding of the history behind the movement. Khalidi heads the Middle East Institute at Columbia University, and has written more than eighty articles pertaining to Middle Eastern history and politics. This shows that Khalidi is a valid source of information, because he has the necessary credentials to write about the Palestinian-Israeli Conflict.

Another important source is "The Palestinian Arab Revolt of 1936-1939," by James Jankowski. This article helped in conducting research, because it provides a general history of the events in the Revolt, but with details on the particularly important events, which was helpful because most other sources are focused on specific events in the Revolt. This article gave me all the information I needed on the Revolt so that I may find more substantial sources to analyze them further. Also, James Jankowski is a Middle Eastern historian who has the credentials to write about the Revolt.

III: Life for Palestinians under the British Mandate of Palestine

Life for the Palestinians under the British Mandate was meager. Palestinians were treated as second-class citizens in their own home, and were angry that after being freed from the Ottomans (who they were with for four centuries), they were once again being ruled by a higher power. In the *Churchill White Paper*, a response from Winston Churchill, the Prime Minister, regarding the Arab concern over the Balfour Declaration, he states "these apprehensions, so far as the Arabs are concerned, are partly based upon exaggerated interpretations of the meaning of the Declaration favouring the establishment of a Jewish National Home in Palestine, made on behalf of His Majesty's Government on 2nd November, 1917." Here, Churchill's tone and diction seems to demean the concerns of the Palestinians regarding their land being misused and given away. His use of the phrase "so far as the Arabs are concerned" singles them out and makes them the other, thereby creating a split between them and the Jews. Likewise, he is confounded by their worry, saying that is based on "exaggerated interpretations" of the document at

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¹² Winston Churchill, *The Churchill White Paper*, (United Kingdom: 1922), 1.

hand. By doing this, Churchill releases to the Palestinians, and the general public, a lack of care for their own concerns, and invalidates them.

Donna Robinson Divine, who wrote "Islamic Culture and Political Practice in British Mandated Palestine, 1918-1948," described that:

Palestinian political activity depended upon and made use of the political resources of the Ottoman Empire where family status, personal authority and local autonomy had recognized meaning and value. When that era ended abruptly with the defeat of the Ottoman Empire during World War I, familiar patterns of political organization and behavior resumed, but they were no longer relevant ¹³

This means that off the bat, the British instilled changes in how the autonomy would work for the Palestinians, and it was different from what they were used to. Instead of valuing the traits the Palestinians deemed important in their autonomy, it was not relevant, which seemingly shook the core of their identities and practices. Despite this:

Experience of Western rule, full as it was for Palestinians of dissonance and antagonism, Palestinian political leaders [were convinced] to retreat to family networks-to be wary of broader political alliances and to attack large-scale economic development, both of which had been set in motion in an environment hostile to the primacy of their traditions and consequently impossible to affirm.¹⁴

This shows that the Palestinians attempted to hold onto their autonomy the way they were used to it during the Ottoman Empire. Nonetheless, Palestinian leaders did take on something new- attacking large scale economic development. This was done in the face of being ruled by a people who did not understand, or quite frankly, care for the traditions which the Palestinians engaged in, which stirred angry Palestinian sentiments. Moreover, because Palestinians under the Ottomans did not have much autonomy, they were starting to think of themselves in "national terms as a people... [and] this was only one of their overlapping senses of identity, which included being part of the larger Arab people and of Greater Syria, as well as having other religious, local, and familial identities." This was significant, because this was the first step to establishing a state: having a national identity.

¹³ Donna Robinson Divine, "Islamic Culture and Political Practice in British Mandated Palestine, 1918-1948," *The Review of Politics* 45, no. 1 (1983): 72.

¹⁴ Divine, "Islamic Culture and Political Practice in British Mandated Palestine, 1918-1948," 88.

¹⁵ Khalidi, *The Iron Cage*, 32.

The Allied Powers had promised to support Arab independence during World War I, but lacked the commitment to their words. In the face of their state being colonized by the British and the Jews, the Palestinians almost had no means of diplomatically fighting for their rights. Because they had been occupied for centuries by the Ottomans, "the Palestinians had no international sanction for their identity, no accepted and agreed context within which their putative nationhood and independence could express itself, and their representatives had no access whatsoever to any of the levers of state power." Here, Khalidi unloads a lot of information by explaining that because they lacked a national identity that was well-known, it was hard for them to fight for their freedom. Also, their leaders were not equipped with the diplomacy or resources to take on a battle with the British. As stated by Khalidi, "none of the top appointees of the mandatory administration outside the judiciary were Arab," and this was the essence of the root of the Palestinian problems with the British. Even when the new British High Commissioner, Sir Wauchope pushed his superiors in the Colonial Office in London for the establishment of a Palestinian Arab legislative council, pro-Zionist politicians defeated this proposal in the British Parliament, frustrating the Palestinians, especially because "neighboring Arab mandates, especially Syria, Iraq, and (earlier) Egypt, had made strides towards sovereignty." The Palestinians, under the British, did not have representation in the decisions that the government made, which supplemented them a reason to revolt.

According to *The Palestine Royal Commission Report* of 1937, there was a large influx of Jewish immigrants from 1931-1936. The records indicate that in 1931, 4,075 Jews immigrated into Palestine. The numbers grow to 1932-9,533; 1933-30,327; 1934-42,359; 1935-61,854; 1936-29,727, respectively. This was due to the rise of Nazism and Fascism in Europe. In a matter of six years, the population of Jews increased in Palestine to 177,895, which reflected a large shifting of the population. When the Jews came into Palestine in large masses, this changed the socio-political order that was in place, and put the Palestinians as second-class citizens.

IV: Economic Boycotts

During the 1920s, the Jews in Palestine were becoming more affluent, and rising to power. Indeed, "from 1921-1929, Jewish land possession nearly doubled, dozens of

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¹⁶ Khalidi, *The Iron Cage*, 39.

¹⁷ Naseer H. Aruri and Samih K. Farsoun, *Palestine and the Palestinians: A Social and Political History*, (Boulder, Colorado: Westview Press, 2006), 90.

¹⁸ Kattan, From Coexistence to Conquest, 11.

new settlements were established, and Jewish owned enterprises multiplied."19 At the same time, the Yishuv, a term to describe the Jewish residents of Palestine before 1948, were founding character necessary for a state:

> It created an elected national assembly, an armed defense force, and an array of institutions to manage agricultural collectives, immigrant absorption, and banking. An encompassing labor union served as an engine of employment, public works, and economic self-sufficiency. Waves of immigrants brought human and material resources. Effective champions outside Palestine offered both funding and lobbying with foreign governments.²⁰

This shows that although the migrant Jews were not being integrated into society with the Palestinians, they were building their autonomy by establishing elements like an armed force, banks, and settlements. Also, this reflects the upper hand that the Jews had when establishing their national identity, because the Palestinians did not have foreign governments to find and lobby on their behalf.

Economic opportunity for Palestinians was on a downward spiral, because Zionist leaders made sure that the Jewish economic sector was growing and hiring Jewish immigrants. The Ha'avara, an agreement between the Nazis and the World Zionist Organization, allowed for Jews leaving Germany to import large amounts of capital into Palestine. This allowed for "wealthy Jews to increase their investments in industry, building, and citriculture."²¹ This meant that the Jews were allowed to bring their money with them to Palestine, where they could further invest in business, and keep hiring Jewish workers over Palestinians

As a result of the growing presence of Jews that the British allowed into Palestine, the lack of economic opportunity for peasants, and the British refusal to establish the Palestinian people, there was an outbreak of anger, violence, and nonviolent protest. The Palestinians came together to find the Arab Executive, a pan-Arab delegation meant to show unity to the British. The AE believed that "the Jewish people held no right to a national home in Palestine, urged a ban on the transfer of lands to Jewish control, and demanded a halt to Jewish immigration."22 The Palestine Communist Party contributed to this movement by handing out pamphlets to Jews in Tel Aviv, encouraging them to stand

¹⁹ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 35.

²⁰ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 36.

²¹ Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," The Modern Middle East (1993): 184.

²² Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 30.

up against Zionism. They pushed these ideas forward to the Jews by saying that Zionism was the root of their issues, and that this movement was pushing Jews into a dead end. The Party was able to acknowledge that "to save the Jewish community in the country from bloodshed, and to shake the country free from the oppressive imperialist yoke, it was necessary for the Jews to form a united front with the Arabs." This was important, because it shows that in some capacity, there were Palestinians who tried to create unity between the Arabs and the Jews.

The Palestinians were able to successfully mobilize an economic boycott to really bring action to their ideas. One of the ways this was achieved was through the Arab Higher Committee, which was a new country-wide organization that successfully united the Arabs and "gave official sanction and national leadership to the strike."²⁴ This committee was founded by the Palestinian parties and national committees as a coordinating body to control the economic boycott through a united front.²⁵ Further, the AHC "represented all political factions and social sectors of Arab Palestinian society and announced its goals to be the complete cessation of Jewish immigration, the prohibition of land transfer to Jews, and the establishment of a national government responsible to a representative faction."26 The AHC was presided over by Amin al-Hussayni, and served as the national organization for the boycotts, but there were local national committees that did a lot of organizing and extended the boycotts to the non-payment of taxes by the Arabs of Palestine. This was economically successful, because "commercial intercourse was seriously disrupted and the cost in revenue to the British administration in 1936 was over one million pounds.²⁷ Despite these economic blows to the British, the Palestinians did not completely get what they wanted from the British politically. Their demands were to limit Jewish immigration, but in July of 1936, the British did send out a Royal Commission to investigate the situation in Palestine, and they came out with the *Peel* Report.²⁸ Wendy Pearlman, in her book, Violence, Nonviolence, and the Palestinian National Movement, was able to analyze the way the Palestinians went about their boycott in a united front against the British and the Jews:

²³ Musa Budeiri, *The Palestine Communist Party, 1919-1948*, (Chicago, IL: Haymarket Books, 2010), 64.

²⁴ James Jankowski, "The Palestinian Arab Revolt of 1936-1939," *Muslim World* 63, no. 3 (1973): 223.

²⁵ Swedenburg, "Palestinian Peasantry in the Great Revolt," 190.

²⁶ Aruri and Farsoun, *Palestine and the Palestinians*, 91.

²⁷ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

²⁸ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

This cohesion enabled a national protest campaign in which diverse sectors of society participated using the nonviolent means at their disposal. The Arab Car Owners' and Drivers' Association halted transport facilities, merchants and city laborers stayed home, prisoners refused to perform penal labor, and schools and factories closed. The Jaffa port ceased operations. Local committees limited farmers' marketing to specified hours. Intellectuals published leaflets, and newspapers urged the public to participate. Men, women, and children of all ages took part in public demonstrations, and families across the country observed a boycott of Jewish firms and products. Boy Scouts and shabab - urban young men who would continue to play a key role in resistance activities for generations thereafter - enforced compliance at the neighborhood level. Although Arab civil servants did not go on strike, first- and second- tier public officials came together to submit memorandum to the government explaining Arab grievances and claims. Many also donated a percentage of their salaries to help the national campaign.²⁹

Pearlman includes a substantial amount of relevant information into her book. She is able to point out that (a) the Arabs, Muslims and Christians were a united force against the Jews and the British, (b) the Palestinians included their entire families in the boycott, and (c) Palestinians took an economic route precluding the revolt, which is actually ingenious. The Arabs understood that economics were the basis of existing, because without economics, how are people going to disperse land, labor, and capital? If the Jews and British suffer economically at the hands of the Palestinians, then the Palestinians will be able to make their demands, and have more of a chance at success. Also, by incorporating the support of entire families into the movement, they were instilling the ideas of protest into their family units, and teaching civil disobedience.

The boycotts ended in October of 1936 for a wide array of reasons. There were economic pressures for the Palestinians, which was the approach of their citrusharvesting season (a hot commodity for the Palestinians), leading to a crack in Arab determination. Also, the Arab neighbors, Iraq, Transjordan, and Saudi Arabia, assured the Palestinians that the British "would do justice, [thus giving] the AHC and the local committees an acceptable reason for terminating their strike on October 12."30 However, the lack of action on the part of the British resulted in Palestinian aggression, which opened the doors to the Revolt.

²⁹ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 43.

³⁰ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

V: The Impact of Education on Palestinians

The increase of education in Palestine directly affected Palestinian national identity. As mentioned earlier, there was not much of a Palestinian identity that existed, because the Palestinians were previously occupied by the Ottomans. Through education, the Palestinians saw a growth in their nationalism and mobility to revolt:

The expansion of education, though lagging behind Palestinian demand, had a similar effect. The percentage of Arab children enrolled in school rose from 20 percent in 1911 to approximately 34 percent by 1946. Education expanded the ranks of a middle class whose ambitions could not be satisfied under the traditional distribution of power. Teachers and civil servants assigned to work in the countryside transmitted political debates from urban to rural areas. The growth of literacy fostered the rise of nationalism. Giving voice to a small but influential nationalist intelligentsia, newspapers helped Palestinians follow the events transforming their country and region.³¹

Another benefit that came out of the rise of education was "a new generation of radical nationalists were raising slogans of socioeconomic justice and Arab unity and developing novel forms of political organization." This was positive, because the rise of education made people politically active, and organized. A key term that Swedenburg uses when describing the effects of education was Arab unity, because without a common idea, there would not be success. Additionally, political organizations came to a rise among Palestinians, with the founding of the Young Men's Muslim Association, the Arab Youth Conferences, the Arab Boy Scouts, and the Istiqlal (Independence) Party. The Istiqlal Party was unique among the political organizations, because instead of being organized based on family or clan loyalties, it was organized around a political program. This appealed to the educated middle class, and distinguished itself by centering their political actions to opposing the British Mandate government, instead of targeting the Jewish community alone.³³

On the other hand, "among the Arabs, economic change and education in Western-model schools (both public and private) were gradually creating a modern Arab

³¹ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 40.

³² Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 186.

³³ Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 186.

elite."34 So although there was a growing sense of nationalism and identity, it caused the development of an elitist class of Palestinians. Even Lord Peel commented on the education of Jews and Palestinians, saying that "like Jewish nationalism, Arab nationalism is stimulated by the educational system and by the growth of the Youth Movement.... The existing Arab and Jewish school systems are definitely widening and will continue to widen the gulf between the two races,"35 This proves that the increase in education created an Arab elite group, which is discussed more at length in Section VI.

VI: Classism in the Revolt/Urban v. Rural Palestine

When the Ottoman Empire collapsed, there was a shift in the political structure among the Palestinians. The political leadership of the Palestinians during the Ottoman rule and throughout the early years of the Mandate was based on the notable families, who "had acquired lands, wealth, and local dominance in the Ottoman period." This system that was in place was not successful for Mandate-era Palestinians, because "the lines of political cleavage ran horizontally, following the most meaningful lines of social cleavage (between village and village, between one notable family and its dependent rural following)," showing that politics was centered on the notable families.³⁷ This traditional leadership was negated by the formation of Arab Congresses, assemblies, and delegations, because the political system did not have any substantial means of sublimating the Palestinians, or opposing the establishment of the Jewish National Home.³⁸

Scholarship on the Revolt has typically painted the peasants as "traditional, backward, and conservative... activated by tribal and religious loyalties...and as too isolated, ignorant and poor," thereby discrediting their role in the revolt, and ignoring their legitimate social and political demands.³⁹ However, the Revolt saw the rise of a middle-class of peasants, and workers, who were able to develop a military force, and implemented social and political programs that challenged the notable leadership that was in place. This nationalist movement really threatened the mercantile-landlord system in place and "the threat of a counter-hegemonic peasant leadership with a class-based

³⁴ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 221.

³⁵ Earl Peel, *Peel Commission Report*, (Great Britain: United Kingdom Government, 1937).

³⁶ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 221.

³⁷ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 221.

³⁸ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 221.

³⁹ Ted Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 169.

program caused large numbers of wealthy urban Palestinians to flee the country."⁴⁰ Moreover, this rise of a middle-class challenged the British military and strategy by forcing them to expend military energies to crush the revolt.⁴¹

Class played a huge role in the way that the Palestinians reacted to the Jewish homeland being established. For the Palestinian peasants, the selling of Arab land to Jews led to an increase in landlessness and subsistent farming. Subsequently:

Tens of thousands of indebted farmers were forced to leave the fields that they had worked for generations. Moving to shanties on the outskirts of Palestine's budding towns, they worked as cheap laborers. Hours were long and conditions wretched. Peasants' dislocation both nourished spaces of volatile bitterness and corroded the ties that traditionally linked them to rural patrons.⁴²

Pearlman's inclusion of this information in her book, *Violence, Nonviolence, and the Palestinian National Movement*, resonates with the reader, because it bridges the peasants to the revolt. When the Jews were starting to establish themselves in Palestine, it most directly affected the peasants, who were displaced from places that they hailed from for generations. By 1928, the sale of land to Zionists by Palestinian landowners had eclipsed those by non-Palestinians. A section of the notable class was "thus enriching itself through land sales to Zionists and contributing directly to peasant landlessness, especially in the northern and central plains." This also shows the disconnect that existed between the elite class and the peasants. Although the elitists generally opposed Zionism, they "urged prudence toward the government... [and] continued to extract profits from tenant farmers, as some did from the sale of land to Jews."

The peasants were quicker to take up arms in response to colonialism and Zionism, because they were affected by it the most. When the Palestinians remained vigilant against these outside forces, it led to some disunity in the movement. For example, "while [the Palestinian Communist Party] condemned the terror in no uncertain terms, it also tried to explain its occurrence as a result of the predominance in the armed bands of peasants, who had felt more directly the pressure of Zionist colonization." ⁴⁵

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⁴⁰ Ted Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 170.

⁴¹ Ted Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 170.

⁴² Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 36.

⁴³ Ted Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 180.

⁴⁴ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 36.

Peasants were burdened with high rates of interest from usurers, rural property taxes charged by the British, and regressive indirect taxes. This meant that "the weight of taxation fell disproportionately on poor Palestinian *fellahin* (farmers) whose contributions helped to finance industrial and agricultural development in the Jewish sector and to pay Britain's expenses in defending the Jewish 'national home,'" and one of the ways they alleviated these debts was by selling plots of their land to Zionists. ⁴⁶ This shows how the peasants suffered in a plethora of ways at the hands of the British, Zionism, and upperclass Palestinians. They were removed from lands that they lived on for generations, were stuck paying taxes that they could not afford, and had to resort to selling their land to the very people who were causing them to be burdened with these issues, Zionists. This information demonstrates the position peasants were put into by the Mandate, and how it resulted in their aggression and violence.

After the economic boycotts were over, because the British decided to send out a Royal Commission to investigate what was happening in Palestine, the rural areas opposed the British by taking up arms. This was an interesting response, because there has been no evidence that this was planned or organized the way the boycott was. According to James Jankowski, who wrote an article called "The Palestinian Arab Revolt of 1936-1939," this was a result of the clash of the urban and rural approaches and effects:

It seems to have been a spontaneous uprising of the Arab peasantry produced by several processes: the accumulating fears of the past fifteen years, the heightened Jewish immigration of the mid-1930s, the displacement of a portion of the Arab peasantry from their traditional holdings through Zionist land purchase, the undoubted use by at least one faction of the Arab leadership, that of Hajj Amin al-Husayni, of xenophobic propaganda, and a temporary but severe economic recession in 1935 and 1936. All these combined to provoke a significant proportion of the peasantry to take up arms once an impetus to resistance was provided by urban developments.⁴⁷

Jankowski is able to capture the harsh realities and differences of class under the British Mandate. It was easier for the urban areas to have faith in Great Britain, because they

⁴⁵ Musa Budeiri, *The Palestine Communist Party*, (Chicago, IL: Haymarket Books, 2010), 64.

⁴⁶ Ted Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 182.

⁴⁷ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

were not struck with economic hardship and displacement that the rural Palestinians were experiencing. At this point, they were fed up with the civil disobedience that the movement was taking on, because it did not produce better living conditions for them. Therefore, they took it upon themselves to bear arms and put more pressure on the British to change their policies in Palestine.

Although this divide in the classes was present, and was a surprise to members of the AHC who spoke out against the rural violence, there were more extreme factions in the AHC who supported the rural violent outbursts. The Husayni faction of the AHC was able to "establish contacts with the guerrillas, and utilized their activities to increase pressure on the British." 48

VII: Phase I of the Revolt

The outbreak of the Revolt sixteen years after the British established their presence in Palestine was rooted in the Palestinian realization that:

The security and efficiency of the British administration, the economic prosperity of most of the interwar period, and the slow and often troubled growth of the National Home until the 1930s, all combined to satisfy the bulk of the population materially, and to lull its latent hostility to Jewish immigration and alien rule.⁴⁹

There were outbreaks of violence in 1921, and 1929, but they were scattered outbreaks by angry Palestinians. However, from 1930 to 1935, the population of Jews grew from 175,000 to 400,000, which was a major concern to Palestinians as well. This was a result of the growing anti-Semitism in Poland, the tightening of quotas in the United States, and the success of Nazism in Europe.⁵⁰

The Revolt has historically been viewed as a movement with two phases, both serving two different platforms. Jankowski writes that "during the first phase of the revolt in 1936, they aimed not at developing into a full-scale attempt to oust the British from Palestine, but rather tried to use the revolt to change British policy." The Mufti Amin al-Husayni's confidant, Emile al-Ghuri told a British audience that "[the] strike has developed into a revolution. It is not the act of terrorists or marauders or snipers: it is a revolution. It is not a revolution designed to threaten the power of Great Britain, nor to

⁴⁹ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 221.

⁴⁸ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

⁵⁰ Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 184.

⁵¹ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 224.

force its hand, but to ask for justice."⁵² The first phase of the revolt can be described as the Palestinians causing a scene to get the British to pay attention to them, and accommodate their demands, which were rooted in limiting Jewish immigration into Palestine.

Shaykh 'Izz al-Din al-Qassam was a radical Islamic reformer, who used his religious position as a shaykh (a leader in the mosque) to recruit followers among the *fellahin* (farmers) and the laborers of Haifa. By 1935, he had recruited anywhere from 200-800 followers, who received military training, which was carried out in the dark. Al-Qassam instilled into his recruits' messages of "strict piety, of struggle and sacrifice, of patriotism, the necessity for unity, and the need to emulate early Islamic heroes." Although al-Qassam and his men did attack Zionist settlements from as early as 1931, the group was not officially mobilized until November of 1935. Then, al-Qassam set out from Haifa to raise the peasants into rebellion after it was discovered that an illegal arms shipment was made to the Zionist movement in the port of Jaffa, which caused unrest among the Palestinians. However, the group had an accidental encounter with the police, which resulted in the death of al-Qassam and several of his followers. This led to an outrage among the Palestinian middle class and peasants, who found comfort and power in al-Qassam and his movement.

The Palestinians who were active in the Revolt "organized themselves into guerrilla bands (*fasa'il*) of a few men with a leader (*qa'id*). Guerillas often used hit-and-run tactics, at night and principally in their local areas." This was strategic for the guerrillas because it meant that they could disperse quickly, and with the advantage of knowing the terrain, could hide among their kins and villagers.

Phase I of the Revolt lasted from the fall of 1936 to the summer of 1937, with "the British discontinu[ing] attempts to actively seek out and identify the rebels, while the rebels faded back into their villages."⁵⁷ As the issues were escalating in Palestine, and opening the doors for the Revolt, the British were unable to mount offensive operations,

⁵² "An Arab View of the Situation in Palestine," *International Affairs* 15 (1936), 691-692.

⁵³ Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 189.

⁵⁴ Achear, *The Arabs and the Holocaust*, 135.

⁵⁵ Swedenburg, "The Role of the Palestinian Peasantry in the Great Revolt (1936-1939)," 190.

⁵⁶ Aruri and Farsoun, *Palestine and the Palestinians*, 92.

⁵⁷ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 225.

because they only had four battalions of British troops in Palestine (as of April 1936). However, by September of that year, the British military increased their presence to 20,000 and offensive operations began. The suspension of the revolt was due to the Palestinians waiting on the Royal Commissions to complete its deliberations.⁵⁸ Husayni and Lord Peel, who was heading the Palestine Royal Commission, were in contact with one another in November and December of 1936. When Lord Peel inquired about the Palestinians establishing a government, and what they would do with the 400,000 Jews, Husayni responded with:

It will not be the first time that Jews have lived under the aegis of an Arab state. In the past it has been the Arab states which were the more compassionate to them. History shows that, during all periods, the Jews only found rest under the protection of Arab rulers. The East was always a shelter for Jews escaping from European pressure.⁵⁹

Here, Husayni makes a valid point about the way the Jews have been historically treated in Europe and in Palestine. The Jews have generally found a safe haven in Arabs, when the Europeans have been anti-Semitic. The Arabs have had good intentions for the Jews, which have been taken advantage of by the British, who just decided to establish a National Home for the Jews in Palestine. Husayni's words are significant, because his tone is firm and to the point-- the Jews have historically coexisted with Arabs, and could coexist if a Palestinian government was established.

The Commission published their findings in 1937, to which they expressed that "the disease is so deep-rooted that in the Commissioners' firm conviction the only hope of a cure lies in a surgical operation," the surgical operation being the partition of the land between the Jews and the Palestinians. ⁶⁰ They concluded that there was no way that the two groups of people could coexist under the same government, and would need to have their own, respective lands. The land that would be given to establish a Jewish homeland was the coastal land along the Mediterranean, like Jaffa, Haifa, Tel Aviv, and Acre, as well as the lands bordering Lebanon and Syria. It is important to point out that these coastal cities were economically developed and bustling with business, but they would have gone to the Jews under this Report. This infuriated Palestinians, who saw this

⁵⁹ Amin Al-Husyani, "Hajj Amin to the Peel Commission in Palestine," *Center for Online Judaic Studies*, 1936.

⁵⁸ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 225.

⁶⁰ Earl Peel, *Peel Commission Report*, (Great Britain: United Kingdom Government, 1937).

as the "antithesis of what the general strike and the uprising of 1936 had been aimed at." The Arabs vehemently rejected the *Peel Commission Report*, and in Syria, "a pan-Arab congress voted overwhelmingly and unequivocally" against it. 62

VIII: Phase II of the Revolt

Phase II of the Revolt, which started in September of 1937, was "dominated by the more radical within the Arab community, particularly the Husaynis," because the traditional notables and newer urban population were afraid of the violence in the previous uprisings, and were hurt by the commercial and agricultural effects of the general strike. This second phase for the revolt was interesting, because there was an evident divide among the Palestinians, and a lot of the planning and organizing was happening outside of Palestine. The British were prepared to immobilize the rebels by any means, and in October of 1937, took it upon themselves to dissolve the AHC, exile its prominent leaders, and intern about two hundred members of the Arab committees.

