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EDITOR'S INTRODUCTION

The Wagner Forum for Undergraduate Research was first published in the fall of 2002. It came about in response to the substantial upsurge in student scholarship that had occurred since the inception in 1997 of the Wagner Plan for the Practical Liberal Arts, a revamped curriculum that focuses on interdisciplinary learning communities, practical internships and service-learning projects tied directly to course curricula. Thanks to Lee Manchester, Director of Media Relations, past issues are now available from the Wagner College Press through its online storefront.

As many of you know this interdisciplinary journal is printed biannually. To enhance readability it is typically subdivided into three sections entitled *The Natural Sciences*, *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). The third section is reserved for speculative papers based on the scholarly review and critical examination of previous works.

Manuscripts are reviewed with respect to their intellectual merit and scope of contribution to a given field. They are first evaluated by the faculty member(s) who supervised the research and then sent to an editorial board that makes recommendations to a single editor-in-chief.

To date full-length articles from over 150 students representing every department on campus have appeared. A similar number of abstracts and technical notes have also been printed. For a complete listing of authors and the issues in which their work appears, go to http://www.wagner.edu/news/sites/wagner.edu.news/files/Catalogue (author alpha).pdf.

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Gregory J. Falabella, Ph.D.
Editor-in-Chief

Section I: The Natural Sciences

Full Length Paper

Section II: The Social Sciences

Full Length Paper

Section III: Critical Essays

Full Length Papers

Invited Full Length Paper

Section I:
The Natural Sciences

Inhibition of Very Long Chain Acyl-CoA Synthetase 3 in U87 Malignant Glioma Cells: A Potential Cancer Treatment

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An enzyme involved in lipid metabolism called very long chain acyl-CoA synthetase 3 (ACSVL3) has been found in extremely elevated levels in malignant glioma cells. RNA interference (RNAi) has been used to show that inhibition of this enzyme significantly inhibits tumor cell growth while leaving normal cells unaffected. Thus, if a drug is found to specifically inhibit ACSVL3, it could hypothetically be used as a form of treatment for glioblastoma tumors. A drug bank of 28 compounds was tested for a specific drug inhibitor of the enzyme ACSVL3 using an acyl-CoA synthetase assay to test for acyl-CoA inhibition. This specific drug bank tested was chosen based on the ability of these drugs to inhibit a structurally related enzyme, ACSVL1. Also, various drug solubilization techniques were tested. Pierce Protein Assays were conducted on a regular basis in order to test the concentration of protein in U87 malignant glioma cell samples. Immuno-fluorescence was performed in order to confirm the knock-down of ACSVL3. Although none of the drugs tested thus far have been found to fully inhibit ACSVL3, one drug family seemed to show potential. This family specifically inhibited some but not all of the ACSVL3 present in the U87 malignant glioma cells tested. Further research will be conducted in order to test the effect of all drugs in this family on ACSVL3 enzyme activity.

I. Introduction

Fatty acids are used in a variety of different metabolic processes including N-myristoylation; palmitoylation; regulation of enzyme activity; remodeling and interconversion of fatty alcohols and fatty aldehydes; α-,β-, and ω-oxidation; and synthesis of complex lipids including eicosanoids, diglycerides, triglycerides, phospholipids, plasmalogens, sphingolipids, glycolipids, cholesterol esters, and waxes. However, all of these processes, except for the synthesis of eicosanoids, require that fatty acids first be converted into fatty acyl-CoAs. This conversion of fatty acid to fatty acyl-CoA depends upon acyl-CoA synthetases to catalyze the reaction.[1]

* Written under the direction of Dr. Wendy deProphetis-Driscoll (Chemistry) in partial fulfillment of the Senior Program requirements.

Acyl-CoA synthetases (ACS) are enzymes which activate fatty acids by thioesterification to coenzyme A (CoA) derivatives so that they can be further metabolized. Formation of acyl-CoA allows otherwise non-reactive fatty acids to participate in the biosynthetic or catabolic pathways described previously. Activation of fatty acids is a fundamental metabolic process that occurs in all organisms. This process, catalyzed by acyl-CoA synthetase, is shown below.[1]

$$\text{Fatty acid} + \text{ATP} + Mg^{2+} \rightarrow \text{acyl-AMP} + Mg^{2+} +$$
$$\text{PPi Acyl-AMP} + \text{CoASH} \rightarrow \text{acyl-CoA} + \text{AMP}$$

To date 26 different acyl-CoA synthetase genes have been discovered and their sequences determined. Of these 26 acyl-CoA synthetases, there are three short-chain (ACSS 1-3), six medium-chain (ACSM 1-6), five long-chain (ACSL 1-5), six very long-chain (ACSVL 1-6), two bubblegum (ACSBG 1-2), and four unclassified (ACSF 1-4) acyl-CoA synthetases (Figure 1).[2]

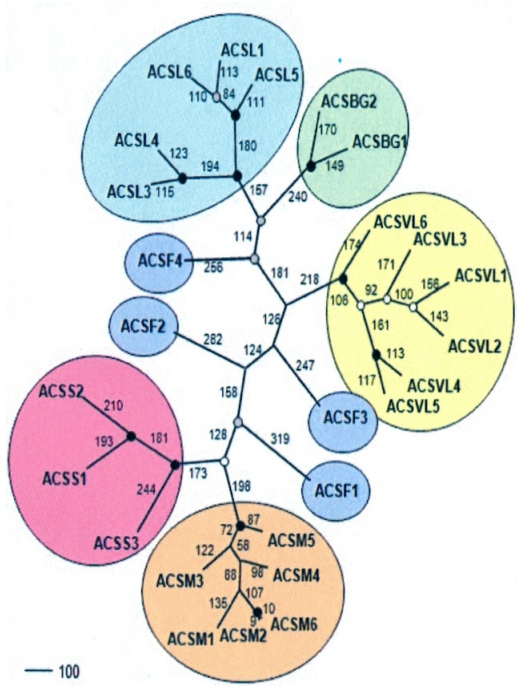

Figure 1: Family Tree of Acyl-CoA Synthetases

Due to their implications in various diseases, lipids and those enzymes associated with lipids, such as acyl-CoA synthetases, have been the focus of much research in recent years. DiRusso, C. et al. focused their research on searching for a drug to treat dyslipidemia, a disease caused by a disruption in the amount of lipids in the blood.[3] Dyslipidemia can lead to type 2 diabetes and cardiovascular disease.[4]

DiRusso, C. et al. began their search for a drug by screening a standardized small compound library consisting of 2,080 compounds with known biological activities in order to identify a compound or a family of compounds able to inhibit fatty acid uptake into cells by fatty acid transport protein 2 (FATP2), also known as very long chain acyl-CoA synthetase 1 (ACSVL1). Of the 2,080 compounds screened, 28 compounds were selected as potential fatty acid uptake inhibitors. Four groups of structurally-related compounds were found within this group of 28 potential inhibitors. The largest of these groups had structural similarities to compounds from a family of tricyclic, phenothiazine-derived drugs which are currently on the market for treatment of schizophrenia and other related psychiatric disorders.[4]

Another very long-chain acyl-CoA synthetase, very long chain acyl-CoA synthetase 3 (ACSVL3), which activates saturated fatty acids 16 to 24 carbons long, is also being closely studied. ACSVL3, also known as fatty acid transport protein 3 (F ATP3), is expressed in the testes, adrenal glands, ovaries, brain, lungs, and kidneys. The aspect of ACSVL3 that has most interested Watkins, P. et al., however, is that this enzyme has been found in extremely elevated levels in human glioma cells (Figure 2). Glioma cells are the malignant phenotype of glial cells which collectively make up different types of brain tumors including astrocytoma, oligodendro-glioma, anaplastic astrocytoma, and glioblastoma multiforme tumors. Glioblastoma, which is the primary focus of research conducted by Watkins, P. et al, is a type of cancer which begins in the brain or the spine. The most common site for glioblastoma tumors to occur, however, is the brain. Glioblastoma multiforme tumors are both the most common and the most aggressive of the different glioma tumors.[5]

One possible explanation for this extreme elevation of ACSVL3 is the fact that tumor cells which collectively make up brain tumors proliferate rapidly and require many different enzymes, particularly acyl-CoA synthetases, in order to synthesize cell membranes at a much faster rate than normal cells. If this process is blocked in tumor cells through inhibition of ACSVL3, tumor growth will also be inhibited.[5]

Another reason why ACSVL3 may be elevated in malignant glioma cells as compared to normal glial cells is that lipids also play key roles in second messenger

pathways which are dysregulated in malignant cells. Elevations in specific lipid messengers are associated with malignancy.[5]

Although the reason for this elevated level of ACSVL3 is not yet fully understood, experimental analysis has shown that when RNA interference (RNAi) is used to knockdown (KD) ACSVL3 in U87 cells, a human glioblastoma cell line, subcutaneous xenografts were less tumorigenic and grew at a much slower rate than control tumors expressing the gene encoding ACSVL3 (Figure 3). This finding has lead to the on-going search for a drug inhibitor of the enzyme ACSVL3.[5]

A drug which can specifically inhibit the enzyme ACSVL3 could potentially be used to stunt or completely inhibit the growth of gliobastoma tumors while leaving normal cells unaffected. In order to search for a drug of this nature, Watkins, P. et al. began by screening the library of 28 compounds found by DiRusso et al. to inhibit the structurally similar enzyme, very long chain acyl¬CoA synthetase 1 (ACSVLl).[4,5]

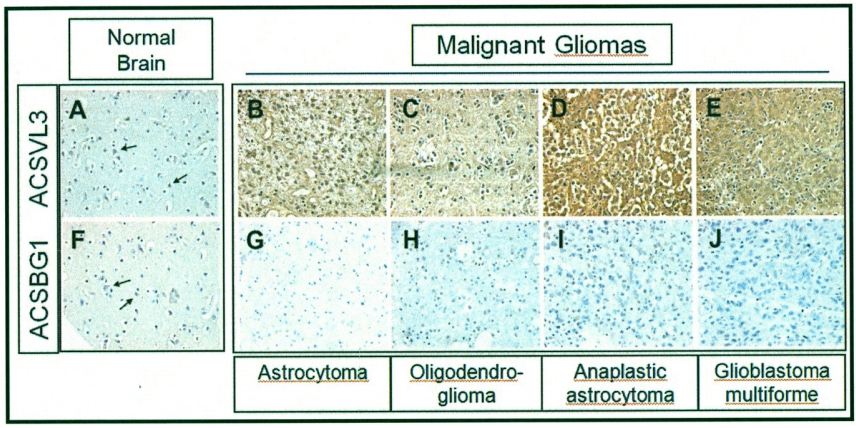

Figure 2: Levels of ACSVL3 are Highly Elevated in Malignant Gliomas

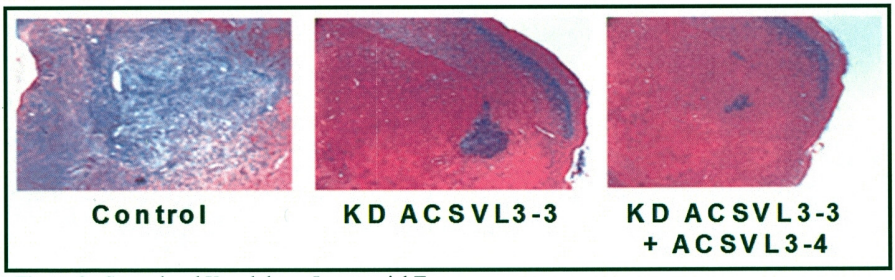

Figure 3: Control and Knockdown Intracranial tumors

II. Results and Discussion

Staining for ACSVL3 and ACSBG1 was performed on different malignant glioma cell types. Specifically, staining was performed on astrocytoma, oligodendro-glioma, anaplastic astrocytoma, and glioblastoma multiforme. Astrocytoma are glioma that originate in astrocytes, which are star-shaped brain cells.[6] Oligodendro-glioma are brain tumors which originate from the oligodendrocytes of the brain, which work to insulate axons.[7] Anaplastic astrocytoma, as the name implies, are brain tumors which arise due to a loss of structural and functional differentiation.[8] Finally, glioblastoma multiforme is the most common and sadly the most aggressive of the gliomas. Glioblastoma multiforme arises from glial cells.[9] After staining these four different types of brain tumor tissue, for which brown coloration indicates the presence of ACSVL3, it was apparent that expression of ACSVL3 is extremely elevated in all malignant glioma cells as compared to cells making up normal brain tissue (Figure 2). The focus of the research conducted by Watkins, P. et al., however, is on glioblastoma multiforme tumors.

Once it was found that ACSVL3 was present in extremely elevated levels in glioblastoma multiforme, testing was performed in order to determine differences between cells containing ACSVL3 and those lacking this enzyme. The next step taken by the researchers Watkins, P. et al., therefore, was ACSVL3 knockdown by RNAi.

Immunofluorescence, a technique in which antibodies or antigens are labeled with fluorescent dyes in order to visualize intracellular biomolecules, was used to determine whether or not ACSVL3 knockdown was successful.[10] After transfecting U87 cells with the ACSVL3+4 plasmid, it can be seen that cells had a decreased level of ACSVL3 compared to control U87 cells. The results of immunofluorescent staining shows ACSVL3 in red (Figure 4).

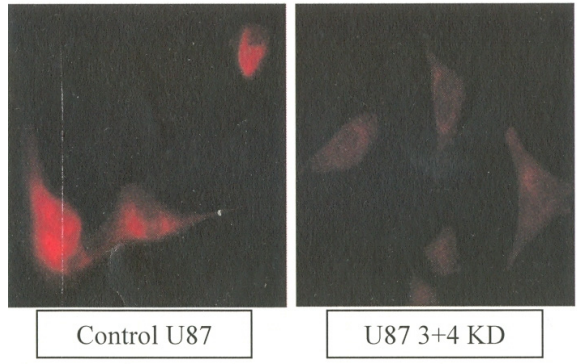

Figure 4: Immunofluorescent Staining for ACSVL3 in Control and KD U87 Cells

Another procedure which was performed on the U87 control and knockdown cells in order to ensure that RNAi was successful was the acyl-CoA synthetase assay. Acyl-CoA synthetase assays measure the combined activity of all endogenous long- and very long-chain ACSs capable of activating C16:0 by quantification of fatty acyl-CoAs. The results of the acyl-CoA synthetase assay show that enzyme activity in U87 KD cells is ~40% that of the control, meaning that ACSVL3 activity makes up 20% of all acyl-CoA synthetase activity in U87 cells. The remaining enzyme activity seen in U87 knockdown results is due to ACSs other than ACSVL3 (Table 1).

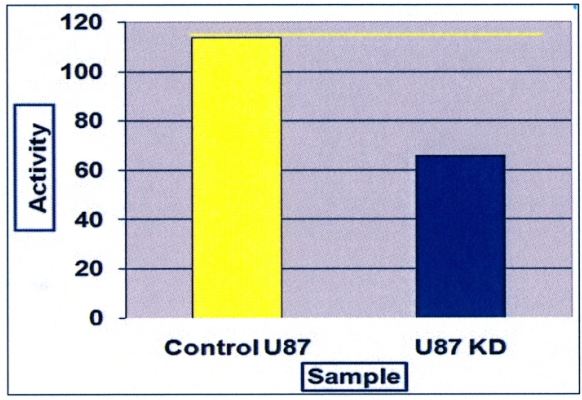

Table 1: Enzyme Activity of Control vs. Knockdown Cells

The next step taken by Watkins, P. et al. was testing drugs in the acyl-CoA synthetase assay as possible specific inhibitors of ACSVL3. In order to modify the assay to allow the addition of drugs, various drug solubilization techniques were tested. First, β-cyclodextrin was tested as a drug delivery method to be used in the acyl-CoA synthetase assay. The concentration of drug was varied while the amount of β-cyclodextrin added was kept constant. These results showed that β-cyclodextrin was not releasing the drug into the assay properly. Next, the amount of β-cyclodextrin added to the assay was increased with increasing concentration of drug. Therefore, the amount of 16mM drug solubilized in β-cyclodextrin added to the assay was varied. The results of these two assays showed that although β-cyclodextrin was an effective drug solvent, the release of the drug into the assay was highly dependent upon the drug: β-cyclodextrin molar ratio. The drug used in the assays testing β-cyclodextrin as a drug delivery system was chlorpromazine (Table 2).

Because β-cyclodextrin was not found to be an ideal method for drug solubilization when using the acyl-CoA synthetase assay, other drug solvents, DMSO and ethanol, were tested at various concentrations. First, DMSO and ethanol were added to the ACS assay in order to see if any inhibition of ACSs occurred from the addition of the solvent alone.

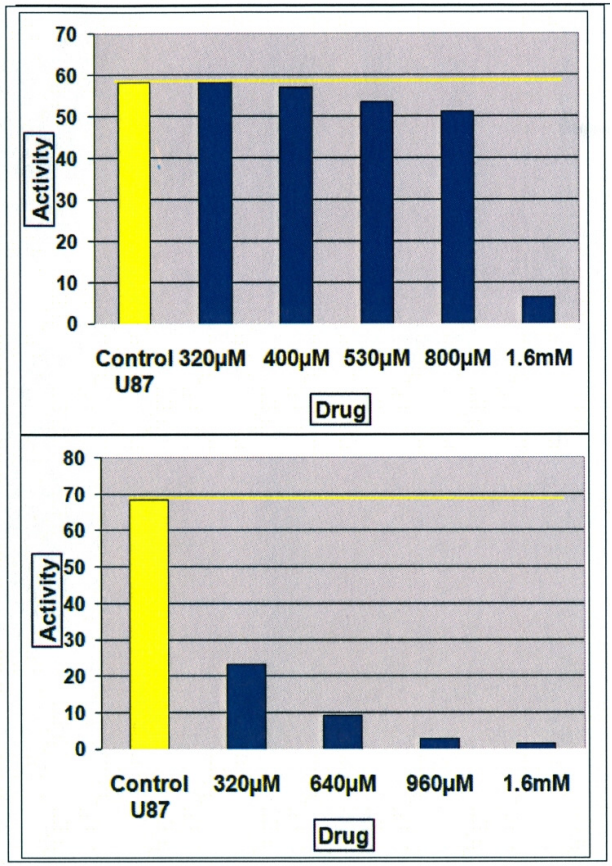

Table 2: Acyl Co-A Synthetase Enzyme Inhibition is Dependent Upon Drug: β-Cyclodextrin Molar Ratio

A total of 0.8% DMSO in PBS was shown to have a detrimental effect on ACS enzyme activity. Specifically, 0.8% DMSO in PBS inhibited ACS activity from the control (to which only water was added) by ~30%. The amount of DMSO added to the assay was then decreased to a total of 0.1 % DMSO in PBS. The 0.1 % DMSO was also

shown to inhibit ACS activity from the control by ~ 10%. A total of 0.5% ethanol diluted in PBS was found to inhibit ACS activity by ~8%. 0.5% ethanol in PBS, therefore, had the least inhibitory effect on enzyme activity of the different solvents at varying concentrations tested (Table 3). For this reason, 0.5% ethanol was used to solubilize drugs in subsequent assays.

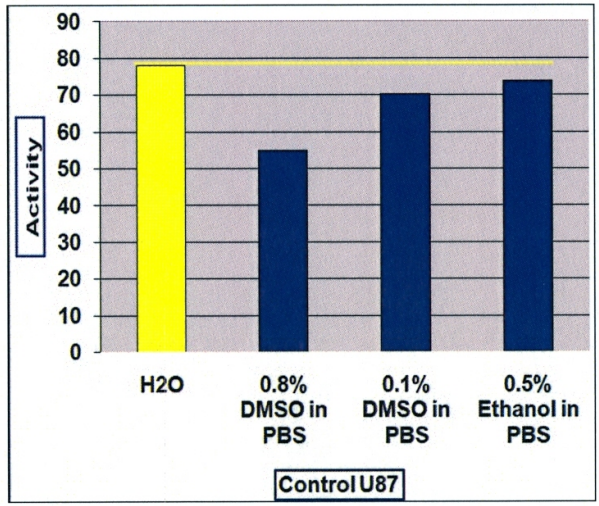

Table 3: Testing for Other Drug Solvents

From the 28 compounds found by DiRusso C, et al. to inhibit ACSVLl, 11 were chosen to be tested in the ACS assay to determine whether or not they showed potential as a specific inhibitor of ACSVL3. These 11 compounds were chlorpromazine, clomipramine, clozapine, embelin, emodin, mitoxantrone, perphenazine, pimozide promethazine, thioridazine, and triflupromazine.

In the first assay conducted, only control U87 cells were used in order to determine which drugs were able to show inhibition of any ACSs present in the cells. Of the 11 compounds tested, only seven were able to inhibit ACS activity. The seven drugs which inhibited control cell ACS activity were embelin, emodin, perphenazine, pimozide, promethazine, thioridazine, and triflupromazine, (Table 4).

A second assay was then conducted using both control and KD U87 cells. In this assay, the seven drugs which were shown to inhibit ACS activity in the previous assay were re-tested in order to determine whether any of the seven specifically inhibited ACSVL3 activity. The results of the assay showed that of these seven drugs, only one, triflupromazine, was found to be a specific inhibitor of ACSVL3 (Table 5).

Unfortunately, however, triflupromazine was only able to inhibit ~12% of the ACSVL3 present in the U87 cells tested.

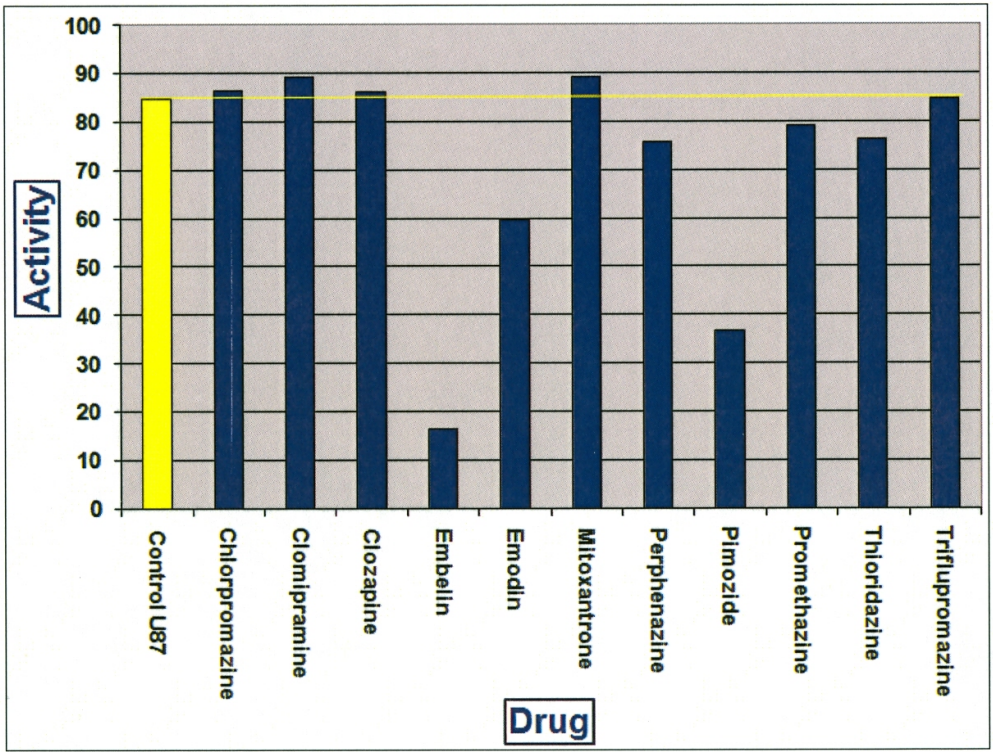

Table 4: Testing for Possible Drug Inhibitors of ACSVL3 Using Control U87 Cells

To continue the search for a specific inhibitor of ACSVL3, Watkins et al. will be testing the other 17 compounds found by DiRusso C, et al. to inhibit ACSVL1. Further modification of the ACS assay is also needed. Although ethanol did not significantly affect enzyme activity, there was considerable variability from experiment to experiment when 0.5% ethanol in PBS was used. This variability in results suggests that 0.5% ethanol in PBS might not be the optimal drug solvent. Further studies are being conducted in order to determine the best way to introduce drugs to the ACS assay.

III. Methods

Materials

The α-CD/10mM Tris pH 8.0 solution was prepared by combining 100mg α-CD, 100µl 1M Tris pH 8.0, and 9.9mL H_2O. The mix used in the acyl-CoA synthetase assay was prepared by combining 120µl H_2O, 10µl 1M Tris pH 8.0, 6µl 0.425M ATP, 6µl 0.425M $MgCl_2$, 6µl 8mM CoA/DTT, and 2µl 1N KOH per test tube. The pH of the

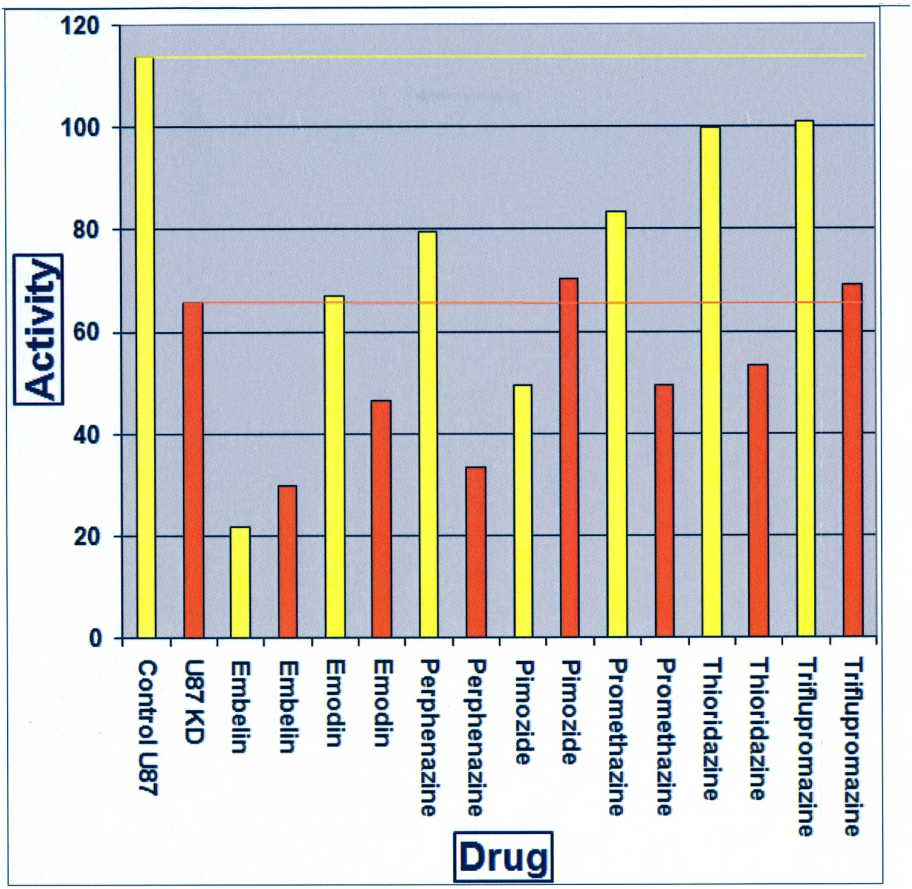

Table 5: Comparing Inhibitory Effect of Drugs on Control vs. KD U87 Glioma Cells

mix was then adjusted to 7.5 using 1N KOH. The modified Dole's solution was prepared by combining 800ml isopropanol, 200ml heptane, and 20ml $2NH_2SO_4$ (a 40:10:1 ratio of isopropanol: Heptane: $2NH_2SO_4$).

Control human U87 malignant glioma cells and U87 cells with stable knockdown of ACSVL3 were used as the test system in all assays. Assays contained 15μg cell protein. All animal protocols were approved by Johns Hopkins University School of Medicine Animal Care and Use Committee.[5]

Cell Culture

Human U87 glioblastoma cell lines (American Type Culture Collection Rockville, MD) were cultured. U87 cells stably expressing EGFRvIII (U87 KD cells) and wildtype U87 (control U87) cell lines were obtained from Dr. Gregory Riggins, Johns Hopkins University School of Medicine (Baltimore, MD).[5]

Transient ACSVL3 Knockdown (KD)

The pSilencer™ kit (Applied Biosystems/Ambion; Austin, TX) was used to produce four different small interfering RNA (siRNA) constructs. These constructs were used to target different regions of ACSVL3 mRNA. siPORT™ lipid reagent (Applied Biosystems/ Ambion) was used to transfect U87 cells with each of the four siRNA constructs. Three days after transfection took place, indirect immunofluorescence and Western blot analysis were used to asses the cells for their expression of ACSVL3. It was found that siRNA ACSVL3-3 and -4 were successful in significantly decreasing the expression of ACSVL3 in the cells while siRNA ACSVL-1 and -2 were not. siRNA ACSVL 3-3 (5'-CACGGCTCGCGGCGCTTTA-3') targets bp 394-412 of ACSVL3 mRNA and ACSVL3-4 (5'-CGTCTATGGAGTCACTGTG-3') targets bp 1861-1879. Control cells were also transfected with siRNA, in order to ensure that no differences between control and KD U87 cells occurred due to transfection. Control U87 received a scrambled nucleotide sequence (Ambion).[5]

Production of Stable KD Cell Lines

For control U87, a pSilencer vector that expresses shRNA with a scrambled sequence which does not express any protein in either human or mouse genomes (Ambion) was used. For knockdown cell lines, short hairpin RNA (shRNA)-producing vectors were constructed using ACSVL3-3 and -4 siRNA sequences seeing as siRNA ACSVL3-3 and -4 were the most effective in decreasing ACSVL3 cellular levels as discussed in the previous section. Nucleic acid polymers 5'-GATCCCACGGCTCGCG

GCGTTTATTCAAGAGATAAAGCGCCGCGAGCCGTGAAA-3' and 5'-AGCTTTTCACGGCTCGCGGCGCTTTATCTCTTGAATAAAGCGCCGCGAGCCGTGG-3' for ACSVL3-3 and 5'- GATCCCGTCTATGGAGTCACTGTGTTCAAGACACAGAGACTGACGGTTA-3' and 5'-AGCTTAACGTCTATGGAGTCACTGTGTCTCTTGAACACAGTGACTCCATAGACGG-3' for ACSVL3-4 are oligonucleotides (Integrated DNA Technologies; Coralville, IA) that were annealed and cloned into linearized pSilencer™ 4.I-CMV hygro vectors (Applied Biosystems/ Ambion). Underlined regions designate the targeted sequences. The BTX ECM 600 electroporator

was used to transfect U87 cells with control, ACSVL3¬3, ACSVL3-4, and ACSVL3-3 plus ACSVL3-4 (3+4) plasmids by electroporation. Hygromycin (200μg/ml) was added to the culture medium 24 hours after electroporation and antibiotic-resistant clones were selected and analyzed for ACSVL3 KD by immunofluorescence and Western blot.[5]

Immunofluorescence Analysis

Affinity-purified antibodies were used in order to perform immunofluorescence analysis of ACSVL3 in control and KD U87 cell lines. Antibodies from BD Biosciences (San Jose, CA) and Cell Signaling Technology (Danvers, MA) were used to detect total and phospho-Akt (ser473) respectively. Total and phospho-Akt (ser473) were quantified using the LiCOR Odyssey dual wavelength infrared system.[5]

Western Blot Analysis

Western blots with SuperSignal West Pico chemiluminescent substrate (Pierce Biotechnology, Rockford, IL) were used to detect relative amounts of ACSVL3 in cell samples.[5]

Subcutaneous and Intracranial Xenograft Mouse Models

In vivo tumorigenesis of control and ACSVL3-3 knockdown of U87 cells was assessed in 4-6 week-old female mice. For subcutaneous (s.c.) xenografts, NIH III Xid/Beige/Nude mice (National Cancer Institute, Frederick, MD) were injected in the dorsal areas with $4x10^6$ cells suspended in a 0.1 ml of phosphate-buffered saline (PBS). Tumor growth was measured every 3-4 days by measuring the volume of the tumors using calipers. The formula used to estimate tumor size was: volume = (length x $width^2$)/2. When tumor size reached ~$300mm^3$, the mice were randomly divided into groups (n=6 per group). The first group was injected with the neutralizing anti-HGF mAb L2G7. The second group was injected with control 5G8 monoclonal antibody (mAb).

Both groups received 100 μg antibody/20g body weight in a volume of 0.1 ml PBS intraperitoneally (i.p.) twice weekly.

10^5 cells in 5μl PBS were injected unilaterally into the caudate/putamen of C.B-17 Scid/Beige mice (National Cancer Instute, Frederick, MD) under stereotactic control for orthotopic xenografts. Mice were sacrificed 26 days post-injection. Brains were perdusion-fixed and hematoxylin/eosin-stained cryostat sections were used. Tumor size was calculated using computer-based morpometrics.[5]

Chemical Compound Library

The SpectrumPlus compound library, consisting of 2,080 compounds, was obtained from MicroSource Discovery Systems, Inc. There are five subsets of compounds within the library: Genesis Plus, Pure Natural Products Collection, Argo Plate, Cancer Platem and Spectrum Plus Plate. The Genesis Plus is composed of 960 compounds that represent new and classical therapeutic agents, and experimental inhibitors and receptor agonists. The Pure Natural Products Collection includes 720 diversified pure natural products and their derivatives, including simple and complex oxygen heterocycles, alkaloids, sequiterpenes, diterpenes, pentercyclic triterpenes, sterols, and many other diverse compounds. The Agro Plate is a group of 80 compounds representing classical and experimental pesticides, herbicides, and purported endocrine disruptors. The Cancer Plate consists of 80 cytotoxic agents, antiproliferative agents, immune suppressants, and other experimental and therapeutic agents. Finally, the Spectrum Plus Plate is a group containing 240 biologically active and structurally diverse compounds. The 2,080 compounds are supplied as 10 mM in DMSO solutions. The 10mM solutions were then prepared for screening in yeast, by diluting the drug solution in PBS to a final concentration of 80 mM. A Caliper RapidPlate 96/384 Dispenser (Caliper Life Sciences, Hopkinton, MA) was used to screen the drugs in yeast.[4]

Acyl-CoA Synthetase Assays

Activation of [^{14}C] palmitate (C16:0) (Moravek Biochemicals, Brea, CA) to its CoA derivative was measured in frozen/thawed cell suspensions. 13x100mm disposable tubes were set up in duplicates and then labeled. A radio-labeled C16:0 solution was heated with gentle stirring in a hot water bath for 5 minutes, sonicated, and vortexed. 50μl of C16:0 was then added to each test tube. The solution was then dried down by placing the tubes under N_2 gas for approximately 5 minutes. The fatty acid was then solubilized with 50μl α-CD/1OmM Tris pH 8.0. The tubes were sonicated for 2 minutes

more and then incubated for 30 minutes in a 37°C moving water bath. A 25:50 ratio of drug to cell suspension was used when creating samples. A 1:1 ratio of sample to STE was added to each tube for a total volume of 50µl sample and STE. 150µl of mix (described in the materials section) was immediately added to each test tube. The test tubes were vortexed for approximately 5 seconds each and then incubated for 20 minutes in a 37°C moving water bath. Once the 20 minutes was up, the reaction was stopped by adding 1.25ml of modified Dole's solution to each tube. The solutions were then allowed to sit for at least 20 minutes at room temperature before they were worked up.
The tubes were then centrifuged using a Beckman Model TJ-6 Centrifuge for 10 minutes. Once complete, the supernant from each tube was transferred to new test tube. 0.75ml Heptane and 0.5ml water were then added to each tube. The tubes were vortexed for 20 seconds each and the solution was allowed to separate into two layers. The radioactive upper layer was then aspirated off. 0.75ml Heptane was added, the tube was vortexed for 20 seconds, and the upper layer was aspirated off. The previous step was repeated. Finally, 0.75ml Heptane was added and the solution vortexed well. The contents of the tubes were then centrifugated for 1 minute in the Beckman Model TJ-6 Centrifuge. Once complete the upper layer was removed and the lower layer transferred to small counting vials. 5ml of Budget Solve solution was added to each counting vial and the contents were shaken thoroughly. The combined activity of all endogenous long- and very long-chain ACSs capable of activating C16:0 was then measured using a Beckman LS 6500 Multi-Purpose Scintillation Counter.

Protein Quantitation

Two different protein quantitation assays were used. Amount of protein was determined in some cell samples by method of Lowry et al.. For most samples, however, the Pierce 660nm protein assay was used. 12x78 mm test tubes were obtained at the start of the Pierce 660nm protein assay. To the blank, test tube 1, 49.2µl PBS 4.8 µl 10% triton, and 6µl STE were added. The first standard solution (STDl) was prepared by combining 47.7µl PBS, 4.8µl 10% triton, 6µl STE, and 1.5µl of 2mg/ml BSA. STD2 was prepared by combining 46.2µl PBS, 4.8µl 10% triton, 6µl STE, 3µl 2mg/ml BSA. STD3 was prepared by combining 43.2µl PBS, 4.8µl 10% triton, 6µl STE, 6µl 2mg/ml BSA. STD4 was prepared by combining 34.2µl PBS, 4.8µl 10% triton, 6µl STE, and 15µl 2mg/ml BSA. The concentrations of STDl, 2, 3, and 4 were 50 µg/ml, 100 µg/ml, 200 µg/ml, and 500 µg/ml respectively.

The remaining test tubes contained the samples in which protein quantity was being measured. To these tubes, 49.2µl PBS, 4.8µl 10% triton, and 6µl sample was

added. Once this was complete, 900µl of New Pierce 660nm protein assay reagent was added to each tube. The tubes were allowed to sit at room temperature for 5 minutes. The protein concentration was measured at 600nm using a Beckman DU 640 UV/Visible spectrophotometer.