In Damascus, Syria, a Central Committee of the Struggle was being spearheaded by Palestinian exiles, who were not ready to give up on the idea of a Palestinian homeland. This committee functioned by providing supplies and channeling volunteers into Palestine, led by Husayni, who had fled Palestine in fear of being imprisoned by the British

Another element that distinguished phase II from phase I of the revolt, was the aid that the rebels were able to obtain from outside of Palestine: "Funds collected in the neighboring Arab countries played a major role in sustaining the rebels, volunteers came from Syria, Lebanon, Iraq and Egypt, and by mid-1938 Germany had become aware of the possibilities of the revolt and was supplying small amounts of modern arms." 65

As mentioned earlier, the split among the Palestinians in regards to pursuing a second phase to the revolt caused an issue. Husayni and his supporters were outraged by this:

Those notables and village leaders reluctant to support the rebels were forced to do so or were eliminated, those who collaborated with the British, especially the Arab constabulary, became the target of attacks.... In 1938, the peak of the

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⁶¹ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 226.

⁶² Ronald Sanders, *The High Walls of Jerusalem*, (New York, NY: Holt, Rinehart and Winston, 1983), 663.

⁶³ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 226.

⁶⁴ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 226.

⁶⁵ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 226.

revolt, an estimated 454 Arab civilians were killed by the rebels themselves, as compared to 206 Jewish civilians. Thus the revolt, while retaining its primarily anti-British (rather than anti-Jewish) orientation, had become a struggle for internal as well as external dominance.66

Another difference in the rekindling of the Revolt was the way the Palestinians challenged the British over land control. The rebels went greater than just stirring the pot for British policy change- they were reclaiming the very land that the British occupied from them. The Central Committee of the Struggle, still functioning outside of Palestine, "began to function partially as a government-in-exile, appointing administrators and judges for the areas under rebel control."67 The British were not expecting such a harsh pushback from the Arabs:

> The British lost control of much of the countryside to armed bands and were briefly forced to withdraw from several of the major cities, including the Old City of Jerusalem, Jaffa, Acre, Jericho, and Bir Sabe'. The less accessible and more rugged areas of the countryside escaped British control for a longer time. The British military commander in Palestine wrote in August 1938 that "the situation was such that civil administration of the country was, to all practical purposes, nonexistent." The spectacle of a few thousand poorly armed Palestinian peasants successfully resisting the might of the British Empire for such a lengthy time encouraged Britain's aggressive and ambitious regional rivals, Italy and Germany; had an impact on Arab and Islamic opinion on the colonized world generally; discouraged and angered the Zionist movement; and infuriated British politicians, officials, and military officials⁶⁸

In August of 1938, with the Arab rebels gaining more power, they set up a High Council of Command. The purpose of the command was to unify the rebel forces, in the same way the AHC tried to unite Palestinian voices in the early 1930s. An empowering action that the High Council put forth was the abandonment of the fez, which was worn by city dwellers, for the flowing headdress of the peasant to make it easier for rebel forces to infiltrate towns.⁶⁹ This comes to be so significant, because it shows that the roots of the revolt was lying in the hands of the peasants, who were putting action to their feelings, and going full-force against the British. The peasants were demanding the upper-class

⁶⁹ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 227.

⁶⁶ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 227.

⁶⁷ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 227.

⁶⁸ Khalidi, The Iron Cage, 107.

urban dwellers to alter their appearances to take control of Palestine and put it in the hands of the peasants, which was incredibly courageous on their part.

The success of the rebels in the countryside encouraged them to take control of interior cities, like Nablus, Hebron, Beersheba, Bethlehem, and Ramallah. At the same time, the British administration in these cities began to deteriorate, and they were withdrawing their forces. At this point, the British realized what they were up against, and started to build new roads throughout 1938 to open the countryside to their forces. Furthermore, they built the Tegart Wall along the Palestine-Syria border to prevent the infiltration of rebels, which was a success for the British. With heightened numbers of British security forces, which was nearly 25,000 by 1938, they were able to gain control back from the rebels. Throughout 1939, there were steady British advances in subduing the rebels, by taking measures like installing curfews, intensive searches, and the prohibition of all road traffic that was not authorized by the security forces. Alongside these measures to gain control, the British used force to repress the revolt.

IX: British Suppression of the Revolt

The British worked hard to suppress the revolt, and did so in cruel, violent manners. In Halhul, the British killed fifteen Palestinians, the youngest being thirty-five and the oldest being seventy-five. They did so by leaving them out in a caged enclosure in the sun with insufficient water.⁷²

Harry Arrigone, a British Palestine policeman in the village of al-Bassa recalled a moment of British aggression towards the Palestinians, after local guerillas buried a land mine meant to kill British officers:

The British "herded" about twenty men from al-Bassa onto a bus. Villagers who panicked and tried to escape were shot. The driver of the bus was forced to drive along the road, over a land mine buried by the soldiers. This second mine completely destroyed the bus, scattering the maimed and mutilated bodies of the men on board everywhere. The villagers were then forced to dig a pit, collect the bodies, and throw them unceremoniously into it.⁷³

This shows the absolutely cruelty, and lack of mercy that the British had towards the Palestinians. They willingly chose to execute innocent villagers to make a statement to

⁷¹ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 228.

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⁷⁰ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 227.

⁷² Matthew Hughes, "Repression of the Arab Revolt in Palestine," 358.

⁷³ Matthew Hughes, "Repression of the Arab Revolt in Palestine," 359.

the Palestinians that their revolt would not give them power, and that their voices were not heard. Furthermore, this one instance highlights the cruelty of the British, because they forced the remaining villagers to dispose of the bodies in an "unceremonious" way. The British went out of their way to make sure Palestinians understood that their revolt would not be tolerated, as evidenced by not allowing the people slaughtered to have a proper burial. Moreover, by forcing Palestinians to dump their bodies into a mass grave, the British were reinforcing the idea that the Palestinians did not have an identity. Another British officer in Palestine, Raymond Cafferata, in a letter to his wife, wrote "Since that day not a single mine has been laid on that road," showing that the British were okay with making examples out of Palestinians if it meant that they could repress the revolt.74

The British doctor, Forster, wrote that "we may teach Hitler something new about the conduct of concentration camps," when discussing Palestinian torture methods.⁷⁵ Forster's words are significant, because they highlight the hypocrisy of the British, on top of shedding light on the torture methods of the British. The British willingly participate in the torture of the Palestinians, who were revolting against the Zionist establishment in Palestine, in the same manner that Hitler would treat a Jew in Europe. The British, here, are helping to set up a National Home for the Jews, and work on decimating the native population by means similar to that of Hitler. This is incredibly ironic, and terribly horrendous

In total, the Revolt, which lasted from 1936 to 1939, "saw more than 3,000 deaths, 146 executions by hanging, and 50,000 arrests leading to 2,000 stiff prison sentences; 5,000 homes and businesses were demolished and long curfews were imposed."76

X: The Role of the Media

The media played an important role in escalating tensions between Jews in Palestine and Palestinians. Even for the Palestinians, "opposition to Zionism became more political and profuse with the lifting of press censorship in 1908."77 An important primary source in understanding the Palestinian Revolt against the British is a political cartoon published in *Davar*, a Jewish newspaper that was being published under the British Mandate of Palestine. The cartoon, titled "Education in Palestine," contains a

⁷⁴ Matthew Hughes, "Repression of the Arab Revolt in Palestine," 359.

⁷⁵ Matthew Hughes, "Repression of the Arab Revolt in Palestine," 362.

⁷⁶ Achcar, The Arabs and the Holocaust, 142.

⁷⁷ Pearlman, Violence, Nonviolence, and the Palestinian National Movement, 27.

mother figure with androgynous features, clearly dressed as an Arab, as indicated by the Palestinian kuffiyeh (a scarf that Palestinians wear around their heads or their necks, especially the peasants) and the black garb. The mother is reading to her child, and this just means that the mother is blindly implanting the wrong ideas to her child from a young age, creating an ignorant generation. The main character of the cartoon being a peasant is significant, because it represents the masses of Palestinians who were supporting the Revolt, and targets them instead of public officials and leaders. Furthermore, by creating the idea that these peasants are uneducated, and just blindly follow what the highly censored newspapers believe.

By creating this image to a large audience, the Jewish media is able to use their power to instill the view that the revolt is being followed by the blind-- those who cannot see that their reality is distorted. However, this invalidates the struggles of the Palestinian people, who have been occupied for so many years, first by the Ottomans and then by the British. To distort their views on Palestinian identity and nationalism takes away from their being and humanity, and allows for them to subject to their inhumane treatment, murder, exile, and torture. This cartoon is further significant for shedding light on the way that Hebrew, the language of the Jews, is able to become prominent in Palestine even before the establishment of the Jewish state. Political cartoons generally tend to be valuable to historians for lending a helping hand to understanding the information that the general population was constantly being fed, and thereby the way the government or institutions act towards marginalized people. Likewise, it displays to the historian the politics of the time by assessing the content of the cartoon, and how it fits into the bigger picture of what was happening at the time.

Also, "strict British censorship during the uprising ensured that Palestinian papers were closed for long periods of time and the Palestinian Arabic Press was unable to make critical comment on British military activity in the country after 1936." By blocking the Palestinians access to the media, the British could control the information being fed to them and could sway popular opinion in their direction. The British were strategic in blocking only Palestinian news media outlets, because "the Zionist Presssuch as *the Palestine Post, Haaretz*, or *Davar*- has more comment on Britain's repression of the revolt than the heavily censored Arabic-language newspapers." This means that in some form, there was information on the repression of the revolt, but it was not to the audience who could take action against it.

⁷⁸ Mustafa Kabha, *The Palestinian Press as Shaper of Public Opinion, 1929-1939: Writing Up a Storm* (London and Portland: Vallentine Mitchell, 2007), 227.

⁷⁹ Matthew Hughes, "Repression of the Arab Revolt in Palestine," 358.

XI: The White Papers of 1939

With the building of the Tegart Wall, there was difficulty in communication among the rebels, which caused a break in the Central Committee of Struggle, when several of the guerilla leaders left the group. Also, the Arab field commander, Abd al Rahim al-Hajj Muhammad was killed in March 1939, and the rough treatment of the rebel courts towards Arabs who did not want to participate in the revolt caused the development of a pro-British, anti-Husayni faction called The Squadrons of Peace, who took action against rebels.⁸⁰

In May of 1939, the British government released the *White Paper of 1939*, after much consultations and negotiations.⁸¹ This document "capped Jewish immigration at seventy-five thousand over five years, restricted land transfers to limited areas, and proposed to make Palestine independent within ten years if Arab-Jewish relations improved."⁸² To the Palestinians, this was a partial victory, because they would be getting an independent Palestine, but it would be split with the Jews. At this point, with the escalation of global issues, the British did not prioritize the British Mandate and the issues that the Palestinians were facing.

XII: Impact on the Creation of Israel

Rashidi, in *The Iron Cage*, does an in-depth analysis of the way the British suppressed the revolt:

The number of those exiled or forced to flee is unknown, but probably in the thousands. In the Arab population of about 1 million, these were considerable figures; they meant that over 10 percent of the adult male population was killed, wounded, imprisoned or exiled. Although some of these casualties were simply bystanders, these figures give some indication of the extent of popular participation in the revolt, and of its all-encompassing national nature.... A high proportion of the Arab casualties included the most experienced military cadres and enterprising fighters.⁸³

⁸⁰ Jankowski, "The Palestinian Arab Revolt of 1936-1939," 228.

⁸¹ Tom Segev, *One Palestine, Complete: Jews and Arabs under the British Mandate*, (New York, NY: Metropolitan Books, 1999), 440.

⁸² Aruri and Farsoun, Palestine and the Palestinians, 93.

⁸³ Rashidi, The Iron Cage, 108.

On top of the casualties, and exiles, the British confiscated large amounts of weapons from the Arabs during the revolt and in the years after. The diverging political views between the Palestinians caused more divides in them, and the decline of the Palestinian economy opened the door for Jewish industries to take control. 84 Consequently, it was easier for the State of Israel to be built, because there was a depletion of sources to resist the establishment of the Jewish homeland. The Palestinian economic decline allowed for the Jews to build themselves up further, and hold stakes in the land. Also, the nationalist political leaders had, for the most part, been killed, imprisoned, or exiled, which meant that the Palestinians did not have the leadership necessary to fight against the building of Israel. Lastly, the weapons had by Palestinians were almost completely wiped out by the British security forces.