IV. Acknowledgement

This work was supported by NIH grants NS037355 (PA W), NS043987 (JL). PS was supported by a fellowship award from the American Brain Tumor Association.[5] The drugs tested by Watkins, P. et al. were chosen based on the research of DiRusso, C. et al..[4]

V. References

1. Watkins, Paul A., 2008, *J Bio. Chem*., 283, 4, 1773-1777.
2. Watkins, Paul A. et. al., 2007, *J Lipid Research*, 48, 2736-2750.
3. Wikipedia: Dyslipidemia, Accessed on 04/13/2010 at 7:32 PM.
4. http:// en. wikipedia.org/wikiJDyslipidemia (4) DiRusso, Concetta C. et aI., 2008, *J Lipid Research*, 49, 230-244.
5. Watkins, Paul A. et. aI., 2009, *Cancer Res*., 69 (24), 9175-9182.
6. Wikipedia: Astrocytoma, Accessed on 04.13.2010 at 12:20 PM.
7. Wikipedia: Oligodendroglioma, Accessed on 04/13/2010 at 12:37 PM.
8. Children's Hospital Boston: Anaplastic Astrocytoma http://www.childrenshospital.org/ az/Site5651 mainpageS565PO.html.
9. Wikipedia: Glioblastoma multiforme, Accessed on 04/13/2010 at 1 :07 PM http://en.
10. Wikipedia: Immunofluorescence, Accessed on 4/13/2010 at 5:32 PM.
11. DiRusso, Concetta C. et aI., 2009, *Immun., Endoc. & Metab. Agents in Med. Chem*., 9, 11-17.
12. Guo D. et aI., 2009, *Science Signaling*, 2 (101), ra82.
13. Wikipedia: Glioma, Accessed on 04/08/2010 at 11 :08 AM.

Section II:
The Social Sciences

Grief of Caregivers Caring for Alzheimer's Disease Patients

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Alzheimer's disease is the most common form of dementia that consists of a gradual decline in physical and mental functioning. Although there is suffering on the part of the patient, caregivers also suffer from the stress, frustration, grief, and burden that accompany caregiving. Grief, burden, and stress have been researched extensively since the 1970s until present. The stages and similarities of grief have been pinpointed, but it seems that the biggest predictor of burden is how the caregiver personally perceives the situation. The issues throughout past research were observed during the author's internship at the Alzheimer's Foundation. New conceptions for future research were formulated during the experience.

I. Introduction

Alzheimer's disease was first identified by Alois Alzheimer in 1906; however it was not thoroughly researched until the 60s into the 70s (Alzheimer's Association, 2009). It is the most common form of dementia, accounting for 60-70 percent of dementia patients (*Basics of Alzheimer's*, 2009). Alzheimer's disease progressively deteriorates the nerve cells within the brain, resulting in a loss of physical and mental functioning. The patient is unable to take care of themselves or make decisions; they are left in the hands of their caregiver. During this time, caregivers have to give up a lot of their own life in order to take care of the patient. Often some leave their job, lose friends and family, and gain physical and mental illnesses that they did not have prior to caregiving. Alzheimer's disease affects every aspect of the caregiver's and the patient's life (*Basics of Alzheimer's*, 2009).

Each patient's decline is different from the next, so all that can be followed are the similarities in the decline. This information provides caregivers with an idea of what is to come during the course of the disease. If the caregivers are educated with the main issues, less stress, grief, and better personal and patient care may result. Early education about the decline of Alzheimer's disease should be presented to them during the initial diagnosis stage. Over the past few decades, research has tried to define Alzheimer's

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disease, and an overview of similarities has been formed. This information will hopefully help the caregiver with support, treatment, and education.

II. Literature Review

It was the year 1959 that community based treatment was encouraged for psychiatric patients. The Mental Health Act was passed with an amendment that encouraged not only support outside of a hospital setting, but treatment within the home. This had huge implications on the treatment of patients with dementia. Grad and Sainsbury (1968) did a two year follow up on the different treatment approaches of two different hospitals; one was "extra-mural" and the other "hospital-oriented". Both of the hospitals sent a psychiatric social worker to measure the burden of the families as either "some burden" or "severe burden". One month after first being assessed, the families with severe burden experienced similar relief in both hospitals. Although it was not statistically significant, the "hospital-oriented" approach helped relieve the "some burden" category of families better. After two years, these trends were still present; 52 percent of caregivers in the "extra-mural" group said that their patient had caused problems during the past two years, whereas only 28 percent of caregivers from the "hospital-oriented" group had problems. There was more caregiver burden when the patient was at home than when they were in the hospital (Grad and Sainsbury, 1968).

The type of family burden that was experienced is very similar to current research. The caregivers experienced emotional disturbances, insomnia, headaches, irritability, and depression. On top of these, they had to give up or greatly restrict their social activities and spent most of their time catering to their patient. The majority of their time, energy, and money were spent caring for the patient. Grad and Sainsbury (1968) concluded that it is important to provide proper support systems for families if they are using community instead of clinical care. After assessing the enormous amount of stress that goes into caregiving they made an important statement, "…we are obliged to consider whether their continued presence in the home is leading to the production of more mental illness in the community" (Grad & Sainsbury, 1968). This idea is why it is so important to provide support for the caregiver along with the patient.

In 1981 through the present, families are attempting to keep the patient in the comfort of their own home as long as possible. This attempt leaves the family with many stressors that may cause physical and psychiatric problems. Every dementia patient is different, their decline can be gradual or quick along with stable plateaus; therefore the effect on the family is unique with every case. Eisdorfer and Cohen (1981) recognized these differences and encouraged treatment that consisted of trying to maximize the

functioning and quality of life for the patient and the caregiver. The different stressors that occur can cause family problems, physical and psychiatric problems, substance abuse, and maladaptive behaviors occurring mainly in children within the families of dementia patients. When a patient is diagnosed with Alzheimer's disease or dementia the physician should make a conscious effort of educating the patient and family about the disease, along with assisting them to community based programs for both people. However, it seems that in 1981 it was not being implemented as strongly as was needed, because the illness was misunderstood (Eisdorfer & Cohen, 1981).

Eisdorfer and Cohen (1981) felt it was important to be familiar with the changes that occur during the decline of the patient. Being ready and informed about what is to come can help prepare not only the patient but also the caregiver. The patient should be evaluated during times of rapid deterioration because it may not be due to Alzheimer's disease, but instead from an infection or an unhealthy diet. The patient could possibly recover from a decline that was not from the disease. Legal and financial issues should be discussed before the patient deteriorates to an enabling state, that way nothing is misunderstood when the time comes to make a decision. Home visits from physicians and social workers can help to create a healthy environment for the patient that can give them the optimum care and functioning. All of these aspects of care can help to decrease the stress and concern that comes with caregiving and being a patient of Alzheimer's disease. Eisdorfer and Cohen (1981) were the pioneers of good care that included therapy and close attention to the relationship between the family/caregiver and the patient.

In 1981, support groups were already being used for caregivers of aphasic and stroke patients; Barnes, Raskind, Scott, and Murphy (1981) thought support groups would also be useful to families of Alzheimer patients. During the time of this study more than 1 million people of the United States had Alzheimer's disease, so the need for some type of support was great. Barnes et al. (1981) started a support group made up of spouses and adult children that met together biweekly for sixteen, 90 minute sessions, and bonded very quickly. Each session was videotaped, so common problems were able to be assessed, such as an inadequate explanation of the disease, irritability, physical abuse, denial, guilt, hopelessness, and frustration. The group helped each of the caregivers to vent and relate experiences with one another. The group leader helped to keep the conversation comfortably flowing, along with give specific legal, medical, and psychological support and advice, but the majority of the learning that took place was actually between the individual caregivers (Barnes et al., 1981).

The key to successful care is the ability to adjust to the constant deterioration that the patient is going through; the family needs to change along with the patient, because nothing else can be done. Since each patient was at different stages of deterioration, the caregivers were able to share stories that helped others to prepare for the future. The support group ended up being a great success, because it informed the families about the disease and the legal issues that needed to be addressed before the patient became unable to care for him/her self. It also helped to increase the morale and well-being of the caregivers. Overall, the support group seemed to help; Barnes et al. (1981) hoped that the concept would spread leading to better care for the patients and caregivers.

The dying process of each Alzheimer individual is influenced by their environment and the people that encompass it, their symptoms, and personality. Although the patient is deteriorating, during the early to mid stage they are capable of doing numerous things and making rational decisions. In order to make it a more positive experience the caregiver must recognize the strengths of the patient and incorporate them in the decision making. Cohen, Kennedy, and Eisdorfer (1984) interviewed a couple hundred Alzheimer patients to see if there were any related ways to cope with the disease. They thought if people were able to better understand how the patient copes, then the caregivers could cope too and provide better care (Cohen et al., 1984).

The dying process is best described in 6 stages, starting with pre-diagnosis. Recognition and concern usually take hold of the people around the patient, because the patient is more likely to ignore or deny the subtle hints that occur. It starts off as being human error and progresses to an inability to function well in society. The symptoms may even cause serious social turmoil, resulting in the loss of a job, friendships, family, and even substance abuse. Once it gets that serious, Cohen et al. (1984) suggested the importance of receiving a medical diagnosis and social support; therefore there is not an untrained misdiagnosis that results in increased stress. Once there is a medical diagnosis of Alzheimer's disease, a second phase occurs which is the reaction of the diagnosis, denial. It is only understandable that someone would deny having Alzheimer's, but it is extremely important for their future to cope. Early diagnosis is most important so that the patient is part of the decision making starting with their medications and views on life support. Not having to cover-up the illness provides the caregiver and patient with great relief; both are then able to communicate and attempt to adjust to the changes (Cohen et al., 1984).

During the acceptance of the disease, feelings of anger, guilt, and sadness usually occur. It is important for a medical professional to provide not only medical

information about the disease, but help them make social support connections within the community. Knowing about day care programs, legal opportunities, and even support groups can make a huge difference in the treatment and progression of the disease. Once the patient and caregiver are able to get through the next stage of coping completely, they can take advantage of all the things they always wanted to do. The patient should be treated and respected like usual, but live in a safe environment. Schedules of little jobs can create less stress for the caregiver and give the patient a feeling of mastery. It is difficult to be constantly deteriorating and try to maintain a normal lifestyle, which is why the patient and caregiver must adjust and constantly redefine themselves (Cohen et al., 1984).

The next phase of maturation consists of the new bond that occurs between the patient and the caregiver. The ability to change with one another creates a new relationship, and can be positive if the coping phase went well. A feeling of self-determination and accomplishment is encouraged because the patient can still function and provide the world with their gifts. Once the disease goes into its final stages, there occurs a separation from self. This is the hardest phase for both the caregiver and patient, because they are no longer the "same" person. The caregiver is taking care of a person who is completely different from whom they originally loved. Cohen et al. (1984) stated that no patient has ever been able to actively explain this separation, because they have extreme loss of functioning. Therefore, it is important to respect their later life decisions that were made before the severe loss of functioning. These common phases among Alzheimer's patients can give a better understanding to the process of change that needs to occur during the dying process. With the help of a medical professional and a successful transition through the phases the best experience can be made of Alzheimer's disease; less stress and better care will result (Cohen et al., 1984).

When the loss of functioning becomes so severe and the stress of caregiving becomes great, the desire to institutionalize the patient increases. Putting an Alzheimer patient into a nursing home is usually the last step of care for the Alzheimer patient. The caregiver can no longer give enough care by themselves or with the help of aids; a nursing home provides 24 hour medical care for the patient. Morycz (1985) wanted to understand what predicted the desire to institutionalize a patient and wondered if race or gender had a factor. He conducted structured interviews and surveys to 80 families that were directly caring for an Alzheimer patient. The functional incapacities, strength, and behaviors were assessed of the patient and the caregiver, because often the caregiver is older with medical problems too. Also, the degree of burden and the strain of caregiving were measured to see how the caregivers subjectively viewed the experience.

Overall, the burden caregivers received was similar across all races and gender. Caregiver strain was the best predictor to institutionalize a patient. However, males and African Americans were less desirous to institutionalize their Alzheimer patient, and strain did not predict that desire. Even more interesting, the less social support the caregivers had predicted more family strain and stress. The results of Morycz's (1985) study are important because it showed there was burden and strain with caregiving despite gender and race. The desire to institutionalize was different depending on the burden that was felt by caregivers, but African Americans and males were less likely to put their patient in a nursing home. It also supported the notion that social support was helpful for the care and burden on the caregiver. Morycz (1985) had great insight on the burden and strain of caregiving.

Haley, Levine, Brown, and Bartolucci (1987) had less support that stress predicted poor caregiver outcomes. 54 caregivers were interviewed and assessed on their stressors, appraisal, coping responses, and the type of social support and activity they were involved in. Surprising to Haley et al. (1987), the severity of caregiving stressors had little prediction to caregiver outcomes, defined as their level of depression, life satisfaction, and health. How the caregiver perceived their own stress rather than the objective measure of stress was a better predictor of the depression felt by them. This makes sense considering every person relates to struggles differently. The more social support, like friends and family that are supportive of the disease the more satisfied caretakers are with their life. Haley et al. (1987) mentioned the importance of coping mechanisms along with social support and activity because they seemed to predict better health outcomes. Better caregiver health outcome means more successful patient care.

An overview of the articles studying caregiver grief prior to 1990 was compiled by Schulz, Visintainer, and Williamson (1990). They were specifically looking at depression and other psychiatric illness rates in caregivers, because caregivers often forget about their own health when taking care of their patient. The list of studies they reviewed measured depression, overall emotional health, stress, immune response, and health care utilization. Compared to non-caregivers, most of the studies had elevated levels of depression, and the more impaired the patient the higher the depressive symptoms in the caregiver. Females were found to have a greater chance of having elevated levels of depression than men. Schulz et al. (1990) were most worried, because some of the cases of depression could warrant a psychiatric diagnosis. They wondered if caregiving was actually causing the psychiatric diagnosis of major depressive disorder, and when treatment should be given. Throughout the studies reviewed, neither institutionalization nor death resulted in a decrease of depressive symptoms. They

hypothesized that if the depression continued for a length of time after the person died, then they should be put on some medical treatment for the disorder. Physical health was also being affected by either precipitating an illness or making a preexisting illness worse (Schulz et al., 1990). If physical and mental health is being negatively affected by caregiving, then support groups and medical attention needs to be given to the caregivers specifically.

Grief occurs during the act of caregiving and after the patient dies. Jones and Martinson (1992) interviewed 30 caregivers, 13 of which were continually contacted during caregiving and after the death of the patient. 54 percent of the caregivers interviewed said that the most intense sadness and grief was during caregiving. The long goodbye during their physical and mental decline seemed to be a reason for their crying, sadness, and depressive feelings. Most were ready to let go due to the quality of life their patient was living in, however some still wanted to hold on as long as possible. Most of the caregivers felt relief with the death of the patient but guilty about past decisions. Some even started to resent the disease because of what it caused the family and the patient. Interestingly, caregivers said they needed help and encouragement to go on with their lives after having committed so much time to their patient. Some reported that they tried to rekindle relationships that had been lost and gained new interests. The grief that Jones and Martinson (1992) observed was not typical of anticipatory grief, but rather acute and related to the loss of ability. They suggested it is a different phenomenon called "dual dying", which incorporated the declining mental capacity that affected intelligence and social ability. It occurred early during caregiving and was at its peak right before the death of the patient, and continues on a much less scale after the death. It seemed the best time to provide support was during the caregiving period (Jones & Martinson, 1992).

Throughout research, depression seemed to be a common ailment that occurred during the caregiving process. Walker and Pomeroy (1996) recognized that depression was present, however did not see it as severe as originally thought. They thought that what was actually occurring was anticipatory grief, because the caregivers were constantly experiencing different losses over an extended period of time. In order to support their hypothesis of anticipatory grief, Walker and Pomeroy (1996) conducted a study in which they interviewed 100 caregivers who had been part of an Alzheimer's and dementia support group. Numerous measures were used including the Grief Experience Inventory, a bereavement scale, Despair scale, and the Beck Depression Inventory. Caregivers scored higher than a control on the depression scale; however they were not extreme levels of depression. The results from the Beck Depression Inventory (BDI)

showed that 63 percent of the variance accounted for grief; therefore Walker and Pomeroy (1996) suggested that the depression was actually grief. Full scores on the BDI strongly suggested that the patient was going through anticipatory grief. A social desirability scale was also used; commonly those with low scores reported high levels of depression and intense feelings of grief. However in this sample, only 8 percent of caregivers reported low social desirability and 44 percent reported high desirability (Walker & Pomeroy, 1996). The authors suggested the high scores are due to the expectations that our society places on the treatment of the ill and caregiving. More attention is needed on the subject of anticipatory grief; treatment could possibly be more efficient if it accurately treated as anticipatory grief. Walker and Pomeroy (1996) urged that more research should be attempted on the topic of anticipatory grief, because it could be beneficial to the caregiver's health and the quality of care for the patient.

Within the same year, Ponder and Pomeroy (1996) discussed the severity of anticipatory grief. Caregivers were unable to mourn successfully while the patient was alive, because they were too busy caregiving. In addition, the fact that the body was still alive complicated feelings. The caregivers lived in long term anticipation of death and were lost in a world of uncertainty and losses. In order to measure the extent of their grief Ponder and Pomeroy (1996) conducted structured interviews of 100 caregivers. The intensity, anticipatory grief behaviors, and the grief stage of which they are in, were measured using the Stage of Grief Inventory, Despair Test, and the Grief Experience Inventory. Caregivers were also asked to self report all of their grief behaviors exhibited in the past two months. They had comparable levels of denial, over-involvement, anger, and guilt, but with higher levels of acceptance and negative symptoms of guilt. Surprisingly, 73 percent of the caregivers were in the last stage of guilt, acceptance (Ponder & Pomeroy, 1996). Most importantly, as the Alzheimer patient's symptoms got worse, the anticipatory grief in the caregivers increased; verifying the hypothesis. They also hypothesized that during the beginning of caregiving guilt would increase, then decrease as death came near; however the results showed an initial decrease of grief, then a rise towards the end. Ponder and Pomeroy (1996) were unable to predict that longer duration of caregiving would end with caregivers reaching the stage of acceptance. Rather, no matter what duration they were within, they had comparable levels of grief. The results of the study were informative in the way caregiving impacted the lives of the caregivers. Their grief and despair did not follow a path that prior research had expected, Ponder and Pomeroy (1996) helped to expand the research on anticipatory grief.

The grieving process happens not only while caregiving, but also when the patient dies. Murphy, Hanrahan, and Luchins (1997) thought it was important to explore

how nursing homes handled grief and bereavement after the patient dies; therefore they conducted a telephone survey to 121 long-term care facilities, of which only 111 participated. The call was directed to either a social worker or the Director of Nursing at the facility, and asked six questions about their grief and bereavement services post-death. The interviewer asked questions such as, are sympathy cards sent to families, are families provided with grieving and bereavement information before or after death, are they sent information about support groups, are they offered a referral for counseling, does anyone from the facility attend the funeral, and does anyone contact the family during the first 13 months of the death. Out of the 111 nursing homes 55 percent sent sympathy cards, the rest expressed interest in the idea, and 98 percent of facilities did not visit, call, or write to the families 13 months after the death of the patient. Surprisingly, 99 percent gave no information before or after death about grief and bereavement, mainly explained that their work load inhibited them from doing so, and some even requested packets from the interviewer to hand out. Also, 99 percent sent no information about support groups locally or on-site, and 76 percent had not given referrals to a counselor or psychiatrist. Lastly, 54 percent of the facilities had an employee attend the funeral of the patient, however it was based on the case and the relationship formed between the employee and patient (Murphy et al., 1997).

These percentages were alarming considering the significant amount of grief caregivers go through after the death of a patient. Murphy, et al. (1997) stated that most caregivers were not aware of the support that was available in their community, and it was at the time a national policy that caregivers should receive at least 1 year of grief and bereavement care. Caregivers reported positive outcomes of pre and post-death grief and bereavement care; it seems more attention is needed to spread the word about these resources.

In order to create the best therapeutic environment for caregivers, Meuser and Marwit (2001) attempted to track the grief responses individually, between spouse and adult-child caregivers depending on the severity of the Alzheimer's patient. They attempted to identify the characteristics of grief at each stage of Alzheimer's disease, the differences and similarities between spouse and adult-child caregivers, and the effects of anticipatory grief. 87 caregivers were mailed a questionnaire which asked demographic information and measured the level of functioning of the patient and grief of the caregiver. After the questionnaires were received Meuser and Marwit (2001) placed the caregivers into either spouse caregivers of mild, moderate, and severe patients or adult-child caregivers of mild, moderate, and severe patients. Overall, the spouses and adult-children exhibited similar intensities of grief. The adult-children had significantly higher

levels of jealousy towards non-caregivers, negativity, loss of interest in usual activities, and questioned the meaning of life. The spouses showed greater levels of loneliness and loss of sexual intimacy (Meuser & Marwit, 2001).

The significant differences between spouses and adult-children were documented from the support groups which were video-taped and later reviewed. The mild stage adult-child group seemed to overlook the early signs of dementia and attributed them to aging. They were less likely to discuss the future and instead, focused on the capacities of their patient. The spouse group was more open, accepted the disease, and seemed realistic in their ideas. At this point the adult-children were self-focused on their personal losses, whereas the spouses were other-focused and saw the loss as mutual (Meuser & Marwit, 2001).

During the moderate stage of caregiving adult-children are hit with the reality of the situation, they can no longer live in a world of denial. They tend to be angry and frustrated because they have to take care of someone with Alzheimer's disease, and then feel guilt for feeling that way. Meuser and Marwit (2001) hypothesized that it was a result of a role shift; children had to take care of their parents and had a hard time accepting that role. Although stress added up in spouse caregivers, they tended to understand it and embrace it rather than have negative feelings about the situation. They exhibited little anger; instead they hoped to sustain dignity and affection (Meuser & Marwit, 2001).

The last stage of severe caregiving is usually marked by putting the patient into a nursing home. Adult-children tended to feel immense relief by releasing the anger, frustration, and jealousy they attributed to caregiving. Their focus was changed from the self to the patient and their relationship. On the other hand, spouses tended to have the most intense grief at that point because it forced them to examine themselves. Often self-care was threatened by caregiving, so they were left trying to build themselves back up, but without their "other half" (Meuser & Marwit, 2001).

This study was a huge step forward in the quality of care for caregivers. Meuser and Marwit (2001) were able to support that there were significant difference between the grief felt by spouses and adult-children. Knowing these differences could make treatment special to the individual caregiver, and improve coping mechanisms.

Now in 2009, researchers have attempted to characterize the grief that a caregiver goes through. Diwan, Hougham, and Sachs (2009) attempted to explore grief that occurs not only after death, but also during caregiving. Caregivers from two major hospitals were contacted for an interview two to six months after the death of the caregiver's patient. The researchers attempted to see if there were any patterns in the

grief of the relationship between patient and caregiver, and what issues precipitated grief. Demographics were taken along with the patient's symptoms during the end stage, also whether the caregiver utilized hospice, was satisfied with patient care, and experienced caregiver grief. There was one open-ended question that asked if they had ever grieved at any other time than during the death of the patient. If they answered yes, then they were asked at what times and to explain why they thought they grieved at that time. The answers to these questions provided the most important information from the study. 62 out of 87 caregivers reported grieving at other times other than during the death of the patient (Diwan, et al., 2009). Some of the issues that may have provoked the feelings were the diagnosis, symptoms from the illness, decline in physical and mental health, personal conflict, institutionalization, and the end stage of the patient.

The relationship that the caregiver had with the patient seemed to have had an influence on the type of grieving they experienced. A smaller percentage of adult-sons, compared to spouses and adult-daughters, reported grief before the death of the patient. Only daughters seemed to have grieved because of some interpersonal conflicts they were experiencing (Diwan, et al., 2009). These results of the differences among types of caregivers are important to explore in further research.

Diwan, et al. (2009) stated an important insight into their own research, and said that "grieving appears to vary by the nature and significance of the loss experienced by the caregiver". They stated the importance of not focusing on similarities of grief between people; it was the caregiver's personal life and reaction that had the biggest influence on their grief. The only way to properly educate caregivers was by preparing them for what to expect by sharing stories and coping strategies. That way they could prepare themselves for what was to come in the future (Diwan, et al., 2009).

Throughout the research presented there were many common themes that were also seen during my placement at the Alzheimer's Foundation. Through my observations I was able to further support what was studied in past research.

III. Observations

My placement was with the Alzheimer's foundation sitting in on caregiver and patient support groups; along with making calls to caregivers and providing them with community resources and brief counseling. I was able to witness the benefits of support groups and hear the stories of each caregiver. No caregiver or patient is alike, but they are still able to learn a lot from one another.

Week 1

While in the office, a caregiver called asking if we had a friendly visit program. She reported that her mother is lonely and lacks the social contact and activities to keep her busy. Advice was given about caregivers visiting the nursing home too often. Nurses and nursing home staff told a caregiver to stay at home, in order to give the patient time to settle into the new situation. A caregiver called to vent about her situation and reported that her father is burning her out.

Week 2

During the caregiver support group, the caregivers reported the progressive deterioration of the disease, and how they felt "hopeless" because the patient never gets better. A caregiver, a school teacher, reported that in order to get her husband to move a leg or go to bed she will say, "And we move the leg" as she moves the leg. She stated the importance of sustaining dignity in the loved one, because "no one likes to be told what to do". A different caregiver reported having a difficult time with her husband acting violent towards her and then running away. She had to call the police, but since he was wearing an ID bracelet she stayed in the house instead of looking for him. She stated, "I wasn't scared at all, is that bad? I just figured the police would find him and I couldn't keep letting him hurt me." Another caregiver spoke about losing her friends and no longer being able to entertain like she wanted. The rest of the group reassured her and said that once time passes, and the patient cannot move around as much, she would be able to entertain again. The leader of the group continuously stated the importance of the caregiver changing, since the patient cannot.

Week 3

In the caregiver support group a new caregiver attended the meeting. The caregivers reacted with words of encouragement and positive yet direct information about patient care. A caregiver brought up the topic of preventing other illnesses in a patient. One patient was advised by the doctor to get a colonoscopy because of issues that were persisting, thinking he might have colon cancer. The caregiver seemed hesitant to go through with the procedure, because he stated the patient had not complained. The leader interjected by saying that often a patient can have a negative reaction to anesthesia and intense procedures. The caregiver's other worry was the preparation for the colonoscopy and the results afterwards. She reported that she may not be able to handle the clean up from the colonoscopy. One caregiver stated in response, "If you find something cancerous will you do something about it?" That appeared to make the caregiver think

and helped to make the decision. Another caregiver asked if he should continue with mammograms for his patient, since it is painful. They discussed the importance of comfort in the caregiving of the patient.

When making phone calls, I spoke to a woman whose father has Alzheimer's disease and is the primary caregiver. She reported that her father was being "nasty", verbally and physically abusive to his wife. The caregiver stated that she yells back at the patient, telling him to stop using his illness as an excuse. She stated when she shows up at the house, her father behaves well.

Week 4

One caregiver stated that you can bring memory back in a patient by using a skill they once used often. The patient did not know who was on the phone earlier in the week; the caregiver who knew he was good with numbers, asked him a series of questions that he was able to answer. "When did your son and wife get married?" "When did they have their first son?" Then, she stated, he was able to figure out who was on the phone and remember his name.

During the Alzheimer patient support group the patients joked and appeared almost "normal". Most of the patients stated that their main goal was to keep busy, do things they are interested in, and not feel sorry for themselves. They were able to remember old information, but when asked about recent events could not report anything. Some of the patients had trouble keeping their train of thought, so when a question is asked it took a while to respond.

Week 5

During the caregiver support group, a new caregiver expressed that she may not want to know whether her husband has Alzheimer's disease or not. She talked continuously about her patient, and the rest of the group actively listened.

During the Alzheimer patient group five patients attended, at various levels of dementia. One woman exhibited a more serious level. She had severe lack of socialization and an intense gaze. While playing a game of bingo, the patients exhibited a lack of concentration, yet still seemed to enjoy the game. Questions were asked about United States history and the patients were able to answer with correct answers, however exhibited trouble with piecing information together.

When calling caregivers, a lack of transportation was a continuous complaint. Caregivers exhibited guilt about taking time out for themselves, and reported having little

motivation to go out. One caregiver stated that she had given up on her self; all that mattered was the patient.

Week 6

During the caregiver group the subject of traveling occurred. The leader stated that when the patient's surroundings change, they decline rapidly. A caregiver previously made plans to go on a cruise with the patient and seemed to be nervous. She stated that the people she would be with would help, but she was worried she would not be able to relax. She assumed that he would stay in the room; however other caregivers interjected and stated that he might try to leave and get confused. One caregiver suggested placing a piece of paper over the door knob, creating the illusion that it is not there. The quality of nursing homes was discussed and their prices. Money and the cost of everything seemed to be a constant worry of the caregivers.

During the Alzheimer patient group, the patients exhibited frustration with the power their caregivers had over them. They often said, "I do what the boss tells me".

While making phone calls, a woman exhibited extreme anger towards the Alzheimer's foundation, stating "I never had help and never got it."

Week 7

During the caregiver group the leader spoke of the importance of letting the patients do their own things. One caregiver shared that her patient hand picks the leaves off the lawn. One patient sings to herself, the caregiver stated it is sad to listen to. Most of the caregivers reported that the patients ask repetitive questions.

During the Alzheimer group one patient exhibited untypical behavior. He could not seem to focus on the game nor could understand the concept of the game and was not social.

During a phone call, a woman reported receiving "no support" from the Alzheimer's foundation. She stated that she received wrong information about money issues, the support group was for "stupid" people, and was upset about a nurse wanting to come to the house.

Week 8

During the caregiver group, multiple people stated that when the patient dies from Alzheimer's disease, the person slowly moves into the fetal position. It starts with the hands, and the fingers will curl until you cannot get them to uncurl. One caregiver appeared to be tired. He stated he is taking care of his patient by himself and does not

want help. Another caregiver had just undergone a serious surgery for a complication that occurred, because he did not get the preventative treatment that was needed. He stated it was because he was too busy caring for his loved one.

Week 9

During the caregiver group a caregiver updated about having to put his patient into intensive care because she was no longer choosing to eat. The caregiver stated he had some hesitation about doing so, but after speaking with his family he agreed. They put a tube into her stomach so that food could be constantly put in, and she could mouth feed. The patient is only 65 years old, so the caregiver said he could not just let her die by not eating. He stated that his wife grabbed him and said she loved him and did not want to die. The caregivers also discussed that they are affected physically by all the stress that comes with the job. Numerous women caregivers reported thyroid problems that probably stemmed from the stress of caregiving. A few caregivers also reported the patience needed to get their loved one to swallow food because they often loose the ability to swallow.

While sitting in on the second caregiver group a new woman came with a patient who seemed to cause some disruption in the group. The woman who is the sole care provider for the patient was not sure who the new woman was and why she arrived with her patient to the group. She stated that the new woman disrupts his schedule and causes added stress to his life. The main caregiver reported the idea that the new woman may be stealing money from the patient. The caregiver seemed extremely frustrated and vented throughout the entire meeting.

Week 10

While sitting with the group, caregivers talked about incontinence. One caregiver stated that she thought she would never be able to clean up her patient, but now, because she has no other choice, is forced to clean him up.

The following group, Medicare and Medicaid were discussed. The caregivers stated that the middle class lose a lot of the benefits, because they make too much or too little for either one. They stated that it is helpful to be more educated in order to reap the best benefits. One patient stated that financial spousal refusal and divorce could be a possible option, “It is only on paper, it does not mean you do not love the person”. Hesitation toward this concept seemed to be central within the group. One caregiver stated the importance of putting all of the assets of the person in the name of someone they trusted, so it would not affect their benefits. One caregiver reported that her patient

was insecure about wearing a care assist button necklace because he is very independent. She stated that losing independence is one of the most frustrating things for both the caregiver and the patient. Another caregiver stated it is "heartbreaking" watching the patient forget to do things they used to do, like how to open an orange juice container. It seems the caregiver gets used to the way things are going and when they see a decline in ability it is really "sad".

Week 11

During the caregiver group, caregivers talked about the frustration they had with the dosages of medicine. The caregivers reported that Alzheimer's medications make the patient drowsy, and the patient ends up sleeping all day. The caregivers urged each other to personally halve the dose to create less drowsiness. Quality of life is an important factor for all of the caregivers.

Week 12

Upon observing the caregiver group, one caregiver stated that she was happy that her family was able to see the "sick" side of her husband. She stated the frustration she felt when people do not understand how the patient really acts, because patients often put up a social front. Another caregiver said she hates visiting a relative who has end-stage Alzheimer's disease because it reminds her of what is to come with her patient. More talk about money and the cost of medicine was brought up. That seemed to be a serious stressor in all of the caregivers' lives

Throughout the 12 weeks that I interned, many issues were continuously brought up. Frustration could be seen every week, but with different aspects such as, loss of independence, forgetfulness, loss of functioning, health care, social understanding, quality of life, and financial issues. Caregivers also consistently had feelings of being "burnt out" and tired. Many attributed those feelings to the reason they are sick. The caregivers reported the stress in trying to make end-of-life decisions for the patient, and the importance of early planning with the patient. Although caregivers had constant feelings of hopelessness, they made a strong attempt to stay positive in their "heart breaking" situations. Many caregivers personally reported a loss of independence, family support, friends, hobbies, and personal identity. The issues reported were very similar to what previous research has concluded. However these issues spark further discussion.

IV. Discussion

Previous research, for the most part, has been able to pinpoint the main issues surrounding caregiving. Caregiving and the decline of the Alzheimer's disease patient are unique to every case, which makes it difficult for researchers to narrow down any specific similarities. What are more important are the differences and why/how they are different. Understanding these differences has helped me to analyze past research with my observations during my placement.

The hospital and extra-mural approach to an institutional setting has a significant impact on the patient and the caregivers (Grad and Sainsbury, 1968). The extra-mural, social support, which is given, provides caregivers with more resources to get educated about Alzheimer's disease and what to expect. While sitting in on the support groups, the help was evident that the caregivers were experiencing. The whole concept of the Alzheimer's foundation is to help caregivers and patients receive social services. The more people know about preparation and education, the better they seem to cope with the disease. Caregivers continuously stated during support groups, how much it helped with treatment to know what to expect in the future. They were able to plan financially, legally, and medically. In an extra-mural setting caregivers and patients are provided with the social resources to help them prepare for the future. Similar experiences of emotional disturbances, insomnia, headaches, irritability, and depression as in the research of Grad and Sainsbury (1968) were reported by the caregivers in the support groups I attended. The caregivers reported feelings of depression and irritability while their patient was declining in function and during their personal loss of independence.

One of the main stressors during caregiving is the desire to keep the patient living at home for as long as possible. As seen in my placement, caregivers attempted to keep the patient at home by all costs. Most caregivers will attempt to personally care for the patient until they physically can not do it or pay for around the clock hospice care. This adds extra stress and burden in the caregivers' life, because although they have someone caring for the patient, they often feel like they should be there the whole time. This same feeling also occurs when the caregiver decides to place the patient into a home. During the support group, many caregivers stated that they go everyday for hours on end to be with their patient. In their eyes, they are never there enough. In order to make things easier I think it would be best if upon diagnosis the patient and caregiver discuss the possibility of putting the person in a home. If the caregiver hears from the patient their feelings on the placement during end-stage, then perhaps there would be less guilt and hesitation to enter a patient into a home.

Eisdorfer and Cohen (1981) brought up an interesting point of research, stating the importance of a healthy diet and lifestyle throughout diagnosis, because other illnesses that may precipitate could speed up the decline of the patient. Most of the activities encouraged by the social workers and mediators of the support groups I attended encouraged exercise and a balanced diet. Knowing that the patient is as healthy as possible in other aspects of life, gives a sense of ease to the stress of caregiving. However, as the patient deteriorates it gets harder to enforce these healthy habits. Some of the caregivers I observed, let their patient eat whatever they want because they are lucky if the patient eats anything. The patients seemed to love to eat the cake and cookies that were supplied during the support groups. I just hope that it is not a daily habit.

The use of support groups as an education and therapy tool throughout research has only been confirmed with my placement. The relationships that were formed were blatantly present while sitting in on the support groups. Whether it was sharing stories, tips, or ideas about certain caregiving topics, each were equally as valuable to the caregivers. What was most important that I witnessed was the affirmation that they are not alone in their caregiving journey. Other people are going through what they are going through, and knowing that seems to give them a sense of calmness.

In order for there to be the most successful care, the caregiver must change while the patient's ability to function deteriorates. This was continuously stated in the support group meetings and became sort of a motto for the caregivers to live by. I do see the importance of changing with the patient because it helps the caregiver to cope better with the loss of functioning. If the caregiver is not creating new expectations, then they will be continuously disappointed as the patient can physically and mentally no longer live up to their expectations. Stress and "heart break" can be reduced if the caregiver learns to change with the patient.

Sustaining the independence of the patient for as long as possible is important for the patient's well being. One of the main things that lead to frustration, violence, and anger is the loss of independence that a patient endures. It is important that caregivers learn to let their patient be independent with as many things as possible, however they must use judgment. For example, I have seen in support groups that at a certain point in the deterioration certain freedoms like driving and going out alone need to be revoked. This is not done easily, and many of the caregivers reported extreme resentment from the patient. The resentment often leads to aggression and possible abusive acts toward the caregiver. Through my observations I feel that the loss of independence is the biggest reason why frustration occurs, because the loss is seen in both the patient and the caregiver.

The grieving process can be described in six stages as outlined by Cohen et al. (1984); pre-diagnosis, denial, coping, acceptance, maturation, and separation from self. Each of these stages I witnessed either in the support groups or while making phone calls to caregivers. Many of the caregivers I spoke to on the phone seemed to still be in the denial/coping phase. Some, caregivers whose patients had already died from Alzheimer's disease seemed to be in a sort of denial that anything occurred. The caregivers in the support group, for the most part, were either in the coping or acceptance stage. From their testimony, it sounds as if the support group enables them to talk about their experiences and transition from one stage of grief to the next. I could distinctly tell by talking to caregivers whether they were past the denial stage or not, because of the content of their complaints. Most caregivers that are within the acceptance stage are able to understand the loss of functioning and realize that it is not the patient wanting to do things, but rather it is the disease making them.