This all shows that although the Revolt empowered Palestinians voices, especially those of the peasants, it indirectly impacted the creation of Israel. When the Arabs rejected the original Peel Commission Report, they completely shut out of the idea of sharing the land under the advisement of the British, which would have been better than their current situation. This is not to say that the Palestinians made a mistake making that decision, because they believed so much in their nationalism and ability to gain independence, and the British proved that they were not trustworthy with the way they handled Palestine. However, this means that the events of phase II of the revolt could not have been predicted by the Palestinians, and that nearsightedness resulted in the lack of a Palestinian homeland. Lastly, the timing of the Revolt came at a time where the world was breaking out into war, and World War II was more important to the world powers, like Great Britain, than the question of what to do with the Mandate of Palestine.

XIII: Conclusion

As evidenced above, the British Mandate of Palestine was not a successful system put in place by the West. By establishing an imperialist power, and opening the doors to the facilitation of the building of a Jewish Homeland, the Palestinians were upset with the British. Although the Revolt has been lost in history, it is important for showing that the peasants were able to mobilize themselves for their cause, thereby empowering their voices. Also, the repression of the Revolt indirectly facilitated the creation of Israel, because the British killed, exiled, and imprisoned the leading voices against the British.

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⁸⁴ Rashidi, *The Iron Cage*, 108.

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Beautiful Nude Girls: Art and Female Sexuality in Nazi Germany

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"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.

Dostoevsky creates characters based on the historical use of feminine embodiment. Colleen Mack-Canty's essay "Third-Wave Feminism and the Need to Reweave the Nature/Culture Duality" discusses the importance of reclaiming that which is deemed 'natural.' Mack-Canty defines embodiment as the physical characteristics of a human being, derived from nature, and historically used in reference to women. As she explains:

"in the nature/culture dualism [...] Men were identified with disembodied characteristics such as order, freedom, light, and reason, which were seen as better than, and in opposition to, women's allegedly more 'natural' and/or embodied characteristics such as disorder, physical necessity, darkness, and passion" (Mack-Canty 158).

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

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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"2-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 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.³ 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

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² Michel Foucault, *The History of Sexuality*, *volume 1: An Introduction* (New York: Vintage Books, 1990), 11.

³ 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.

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 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 architecture⁴, 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. 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

⁴ Frederic Spotts, *Hitler and the Power of Aesthetics* (New York: Overlook Press, 2003), 311.

⁵ 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.

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," through which she is free to experience the subject's sexuality as both her 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." 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."8 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 I] was even bought by Hitler and hung above his fireplace at the Führerbau in Munich.9

⁶ John Berger, Ways of seeing (London: British Broadcasting Corporation, 1973), 46.

⁷ Peters, "Genesis, Conception, and Consequences," 108.

^{8 &}quot;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

⁹ Peters, "Genesis, Conception, and Consequences," 110.

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 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." 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" 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

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¹⁰ Foucault, *The History of Sexuality*, 24.

¹¹ Foucault, *The History of Sexuality*, 9.

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..."

This assertion fell 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," 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." Artistic creation can be understood

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¹² 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.

¹³ Foucault, *The History of Sexuality*, 25.

¹⁴ Marcuse, "State and Individual Under National Socialism," 87.

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. 15 Through its efforts to bring 'fine' or 'high' 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" in an appropriated, quasiclassical 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." ¹⁷ 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," around which so much of Western morality was and continues to be built.

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¹⁵ "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

¹⁶ Marcuse, "State and Individual Under National Socialism," 87 & 92.

¹⁷ Berger, Ways of seeing, 59.

¹⁸ Gordon, "Fascism and the Female Form," 166.

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. 19 Furthermore, sexual liberation only created the veneer of individual 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."²⁰ Sexual liberation, then, became a privilege and perhaps even a right of those citizens subjects who belonged to the National Socialist volksgemeinschaft, 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."²¹ 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.²² 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."23 It is not without precedent, therefore, that the imbuement of nude

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¹⁹ Marcuse, "State and Individual Under National Socialism," 84.

²⁰ Gordon, "Fascism and the Female Form," 164.

²¹ Gordon, "Fascism and the Female Form," 165.

²² Gordon, "Fascism and the Female Form,"

subjects in with a real and natural sexuality occured 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 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 is 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 mean 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 or 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

²³ Endres quoted in George W. Herald, "Sex is a Nazi Weapon," *The American Mercury* 54, no. 222 (June 1942), 661.

men's history."²⁴ 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 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 I]. 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. I] - 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-

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²⁴ 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.

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."²⁵ 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." 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

²⁵ Berger, Ways of seeing, 55.

²⁶ Berger, Ways of seeing, 62.

coordination" and reconciliation of the paradoxical ideals and ideologies of National Socialism.²⁷ 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 *yolk*.

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 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.

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²⁷ Marcuse, "State and Individual Under National Socialism," 92.



Figure I. 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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Woman as Witness: Embodiment and the Female Christ-Figure in Dostoevsky's *Crime and Punishment*

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Fyodor Dostoevsky's *Crime and Punishment* develops the female character as a catalyst for the rebirth of the main character, Raskolnikov. The women appear as martyr figures, whose stories run parallel with Raskolnikov's, focusing on self-sacrifice for the preservation of others, while Raskolnikov's own story focuses on self-destruction for the generation of self. The women, specifically Sonia, must endure great suffering in order for their male counterparts to achieve revelation. Through the embodiment of these two women, the degradation of their physical bodies, and the abandonment of their own desires, Raskolnikov finds himself on a path to salvation. Raskolnikov's interactions with the 'feminine' embodied characteristics, physical illness, degradation, spirituality and compassion, catalyze his renewal process. Dostoyevsky's women stand witness to crime within the novel, offering their bodies in exchange for their male counterpart's achievement of Christian salvation.

Dostoevsky creates characters based on the historical use of feminine embodiment. Colleen Mack-Canty's essay "Third-Wave Feminism and the Need to Reweave the Nature/Culture Duality" discusses the importance of reclaiming that which is deemed 'natural.' Mack-Canty defines embodiment as the physical characteristics of a human being, derived from nature, and historically used in reference to women. As she explains:

"in the nature/culture dualism [...] Men were identified with disembodied characteristics such as order, freedom, light, and reason, which were seen as better than, and in opposition to, women's allegedly more 'natural' and/or embodied characteristics such as disorder, physical necessity, darkness, and passion" (Mack-Canty 158).

Crime and Punishment applies feminine embodiment to the image of Christ. Just as Christ sacrificed himself for the sins of the world by taking a human embodied form, so the female characters of Dostoevsky sacrifice themselves through their own embodied degradation.

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Marmeladov introduces the character of Sonia. He describes the debasement of Sonia, her selling her own body to support the family and maintain his alcoholism. A defiled pub, full of mocking barmen and the grotesque Marmeladov, supplies the setting for Marmeladov's explanation of his ascent into the kingdom of heaven. Benjamin Saxton explains in his essay how "Marmeladov's vision, which presents an image of infinite redemption, arises from his knowledge of infinite debasement" (101). Marmeladov's foulness forces the physical deprivation of Sonia, placing her in the role of Christ figure. Elizabeth Blake's essay traces the character of Sonia through her speech acts. She explains how "before Sonya ever utters a word, her father, Raskolnikov, and Luzhin present competing identities for her ranging from a model of Christian selfsacrifice to a common prostitute" (Blake 255). Though the image of Sonia as prostitute may initially degrade her, the act achieves a sense of morality through her self-sacrifice. Sonia's deep shame surrounding her status, as well as her constant support of her family explain how "this decision did not result from a moment of moral weakness on her part" (257). She is instead read as Christ figure, the angel in the house, as discussed in Gilbert and Gubar's book. They explain how for the self-sacrificing woman "it is the surrender of herself- of her personal comfort, her personal desires, or both - that is the beautiful angelwoman's key act, while it is precisely this sacrifice which dooms her both to death and to heaven" (Gilbert and Gubar 817). Sonia's self-sacrifice gives her power over Raskolnikov's narrative. Although her power is indirect, she manages to manipulate his eventual redemption. Sonia uses her spiritual and embodied self as a means of achieving the redemption of Raskolnikov's soul.

Raskolnikov initially mocks the family's sacrifice of Sonia; "Hurrah for Sonia! What a mine they've dug there!" (Dostoyevsky 22). His mocking reaction indicates his alliance with the non-embodied characteristics, as indicated by Mack-Canty. Raskolnikov looks only to reason, and refuses the needs of his body. His preoccupation with his plans for murder cause him to neglect his body: "for two days he had scarcely tasted food. He was so badly dressed that even a man accustomed to shabbiness would have been ashamed to be seen in the street in such rags" (2). Marmeladov's repulsive form offers an example of the degradation of society. Raskolnikov attempts to escape this degradation through intellectual means. Yet, his intellectualism leads him to madness. Marta Wilkinson in her essay "Raskolnikov: Rodion Romanovich's struggle with the woman within" observes how "Raskolnikov attempts to live only for the mind, as for him the body carries associations with the abject, as is illustrated in the filthy, subservient and objectified positions of the female characters. He refuses all association or identification with the body by denying it food, rest and the benefits of decent clothing" (Wilkinson 1).

Raskolnikov's refusal of the body demonstrates his obsession with achieving hyper masculinity. He associates the body with femininity, and therefore rejects it. Thus, the sacrifice of the female body allows for his redemption.

What Raskolnikov does not understand is the Christian philosophy of suffering as a means to salvation. The body must physically suffer while the mind remains pure, in order for the soul to be saved. Therefore, the self-sacrificing nature of Sonia leads not only to her own salvation, but also to the salvation of those around her. Forgiveness, offered by these women, becomes close to the word of God. Their physical suffering against their pure minds transforms them to the level of sainthood. Straus explains that "if Alyana brokers jewelry, Sonya...brokers youth and sexuality" (Straus 59). Sonia exchanges their bodies in order to provide for their families, and Raskolnikov resents this physical exchange. Yet, Straus' essay also highlights Raskolnikov's own link with the women throughout the text. Raskolnikov is unable to escape the image of the woman; "female images (nag, pawnbroker, landlady, sister, mother) are sources of uncontrollable misery which he longs to transcend through the 'fascinating audacity' of a violent, manly act" (55). And yet, as Straus continues to explain, "this act, associated with the fantasy of man's illimitable freedom...receives its charge from the contrasting idea of woman's bondage" (56). Raskolnikov cannot escape the physical embodiment of the women of the text because he requires their bondage to experience his complete masculinity. Femininity and masculinity "enter into a dialogic relation with each other," creating a link between the two (57).

Raskolnikov's murder of the two women depicts a twisted attempt at male bravado, selfishly designed to prove his own value as a man. This 'manly act,' his murder of Alyana and Lizaveta, cultivates his disdain for the embodied characteristics within himself. Raskolnikov's murder of the two women attempts to physically embody the disembodied characteristics of Raskolnikov's theory. Therefore, "the strike to the pawnbroker's head as an act by which Raskolnikov attempts to release blocked energy from his own head in an unconscious response to the split between his mind and body" (Wilkinson 6). Raskolnikov's internal conflict between the disembodied and the embodied, between feminine and masculine, violence and prayer, creates conflict within him: "the idea of 'the feminine' in *Crime and Punishment* is the symbolic hatchet that breaks open men's heads by destroying the distinctions between 'low' and 'high', 'docile' and 'powerful', victim and master, coward and hero" (Straus 56). It is therefore through his own acceptance of the feminine within himself, the acceptance of the embodied sacrifice of Sonia, which allows Raskolnikov to begin the path to redemption.

Raskolnikov believes the seeming coincidence of his arrival in the Hay Market at the exact moment this information is relayed, to be an act of fate, relinquishing his responsibility for his actions. Raskolnikov's chance encounter at a tavern with two men discussing the same idea for murder reinforces his belief that his decision to murder the old woman truly represents the intentions of fate, "as though there really had been in it something preordained, some guiding hint" (55). Raskolnikov's intellectual justification, his misinterpretation of and irrational reverence for signs, demonstrate his alienation from his own embodied spirituality, His spirituality is instead warped by his desire to maintain what he views as an ideal disembodied mind. Yet, his disembodiment leads expressly to his descent into madness. Therefore Sonia, and her bodily sacrifice, leads to his own rebirth as an embodied figure. As Wilkinson explains, "The humiliating and victimizing experiences of these women mirror his own desperation and helplessness. Dostoevsky's presentation of women as victims creates a paradigm of social abuses that illustrate...Raskolnikov's struggle is against the feminine elements within himself" (Wilkinson 3). Raskolnikov's own depravity, his intellectual baseness, requires a mirror of physical baseness in order to establish balance. Sonia offers her physical body as sacrifice, without sacrificing her sanity.

Sonia's physical body becomes a religious icon for Raskolnikov. Yet as Saxton indicates, the image of Sonia, who "appears as a living icon" (106). Religion, thus takes its earthly form, not merely embodied as a human, but as a woman who is socially shunned. Sonia, removed from her home because she was forced to turn to prostitution, offers the entirety of her body for the sake of her family; "Sonya's spiritual purity despite the squalor of her life drives Raskolnikov to confess his crime, after which she follows him to Siberia where he is serving his sentence at the conclusion of the novel" (Wilkinson 2). Raskolnikov turns to Sonia as a physical embodiment of all religion, falling to her feet and declaring: "I did not bow down to you, I bowed down to all the suffering of humanity" (Dostoyevsky 255). Raskolnikov makes Sonia into a symbol, an icon for his backwards faith. Sonia becomes a Christ-figure, sacrificing her physical body symbolizing Raskolnikov's redemption.