Haley et al. (1987) made an important discovery when researching what precipitates caregiver outcome. It is not so much the actual stressors that affect the outcome, but rather how the caregiver perceives their own stress. What one caregiver sees as difficult may not be what another one sees as difficult. For example, a caregiver in the support group had no issues with helping the patient with their incontinence problems, whereas another caregiver stated she could never do something like that. People deal with things differently; therefore if a caregiver is presented with what is to come, they may be able to utilize better coping mechanisms.

Caregivers tend to put their own health on the back burner while caring for their patient. This often leads to serious physical and mental illnesses that are not noticed until they are severe. Research has reported serious forms of depression; however I did not witness that during my placement. During the twelve weeks that I was at my placement two of the caregivers went through major surgeries for problems that were not caught in time. One patient had to get his sphincter removed because of the late detection of his colon cancer, and the other patient had to get her aortic valve replaced. The caregivers actually stated that if they were not caregiving they may have been able to catch the illnesses earlier. Other caregivers report specific thyroid problems and generally being sick more often. Caregiver self-care is extremely important considering they are caring for another person also. Throughout the support groups, the leaders encouraged caregivers to take time out to care for their mental and physical health. Unfortunately, a lot of caregivers do not realize the importance of rest until it is too late.

Anticipatory grief, grief that occurs during caregiving, was extremely apparent while listening and talking to caregivers. The slow deterioration of the person causes the

caregiver to grieve each loss. It is like the person is slowly slipping away before their eyes. It was seen during the caregiver support group sessions, when caregivers would discuss their feelings of "heart break" while watching their patient struggle to perform certain tasks. The anticipation of death causes the grief that caregivers are continuously experiencing. It was hypothesized by Ponder and Pomeroy (1996) that anticipatory grief would dissipate after the death of the patient, when in fact the results of their study showed that grief increases. Grief starts off low due to the usual denial of the disease, increases as coping continues, declines during the acceptance phase, and then increases once the patient dies. I think this occurs because of the ambivalent feelings the caregivers have regarding the loss of their patient. Although they already lost the person they once knew, they no longer have anything to hold on too. The caregiver also will doubt the care they gave them, thinking that they could have done more, when in most cases they did the best anyone could ever expect. Anticipatory grief is inevitable during the course of Alzheimer's disease.

Usually a caregiver is either a spouse or adult-child to the patient. This brings in interesting aspects of role reversal within their relationship. The spouse seems to focus all of their energy and attention with the loved one. The only thing that matters to the spouse caregiver is what is going on with the patient, thus everything that affects the patient is internalized within the spouse caregiver. Adult-children are affected differently; they tend to worry about self related issues. They are more interested in how the caregiving process is affecting them personally more than the spouse caregiver. Adult-children see the personal losses that they endure as important and their grief and issues stem from those thoughts. The important distinction is that spouse caregivers know they will eventually be taking care of one another; however adult-children do not expect to take care of their parents. It is difficult taking care of a parent after having been taken care of your whole life. Many of caregivers state the heart break they have when they see their mother or father suffering. The role reversal that occurs in spouse and adult-child caregiving is a predictor in how caregivers perceive their stressors.

The last, but important point is the prevalence of grief and bereavement services that are available to caregivers. There are social services in the community that can help caregivers, but knowing about them and accessing them seem to be what stops people from reaping their benefits. The benefit of the Alzheimer's foundation is that they have all the information about local services, so when I made calls I was able to help the caregivers. I would call them and ask them if they needed help gaining any of the resources that are available. Caregivers are willing to get help but often do not know where to turn or do not have the motivation to try to search for help. Most of the

caregivers I spoke to just needed someone to encourage them to get help. They felt selfish for wanting to help themselves, in addition to helping their patient. I think most of the effort needs to be in advertising the resources that are available because a lot of good can come out of them.

My personal observations while at the Alzheimer's foundation helped me to better understand the research that has already been completed. The research seems to be a good representation of what is actually occurring during the support groups and support talks I have witnessed.

V. Conclusion

Alzheimer's disease deteriorates a person physically and mentally. Unfortunately, the caregiver endures the majority of the grief seen from the loss of functioning. The patient will be able to notice differences up until a certain part of their life, and then the patient becomes nothing more than a dying body. The caregiver is then left with all major decisions pertaining to the patient. Once, a patient is diagnosed, the caregiver and patient have to take steps together to get all legal and financial issues in line. Early planning will take some stress off the caregiver, when they have to make those important decisions. Keeping a normal and healthy life as long as possible helps the patient to feel like they are worth something, which in return will create a better relationship with the caregiver. The relationship between the caregiver and patient is unique by race, gender, and whether the caregiver is a spouse or adult-child. The role shift of taking on a responsibility that may have never been expected or is not as socially acceptable creates tension and more stress on the caregiver. This influences how the caregiver interprets different losses and problems that precipitate with the disease. Thus, the grief, anticipatory grief, and stress they endure are all unique to their personal beliefs and relationships. It is important to provide education about symptoms to come, emphasize self help, and encourage a future for all caregivers at the initial diagnosis of the patient. These keys can help to lessen the grief and stress endured by caregivers caring for Alzheimer's disease patients.

Future research would be beneficial, because any insight is better than none at all. However, I feel that the study of the grieving process and the symptoms that precipitate has been exhaustive. The main conflicts and issues have been outlined thoroughly, now it is time to research what coping mechanisms work best for caregivers. Since, we currently understand that caregiver grief and stressors are perceived differently by each individual person, it is the preventative treatments that need to be studied. Different ideas beyond support groups should be formulated and then tested by

caregivers. Since, grief and stress is inevitable, more coping mechanisms need to be formulated and taught to the caregivers. This research would be more beneficial to the health of caregivers, and in return increase the quality of care for the patient. When these new ideas are formulated and thoroughly tested, they need to be made readily available to caregivers. Caregivers are often uneducated on the course of Alzheimer's disease and what there is to expect as a new caregiver. With more research on preventative coping tools and more access and advertisement to the tools, caregivers will hopefully be able to perceive stress and grief in a healthier way.

VI. References

Alzheimer's Association. (2009). *2009 Alzheimer's disease facts and figures.* Retrieved from http://www.alz.org/national/documents/report_alzfactsfigures2009.pdf.

Alzheimer's Association. (2009). *Alz.org, Alzheimer's association*. Retrieved from http://www.alz.org.

Barnes, R. F., Raskind M. A., Scott, M., and Murphy, C. (1981). Problems of families caring for Alzheimer patients: Use of a Support Group. *Journal of the American Geriatrics Society, XXIX*(2), 80-85.

Cohen, D., Kennedy, G., and Eisdorfer, D. (1984). Phases of change in the patient with Alzheimer's dementia: A conceptual dimension for defining health care management. *Journal of the American Geriatrics Society, 32*(1), 11-15.

Diwan, S., Hougham, G.W., and Sachs, G.A. (2009). Chronological patterns and issues precipitating grieving over the course of caregiving among family caregivers of persons with dementia. *Clinical Gerontologist, 32*, 358-370.

Eisdorfer, C., and Cohen, D. (1981). Management of the patient and family coping with dementing Illness. *The Journal of Family Practice, 12*(5), 831-837.

Grad, J. and Sainsbury, P. (1968). The effects that patients have on their families in a community care and a control psychiatric service: A two year follow-up. *British Journal of Psychiatry, 114*, 265-278.

Haley, W. E., Levine, E. G., Brown, S. L., and Bartolucci, A. A. (1987). Stress, appraisal, coping, and social support as predictors of adaptational outcome among dementia caregivers. *Psychology and Aging, 2*(4), 323-330.

Holley, C. K. and Mast, B. T. (2009). The Impact of anticipatory grief on caregiver burden in dementia caregivers. *The Gerontologist, 49*(3), 388-396.

Jones, P.S. and Martinson, I.A. (1992). The experience of bereavement in caregivers of family members with Alzheimer's disease. *IMAGE: Journal of Nursing Scholarship, 24*(3), 172-176.

Meuser, T. M. and Marwit, S. J. (2001). A comprehensive, stage-sensitive model of grief in dementia caregiving. *The Gerontologist, 41*(5), 658-670.

Murphy, K., Hanrahan, P., and Luchins, D. (1997). A survey of grief and bereavement in nursing homes: The importance of hospice grief and bereavement for the end-stage Alzheimer's disease patient and family. *The American Geriatrics Society, 45*, 1104-1107.

Ponder, R.J. and Pomeroy, E.C. (1996). The grief of caregivers: How pervasive is it? *Journal of Gerontological Social Work, 27*(1/2), 3-21.

Schulz, R., Visintainer, P., and Williamson, G. M. (1990). Psychiatric and physical morbidity effects of caregiving. *Journal of Gerontology, 45*(5), 181-191.

Walker, R.J. and Pomeroy, E.C. (1996). Depression or Grief? The experiences of caregivers of persons with dementia. *Health & Social Work, 21*(4), 247-254.

Section III:
Critical Essays

Exoticism and Escape in the Works of Gauguin and Baudelaire

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In Gauguin's Skirt, Stephen Eisenman describes exoticism as a "preference for difference combined with a more or less willful ignorance of historical and cultural particulars" (29). Ideas about the exotic became popular at the turn of the century in Paris, when many artists sought to return to a simpler time that they believed was more pure. This caused an interest in and glorification of cultures that many artists constructed in their minds as idyllic, primitive societies. Exoticism was a theme that pervaded the arts in fin-de-siècle France, especially in the works of Gauguin and Baudelaire where the "primitive" was seen as the ideal escape from modernity.

At the turn of the century, technology and modernity reigned. Cities and cultures had changed, seemingly overnight, giving many people a feeling of anxiety, or angst, towards the transformation that had occurred. The changes wrought in Paris brought with them many problems – dirt, drugs and disease ran rampant in the city. The City of Light became a city of decadence. There was believed to be a loss in morality and an increase in corruption. Many lived in dingy, cramped apartments and often used drugs and alcohol to create artificial paradises as an escape. Others looked back on the past as a better time and wished for a return to it.

This looking back to the past, coupled with a desire to escape to somewhere devoid of technology, manifested itself in an upsurge in exoticism. People looked at foreign and exotic cultures as things that were untouched by time and purer, compared to the corrupt newness of the technology in Paris. These places and peoples became idealized in the minds of many artists and writers, such as Gauguin and Baudelaire. Luckily for them, the technology they wanted to escape ironically provided a wide array of travel options. This travel helped ideas to spread. However, ideas spread so rapidly that many people began to fear "the spread of sameness," which carried the implication that the exotic was quickly disappearing and being overtaken by Europeans and European ideas .(Forsdick 37) While this did create a kind of urgency to visit disappearing cultures

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that were truly "primitive," it also created a "belief in the individual's privileged status as last observer." (Forsdick 39)

Paul Gauguin is an artist who is well-known for his art that was created in Brittany and Tahiti, two locations that he believed to be remnants of a forgotten age. Gauguin first visited Pont-Aven in Brittany in 1886. He was attracted to what he saw as the simple lives lived there by the religious, pre-industrial community. During his second visit in 1888, he wrote: "I like Brittany, it is savage and primitive. The flat sound of my wooden clogs on the cobblestones, deep, hollow and powerful, is the note I seek in my paintings" (Eisenman 33). By his second visit, however, Gauguin began to realize that Brittany was not bypassed by Modernity. He saw that many things, such as the clothes worn by the local people, were modern and represented local kinship ties and ethnic solidarity. This did not stop him from continuing to claim to friends and family that Pont-Aven was a place filled with vestiges of a primitive community with a pagan past (Eisenman 33-38).

It was in Brittany on this second visit that Gauguin created *Vision After the Sermon: Jacob Wrestling with the Angel* (1888) (Figure 1). In this painting, Gauguin used simplified forms to represent the primitive culture he believed he was witnessing. The lack of naturalistic scale and the red ground in the work make it difficult to read. Characteristics like these are typical of the Symbolist artists, who did not want painting to resemble a window to the real world, but as something obviously created by man that reflected emotion and vague ideas that could be subjectively interpreted. Gauguin used unrealistic, simplified forms and bold, unmuted colors along with points of view that appears to be those of the peasants, showing his belief that these people saw things more purely and associated them with "purer" thoughts and an 'unsophisticated' mode of artistic expression" (Harrison et al. 19). The peasants look on to a scene that is visible only to those who have not become so jaded by the modern that they can still see and believe in it.

His view of the peasants being closer to religion and nature could be seen as a good thing, but his veneration of this culture comes at a price. When Gauguin hails something as "primitive" and more simple, he simultaneously affirms the superiority of the Western world. Gauguin imagines for himself a "primitivist ideal" and applies it to the culture he is looking at. By creating this, he fabricates the idea of a "universal human essence prior to society's corruption;" the Western world becomes better still than this ideal because it represents "a civilization which is superior precisely because it is defined by its *difference* from the primitive" (Knapp 369).

Gauguin's views of himself as sophisticated and superior are easily visible in paintings like this where the aspects of the culture, which is seen as simple and primitive, are glorified in a patronizing way. Gauguin chose specific aspects of the community to use for his art that served his purpose and "saw himself as a direct communicator, a kind of innate savage, for whom objects and stimulus within an unsophisticated culture *enable* rather than simply inspire the expression of what is thought to be inherent in the artist" (Harrison et al. 19). In Brittany, a theme emerged from his work that showed his tendency to foist his love of the primitive onto cultures that he believed to be equally as resistant to modernity as he was.

This theme is continued in works such as *The Yellow Christ* (1889) (Figure 2) and *The Green Christ* (1889) (Figure 3).In these paintings, Breton women are shown at the foot of images of Christ. In *The Yellow Christ*, the women appear to be kneeling before a crucified Christ who has appeared to them. In *The Green Christ*, a woman sits in front of a sculpture of a crucifixion scene. Both show Gauguin's view of the women of Brittany as a primitive people who are closer to their religion and so can experience the spiritual more intensely. Religion is pervasive in the lives of the people who are a part of the culture he constructed. It seems to be inextricable from nature in his paintings, and best experienced by those who had escaped modernity.

To escape even further into the exotic, Gauguin decided to travel to Tahiti. Tahiti became a French colony in 1881 and was a place that was provided many benefits and privileges for colonists. It was advertised as having an abundance of cheap food and "sensual native women" (Harrison et al. 28). In a letter to the artist Odilon Redon in 1890, Gauguin wrote: "Madagascar is still too close to the civilized world; I want to go to Tahiti and finish my existence there. I believe that the art which you like so much today is only the germ of what will be created down there, as I cultivate in myself a state of primitiveness and savagery" (Eisenman 84). A year later he traveled to Tahiti, prepared with only the small amount of knowledge gained from ethnic differentiation in the cities in France, the knowledge of art in the museums and Salons and his personal reading. Before leaving, he wrote a letter to his wife that described his expectations: "There, in Tahiti, in the silence of the lovely tropical night, I can listen to the sweet murmuring music of my heart, beating in amorous harmony with the mysterious beings of my environment. Free at last, with no money troubles, and able to love, to sing and to die" (Eisenman 53).

Gauguin arrived in a Tahiti in 1891 that had abandoned its pagan religion in favor of Western Christianity and a people that wore Western clothing. This did not stop him from depicting Tahiti as a primitive and pre-modern paradise in his work. Gauguin's

Tahiti was a colorful paradise populated by sensual, young native women. His paintings from his time in Tahiti utilize a bright palette and put an emphasis on nature, as well as exotic patterns in the costumes of the natives. The vast majority of people depicted in these paintings are women, who are often nude. He also continued his use of flattened planes of colors that are seen in his paintings from Brittany.

Gauguin's views on Tahiti are easily visible in his painting *Spirit of the Dead Watching* (1892) (Figure 4). In this painting, a nude Tahitian girl lays on her stomach on a bed hiding her face partially with her hand. Behind her a figure dressed in black stands in profile with a blank expression on its face. Gauguin used his typical bold palette, depicting detailed, colorful patterns in the fabric. The general roughness of the painting, the strong lines and the flatness help to add to the exotic feeling. The style mimics "primitive" art that used more simplified forms and an obvious use of materials. This is seen in this painting, which is obviously not a window, but paint placed on a flat canvas. The materials used are not hidden or camouflaged, they are emphasized. There is, however, a lack of nature in this painting compared to his other works. This causes the contrast between Gauguin's Tahiti to the Western world to become more pronounced. The reclining nude on the white fabric with a figure in the background recalls Manet's *Olympia* (1863) (Figure 5). This girl, however, is more reserved than Olympia, hiding her body in the fabric and her face in the pillow rather than displaying it. She also appears to show an irrational fear of what Gauguin perceived to be primitive superstitions (Harrison et al. 34)

The poet Charles Baudelaire, like Gauguin, venerated exoticism. Baudelaire's first experience with the exotic came when his stepfather sent him to India in 1841 when he was twenty years old to rid him of his love of literature and bohemian tendencies. He did not make it to India, but left the ship in Bourbon, Mauritius, a French island colony off the coast of Africa, fully intending to catch the next ship back to Paris. Baudelaire spent less than a year there, but the experience shaped his poetry throughout his lifetime (Lionnet 66-68). It was here that Baudelaire wrote his poem, published in 1845 called "A Une Dame Créole" (For a Creole Lady). In this poem, he uses language that emphasizes the beauty of the woman and the foreign land, while also underlining the fact that they are exotic. He describes Mauritius as a "perfumed land bathed gently by the sun" and the woman as a "brown enchantress" and a "huntress" (Lionnet 70). This begins a theme in Baudelaire's poetry of using unusual and exotic-sounding words to not only highlight the foreignness of what he is describing, but also the femininity, which gives a primitive connotation. Baudelaire came from a tradition that often represented Africa as a

"feminized void," which is evident from his use of feminine forms of words, such as "hunt*ress*" (Lionnet 73).

"A Une Dame Créole" also displays a tendency of Baudelaire to see blackness as the epitome of the exotic. This is shown in many poems, such as "Head of Hair" where he conflates Asia and Africa as "A whole world distant, vacant, nearly dead" (Baudelaire and McGowen 51) that lives on only his dark-skinned mistress. Baudelaire places the exotic women in his work in an imagined, generalized native Africa. The women become figures that stand in for "generalized otherness" (Lionnet 79). His poems after this showed a propensity to over-racialize the woman he described and to place an intense focus on their dark skin. Like Gauguin, Baudelaire devoted his art to the exotic woman and this fascination with the "primitive" females showed itself in the imagery of the Black Venus. There were two women that came to represent Baudelaire's Black Venus: Dorothea, a black prostitute in Bourbon and his mulatto mistress Jeanne Duval.

"La belle Dorothée" (Dorothea the Beautiful) was a prose poem, published in Paris Spleen (1869), written about experiences in Bourbon and, of course, Dorothea. In this poem, the reader is treated to, first, a vision of a town with dazzling sand and a glittering sea with the world sinking "cravenly into siesta" (Baudelaire and Waldrop 49). In his description of her, he emphasizes her race, describing her "shadowy skin" and "dark face," she is a "dark shiny spot in the light" (Baudelaire and Waldrop 49). He also emphasizes the fact that she is walking barefoot, drawing attention to her primitivity. The fact that she is barefoot becomes a major point in the poem. She is a freed slave, but still walks barefoot. There is still a divide between her and and everyone else and that division is comprised of her blackness. Her skin color represents "the unabridgeable gap between the colonized and the colonizer" (Sharpley-Whiting 69).

Baudelaire describes her conversation with an officer where she asks him about France: "Without fail, she will beg him, simple creature that she is, to describe the Opera Ball, ask him if it is possible to attend barefoot…and then again, if the belles of Paris are really all more beautiful than she" (Baudelaire and Waldrop 50). Dorothea is represented as naïve, and her childlike curiosity and primitive ways become part of her charm. It is Dorothea's question of whether the women in Paris are more beautiful than she is that also helps to highlight the divide between Europe and the generalized exotic. Dorothea is continually described as beautiful and every word in the poem seems to affirm her effortless beauty, however, she is still measured against the Parisian women. On the shore, she "proceeds, harmoniously, happy to be alive and smiling a bland smile, as if she recognized in the distance a mirror reflecting her gait and beauty" (Baudelaire and Waldrop 49). The mirror represents France, which "is not merely reflecting, it is

validating, reassuring" her in mimicry of the Parisian women (Sharpley-Whiting 68). Baudelaire certainly seems to prefer Dorothea, but makes the comparison and his preference explicitly known. Her naivety and primitivity seem to represent the kind of invented novelty that both Baudelaire and Gauguin appreciated.

Jeanne Duval, Baudelaire's second "exotic" muse is associated with his poems in Les Fleurs du Mal (The Flowers of Evil) (1857). In these poems, Duval's race is constantly referenced, as is her connection to nature and the exotic, resembling his treatment of Dorothea. Edward Ahearn describes Baudelaire's Duval as "a black woman, as one who embodies and who opens up to the poet another world – exotic, far removed from nineteenth-century urban civilization, a world glimpsed through the literary tradition and Baudelaire's own brief travels" (Ahearn 215). As with Dorothea and Gauguin's Tahitians, constructed primitive women seem to be the key to the exotic, the escape from modern society. Duval is not connected to any foreign lands, but because of her race, Baudelaire sees her as an "exotic" other.

In the poem "The Jewels," Duval is described much like Dorothea was, with an emphasis on her skin color and with a cacophony of exotic-sounding words. The poem begins with her wearing only jewelry that gives her "the attitude/ Of darling in the harem of a Moor;" she is a "tiger tamed," "undulant like a swan" and her waist contrasting with "her haunches" (Baudelaire and McGowan 47-49). He insists on her non-European qualities and emphasizes the traits that she shares with exotic peoples and animals. These same characteristics also highlight her sexuality. His descriptions are consistent of stereotypes of black sexuality that were prevalent in Europe, "an eroticism mingling innocence, animality, and lubricity" (Ahearn 215-216).

Baudelaire utilizes similar imagery for many of the poems in Paris Spleen. In "Exotic Perfume," he describes "inviting shorelines" and an "idle isle" reminiscent of the Mauritius of "Dorothea the Beautiful" (Baudelaire and McGowan 49). He gives this island a sense of laziness and a kind of communal feeling – a simple, work-free, collective lifestyle that both he and Gauguin dreamed of (Ahearn 217). Nature is an ever-present figure and the people are idealized. The men are "lean and vigorous and free" and the women are sincere, their "frank eyes are astonishing" (Baudelaire and McGowan 49). It is the scent of Jeanne Duval that calls up these images for Baudelaire. It is she that is able to connect him to happiness, to the exotic, to nature and to freedom from modern Paris. He finds his idealized, exotic land only through her and can be united with it in that way. He ends the poem: "verdant tamarind's enchanting scent,/ filling my nostrils, swirling to the brain,/ Blends in my spirit with the boatmen's chant" (Baudelaire

and McGowan 49). She is able to help him become a part of his invented paradise, by conjuring up these sights, sounds and smells for him.

In "The Swan," Baudelaire's poem about exile in The Flowers of Evil, he references the different exiles that many different people, both fictional and real, faced. Duval's exile is described in a stanza toward the end: "I think of a negress, thin and tubercular,/ Treading in the mire, searching with haggard eye/ For palm trees she recalls from splendid Africa,/ Somewhere behind a giant barrier of fog" (Baudelaire and McGowan 177). Duval pines for an Africa that has been constructed for her by her lover. She is trapped by "Western industrial reality" and "can no longer rediscover 'la superbe Afrique' of her origins. She joins the poet in a condition of exile which is perhaps more excruciating for her than for him" (Ahearn 220). Baudelaire projects his feeling of exile from the modernized Paris onto Duval. It seems that he realizes in this poem that his exotic escape is constructed and unreachable, even the embodiment of what he sees as the exotic cannot help him, as she is trapped as well.

Both Gauguin and Baudelaire found their escape in lands that were mostly constructed in their minds. It is also interesting that the places that both of them escaped to were not places untouched by the Western world, but French island colonies. Francoise Lionnet does not believe that this is an accident. According to Lionnet, islands are mythical places that are generally seen as an escape because there is no "aura of acquired knowledge or esoteric wisdom." Islands, to the turn of the century traveler, did not "appear to have any cultural integrity of their own, unlike older civilizations. They [were] seen as the residues of Europe's dream of empire, *tabulae rasae*, which need not be taken very seriously" (Lionnet 65). Those artists that idolized the exotic took over the islands in their mind, just as colonizers did in life. Many Symbolist artists and writers projected their emotions and ideas upon nature; Gauguin and Baudelaire took that just one step further and projected their dreams onto islands specifically.

At the turn of the century, brought on by the rapidly changing landscape and climate of Paris, many turned to the exotic as an escape from modernity. For Gauguin, the exotic manifested itself in Brittany and Tahiti, for Baudelaire in Mauritius and Jeanne Duval. In both cases, it was imagined, constructed and applied to a culture bearing the mark of colonialism. This did not stop the idealization of the "primitive" and the "other" or the effect that exoticism had upon the artists that wanted to escape modern life.

Works Cited

Baudelaire, Charles, and James McGowan. The Flowers of Evil. Oxford: Oxford UP, 2008.

Baudelaire, Charles, and Keith Waldrop. Paris Spleen: Little Poems in Prose. Middletown, Conn.: Wesleyan UP, 2009.

Callen, Anthea. "The Unvarnished Truth: Mattness, 'Primitivism' and Modernity in French Painting, C.1870-1907", *The Burlington Magazine* 136.1100 (1994): 738-46.

Eisenman, Stephen F. Gauguin's Skirt. London: Thames and Hudson, 1997.

Forsdick, Charles. "Exoticism in the Fin De Siècle: Symptoms of Decline, Signs of Recovery", *Romance Studies* 18.1 (2000): 31-44.

Harrison, Charles, Francis Frascina, and Gill Perry. Primitivism, Cubism, Abstraction: The Early Twentieth Century. New Haven: Yale UP, 1993.

Knapp, James F. "Primitivism and the Modern", *Boundary 2* 15.1/2 (1986): 365-79.

Lionnet, Francoise. "Reframing Baudelaire: Literary History, Biography, Postcolonial Theory, and Vernacular Languages.", *Diacritics* 28.3 (1998): 63-85.

Sharpley-Whiting, T. Denean. Black Venus: Sexualized Savages, Primal Fears, and Primitive Narratives in French. Durham, N.C.: Duke UP, 1999.

Figure 1: Paul Gauguin, *The Vision After the Sermon (Jacob Wrestling with the Angel)*, 1888, Oil on canvas, 73 x 92 cm, National Gallery of Scotland.

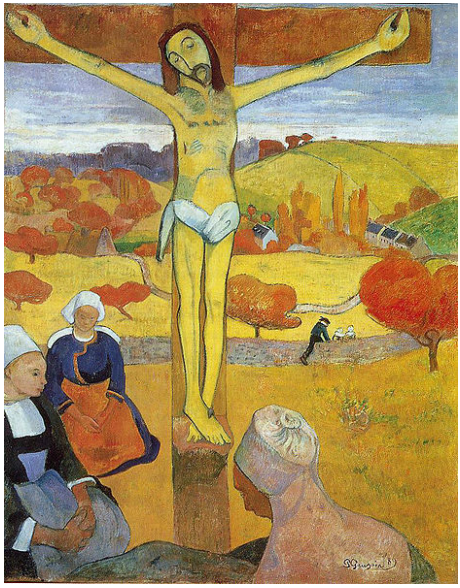

Figure 2: Paul Gauguin, The Yellow Christ, 1889, Oil on canvas, 92.1 x 73.4 cm, Albright-Knox Art Gallery.

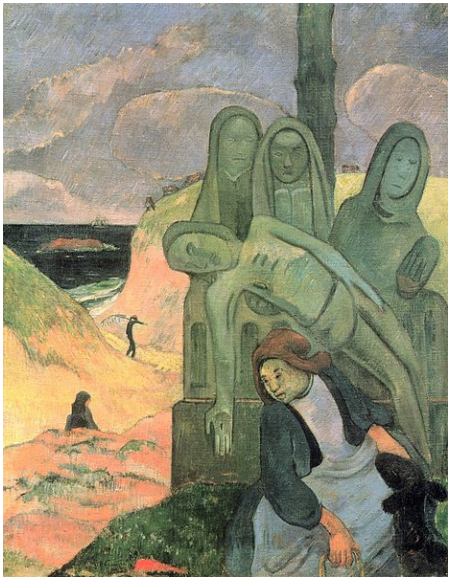

Figure 3: Paul Gauguin, *The Green Christ* 1889, Oil on canvas, 92 x 73 cm, Musées royaux des Beaux-Arts de Belgique.

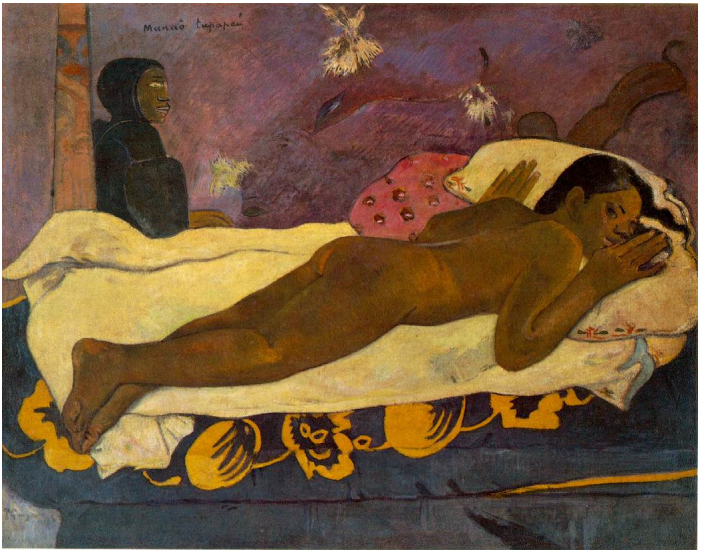

Figure 4: Paul Gauguin, *Spirit of the Dead Watching*, 1892, 72.4 x 92.4 cm, Albright-Knox Art Gallery.

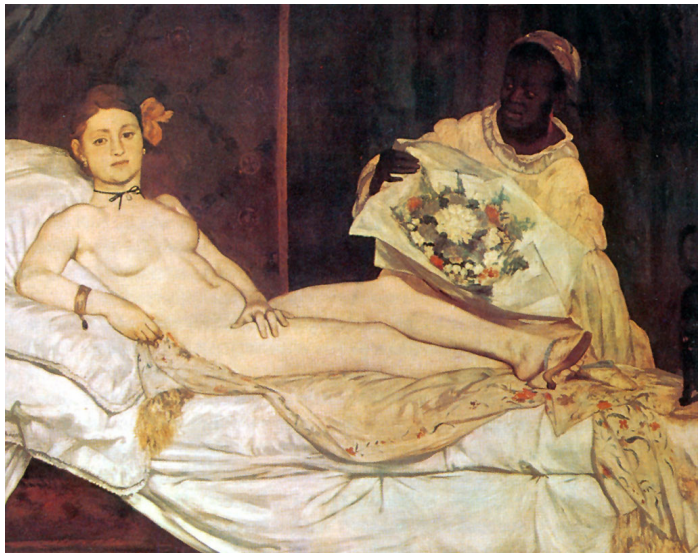

Figure 5: Edouard Manet, *Olympia*, 1863, Oil on canvas, 130.5 x 190 cm, Musée d'Orsay.

La Polyphonie et le Féminisme Postcolonial: *L'Enfant de sable* de Tahar Ben Jelloun et *Persepolis* de Marjane Satrapi

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In her essay "Can the Subaltern Speak?", Gayatri Spivak asserts that subaltern countries, or countries that have been excluded from the hegemonic power struggle, have also been excluded from the intellectual discourse of the Occident. Spivak also argues that these exclusions create a binary relationship that represents East/West as self/other. The texts *L'enfant de sable* by Tahar Ben Jelloun and *Persepolis* by Marjane Satrapi work to undo this binary opposition between the west and the subaltern through the incorporation of both eastern and western traditions into the texts. Furthermore, they both rely on the use of intertextuality, created through the use of multiple narrations. This intertextuality deconstructs the binary relationship between the narrator and the reader in order to create a discursive third space that Spivak suggests is the goal of post colonial literature. Spivak also suggests that subaltern women are doubly marginalized, as they are excluded from an intellectual feminist discourse that is only relevant in the context of the west. Both *L'enfant de sable* and *Persepolis* address this goal of feminist post colonial literature presented by Spivak, as the two texts present feminist examples that challenge traditional representations of subaltern women.

Dans son essai «Can the Subaltern Speak?", Gayatri Spivak affirme que les pays subalternes, ou des pays qui ont été exclus de la lutte pour le pouvoir hégémonique, ont également été exclus du discours intellectuel de l'Occident. Par conséquent, selon Spivak, les subalternes ne peuvent pas parler. En outre, Spivak montre aussi que ces exclusions créent une relation binaire qui représente l'Occident et l'Orient comme le soi/l'autre. Les textes de *L'enfant de sable* de Tahar Ben Jelloun et *Persepolis* de Marjane Satrapi travaillent à annuler cette opposition binaire entre l'Occident et le subalterne par l'incorporation de traditions orientales et occidentales dans les textes. Dans *L'enfant de sable*, Ben Jelloun reprend les contes traditionnels du Maroc dans tout le texte par son utilisation du «conteur», la structure de récit cadre, et l'utilisation des narrateurs multiples tout au long du texte. Ben Jelloun intègre également le lecteur occidental dans son texte

[1] Written under the direction of Natalie Edwards (Modern Languages) for FR400: *French Expository Writing*.

par une structure narrative qui déconstruit la relation traditionnelle entre le narrateur et le lecteur. Dans *Persepolis*, Marjane Satrapi raconte l'histoire iranienne grâce à l'utilisation des genres occidentaux de la bande dessinée et de l'autobiographie. En outre, ces deux textes reposent sur l'utilisation de la polyphonie, créée par l'utilisation de narrations multiples. Cette polyphonie déconstruit la relation binaire entre le narrateur et le lecteur afin de créer un espace discursif qui, d'après Spivak, est le but de la littérature postcoloniale. Tout au long de *L'enfant de sable*, Ben Jelloun crée l'intertextualité en faisant référence aux *Mille et une nuits*, à travers de multiples versions et explications de la même histoire. Quant à Marjane Satrapi, elle crée la polyphonie dans Persepolis à travers le texte et des images dans son œuvre.

Un autre aspect important de l'étude de Gayatri Spivak de la littérature postcoloniale est sa réinterprétation de la théorie féministe. Dans son étude de la littérature postcoloniale, Spivak suggère que les femmes subalternes ont été doublement marginalisées, car elles sont exclues de la lutte pour le pouvoir hégémonique avec les subalternes, et aussi à travers un discours féministe qui n'est pertinent que dans le contexte de l'Occident. Spivak affirme que la littérature postcoloniale féministe devrait intégrer les femmes subalternes dans le discours féministe. Les textes de *L'Enfant de sable* de Ben Jelloun et *Persepolis* de Marjane Satrapi essayent de représenter ce but de la littérature postcoloniale féministe présentée par Spivak car ces textes présentent des exemples féministes qui remettent en question les représentations traditionnelles des femmes subalternes. Cependant, Spivak dit aussi que pour que les subalternes se fassent entendre dans le discours occidental, elles doivent aussi apprendre à parler d'une manière qui est entendue par l'Occident. La littérature postcoloniale devient aussi complice dans le renforcement de la domination occidentale à cause de l'utilisation de la langue française, la logique et la raison de l'Ouest. De cette façon, la notion de féminisme postcoloniale renforce l'hégémonie occidentale, car la notion de féminisme est en soi un concept occidental. Par conséquent, en plaçant les femmes subalternes dans un contexte féministe, les subalternes commencent à être conformes à la logique de l'Occident. Les textes de Ben Jelloun et Satrapi renforcent également ce concept car les éléments féministes dans ces deux textes semblent présenter une vision occidentale du féminisme qui ne parvient pas à représenter véritablement la voix des femmes subalternes.

La première façon dont Ben Jelloun essaie de donner une voix aux subalternes dans *L'Enfant de sable* est par son utilisation des traditions narratives orales du Maroc liées à l'histoire de *Mille et une nuits* comme base de la narration dans le roman. Au début du roman, l'histoire d'Ahmed est présentée, ainsi que le conflit qu'il sent au sein de son propre corps, et la dépression que ce conflit engendre. Le thème de la polyphonie est

introduit pour la première fois, comme Ahmed décrit son propre journal, qui devient la base pour des extraits de la narration dans le texte. Comme le premier chapitre se termine, un autre changement se produit dans la narration, et un récit cadre est créé alors même que le conteur devient un personnage dans le texte. Tout à coup, nous nous rendons compte que l'histoire d'Ahmed est racontée à un groupe de personnes qui se sont rassemblées sur la place de Marrakech. L'histoire est plus compliquée car nous apprenons que le conteur lui-même est une connaissance d'Ahmed, comme il révèle que l'histoire d'Ahmed lui a été racontée par Ahmed car le conteur indique: « il me l'avait confié juste avant de mourir » (Ben Jelloun 12). En plus, le conteur, héros de son histoire, et l'histoire elle-même semblent être connectés car il dit « je suis ce livre. Je suis devenue le livre de secret: J'ai payé de ma vie pour le lire. Arrivé au bout, après des mois d'insomnie, j'ai senti le livre s'incarner en moi, car tel est mon destin. » (13). Dans ce passage, Ben Jelloun rend hommage aux traditions des contes du Maroc tout en suggérant que le processus de la narration est beaucoup plus complexe que le récit des événements, et l'histoire commence à avoir une vie propre dans l'histoire elle-même qui est liée à la vie du conteur. En outre, le conteur commence à intégrer son public dans la narration dans le passage suivant:

> « Les autres peuvent s'en aller vers d'autres histoires, chez d'autres conteurs. Moi, je ne conte pas des histoires pour passer le temps. Ce sont les histoires qui viennent à moi, m'habitent et me transforment. J'ai besoin de mon corps pour libérer des cases trop chargées et recevoir de nouvelles histoires. J'ai besoin de vous. Je vous associe à mon entreprise. Je vous embarque sur le dos et le navire. » (16)

Dans ce passage, il semble que le conteur ne parle pas seulement à son auditoire, mais aussi pour le lecteur du texte.