The internal conflict between feminine and masculine, spiritual and intellectual, redemption and violence, creates within Raskolnikov an imbalance, which is the origin of his insanity. Raskolnikov, exhausted with his madness, turns to the salvation offered by Sonia. Dostoyevsky portrays Sonia's inherent need for self-sacrifice as most masochistic. Upon hearing that Raskolnikov has murdered two women, one of whom was her friend, Sonia embraces him declaring "No one in the whole world now so unhappy as you!" (323). Sonia is thrilled at the prospect of discovering the most depraved other for whom

she can sacrifice herself. She asks Raskolnikov to explain his intentions, "Only speak, speak daring and I shall understand, I shall understand in *myself*" (326). Her attempt to understand him, her unconditional love for him, creates for him a path to salvation. Almost immediately she offers to join him in his condemnation; "we will go to suffer together, and together we will bare our cross" (332). Sonia's quick disposal of her life seems at first futile, naive and absurdly self-sacrificing. Yet, Dostoevsky creates in Sonia the ultimate trap: she cannot escape her social situation and therefore enters into exile regardless of her relationship with Raskolnikov. As a prostitute, Sonia already faces social exile and at least in Siberia she will not be alone.

Raskolnikov accepts Sonia's sacrifice and path to salvation. He agrees to turn himself over to the police proclaiming, "I've come for your cross, Sonia" (410). A moment of embodied revelation proceeds Raskolnikov's confession. Raskolnikov, leaving his intellectual madness, turns to worship the physical earth in all its deprivation; "he knelt down in the middle of the square, bowed down to the earth, and kissed that filthy earth with bliss and rapture" (413). Raskolnikov finally comprehends the need for physical suffering and turns towards this feeling of spiritual purity "clutch[ing] at the chance of this now unmixed complete sensation... Everything in him softened at once and tears started into his eyes" (413). Sonia's example of an embodied salvation has lead Raskolnikov to his redemption. As Stellemen explains Sonia "represent[s] a way of "being in the world" as opposed to the "being in the mind" represented at the ideological level...this mode is easily transferred into the speech of "the heart", as it is firmly rooted in the immediate individual experience and therefore has no need for dialogizing" (Stellemen 285).

Sonia's salvation derives from a non-ideological belief in God. Her lack of ideology maintains her purity, and keeps her from the madness which her physical situation implies. Raskolnikov's feeling of rapture as he kisses the earth derives from the simplicity of Sonia's faith. The unstructured, non-ideological belief in God offers Raskolnikov an unlimited salvation from his violent sins. Raskolnikov therefore turns to the unconditional love of Sonia, ipso facto God, and "his development thus moves from a self-preserving life, in which he is divided by the rationalizing aspect, to an experiencing, and ultimately loving life, which has no need for words" (288). Raskolnikov turns from his disembodied intellectual pursuits, to the non-ideological embodied life Sonia offers. Their exile to Siberia strips them of all their belongings and ideas and "the only thing of value that remains, really, is the wordless power of existence itself: life" (289). For Raskolnikov "life had stepped into the place of theory and something quite different would work itself out in his mind" (Dostoyevsky 430). He achieves salvation through his

acceptance of the embodied sacrifice of Sonia, and all the women in his life, and leaves the madness of his intellect. He resolves to dedicate his life to loving Sonia, "he knew with what infinite love he would now repay all her sufferings" (430). Their strange love, built on sacrifice and salvation, transcends the physical world through non-ideological and embodied purity.

Dostoevsky creates female characters whose embodiment becomes a temple of rebirth and renewal. Yet the rebirth lies not for these women, but for their male counterparts. The intellectual world, the psychological world of Raskolnikov, which he believes would offer him revelation and enlightenment instead brings him only to madness. His salvation, therefore, lies in his own embodiment, offered by the self-sacrifice and degradation of the women of the text, regenerating his spiritual and embodied relationship with the church. Dostoyevsky's female characters offer up their bodies to illuminate Christian theology and the salvation of man.

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"Be a Man": How Hegemonic Masculinity is Harming Humanity

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Hegemonic masculinity is a social concept that promotes the dominant social position of men and the subordinate social position of all women and of men who do not meet its narrow definition. Women are oppressed by hegemonic masculinity, and men are pressured to fit an idea of a "perfect man" that constricts the expression of all the identities that men may possess. Hegemonic masculinity encourages men to be emotionally restricted, controlling, and aggressive. Given that it is formulated as the opposite of femininity, hegemonic masculinity devalues all women. Because it is based on a narrow construction of masculinity that assumes heterosexuality, White race, and wealth, men with identities that vary from the hegemonic norm are also devalued. Hegemonic masculinity is an institutionalized way of thinking that is instilled in young children by their parents and reinforced by popular media and peer relationships. Hegemonic ideals often lead to an internal struggle, especially in men whose identities are other than White, wealthy, cisgender, and heterosexual. This internal struggle often produces emotional restrictiveness, feelings of inferiority, and relationship stress. Hegemonic masculinity is socially constructed, and it can be socially undone.

"Be a Man": How Hegemonic Masculinity is Harming Humanity

Hegemonic masculinity oppresses women and imposes an idea of a "perfect man" that constricts the expression of all the identities that men possess, therefore crippling the growth of our society. Men who fit this ideal of a "perfect man" are often entitled to privilege that others are not. This fluid concept is likely to vary from culture to culture and its definition has changed over time (Connell & Messerschmidt, 2005; Kane, 2006). J. M. O'Neil (1981) predicted that "the late 1970s and early 1980s will probably be known as the times when men recognized that they are also victims of restrictive gender role socialization and sexism in their lives" (p. 203). He also suggests that a focus on men's gender role socialization is essential in order to reduce the oppressive aspects of sexism for both sexes.

Psychologists have approached this area of research with varying theoretical perspectives, including essentialist theory, constructionist theory, and life course theory.

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Eliot (2010) explores the roles of both genetic factors (nature) and experiences (nurture) in the development of our gender identity. "Researchers have found very few large-scale differences between boys and girls in brain structure or function" (p. 22) and since biological differences are minimal, there must be some other explanation for the differences between men and women in our own and so many other cultures. "The crucial, often overlooked fact is that experience itself changes brain structure and function" (p. 22). Experiences have major influences on gender identity and can offer insight into societal differences between genders.

Taking a nature perspective, essentialists view sexual orientation through a biological lens and consider it an innate, deeply-rooted set of attributes that are immune to any cultural or environmental influence. Constructionists, on the other hand, believe that gender identity is socially constructed through one's own life experiences, such as cultural influences and personal relationships. Hammack (2005) realizes that both the essentialist perspective and a purely social constructionist perspective that disregards biology are radical approaches. Psychologists can gain deeper insight when they utilize a more holistic approach. Although Hammack (2005) focuses on sexual orientation and identity rather than gender, his promotion of life course theory, which integrates essentialism and constructionism to "[consider] the biology of sexual desire while simultaneously acknowledging the socially constructed nature of identity" can be applied to understanding expression of gender (p. 267). Life course theory takes historical moment in time and culture into account, which are two major influences on an individual's life experience. An individual born in the United States during the roaring 1920s would experience a much different social atmosphere than someone born ten years later during the Great Depression; these changes could influence gender role expectations, individuals' responses to those expectations, sanctions for violating expectations, and reinforcement for conforming to expectations. Life course theory takes into account human agency; individuals are capable of making choices within the opportunities and restrictions of history and social circumstances. "Life course theory thus acknowledges the dialectical process between internal and external, biology and culture, person and society" (p. 269) to give us the fullest understanding of hegemonic masculinity.

Intersectionality plays an integral role in the development of hegemonic masculinity. "Intersectionality makes plain that gender, race, class, and sexuality simultaneously affect the perceptions, experiences, and opportunities of everyone living in a society stratified along these dimensions" (Cole, 2009, p. 179). To understand hegemonic masculinity, it is critical to explore the distinction between sex and gender,

and how these identities intersect with other major categories of identity. Sex is a biological category (male, female, or intersex) while gender is psychological identity, such as identifying as a boy, a man, a girl, a woman, gender queer, or non-binary. "Distinguishing sex from gender was a very important step in recognizing that biology is not destiny—that many of the apparent differences between women and men might be societally imposed rather than natural or inevitable" (Muelenhard & Peterson, 2011, p. 794).

Psychology has been affected by the patriarchal systems of the societies in which the field has developed (Bem, 1994). Fausto-Sterling, Gowaty, and Zuk (1997) expose androcentric bias in their criticism of evolutionary psychology, a theory that suggests the differences in the social roles of men and women are due to biological adaptations. Prior to the second wave of the feminist movement, men outnumbered women in empirical investigations of gender. With more women exploring gender and more men critically evaluating hegemonic masculinity, we are realizing that the patriarchal goggles of Western societies have blinded us from some scientific discoveries. "In Female Choices: The Sexual Behavior of Female Primates, Meredith Small found evidence of sexually active female primates whose behavior is far from coy" (Fausto-Sterling et al., 1997, p. 407). This goes against a major belief in evolutionary psychology that males usually engage in more sexual activity in order to increase their chances of passing on their genes through their offspring. Critical evaluation suggests that hegemonic masculinity may explain why beliefs like these have been accepted for so long. Evolutionary psychology celebrated sexually prolific men—sometimes to the point of justifying sexual aggression. In contrast, critical evaluation of evolutionary psychology has contributed to psychologists' understanding of potential bias, as well as promoting advancements in the study of gender in order to reduce the harmful effects of hegemonic masculinity.

Hegemonic masculinity is a fluid, time-sensitive concept that varies from culture to culture. One distinguishing characteristic of hegemonic masculinity is its framing in opposition to femininity. "When a man fears his feminine side he really fears that others will see him as stereotypically and negatively feminine (e.g., weak, dependent, submissive) rather than positively masculine" (O'Neil, 1981, p. 206). This fear of femininity produces a gender role conflict that produces suppressed emotionality, a drive for control, and homophobia fueled by stereotypes that homosexuality in men bears a resemblance to femininity (O'Neil, 1981). Hegemonic masculinity has led to a fear of femininity, and societal standards affect how an individual develops and expresses gender identity. "Hegemonic masculinity is embodied at the specific intersections of race, class,

and sexuality" (Hurtado & Sinha, 2008, p. 338), specifically White, rich, and heterosexual men who demonstrate strength are privileged. The privilege associated with these identities often excludes men of color, impoverished men and working-class men, and gay, bisexual, and transgender men, who are identified within American society as belonging to devalued social groups.

One may suggest we just change how society views gender in order to fix the damage that has been caused by hegemonic masculinity, but it is difficult to revert years of institutionalized thinking. Most sex differences are minimal at first, but they become amplified by our patriarchal society (Eliot, 2010). Once a child's sex has been determined, societal expectations determine what behavior, attire, and relationships are appropriate. Parents are an important influence in gender identity development, especially for young children (Kane, 2006). "Parents anticipate sex differences from the first prenatal ultrasound, but then seem amazed when their son goes gaga over trucks or their daughter will wear nothing but pink" (Eliot, 2010, p. 22). Parents are aware of what has been socially deemed appropriate for the male sex and understand the consequences that come with stepping out of these societal bounds. Parents often condition, or nurture, their children to accept and abide by socially determined gender roles, either to fulfill the parents' values or to avoid having their male children face criticism (Kane, 2006).

Parents tend to reinforce gender-appropriate behavior and to reprimand the opposite, especially when it comes to young boys. Many parents are actually open to the idea of their daughters exploring different opportunities, emotions, and interests than those defined by gender stereotypes, however parents strictly limit what their sons are exposed to (Kane, 2006). Blazina (2001) uses the all-too-familiar scene of a distressed little boy who is crying out for emotional soothing. The father of the boy will more than likely tell the boy that he is "acting like a little girl" (the opposite of the way he should be acting) and that he needs to "man up" (suppress his emotions). This is a common interaction for a young boy to experience that teaches him that he should oppose femininity and bury his emotions (Blazina, 2001).

The behaviors children learn during critical developmental years are often the ones they will carry for life. Korobov (2004) interacted with a group of adolescent boys and recorded powerful examples of how hegemonic masculinity influences behavior. The boys were uncomfortable with the concept of homosexuality, but the boys seemed alarmingly more uncomfortable when asked to imagine that someone they associated with often (e.g., a best friend) was homosexual. The boys expressed concern that people on the outside looking in might question their masculine values. The boys felt that any association with queer sexuality (e.g., having a gay friend) would make them less of a

man. This is an antiquated, harmful way of thinking that leads to judgmental men who lack self-expression.

This hegemonic behavior more often than not follows a child into adulthood where the behavior materializes into much more than just a simple opposition to femininity.

Men learn at an early age to compete for power and to establish their place in the home, school, or work setting. Power, control, and competition are learned by modeling after fathers and other men who have also learned that being powerful is an essential part of being a man (O'Neil, 1981, p. 207).

This masculine adoration is exemplified in Korobov's (2004) study. At the start of the discussion, the seven boys involved are discussing their idols and all of them are male. The boys may be unaware of it, but they are living products of hegemonic masculinity and therefore idolizing anything other than a man would be a violation. Their idols, often athletes, have risen to the top of their game by being dominant competitors, and the boys think the only way to achieve success is by doing the same. This leads to men's obsession with success and the primary means to this success is through competing with other men by using power and control (O'Neil, 1981).