Dans le chapitre intitulé «La porte du samedi», le narrateur cherche à nouveau l'aide de son auditoire afin de raconter l'histoire d'Ahmed. À ce moment, Ahmed commence à faire face aux conflits entre son corps biologique féminin et l'identité masculine que son père a créée. Comme l'identité d'Ahmed devient ambiguë, cette ambiguïté se reflète également dans le style de la narration car le conteur demande à son auditoire de participer à la reconstitution de l'histoire d'Ahmed. À ce moment du texte, le narrateur trouve des pages blanches dans le livre contenant l'histoire d'Ahmed, et le conteur dit: « C'est une période que nous devons imaginer, et si vous êtes prêts à me suivre, je vous demanderai de m'aider à reconstituer cette étape dans notre histoire. Dans ce livre, c'est une espace blanc, des pages nues laissées ainsi en suspens, offertes à la liberté du lecteur. A vous! » (42). Dans le reste du texte, l'interdépendance entre le

conteur et le texte est renforcée par la fluidité de l'histoire elle-même, car l'histoire change avec chaque récit. Contrairement à la littérature de l'Occident, le conte oriental qui est référencé dans le texte est quelque chose qui est vivant et changeant à travers la relation entre le conteur et le public.

Plus tard dans le texte, nous apprenons que le conteur est littéralement dépendant de l'histoire qu'il dit, car « le conteur est mort de tristesse ». Lorsque la police découvre le cadavre du conteur, elle trouve qu'il « serrait contre sa poitrine un livre, le manuscrit trouvé à Marrakech et qui était le journal intime d'Ahmed-Zahra » (136). Un autre changement dans la narration se produit après la mort du conteur original, comme d'autres conteurs reprennent le récit de la narration. Après la mort du conteur primaire, chaque conteur semble prendre l'histoire où l'autre finit, ce qui crée une narration chronologique. En outre, la caractérisation du personnage semble changer en fonction de chaque conteur. Nous nous rendons alors compte que l'identité d'Ahmed est dépendante du narrateur. Cet aspect de la narration fait référence à des traditions marocaines, car il montre que la reconstitution de l'histoire dépend du conteur, contrairement à un roman, où l'histoire est fixée par le texte.

De plus, la polyphonie est représentée dans le texte de *L'enfant de sable* par la création d'un récit cadre autour de l'action principale du roman car deux histoires sont présentés: l'histoire du narrateur qui raconte son histoire au public, et l'histoire qui est recréé par le conteur. Cet aspect du roman fait référence aussi à la tradition de *Mille et une nuits* qui, comme *L'enfant de sable* utilise un récit cadre, celui de Shéhérazade. Ensuite, le conteur implique son public dans sa narration de l'histoire d'Ahmed, en supprimant les frontières traditionnelles entre le narrateur et le public. Ben Jelloun montre aussi que l'histoire commence à prendre une vie propre, comme il montre que la vie de la conteuse et la vie de l'histoire sont liées. Après la mort du conteur, l'utilisation des narrateurs multiples dans tout le texte renforce également le lien à la tradition du conte oral, comme chaque narrateur propose des réinterprétations différentes de l'histoire d'Ahmed, et chaque conteur présente une fin ambiguë. Comme le roman progresse, le narrateur change constamment, car les membres du public deviennent tout à coup narrateurs eux-mêmes. Cette utilisation de plusieurs narrateurs crée des narrations multiples, et renforce l'ambiguïté: la polyphonie déstabilise la structure traditionnelle de la littérature occidentale, qui présente généralement une relation binaire entre le narrateur et le lecteur, afin de donner une voix aux subalternes (Fayad 291). Dans le texte, cette relation binaire qui est recréée par le changement dans la relation entre le narrateur / lecteur peut se lire également en les changements qui surviennent dans la relation du soi / autre. De cette façon, la destruction du binaire entre narrateur / lecteur commence à

créer le type de «othered self» décrite par Spivak, qui est défini comme un lecteur occidental qui est capable de s'identifier avec le subalterne.

De même, dans le texte de *Persepolis*, la polyphonie recrée la relation entre le soi/autre car Satrapi change la relation entre le public et le conteur par la création de narrations multiples et par son utilisation du genre de la bande dessinée. Dans *Persepolis*, les narrations multiples sont créées de plusieurs façons : d'une part, les images présentent une narration qui peut être considérée séparément du texte, d'autre part, la polyphonie est créée dans le texte lui-même, avec le format de bande dessinée qui permet d'utiliser non seulement la voix du narrateur/ protagoniste Marji, mais aussi la voix des autres personnages tout au long du texte. Avec la première narration utilisée dans *Persepolis*, les images elles-mêmes permettent de créer une universalité du texte par l'attraction généralisée de la bande dessinée qui rend le texte accessible aux lecteurs. Ensuite, ces images créent un lien entre le texte et le lecteur, comme le lecteur peut s'identifier à la forme reconnaissable du visage humain, qui peut représenter des émotions universelles comme la colère ou la tristesse. En outre, ces images peuvent être interprétées sans l'utilisation du texte, ce qui crée une sorte de texte qui transcende les barrières linguistiques. L'image suivante montre ces deux fonctions des illustrations:

Cette image permet au lecteur de s'identifier au personnage principal, où le dessin représente l'émotion reconnaissable de la tristesse. En outre, cette image peut aussi être interprétée sans l'utilisation du texte, car l'image montre clairement le conflit que Marji ressent entre les influences orientales et occidentales (Naghibi 228). Si les images dans *Persepolis* ajoutent un sentiment de familiarité, elles servent aussi à renforcer les

différences culturelles entre l'Orient et l'Occident par le foulard présent et porté par la narratrice dans le roman.

La manière dont Satrapi explore la polyphonie dans *Persepolis* passe par l'utilisation de plusieurs voix dans la narration. L'utilisation du genre de la bande dessinée permet de faire exister d'autres voix dans le texte, car d'autres personnages, y compris la grand-mère de Marji, Dieu, et l'oncle de Marji parlent directement à travers l'histoire qu'elle recrée. Grâce à cette utilisation de plusieurs voix, Satrapi montre que la création de l'identité est discursive, car les conversations que Marji a avec les autres membres de sa famille sont responsables de beaucoup de ses opinions politiques et religieuses quand elle est enfant. Par exemple, les conversations de Marji avec sa grand-mère renforcent ses convictions qu'elle deviendra un prophète quand sa grand-mère lui dit: "je serai ta première disciple" (5).

Ensuite, l'utilisation de plusieurs voix dans les textes permet à Marji de non seulement raconter sa propre biographie, mais aussi de devenir une voix racontant la révolution islamique car elle alterne le dialogue entre elle et sa famille, et son propre récit des événements. En outre, dans certaines parties du texte, ces deux récits se juxtaposent dans le même cadre du texte. Dans le chapitre " La cellule d'eau," Satrapi commence par les descriptions des manifestations où ses parents sont des participants: « Mes parents manifestaient tous les jours. Ça commençait à dégénérer. L'armée leur tirait dessus, et eux leur lançaient des pierres. Les soirs, à force de marcher et de lancer des pierres, ils avaient des courbatures, même dans leur tête. » (16). Directement sous ce texte, Satrapi recrée une conversation entre elle et ses parents qui semble être une conversation d'enfance typique : « Hé maman, papa, on joue au Monopoly? ». Par cette juxtaposition de la narration de la révolution iranienne et une expérience reconnaissable entre un enfant et sa famille, Satrapi permet au lecteur de s'identifier à certains aspects du texte, afin de rendre quelque chose d'aussi étranger que la révolution islamique accessible aux lecteurs occidentaux, permettant « le soi » occidental d'identifier avec « l'autre » oriental.

Dans les deux textes de *L'enfant de Sable* et de *Persepolis*, la polyphonie est utilisée afin de donner une voix aux subalternes d'une manière qui est accessible au lecteur occidental. Cette polyphonie qui est utilisée dans les deux textes devient aussi discursive par la création d'un dialogue non seulement entre l'auteur et le lecteur, mais aussi entre l'Orient et l'Occident. De cette façon, les textes peuvent illustrer la théorie de Françoise Lionnet car elle l'écrit: « Literature is a discursive practice that encodes and transmits as well as creates ideology. It is a mediating force in society, since narrative often structures our sense of the world, and stylistic conventions or plot resolutions serve either to sanction and perpetuate cultural myths or to create new mythologies that allow

the writer and the reader to engage in a constructive rewriting of their social contexts. » (Lionnet 132). De plus, ces deux textes créent un dialogue entre l'Occident et l'Orient par l'utilisation de la polyphonie, ainsi que par l'intégration des femmes subalternes dans ce dialogue, ce qui répond aux objectifs du féminisme postcolonial à travers des exemples de femmes du Moyen-Orient qui défient les stéréotypes traditionnels. Dans *Persepolis,* Satrapi montre comment les changements de la révolution islamique touchent particulièrement les femmes iraniennes. Ensuite, elle conteste également la perception occidentale de la femme iranienne par le personnage de Marji qui rêve de devenir à la fois un prophète et un révolutionnaire. Dans *L'enfant de sable*, Ben Jelloun débat également des représentations traditionnelles des femmes du Moyen-Orient car il donne des exemples des femmes marocaines dont certaines caractéristiques sont généralement associées avec les hommes, ce qui suggère que le sexe est créé à la fois socialement et biologiquement. Cependant, les exemples féministes utilisés dans les deux textes semblent renforcer une notion occidentale du féminisme d'après Spivak, qui affirme que les écrivains postcoloniaux se rendent complice de la domination de l'idéologie occidentale.

Dans *Persepolis*, Satrapi travaille à intégrer les femmes subalternes dans le dialogue intellectuel par sa bande dessinée autobiographique. Dans le texte, Satrapi raconte sa propre expérience, ainsi que la manière dont les femmes sont particulièrement influencées par les changements sociaux radicaux de la révolution islamique. Au début, Marji met l'exemple le plus évident des changements pour les femmes pendant la révolution dans le chapitre intitulé, « Le foulard ». Dans ce chapitre, Satrapi décrit la loi qui oblige les femmes à porter le voile, ainsi que la ségrégation entre les sexes à son école privée pendant la révolution. Bien que la nouvelle loi qui oblige les femmes à porter le foulard soit prévue pour un renforcement de l'idée islamique que les femmes devraient rester modestes, Satrapi montre que les jeunes filles qui portent le voile à l'école sont incapables de comprendre la raison pour laquelle les voiles doivent être portés. Satrapi écrit: « Nous n'aimions pas beaucoup porter le foulard, surtout qu'on ne savait pas pourquoi. » (1). Pour ces jeunes filles, le port du foulard n'est pas une déclaration politique, mais une gêne et une nouvelle source de divertissement de jeux car ils crient « Huu! Je suis le monstre de ténèbres . . . rends mon foulard! » (1). De cette manière, Satrapi montre que les lois régissant la pudeur féminine ne conduisent pas nécessairement à des changements dans le comportement des femmes.

Bien que les autres filles de son école ne semblent pas conscientes de l'importance du port du foulard, le refus de Marji (qui est cachée derrière le mur) de

porter le foulard dans l'image suivante semble être une décision consciente qui reprend le refus public de sa mère à porter le voile:

Dans les images suivantes du texte, Marji décrit l'implication de sa mère dans les protestations contre le foulard. De plus, sa mère est photographiée sans le voile dans une image qui est distribuée partout en Europe ainsi qu'en Iran. Grâce à cette déclaration politique faite par sa mère, Marji regarde sa mère comme une héroïne, et le premier dans la ligne des héros qu'elle admire tout au long du texte. Sa mère semble être aussi un modèle pour la personnalité indépendante et intelligente de Marji, qui défie la perception occidentale de la femme iranienne à travers le texte.

Marji continue à se définir comme un penseur intelligent et indépendant, car sa propre représentation d'elle-même n'est pas affectée par les changements patriarcaux de la révolution, y compris l'obligation de porter le voile. À l'âge de six ans, Marji croit qu'elle est destinée à être « la dernière des prophètes », et cette idée mène à la relation inhabituelle entre Marji et Dieu, avec qui elle a des conversations dans la baignoire (4). Marji devient également un lecteur vorace de livres sur les révolutionnaires, y compris Castro et Marx, l'amenant à croire qu'elle sera la prochaine héroïne de la révolution. Bien que la caractérisation de Marji défie les stéréotypes occidentaux de la femme en Iran, Satrapi flatte aux publics occidentaux à travers les genres populaires occidentaux de la bande dessinée et l'autobiographie féminine, et en écrivant la bande dessinée en français (le texte n'a pas été traduit en persan). Par conséquent, Satrapi est complice dans le renforcement de l'idéologie occidentale suggéré par Spivak, car son personnage féminin indépendant, Marji, semble commercialisé vers un public occidental, et n'est pas vraiment

une représentation féministe de la femme iranienne. Toutefois, Satrapi réussit à intégrer les femmes subalternes dans le discours intellectuel par le personnage de Marji dans le texte (Malek 377).

Ben Jelloun intègre également les femmes subalternes dans le dialogue intellectuel, ainsi que les idées du féminisme occidentalisé. La première manière dont Ben Jelloun intègre les idées féministes dans le texte est quand il suggère que le sexe n'est pas seulement biologique, mais aussi une création sociale. Cela est évident car Ahmed semble plus à l'aise dans son identité construite socialement comme un homme bien qu'il soit biologiquement féminin. Par exemple, comme un enfant, Ahmed préfère la sphère sociale de son père car Ahmed décrit sa préférence pour aller au bain avec son père, et de son aversion pour l'occasion sociale du bain de sa mère. Dans son journal intime, il écrit « En vérité, je préférais aller au bain avec mon père. Il était rapide et il m'évitait tout ce cérémonial interminable. Pour ma mère, c'était l'occasion de sortir, de rencontre d'autres femmes et de bavarder tout en se lavant. Moi, je mourais d'ennui. » (33). Ahmed se sent plus à l'aise dans l'espace masculin de la salle de bain des hommes tout comme il préfère les activités réservées aux hommes au sein de la société musulmane, croyant que la vie de femme serait insatisfaisante : « Et, pour toutes ces femmes, la vie était plutôt réduite. C'était peu de chose: la cuisine, le ménage, l'attente et une fois par semaine le repos dans le hammam. J'étais secrètement content de ne pas faire partie de cet univers si limité. » (34). Quand Ahmed arrive à maturité, il est capable de remplir toutes les fonctions sociales réservées aux hommes dans la société musulmane. Il devient chef de sa famille, il s'isole de ses sœurs et sa mère, et reprend avec succès le contrôle de l'entreprise de son père:

> « Ahmed était devenu autoritaire. A la maison il se faisait servir par ses sœurs ses déjeuners et ses diners. Il se cloitrait dans la chambre du haut. Il s'interdisait toute tendresse avec sa mère qui le voyait rarement. A l'atelier il avait déjà commencé à prendre les affaires en main. Efficace, moderne, cynique, il était un excellent négociateur. Son père était dépassé. Il laissait faire. » (51)

Tout au long du texte, Ahmed, qui est biologiquement femme se sent à l'aise dans les rôles sociaux traditionnellement assignés aux hommes. De cette façon, Ben Jelloun montre que les traits de personnalité ne sont pas seulement déterminés par le sexe, et que les femmes sont aussi capables de remplir les rôles réservés aux hommes dans une société orientale.

Bien qu'Ahmed soit à l'aise dans la société des hommes, il se sent séparé de son corps féminin. Toutefois, ses sentiments sont réprimés car Ahmed se rend compte de la valeur intrinsèque d'être un homme : « Il a vite compris que cette société préfère les

hommes aux femmes. » (42). Cet aspect du texte illustre le concept de la « performativity » du sexe décrit par Judith Butler, car « Ahmed's persistence in his masculine identity arises from his understanding of a binary sexual identity wherein the masculine dominates the feminine. » (Gauch 184). En outre, Ben Jelloun montre que le sexisme n'est pas le résultat de différences entre les sexes, mais qu'il est socialement créé car Ahmed commence à montrer les tendances misogynes qui sont renforcées par son père et par sa société. Cela devient évident quand Ahmed est critique des aspects féminins de sa propre personnalité. Par exemple, lorsque Ahmed est attaqué dans la rue après avoir assisté à la mosquée, il est gêné pour montrer son émotion : « Je rentrai à la maison en pleurant. Mon père me donna une gifle dont je me souviens encore et me dit : 'Tu n'es pas une fille pour pleurer! Un homme ne pleure pas!' Il avait raison, les larmes, c'est très féminin! » (39). Dans cet exemple, le père d'Ahmed renforce l'idée que les émotions qui sont associées aux femmes sont négatives, et par cet exemple, Ahmed forme une association négative des aspects féminins de lui-même et des femmes en général. À cause du sexisme illustré par le caractère d'Ahmed et sa préférence pour son identité masculine sur son corps féminin, Ben Jelloun montre les deux sexes et les opinions négatives des femmes sont le résultat de la réitération des valeurs patriarcales sociales, et ne sont pas le résultat des différences biologiques.

Ahmed persiste dans son identité d'homme, mais sa séparation avec sa la biologie féminine l'amène à se retirer de la société car il décide de passer la majorité de son temps dans la solitude, enfermé dans une chambre. Dans l'intimité de son domicile, le journal intime d'Ahmed devient un moyen pour lui de résoudre son conflit qu'il sent entre sa biologie et son identité extérieure masculine. Bien qu'Ahmed soit satisfait de la situation sociale qu'il s'est donné en tant qu'homme, Ben Jelloun écrit qu'« il n'arrivait plus à maitriser son corps » et « entre lui et son corps il y avait eu rupture, une espèce de fracture » (10). Ahmed essaie de résoudre cette rupture qu'il éprouve et de trouver un sens de soi et de l'identité à travers l'écriture, ce qui renforce l'idée de Cixous stipulant que l'écriture est un lien à la sexualité, et que l'écriture du corps féminin est un moyen de trouver une identité féminine. Dans le passage suivant, Ben Jelloun établit la fonction du journal intime d'Ahmed comme un moyen de retourner à son identité féminine initiale:

> « Il avait entendu dire un jour qu'un poète égyptien justifiât ainsi la tenue d'un journal : 'De si loin que l'on revienne, ce n'est jamais que de soi-même. Un journal est parfois nécessaire pour dire que l'on a cessé d'être.' Son destin était exactement cela: dire ce qu'il avait cessé d'être. » (11-12).

Tout au long du texte, le journal continue à être l'espace où Ahmed exprime sa relation à son corps féminin et où il réfléchit sur la question qu'il lui pose à travers la narration, « qui suis-je? ».