This desire for success by power and control follows into manhood and negatively impacts both men and women. Men fear failure, hunt for dominance and power, and are forced to wear a mask to conceal their "weakness" (emotionality). This hunt pushes women into a submissive role, not only in terms of relationships, but also in society. Women are held to very different societal standards than men are. When young, girls are not necessarily expected to play competitive sports. In contrast, it is extremely rare for a boy not to be encouraged to partake in some type of organized, competitive, often physically demanding sport (Eliot, 2010).

Traditional patriarchal views extend to expectations of men within familial relationships. Some of the men interviewed for Dancy's (2011) study signified that they viewed themselves as the stronghold of the family. They believed their roles were to protect and provide for their women and children. Though a kind thought, it devalues a woman's contributions to the family and implies that she cannot effectively provide for herself. This way of thinking places women in the role of the homemaker while men play a more dominant role.

Many men concur with this way of thinking and see themselves as having to be proactive and outspoken. They feel they must protect their masculinity at all costs and this may arise from the expectation that men are to be in control and emotionless. These two expectations often force men to be overly-assertive, or even aggressive. Hoffman,

Hattie, and Borders (2005) found that "35% of the men interviewed described their masculinity as having a forceful/aggressive component" (p. 71). A good percentage of men identify with this aggressive/forceful behavior because aggression is one of the few emotions men are "allowed" to feel within the hegemonic form of masculinity. A man who shows affection, cries when he is sad, or seems flustered when he is frustrated is considered weak. Wong and Roclen (2005) discovered that men who adhere to traditional societal gender roles are much less likely to openly express their feelings, especially verbally.

This restrictive emotionality is an unhealthy characteristic of hegemonic masculinity that harms men. Male restrictive emotionality predicts low self-esteem, difficulties with relationship intimacy, anxiety, and depression (Wong & Rochlen, 2005). Emotional limitations set by hegemonic masculinity lead to a grueling internal struggle within men. This internal struggle resembles a game of tug of war. On each side of the rope is a social category with which an individual identifies. Society places such an emphasis on masculinity that most men desire to identify with it, but some men have identities that "pull" them from the hegemonic ideal. Social class, race, and sexuality are examples of identities that do not allow some men to experience full hegemonic privilege.

Working class men of color tend to be a social group that struggles with accepting all of their identities because they vary on two major dimensions from the ideal hegemonic man, in that they are not White or rich. African American males interviewed by Dancy (2011) reportedly struggle with a double identity crisis, or as he describes it "double consciousness." These men understand that they are not allowed full hegemonic privilege because of their race and must act accordingly. They struggle to express two identities: one is a hegemonic man and the other is an oppressed African American. These men often analyze themselves in the eyes of others before they make any conscious decisions, hence the term double consciousness. For these African American men, "acting White" may be frowned upon in a Black community, but welcomed in White communities. Therefore men of color often alter their behavior to reflect the consciousness of those around them; they wish to blend into the social environment in order to avoid judgment for one of their multiple identities (Dancy, 2011).

Each individual is a summation of all of their identities, shaped by prior experiences and relationships. Some identities, such as masculinity, are favored by society while others, such as skin of color, are often a hindrance to an individual. Cole (2009) summarizes this point when she states, "constructs like race and gender affect the beliefs about what is possible or desirable and define the contours of individuals'

opportunities and life chances through social and institutional practice" (p. 173). In the androcentric society of the contemporary United States, a woman's worth is too often based on her value to the hegemonic male. White women, although not masculine, experience some of the privilege affiliated with hegemonic masculinity due to their relationship with White men, while women of color receive double discrimination for their race and sex (Cole, 2009). Even a woman's place in society is dependent on her relationship to men.

Although it may seem as though being at such a disadvantage may make working class individuals of color resent hegemonic masculinity, these individuals have offered some of the most constructive feedback of hegemonic masculinity. Men in Dancy's (2011) study constructed their own definitions of masculinity. They believe that a man is someone who demonstrates leadership values, who is reliable, and who is true to himself. This resembles hegemonic masculinity in that the dominant men desire control, but it differs in the fact that these men believe true self-expression is integral to being a man (Dancy, 2011). Men in Hurtado and Sinha's (2008) study were worried that the current cultural consensus on the definition of masculinity emphasized many negative characteristics with which men did not want to be affiliated with. Some of these characteristics included selfishness, emotionlessness, and closed mindedness. Rather than accept these characteristics associated with hegemonic masculinity, the men decided to take the admirable characteristics of manhood—such as selflessness, expressiveness, and supportiveness—and personify those. It is empowering to see individuals who are negatively impacted by hegemonic masculinity personally redefining what masculinity means to them. A man to them is "a person who from now on instead of thinking about himself is someone who starts thinking about repercussions about his actions for his family and for [his] community" (Andres Elenes, 2008, as quoted by Hurtado & Sinha, 2008, p. 345).

The aspects of hegemonic masculinity that participants in Hurtado and Sinha's (2008) study rejected were male bonding over the objectification of women and physical and sexual domination of women. The two ideas, major components of hegemonic masculinity, devalue and dehumanize women. In a patriarchal society, women are mainly worthwhile for sexual pleasure, childbearing, and home making. In fact, many men look at sexual interaction with women as a game rather than an intimate connection. The goal of "the game" is to assert male dominance over women and have sex with as many women as possible (O'Neil, 1981). This way of thinking leaves no room for an emotional connection.

Fortunately, we have made some progress as a society in terms of seeing the true worth of femininity. A woman should not be considered inferior to a man because of her sex or gender, and the men in Hurtado and Sinha's (2008) study recognize this. Women have historically been at a severe disadvantage. Women had to fight for their right to vote, a privilege granted to White, property-owning men, because women were considered incapable of making rational decisions. Thankfully, women have been progressively gaining equal rights, but true equality will never be granted until hegemonic masculinity is a concept of the past.

We may not be able to fix the damage already caused by hegemonic masculinity, but we do have the power to stop it from hindering any more of our growth as a society. It is important to fix the issues people of color encounter, especially on college campuses. People of color often feel that the White community is trying to hold them back and oppress them, and this is a valid feeling considering the years of oppression people of color have experienced, especially in the United States. Dancy (2011) suggests the way to fix this mistrust is through "higher education practices" (p. 493). Dancy's (2011) participants agreed that seeing diversity among institutional leadership reinforces their self-expectations and shapes a sense of value in the institutions they attend. Culturally-sensitive hiring is an important step in helping people of color feel welcome and reach their potential within institutions. In order to get the White community to accept diverse racial identities, colleges and communities should offer cultural workshops to educate people on diversity within the community (Dancy, 2011).

Similarly, women should have equal chances for employment and more men should make the effort to learn about what it is like to be a woman. There have been many great strides, especially in mass media, taken to help prevent further hindrance by hegemonic masculinity. "In the past few years, some [advertising] brands have finally started to leverage sports and playing sporting events to promote healthier depictions of masculinity" (Fischl, 2016). This is unusual from previous sporting advertisements that typically capitalized on aspects of hegemonic masculinity to sell their products. In fact, a commercial aired during Super Bowl 50 in 2016 that took Jordy Nelson (a male role model) and put him in the position of a caregiver. The commercial portrays Nelson taking his son to school, cooking breakfast for his son, and showing his son affection. Nelson "wants [his kids] to understand that being a man is about being comfortable in who you are, not someone that's just fitting in because it's the cool thing to do" (Fischl, 2016). This demonstrates a modern-day man redefining what it means to be a man.

Although hegemonic masculinity has crippled societal growth in the United States over the years, we do not have to continue down this path. Now that we

understand that hegemonic masculinity prevents men from full self-expression and devalues women, we should all be able to reflect and evaluate what we are doing to promote the abolishment of hegemonic masculinity, first at an individual level, then at a societal level. If we can all band together to promote acceptance and a comfortable environment for individuals to express all of their intersecting identities, the world would benefit from diverse expressions of masculinity and femininity. "Patriarchy hurts everyone and therefore manhood is a false ideology that should be questioned and eventually obliterated and replaced with more equitable arrangements between people" (Hurtado & Sinha, 2008, p. 347). If we wish to continue to grow and evolve as a society, we must rid this world of hegemonic masculinity.

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Los aspectos sociales y físicos del bilingüismo

Tori Ross (Spanish)1

El bilingüismo es más que solo la capacidad de hablar dos idiomas. Son las conexiones y funciones formadas en el cerebro. Es la habilidad del cerebro para distinguir sonidos y palabras de diferentes idiomas y categorizar esas palabras apropiadamente. Es la capacidad de cambiar de código entre dos idiomas cuando se comunica con otros. Es el entorno en el que nacemos, las amistades que hacemos, la familia que cuidamos, el pasado y el futuro de nuestra familia.

Antes de explicar cómo la gente aprende múltiples idiomas, es importante discutir cómo el cerebro desarrolla cualquier lenguaje primero. Las principales áreas del cerebro responsables de desarrollar y comprender el lenguaje son el área de Broca y el área de Wernike. Estas áreas del cerebro son críticas para el lenguaje y juegan dos papeles muy importantes.

El área de Broca es responsable de la producción del habla. Se encuentra en la corteza frontal derecha detrás del ojo izquierdo y fue descubierto en 1861 por el cirujano francés Paul Broca. Paul Broca descubrió este área al observar los cerebros de pacientes que habían perdido la capacidad de hablar. Vio que esta área específica estaba dañada y se dio cuenta de que esta área del cerebro era responsable del habla (Pierre Paul Broca, 2017). Esta área del cerebro ahora se llama el área de Broca. Un estudio realizado en la Johns Hopkins Medicine concluyó que el área de Broca "is developing a plan for articulation, and then monitoring what is said to correct errors and make adjustments in the flow of speech" (John Hopkins Medicine, 2015). Para esta prueba, los doctores trabajaron con varios pacientes con epilepsia que fueron sometidos a la cartografía cerebral para encontrar el origen de sus convulsiones. Durante este procedimiento, los médicos ponen electrodos en la corteza frontal del paciente en diferentes lugares, incluyendo el área de Broca. Con el paciente completamente despierto y sensible, los médicos le pidieron al paciente que leyera o escuchara palabras de una sílaba y las repitiera. Algunas de estas palabras eran reales, por ejemplo 'book', y algunas palabras no eran reales, por ejemplo 'yode'.

El estudio concluyó que el área de Broca era más activa "just before the words were spoken, but its activity declined while the patients were speaking... [and the]

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Broca's area was most active, and stayed active longest, when the patients were asked to pronounce nonsense words" (Johns Hopkins Medicine, 2015). Esto demuestra que el área de Broca tiene que trabajar más duro para procesar sonidos y palabras desconocidas. Por lo tanto, el área de Broca se apaga mientras la persona habla, pero puede permanecer algo activa durante la conversación para planear palabras y oraciones futuras. El doctor también concluyó que el área de Broca no sólo es responsable del habla. Conecta la corteza temporal que es responsable de organizar la información sensorial y la corteza motora que es responsable de los movimientos de la boca. Esto hace que el área de Broca sea un área crítica para conectar la información del lenguaje a través de las diferentes regiones del cerebro (Johns Hopkins Medicine, 2015).

La otra área del cerebro que es responsable de entender el lenguaje es el área de Wernike. El área de Wernike se encuentra en el lóbulo Temporal en el lado izquierdo del cerebro y fue descubierto diez años después del descubrimiento de la zona de Broca por Carl Wernike. Carl Wernike descubrió este área realizando un estudio de caso sobre un paciente que había sufrido un accidente cerebrovascular. Este hombre no tenía problemas para oír ni hablar, pero no podía entender nada de lo que se le decía o le escribía. Cuando el paciente murió y Wernike pudo estudiar el cerebro, descubrió que había una lesión en el lóbulo temporal izquierdo. Concluyó que esta región del cerebro era responsable de la comprensión del habla (Alic, 2017).

El área de Broca y el área de Wernike trabajan juntas para comprender y hablar un idioma. Cuando queremos decir una palabra escrita, el cerebro pasa por un proceso largo. Primero, vemos la palabra con nuestros ojos y esa imagen entra en la corteza visual primaria, la parte del cerebro responsable de la vista. Entonces esa información es transferida al área de Wernike donde la palabra es comprendida. Después de que la zona de Wernike comprende la palabra, se envía a la zona de Broca donde la palabra se pronuncia y está lista para ser enunciada. Finalmente después de que la información se transfiere a la corteza motora primaria, la parte del cerebro es responsable del movimiento para hacer que la boca se mueva y diga la palabra escrita. Si la palabra se dice en voz alta, el proceso es muy similar. En lugar de pasar por la corteza visual primaria sin embargo, la palabra pasa a través de la corteza auditiva primaria, que es responsable de la audición. Una vez que se hace, la información pasa a través de la zona de Wernike, a la zona de Broca, y finalmente a la Cortex motor primario de nuevo (Oh Say Can You Say).

Aprender un idioma es una de las primeras cosas que aprendemos a hacer como seres humanos. Mientras que algunas personas aprenden un idioma como un niño, otras personas tienen la oportunidad de aprender varios idiomas desde el nacimiento dando

lugar al multilingüismo. La capacidad de aprender más de un idioma es el resultado de atributos físicos dentro del cuerpo, así como factores externos y el entorno que nos rodea.

Aprender un idioma como un niño es muy diferente a aprender un idioma como adulto. El cerebro se desarrolla de manera diferente durante la infancia y durante la edad adulta. Durante la infancia, los niños pueden aprender cualquier idioma y pueden aprender y responder fácilmente a palabras y sonidos en cualquier idioma.

Los científicos han llegado a la conclusión de que hay un período crítico en el que los niños pueden aprender un idioma más fácilmente. Este período de tiempo crítico varía según el sujeto. Por ejemplo, el período crítico para el aprendizaje fonético ocurre antes del final del primer año. La sintaxis de aprendizaje ocurre entre los 18 y 36 meses de edad, y la adquisición de vocabulario comienza a los 18 meses de edad y continúa siendo activa durante toda la vida (Kuhl, 2010).

Sin embargo, hay una pregunta importante que hacer: ¿si un cerebro adulto está más desarrollado cognitivamente que el cerebro de un bebé, por qué los bebés aprenden más fácilmente varios idiomas? La respuesta está en la pregunta. Dado que el cerebro de un bebé tiene capacidades cognitivas limitadas, les permite aprender y dominar los idiomas que les hablan haciendo patrones simples. Dado que el cerebro aún no ha crecido, también puede hacer y distinguir patrones para múltiples idiomas, que se integran en los circuitos del cerebro. Sin embargo, esta capacidad comienza a disminuir entre los 6 y los 12 meses de edad porque disminuye la capacidad del cerebro para distinguir idiomas extranjeros. Esto se debe a la mayor comprensión y exposición a la lengua materna. Por eso es más difícil aprender un idioma como adulto. Los nuevos patrones que están tratando de aprender no se ajustan a los patrones de lenguaje original establecidos como niños (Kuhl, 2010).

Establecer estos patrones durante la infancia es extremadamente importante porque hay aproximadamente 200 vocales y 600 consonantes utilizadas en todo el mundo. Todas estas vocales y consonantes se llaman fonemas. Estos fonemas cambian el significado de una palabra basada en el sonido, por ejemplo: baño y paño. Por lo tanto, aprender a distinguir estos diferentes sonidos fonéticos es importante para comunicarse correctamente. Esto es importante para los niños bilingües porque están siendo expuestos a muchos fonemas que no pertenecen a un idioma. Entonces, los niños necesitan una manera de agrupar cada idioma en consecuencia, por lo que el cerebro hace estos patrones. En conclusión, la tarea del niño en el primer año de vida consiste en descubrir la composición de las 40 categorías de fonemas en su idioma antes de tratar de adquirir palabras en su lengua materna (Kuhl, 2010).

Desde un aspecto físico, los niños son capaces de aprender otro idioma mucho más fácilmente que los adultos que quieren aprender otro idioma. Este desarrollo del lenguaje comienza cuando el niño está en el útero. A pesar de que el niño no ha nacido todavía puede escuchar las palabras de su madre y recoger los sonidos de los alrededores de la madre también. Una vez que el niño nace, hay una edad crítica del período de adquisición que termina en la adolescencia, donde se pueden aprender múltiples lenguas debido a la neuroplasticidad cerebral durante ese período de tiempo. Los bebés que están expuestos a múltiples lenguas al nacer son capaces de demostrar "una capacidad universal para percibir los fonemas de todas las lenguas habladas" (Berken, Gracco, Klein, 221).

Por lo tanto, todos los niños tienen el potencial de aprender cualquier idioma, y si se les da la oportunidad, tantos idiomas como puedan. Una vez que un bebé alcanza los 6 meses de edad, esta capacidad comienza a disminuir, y se hace más difícil percibir estos sonidos diferentes. Este es un punto crítico en el desarrollo del lenguaje porque un idioma nativo está empezando a establecerse en el niño aunque no puedan hablar todavía.

Los sonidos de vocales y consonantes, asociados al lenguaje al que el niño está siendo constantemente expuesto, ahora están comenzando a ser grabados en las Áreas de Broca y Wernike del niño. A los 9-10 meses de edad, las primeras tapas de vocalización comienzan a aparecer en forma de balbuceo. Este balbuceo refleja los sonidos y el acento del idioma nativo al que están expuestos. Los niños que aprenden una lengua y se vuelven multilingües a una edad temprana pueden dividirse en dos categorías diferentes: bilingües simultáneos y bilingües secuenciales (Berken, Gracco, Klein, 221).

Los bilingües simultáneos son niños que aprenden dos idiomas al mismo tiempo, y los bilingües secuenciales son niños que aprenden primero un idioma nativo y luego un segundo idioma poco después. Aunque ambos idiomas se aprenden a una edad muy joven, a menudo hay muchas diferencias con la competencia y cómo habla el niño. Como se mencionó anteriormente, un niño después de los 6 meses de edad comienza a reconocer y entender los sonidos en el idioma nativo. Un niño que aprende múltiples idiomas a una edad muy temprana puede diferenciar los sonidos y fonemas de cada lengua antes de que puedan hablar los idiomas (Berken, Gracco, Klein, 222). Esta capacidad de aprender y diferenciar los sonidos según el lenguaje se debe al hecho de que el cerebro está en su etapa de desarrollo óptimo. Nuevas sinapsis, mielinización, conexiones neuronales y circuitos neuronales están constantemente creándose y moldeándose dentro del cerebro. La actividad cerebral que ocurre en los primeros años de vida crea un alto grado de neuroplasticidad. Sin embargo, al analizar los cerebros de los bilingües simultáneos, se descubrió que utilizan "las mismas estructuras neuronales

implicadas en la adquisición de una primera lengua" (Berken, Gracco, Klein, 223). Sus áreas de lenguaje en el cerebro son las mismas para ambos idiomas. Los bilingües secuenciales, cuando se analizaron, mostraron mayor actividad en áreas del habla y motor, y en sustratos más neuronales en comparación con un bilingüe simultáneo (Berken, Gracco, Klein, 223).

Ambos conjuntos de bilingües usaron las mismas estructuras cerebrales para el habla, pero hay estas ligeras diferencias en cómo estas regiones del cerebro están conectadas. Esto demuestra que a pesar de que ambos conjuntos de bilingües aprendieron un idioma a una edad temprana, todavía hay pequeñas diferencias en cómo el cerebro se desarrolla debido a la diferencia de edad y el entorno en el que aprendieron el idioma. Esto es evidente en un área específicamente: el acento. Los bilingües simultáneos fueron capaces de hablar y escribir igualmente competentes en ambos idiomas, mostrando un dominio igual en ambos idiomas. Estos bilingües simultáneos tenían un acento nativo en ambos idiomas, mientras que los bilingües secuenciales eran tan proficientes en hablar y escribir como bilingües simultáneos, sin embargo no tenían un acento nativo en el segundo idioma aprendido (Berken, Gracco, Klein, 223).

Un niño puede aprender una gran cantidad de vocabulario antes de llegar a la adolescencia. El vocabulario puede verse influido en gran medida por el entorno del niño y su escolarización. Esto puede afectar su capacidad para comunicarse efectivamente en múltiples idiomas.

El vocabulario es muy importante para comunicarse. Hay tres tipos diferentes de vocabulario. Estas palabras de vocabulario están organizadas en tres niveles diferentes. Las palabras de nivel 1 se conocen comúnmente como palabras reconocibles a primera vista. Estas son palabras que un niño puede leer de una página e inmediatamente sabe lo que dice. Estas palabras incluyen 'libro, niña, niño, triste, perro, gato' entre otras (Sprenger, 2013).

Las palabras de Nivel 2 son palabras que los niños encuentran todos los días. Estas palabras tienen múltiples significados, se usan en múltiples áreas temáticas, son palabras descriptivas, son necesarias para la comprensión de lectura y ayudan a construir un lenguaje maduro. Algunos ejemplos de palabras de Nivel 2 incluyen "benevolente, coincidencia, obra maestra" entre otras. Las palabras de Nivel 2 causan muchos problemas para los estudiantes cuando leen porque son palabras muy maduras (Sprenger, 2013).

La categoría final de palabras es palabras de Nivel 3. Estas palabras son palabras específicas del contenido y se usan cuando se estudia un tema. Estas palabras son fundamentales para construir conocimiento y comprensión dentro de un tema académico.

Algunos ejemplos de palabras de Nivel 3 son 'hipótesis, precipitación, mediana, cuadrática' entre otras (Sprenger, 2013).

El medio ambiente de un niño afecta enormemente el desarrollo del vocabulario, especialmente si el niño creció hablando más de un idioma. Ha habido un largo debate sobre si los bilingües tienen o no un vocabulario más extenso que un monolingüe. Para encontrar una respuesta a esta pregunta, se realizó un estudio con niños de habla inglesa y niños bilingües que hablan inglés y español. Estos niños recibieron el Examen de vocabulario expresivo de una palabra (EOWPVT). Esta es una prueba donde los sujetos de prueba tuvieron que identificar una imagen usando solo una palabra. Los niños que eran bilingües recibieron la prueba en inglés y español, los niños que eran monolingües solo recibieron la prueba en inglés. Los resultados de la prueba fueron muy sorprendentes. Los niños que eran hablantes de inglés monolingües obtuvieron el puntaje más alto. Los niños que eran bilingües, pero el inglés era su idioma dominante, obtuvieron el segundo puntaje. Los niños que eran igualmente competentes en inglés y español obtuvieron el tercer puntaje más alto, y finalmente los bilingües que identificaron el español como su idioma dominante obtuvieron el cuarto puntaje más alto (Allman, 2005).

El lenguaje no es solo el resultado del desarrollo del cerebro y las características físicas, también es el resultado de nuestro entorno. Para entender por qué aprender otro idioma es importante desde un punto de vista global, tenemos que volver a la prehistoria, cuando los humanos todavía estaban migrando y estableciéndose en todo el mundo.

Durante la prehistoria, muchos grupos diferentes de personas migraron en todo el mundo. Cuando estos grupos de personas migraban, generalmente se dividían porque sus grupos se volvían demasiado grandes o se separaban unos de otros. Cuando estos grupos se separaron, por lo general se aislaron de otros seres humanos durante muchos años. Una vez que estos grupos se aislaron, eventualmente comenzarían a desarrollar sus propios idiomas y dialectos. Estos nuevos lenguajes se desarrollaron en el transcurso de miles de años, razón por la cual cada idioma es diferente e incomprensible para personas ajenas a esa sociedad. (Hagen, 52).

Cuando estas diferencias idiomáticas evolucionan debido a que están aisladas del mundo, las diferencias culturales también evolucionan. Estas diferencias culturales y de idioma pueden causar hostilidades y malentendidos. Es por eso que es importante que las personas de ese momento aprendan un segundo idioma. Al aprender un segundo idioma, estos grupos de personas podrían comenzar a comerciar con otros grupos de personas y mantener buenas relaciones con otros grupos. (Hagen, 52).

Si un grupo entraba en contacto con otro grupo y no hablaban un idioma común, ambos grupos probablemente recurrían a la violencia. Esto se debe a que un grupo de personas protegía a su propia gente, sin embargo, no harían lo mismo con un extraño. Es más fácil para alguien cometer un acto de violencia contra alguien con quien no se puede comunicar que alguien en su grupo porque es más fácil para ellos deshumanizarse mutuamente. Hay una falta de empatía y conexión entre los grupos. Si un grupo de personas no puede comunicar sus deseos y necesidades entre sí, hay margen para malentendidos. Este malentendido puede llevar a que alguien se ofenda involuntariamente, lo que conducirá a la violencia. (Hagen, 55-57).

El desarrollo del lenguaje bilingüe ha cambiado mucho desde tiempos prehistóricos, especialmente para niños. Los niños bilingües están muy influenciados por su entorno. Este entorno no solo ayuda a dar forma a los idiomas que estos niños aprenden, sino que también ayuda a dar forma a su identidad. Estos aspectos ambientales tienen un impacto en los niños bilingües, así como en sus familias.

Se realizó un estudio sobre los inmigrantes y sus descendientes al mudarse a otro país y conservar su identidad lingüística y cultural. Este estudio mostró que había un deseo de que estos inmigrantes se integraran y se asimilaran en su nuevo país. Al tratar de asimilarse en su nuevo país, los inmigrantes intentan aprender el idioma nativo de ese país. Durante este proceso hay una mezcla constante del idioma del país y el idioma nativo de los inmigrantes que se llama 'Parler Bilingue'. Para los hablantes de español e inglés esto se llama 'Spanglish'. Para los inmigrantes de primera generación, esto es importante porque quieren conservar su identidad cultural, y aún así ser capaces de integrarse en su nueva sociedad. Una vez que se logra la fluidez en ambos idiomas, el idioma nativo se usa en el hogar y durante otras interacciones familiares, mientras que el nuevo idioma se usa en el trabajo y en las interacciones sociales. (Avenas, 1998)

Para los inmigrantes de segunda generación, sin embargo, el bilingüismo se veía de manera más negativa porque temen ser discriminados. Están atrapados entre el país de origen de sus padres y las tradiciones, y entre su nuevo país y sus tradiciones. No quieren ser vistos como 'extranjeros'. Como resultado, usan el idioma del nuevo país y rechazan el idioma de su país de origen. Sin embargo, muchos inmigrantes de segunda generación todavía practican su lengua materna para que puedan integrarse en su grupo étnico solo cuando sea necesario. (Avenas, 1998).

Mi familia ha experimentado esto con mi abuelo. Mi abuelo emigró a América desde Puerto Rico con su padre cuando era muy joven. Cuando crecía en Estados Unidos, mi abuelo usaba el español solo con su padre en casa. Intentó mucho aprender inglés hasta el punto en que se deshizo de su acento español. Para encajar mejor con la cultura

estadounidense, procedió a cambiar su apellido de 'Torres' a 'Ross'. Luego logró convencer a sus hermanos y padre de cambiar sus apellidos a 'Ross' también. Luego mi abuelo se deshizo de cualquier evidencia de que era puertorriqueño, y escondió cualquier documento que tuviera su apellido. Esto incluía boletas de calificaciones, cartas, documentos personales y otros documentos personales que pertenecían a su padre y hermanos. Esto fue descubierto por mi padre hace unos años cuando encontró un boletín de calificaciones de la escuela primaria que pertenecía a su tío en el ático de mi abuelo.

El concepto de 'Spanglish' es importante para cada generación de inmigrantes porque muestra la fusión de dos culturas. Lo que es interesante de descubrir es que hay dos tipos diferentes de 'Parler Bilingue' o 'Spanglish'. Está el spanglish 'inglés-español' y el spanglish 'español-inglés'. Ambos son la mezcla del idioma inglés y el español, pero hay algunas diferencias. Con el spanglish 'inglés-español', los inmigrantes principalmente hablan inglés e integran el español como consecuencia. Con el spanglish 'español-inglés', los inmigrantes principalmente hablan español e integran el inglés como consecuencia. Cualquiera que sea la forma de Spanglish que usen depende de su competencia lingüística, así como de su identidad cultural (Avenas, 1998).

El spanglish es importante hoy porque según la Oficina del Censo de EE. UU., la población hispana total en los Estados Unidos supera los 37,4 millones y sigue creciendo. Estiman que para 2020, la comunidad hispana será el grupo minoritario más grande en los Estados Unidos. Con este gran aumento de la población, la sociedad y la cultura estadounidense cambiarán enormemente, y esto incluye el uso del spanglish. Esto se debe a que los inmigrantes de habla hispana y las personas de origen hispano, que hablan español e inglés, y que ya viven en Estados Unidos interactúan más entre sí. Las interacciones que ocurren finalmente conducen a la mezcla del idioma español e inglés (Hernández, 21-22).

Muchas generaciones de habla hispana e inglesa reaccionan al hablar spanglish de la misma manera en que reaccionan por ser bilingües. Como se mencionó anteriormente, algunos inmigrantes no quieren hablar Spanglish porque quieren asimilarse a Estados Unidos y están avergonzados de su origen. Por lo tanto, estos inmigrantes solo hablarán inglés, como lo hizo mi abuelo, o usarán Spanglish con palabras específicas en inglés porque les hace sentirse con poder y listos. Algunos inmigrantes usan Spanglish porque viven en una comunidad donde el Spanglish es el dialecto principal, y hablar Spanglish crea un sentido de pertenencia. Algunos inmigrantes se niegan a hablar Spanglish porque lo ven como una corrupción del idioma inglés y español, o no se sienten cómodos de alternar entre idiomas porque nunca antes han estado expuestos a un entorno bilingüe (Hernandez, 22-23).

El idioma español, así como el spanglish, es muy diferente entre cada comunidad hispana. Ciertas palabras pueden significar una cosa en cierta comunidad, pero pueden significar algo completamente diferente en otra comunidad. Es por eso que en ciertos países de habla hispana puedes decir "coger al autobus", pero en México nunca puedes decir "coger al autobus" porque tiene una connotación sexual.

A menudo, estas diferencias en el significado de la palabra pueden causar malentendidos. Otro ejemplo de esto ocurrió cuando una compañía de insecticidas decidió anunciar su producto a la comunidad de habla hispana. Contrataron a alguien que no tenía experiencia y carecía de conocimiento sobre estas diferencias de idioma. Por lo tanto, la compañía en su anuncio declaró que eran "infallible at killing bichos" (Hernandez, 24). Cuando este anuncio se hizo público, muchos hispanohablantes se rieron porque, aunque bicho significa "insecto" en la comunidad mexicana, se refiere a los genitales masculinos en la comunidad puertorriqueña. (Hernandez, 24).

Debido a estas ligeras diferencias de idioma, hay múltiples comunidades hispanas en todo Estados Unidos que son únicas a su manera. Por ejemplo, en Miami hay una mayor población de cubanos, en Nueva York hay una gran comunidad puertorriqueña, en el suroeste, especialmente Texas, hay una gran comunidad mexicana. Cada comunidad tiene su propia forma de Spanglish. En Miami, su forma de Spanglish se llama Cubonics, en Nueva York, su forma de Spanglish se llama Nuyorrican, y en Texas, su forma de Spanglish se llama Tex-Mex. El Spanglish por lo tanto es el término general que cubre todos estos dialectos español-inglés (Hernandez, 24).

A pesar de estas diferentes formas de Spanglish, la mayoría de estos bilingües solo usan Spanglish en conversaciones informales. La mayoría de sus conversaciones en Spanglish solo ocurrirán con sus familias y amigos muy cercanos. Estos bilingües hacen esto para expresarse más fácilmente, especialmente cuando no conocen una traducción adecuada para una palabra. Ser bilingüe abre un mayor rango de expresión porque tienen la capacidad de elegir en qué idioma se expresan. Sin embargo, casi todos los bilingües entrevistados dijeron que no les gustaba usar Spanglish porque la mezcla de ambos idiomas no es atractiva y no es estéticamente agradable hablar (Hernandez, 25-26).

Sin embargo, hay excepciones a este sentimiento hacia el spanglish. Muchos escritores hispanos famosos como Junot Díaz usan Spanglish en sus galardonados libros y escritos todo el tiempo. Cuando Junot Díaz fue entrevistado acerca de su novela ganadora del Premio Pulitzer, *The Brief Wondrous Life of Oscar Wao*, se le preguntó si siempre usa el spanglish en sus escritos y por qué? Él dijo:

"Since I can remember, English was present in my Spanish. And clearly Spanish was always present in my English... the technique, the mixture, has always been within me. An accident of immigrant history, but one that I've pursued relentlessly and rigorously." (O'Rourke, 2008)

Díaz usa exactamente la misma razón por la que la gente no quiere usar Spanglish, para justificar por qué usa Spanglish en sus escritos. También usa Spanglish como un medio para conectarse con las comunidades de habla inglesa e hispanohablante. Al hacer esto, los lectores conocen el idioma y la comunidad que conocen, así como el idioma y la comunidad que no conocen. (Shanesy, 2010).

Usar Spanglish es ventajoso porque ciertas cosas se pueden explicar más fácilmente en inglés que en español, y viceversa. Esto permite que los hablantes de español e inglés se comuniquen de manera más eficiente y efectiva. Esta 'ley del esfuerzo más fácil' permite que los bilingües se comuniquen sin usar mucha energía, mientras que el 'principio de eficiencia' permite a los bilingües comunicarse con más energía cuando sea necesario y con menos energía cuando no sea necesario. (Hernandez, 26-27).

Esta adaptación del bilingüismo continúa evolucionando incluso hoy en día. Para mis horas de tesis para Seniors, yo era la supervisora del programa de ayuda para tareas después de la escuela en el Centro de Inmigración de Make the Road Nueva York. Ayudaba a los estudiantes de primaria a completar sus tareas, así como a mejorar sus habilidades de lectura y escritura en inglés. En el Centro de Inmigración de Make The Road, realicé una serie de pequeñas entrevistas con los niños a los que enseño allí. Todos estos niños están en la escuela primaria, a pesar de que sus edades y grados son diferentes. Sin embargo, casi todas sus respuestas fueron muy similares. Todos estos niños dijeron que eran bilingües y hablaban inglés y español. Todos estos niños dijeron que predominantemente hablaban español con solo un poco de inglés en casa. Estos niños dijeron que solo usaban Spanglish a veces con sus amigos porque sus padres no hablan mucho inglés. Solo un niño dijo que hablaba Spanglish en casa con sus padres, y otro niño dijo que usa Spanglish con su madre porque, como se mencionó anteriormente en otros casos, ella no conoce una traducción adecuada de una palabra.

A pesar de esto, todos los niños dijeron que ser bilingüe los hace felices. Todas sus razones fueron muy similares en el hecho de que ayudan a enseñar inglés a un ser querido. Un niño dijo que les gustaba poder hablar dos idiomas porque cuando su hermana llega a Nueva York desde México, pueden ayudarle a aprender inglés. Muchos niños dijeron que estaban felices porque les enseñan inglés a sus padres y sienten que están ayudando a su familia. El bilingüismo para estos niños es algo positivo, y en mi

opinión, es una forma de contribución de su parte porque están contribuyendo a su hogar y ayudan a sus familias.

Spanglish es el resultado de 'code-switching' o el cambio de código. La definición oficial del diccionario para el cambio de código es "el cambio del sistema lingüístico de un idioma o dialecto al de otro" (Merriam-Webster's Dictionary). La conmutación de código para Spanglish se identifica por el hecho de que el hablante cambia a palabras inglesas o españolas sin cambios, y las palabras que se dicen se pronuncian de la misma manera que un hablante nativo de cada idioma las pronunciaría. Sin embargo, para cambiar el código, el hablante debe tener competencia en ambos idiomas. Deben comprender los formatos de idioma de español e inglés. Si no se pueden cometer muchos errores.

Por ejemplo, una vez un niño jugaba al tag en la escuela y constantemente lo estaban molestando. El niño quería que esto se detuviera, y quería decirles a los niños 'Stop bothering me!' Sin embargo, el niño no sabía la palabra 'bother' en inglés, pero en cambio sabía que 'molestar' significaba lo mismo. Por lo tanto, cuando fue a decirles que lo dejaran en paz, dijo 'Stop molesting me!', lo que significa algo completamente diferente en inglés. Esta es la razón por la cual la comprensión del trabajo en español e inglés es extremadamente importante cuando se cambia de código (Jiménez, 2017).

El cambio de código requiere tanto de la gramática inglesa como de la española, y debe fluir y sonar correctamente. Esta es la razón por la cual las personas que hablan Spanglish no pueden decir 'Stop molesting me!' or 'Yo am going to the baile in the noche.' No parece correcto, y no muestra competencia en ambos idiomas. En cambio, frases como 'El libro me costó twenty dollars', y 'I'm going home pasado mañana.' son ejemplos efectivos de cambio de código porque muestra una estructura gramatical adecuada en el idioma español, así como en el idioma inglés. Las personas que cambian de código en Spanglish hablan de una manera única y compleja dentro de las reglas de ambos idiomas (Jiménez, 2017).

Los beneficios del bilingüismo son increíbles porque abren muchas oportunidades diferentes. Una persona bilingüe puede comunicarse con más personas y conectarse con las diferentes comunidades de habla. Esto es extremadamente importante en el mercado de trabajo de hoy. Anotar que eres bilingüe te da una ventaja increíble sobre tus competidores porque la compañía a la que postulas puede ampliar su mercado en todo el mundo, así como anunciar a diferentes comunidades de habla hispana.

Mi familia también tiene experiencia de primera mano en esto. Mi padre es un oficial de policía del Departamento de Policía del Condado de Suffolk (SCPD) y trabaja

en la Academia de Policía. Cuando es hora de contratar una nueva clase de reclutas, mi padre y sus compañeros de trabajo se sientan y miran las solicitudes. Me dijo que aquellos que hablan más de un idioma, especialmente español e inglés, son incluidos en una lista de contratación preferencial por separado. Esto se debe a que el SCPD está al tanto de la creciente población de habla hispana en Long Island, y desean poder conectarse positivamente con esa comunidad. El trabajo de mi padre quiere ser accesible, y eso es muy difícil de hacer si hay una barrera del idioma.

Toda esta investigación que he hecho la he podido experimentar en Make the Road New York. Todos los niños con los que he tenido la oportunidad de trabajar han hablado inglés y español desde que eran muy jóvenes. Casi todos ellos hablan con un perfecto acento inglés cuando hablan inglés, y un acento español perfecto cuando hablan español. Todos ellos pueden alternar entre inglés y español sin esfuerzo, dependiendo de con quién están hablando y de qué están hablando. Estos niños también pueden cambiar de idioma y hablar Spanglish para ayudar a sus familias y amigos a aprender inglés o spanglish.

El bilingüismo es más que solo la capacidad de hablar dos idiomas. Son las conexiones y funciones formadas en el cerebro. Es la habilidad del cerebro para distinguir sonidos y palabras de diferentes idiomas y categorizar esas palabras apropiadamente. Es la capacidad de cambiar de código entre dos idiomas cuando se comunica con otros. Es el entorno en el que nacemos, las amistades que hacemos, la familia que cuidamos, el pasado y el futuro de nuestra familia. El bilingüismo es más que un término descriptivo, simplemente elegimos mirar más allá de su significado superficial para encontrarlo.

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