En outre, Ahmed commence à explorer sa sexualité dans son journal, car il décrit son attirance physique pour sa femme, Fatima. Dans le journal, Ahmed écrit qu'« Elle est blanche et je me cache les yeux. Mon corps lentement s'ouvre à mon désir » (54). Cette attirance sexuelle qu'il éprouve à l'égard de Fatima semble lui ouvrir à une exploration de sa propre identité sexuelle, quand il commence à décrire et à prendre plaisir à son corps féminin nu: « Ma nudité est mon privilège sublime. Je suis le seul à la contempler. Je suis le seul à la maudire. Je danse. Je tournoie. Je tape des mains. Je frappe le sol avec mes pieds. » (56). Pendant qu'Ahmed écrit son rapport avec son corps dans son journal, il cherche pour des autres moyennes d'écrire le conflit qu'il se sent en lui-même. Les lettres qu'Ahmed écrit à un correspondant anonyme devient aussi un moyen pour Ahmed pour décrire la séparation qu'il ressent de son corps, ainsi que la solitude qui est créée par cette séparation. En outre, ces lettres révèlent la compréhension d'Ahmed des valeurs sexistes de la société marocaine dans laquelle il vit, car il l'écrit « Vous savez combien notre société est injuste avec les femmes, combien notre religion favorise l'homme, vous savez que, pour vivre selon ses choix et ses désirs, il faut avoir du pouvoir. » (87). Dans cette partie du texte, Ben Jelloun lie sa propre critique des valeurs patriarcales de la société marocaine, et offre l'écriture comme un moyen pour les femmes d'exprimer leur sexualité. Cependant, Ben Jelloun devient aussi complice dans le renforcement d'une idée occidentalisée du féminisme, car Ahmed peut utiliser l'écriture comme un moyen de formation de l'identité parce qu'il a été élevé comme un homme. De cette façon, l'interprétation du féminisme donnée par Ben Jelloun n'est pertinente que dans les sociétés où les femmes ont accès à l'éducation.

Enfin, les textes de *L'enfant de sable* et *Persépolis* utilisent avec succès la polyphonie afin de donner une voix aux subalternes et déconstruisent le binaire du soi/autre qui représente non seulement la relation entre le narrateur et le lecteur, mais aussi la relation entre l'Orient et l'Occident. Dans *L'enfant de sable*, Ben Jelloun intègre les traditions narratives de l'Orient liées au *Mille et une nuits*, et crée la polyphonie à travers l'utilisation de narrations multiples tout au long du texte. Dans *Persepolis*, Marjane Satrapi crée la polyphonie car le genre de la bande dessinée permet l'utilisation de plusieurs narrateurs. Ensuite, les deux textes intègrent les femmes subalternes dans le discours intellectuel par l'incorporation des représentations qui mettent en question les stéréotypes des femmes marocaines et iranienne créées par l'occident. Toutefois, les représentations des femmes dans les deux textes renforcent l'idéologie occidentale, et par

conséquent, les deux textes ne montrent pas vraiment le but de la littérature postcoloniale féministe selon Spivak, qui affirme que les écrivains postcoloniaux doivent trouver un moyen pour intégrer les femmes subalternes dans le dialogue intellectuel d'une manière qui est différente des représentations occidentales des femmes et du féminisme.

Works Cited

Ben, Jelloun Tahar. *L'enfant De Sable Roman*. Paris: Ed. Du Seuil, 1985.

Fayad, Marie. "Borges in Tahar Ben Jelloun's L'Enfant De Sable: Beyond Intertextuality." *The French Review* 67.2 (1993): 291-99.

Gauch, Suzanne. "Telling the Tale of a Body Devoured by Narrative." *Differences* 11 (1999): 179-202.

Lionnet, Francoise. "Geographies of Pain: Captive Bodies and Violent Acts in the Fictions of Myriam Warner-Vieyra, Gayl Jones, and Bessie Head." *Callaloo* 16.1 (1993): 132-52.

Malek, Amy. "Memoir as Iranian Exile Cultural Production: A Case Study of Marjane Satrapi's Persepolis Series." *Iranian Studies* 39.3 (2006): 353-80.

Naghibi, Nima. "Estranging the Familiar: "East" and "West" in Satrapi's Persepolis." *English Studies in Canada* 31.2-3 (2005): 223-48.

Satrapi, Marjane. *Persepolis.* Paris: L'Association, 2007.

Spivak, Gayatri. "Can the Subaltern Speak?" *Marxism and the Interpretation of Culture*. Urbana: University of Illinois, 1988.

Homemaker or Career Woman: Is There Even a Choice?

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> We've got a generation now who were born with semi-equality. They don't know how it was before, so they think, this isn't too bad. We're working. We have our attaché cases and our three piece suits. I get very disgusted with the younger generation of women. We had a torch to pass, and they are just sitting there. They don't realize it can be taken away. Things are going to have to get worse before they join in fighting the battle.
>
> –Erma Bombeck

At one time, women in the United States were expected to marry, bear children, and stay home and tend to the household. Thanks to the Women's Movement, women have come a long way since this time. Now, it is expected that young women attend college and pursue a career. Yet, on top of all of this, women are still expected to be the dominant caretaker if they choose to be married and start a family. Have women fought for so much that we have in fact only doubled our burdens and, in turn, distanced ourselves further from the equality we wish to share with men?

The social pressures women face in this day and age may make them feel shameful if they choose to "backtrack" and become a homemaker. These pressures are a result of cultural gender ideals that have been engrained in our consciousness since at least the "golden era" of the 1950s. During this time, the quintessential male worked from nine to five; his counterpart, the quintessential wife, took care of the children, all of the household chores, and assured her hardworking husband that dinner would be ready and waiting for him when he arrived home. Male-breadwinning families were the norm, an unspoken rule by which all were expected to abide. Although this is no longer necessarily expected, the persistence of gender ideals, particularly those which tell us which responsibilities are "feminine" or "masculine", continue to bring about the same undesired result. If economic and household labor can be equally shared between two spouses, why are women made to feel guilty for choosing to follow the career path of mother and caretaker?

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[1] Written under the direction of Dr. Jean Halley (Sociology) for SO301:*The Family*.

Growing up in a traditional Irish-Catholic family, I have witnessed the women in my family balance a part-time career and tend to their families. If I were to be married directly after college, and start a family not long after that, my family would support my decision. However, my experience as a young woman in a liberal arts college has shaped my feelings otherwise. Being around such strong-minded, driven women has made me rethink the possibility of becoming "just a homemaker." I cannot help but wonder why I feel ashamed to consider this. Have not women come so far in the fight for equal opportunity that we cannot, if we please, choose to pursue motherhood as a full-time career? What does this say about the American society? It is becoming increasingly apparent that the work of motherhood is not only undervalued but also of little importance. Given that the strong-minded women who *first* stood up for women's rights were just that—the first—it is more than likely that their mothers did not work outside of the home. It is interesting, then, to consider what might have been had they not been raised with the love, patience, and care of hard-working mothers.

In "The Gendered Society", Michael Kimmel (2004) leads us through a variety of examples of gender in action, seen through his point of view: that gender is not just a commonplace frame of reference for the sexes but is also the largest and most universal source of inequality. Gender is everywhere. This complicates the women's crusade toward equality, for it has proven a great struggle to change beliefs many aren't even aware they hold. Or, as Kimmel (2004) puts it, "our adherence to gender ideologies that no longer fit the world we live in has dramatic consequences for women and men, both at work and at home" (pp. 184). Look around you, and surely you will be able to identify our general social inability to break free of this cling.

Here I will show two very different portrayals of gender in action—one, a traditional rural West African society that has changed significantly over the past century; the other, in the form of a privileged English family around two hundred years ago. One society colonized the other, and although both lived gender in ways distinct from our contemporary mainstream United States culture, both influenced American gender norms as they encountered the United States through immigration and the slave trade. Finally, I will include modern perspectives of the roles—and limitations—gender implies.

Ifi Amadiume (1987) explores the gender ideals of and the sexual division of labor in the Igbo society in Africa in her book *Male Daughters, Female Husbands: Gender and Sex in an African Society*. These ideals and divisions are directly correlated. Amadiume specifically focuses on the Nnobi people. Nnobi women had a more prominent role in myths than did men. The society depended heavily on female labor—and more than that of motherhood. Wealth for women came from crops, livestock, and

either sons who would later become wealthy or daughters who would marry and, in doing so, bring wealth. Men gained wealth by accumulating wives.

It is important to note that in her rich description of a society far from our own, socially as well as geographically, Amadiume illustrates the separate spheres of sex and gender. At the heart of her account is the notion that gender and sex are not intricately linked, as they are in our society. In fact, sex and gender in the United States are so cohesive that when a child is born, it is automatically dressed in blue or pink according to its sex and is, from then on, expected to conform to the male or the female gender. Sexuality relies heavily on the expectations set by these assigned genders, and a person will be cast out if they step outside of their gender's comfort zone, or the social norms for that gender. In the Nnobi people's society, a woman could become "male" or be considered a "female husband." Daughters could become male if they were first in line to inherit their father's wealth, because he had no sons. Once male, a daughter could, like men, begin to accumulate wives. From that point on she is considered a female husband. Amadiume claims these ideologies stem from the division of labor in the society, which is shared differently by spouses than in the United States. Nnobi men could have multiple wives. This resulted in multiple children and a broader division of labor. The lives of the Nnobi people revolved around rituals and farming, whereas most families in the United States are concerned with balancing economic stability with household responsibilities. The sexual division of labor in the United States is not as severe as it was a few decades ago. Men are still expected to be strong and work hard to provide for their family, as they have been for the past century, at least. Women are still expected to be feminine and maternal, except now that is combined with the pressure to be a driven career woman.

Women in the Nnobi society are virtually required to have children and maintain farm work and sexual duties. This has not changed in the Nnobi society. In the United States, things have changed a great deal over the past half of the century. Societal expectations of women in the Nnobi society are similar to those of women in America in that they are seen as producers. However, women in the United States can choose to pursue a career and not have children, and this would be socially acceptable. For Nnobi women, this is not an acceptable option. Another difference between the Nnobi women and American women is that if a white, middle-class woman like myself chose to only have children and not a career, there would most likely be criticism from those who believe all women should seize the opportunity to be something more than a mother.

In Jane Austen's *Mansfield Park*, marriage was considered a social norm at a much younger age than today. Life may have been simpler then; men worked and were the breadwinners while women remained at home and tended to the duties of the

household. Sir Thomas Bertram, who owned the estate at Mansfield Park, owned sugar plantations and this was not a far-fetched concept at the time. His daughters, Maria and Julia, are spoiled and unkind. I suppose I cannot blame them, for they were raised under the assumption that it was okay to look down upon those less fortunate and seek a man to marry for wealth and not love. Sir Thomas and his wife also have two sons, Thomas and Edmund. Thomas is to inherit his father's estate and Edmund is to become a clergyman. Mary and Henry Crawford come to live at Mansfield Park after being brought up by an aunt and uncle. After spending some time with Edmund, Mary realizes he is kind and gentle-hearted man. She finds herself falling for him, but since he is set to be a clergyman, she has to bury her desire. Once again, one must not jump to conclusions about these seemingly heartless women. Mary was raised to believe, as most if not all women were at the time, that a desirable husband was one that was wealthy and provided for her. Mary even puts Edmund down to hide how she truly feels (Austen, 1964).

Before the events of the women's movement, women were brought up to believe that a woman's place is in the home, and a man's job is to provide for the family financially. In the '90s, when I was growing up, it was already expected that women have at least a part-time career, in addition to caring for the family. The societal expectations of women have changed drastically since the era of *Mansfield Park*, from women being the sole caretaker and men the sole breadwinner to both men and women having careers and a family if they choose. This drastic change, however, was in one direction. The woman most likely still receives the bulk of childcare and housework.

I can imagine how one might make the general assumption that by choosing to "retreat" back to homemaking, women are backtracking. The belief commonly held by those who argue against a woman's decision to be only a "stay-at-home mom" is that this choice will negate how hard women have fought for a woman's place in an otherwise male-dominated realm: the workplace. But it is *because* women have fought for and gained the freedom to choose their destinies that this idea of backtracking is simply false. It is not so much backtracking on the part of women as it is a failure to move forward by men, as well as the general society's beliefs. I can understand some feminists' fear that if women do choose the dual career of mother and homemaker and no longer strive to work alongside men outside of the home, all that women have fought for, and all that women have achieved, will diminish. However, what is not acknowledged is what men can do to alleviate some of the burden. If we can alter cultural understandings of the roles men should assume, perhaps the goal of equality will not seem quite so out of reach.

In the article, "Home-to-Work Conflict, Work Qualities, and Emotional Distress," Schieman, McBrier and Van Gundy discuss the stressful consequences of both

men's and women's household responsibilities pouring over into and affecting their career roles. One point argues that the increase of women in the workforce creates stress about balancing the roles of parent and employee. This point also argues that the individual's ability to handle this stress reflects their ability to organize their daily life. The authors also found that amongst parents with careers, one role unfortunately takes precedent over the other, therefore making the other role suffer. This article concentrates on the affects of home life on career life, as opposed to vice versa (Schieman et al., 2003).

One study discussed by Schieman et al. observed that women experience more stress than men when dealing with home-to-work conflict. I would not doubt this because although women are encouraged and often expected to lead successful careers, simultaneously they are expected to be the primary caretaker of the children. Discussed is a study in which the authors assumed that staying at home would be more beneficial for women, and that occupying roles as an employee would be more beneficial to men (Schieman et al., 2003).

Schieman et al. introduce "The Double Disadvantage Hypothesis," which "predicts that individuals are most vulnerable to symptoms of depression and anxiety when such work qualities combine with conditions of high home-to-work conflict" (Schieman et al., 2003, pp. 140). Given the state of the American economy, I can understand why one would assume that it is necessary for women to work outside of the home. Many are lucky to hold onto a job in these difficult economic times. If this is the case, both spouses should create a system of balance so that neither should have to do more work than the other. However, if a woman has the means to lead her life as a full-time mother, she and her spouse most likely have an equal balance of economic and household support. The woman can stay home and raise her children and complete her household-related responsibilities, and her spouse can, for the most part, be responsible for the family's income. There is no reason, then, for society to pressure a woman to work for a wage, or to feel guilty if she fails to succumb to such pressure. The authors refer to a view that expresses that women may face more stress from the home-to-work conflict than men because career work is simply added on to preexisting household duties. I could not agree more with this point. Our society virtually forces women to pursue a career because women have worked hard and gained so much since the beginning of the feminist/women's movement. Yet our society has not advanced nearly as far in terms of its perceptions of gender roles. Women are still expected to be the primary caretaker of children and although men have become more active in the household, the numbers simply do not add up. It should appear backward, then, that

women should be expected to do double the work that men do. After all, have not women been working towards equality? The studies conducted by Schieman et al. show that there is clearly not an equal division of labor in the American household (Schieman et al., 2003).

Similar to Schieman et al, "Housework and Wages", by Joni Hersch and Leslie Stratton (2002), focuses on the effects of domestic work on paid work. The negative effect of housework on wages was significantly more for women than men, and noticeably more for married women than unmarried women. This finding suggests that there is interplay between marriage and housework. In their studies, Hersch and Stratton (2002) determined the amount of work performed regularly by women and men based on their participation in household responsibilities that were typically "female" or typically "male". Typically female duties included preparing meals, doing the dishes, general cleaning, shopping and laundry. Responsibilities that were typically male were outdoor housework and maintenance, and auto repair. Housework that was considered neutral was paying bills and driving others, which stood for driving someone other than oneself. Not only are there more categories of female work than male work, but female work, for the most part, needed to be tended to daily. Male work, such as outdoor maintenance, could generally be postponed if paid work required more attention. Married men in the studies spent less time on responsibilities that seemed to have the greatest effect on wage. It can be assumed—or in the case of the Hersch and Stratton (2002) study, proven—that maintaining two jobs on a regular basis will negatively affect at least one of them. In this case, the focus is on the effect on women's wages. Hersch and Stratton (2002) compared this phenomenon to a continuation of the 1950s.

On the other hand, Gretchen Webber and Christine Williams (2008) observed the effect of part-time work on housework. They argue that women are influenced to work part-time because of the incompatible demands of motherhood and paid work. This experience is tightly linked to gendered division of labor within the household. Webber and Williams (2008) argue that our society devalues unpaid work, like motherhood, and overvalues paid work (pp. 17). Not long ago this was referred to as a "mommy track"—a path that led women to fewer job opportunities (pp. 16). Employers assume, naturally, that a woman with children will need time to care for them. Therefore, acting off of this assumption, they will forgo offering women opportunities or promotions for fear that they may not be able to fully commit. Kimmel (2004) refers to this as "the glass ceiling", holding women down in the work world.

In Webber and Williams' study, women generally moved from full-time to part-time work as a means to lessen their overall workload; they felt they did the bulk of the

housework while also working full-time outside of the home. But instead of having more time to relax, women ended up doing more housework with their newfound "off" time. Webber and Williams (2008) argue that women are put in an "untenable double bind" by two competing ideals—the hegemonic cultural ideal that women should make motherhood their top priority and the employer's ideal that their best worker is one that exhibits the most loyalty to their company. It is impossible for both of these ideals to be fully achieved. Needless to say, one job will suffer.

In Julie Brines' article, "Economic Dependency, Gender, and the Division of Labor at Home," she examines the link between housework and the transfer of earnings and how it complies with the rules of economic exchange. According to Brines (1994), economic dependency compels wives to work at home to make up for the work that her husband does. She hypothesizes the "dependency model", which claims, "the rules governing housework are tied to relations of economic support and dependency" (Brines, 1994, pp. 653). According to this model, housework and economic dependency are mainly assigned to a specific gender: the first reinforcing femininity and the latter, masculinity. Brines' study aims to correct the basis of the dependency model, that is, that household labor is performed as a return favor for economic dependency. My beliefs parallel Brines' findings; I believe homemaking is a career in and of itself. When a woman chooses to raise a family, instead of, say, choosing a career with a wage, she does not desire to tend to household responsibilities because she feels her husband does the bulk of the work, or because she feels she needs to contribute something in return for her husband's earnings. For a successful division of labor in the household, there needs to be an understanding of equality and balance between homemaking duties and economic stability.

Brines' also theorizes that the women's "revolution" has either stalled or was never quite completed. She claims "housework remains primarily 'women's work' despite substantial changes in women's employment patterns and in attitudes once thought to undergird the sexual division of labor" (Brines, 1994, pp. 652). In other words, what was meant to completely change society's views of women was only half successful. Or, as some believe, it has done nothing more than double women's workloads. Women are now expected to work on basically the same level as men, but the same is not true for society's expectations of men and housework. These expectations have barely changed in comparison to the change we have seen in women.

Nowhere in my research is the belief that women have only doubled their burden more evident than in the article "How Long Is the Second (Plus First) Shift? Gender Differences in Paid, Unpaid, and Total Work Time in Australia and the United

States" by Sayer, England, Bittman, and Bianchi (2009). Sayer et al. (2009) argue that "men adjust little to their wives' employment" (pp. 538). This lack of adjustment is coined "asymmetry of gendered change" (Sayer et al., 2009, pp. 538). That is, women have doubled their workload by entering the paid workforce because men have neither increased their domestic work nor decreased their paid work time away from home. Sayer et al. (2009) note that children increase the unpaid workload for women more so than men, because, again, women remain the primary caretaker. As a result, women resort to swapping personal leisure time with childcare. Men, on the other hand, "do not appear to make similar tradeoffs" (Sayer et al., 2009, pp. 541). Finally, Sayer et al. (2009) touch on a component of this argument that I find to be of utmost importance: "how gendered cultural understandings and work structures keep men from taking on traditionally female responsibilities" (pp. 541). This element must be brought into the limelight, considering that the female endeavor to attain equality, which has long been the focus, has been one-sided and has proven inadequate.

In the article, "Homemaker or Career Woman: Life Course Factors and Racial Influences among Middle Class American," Janet Zollinger Giele observes the change from traditionally patriarchal marriage to today's more egalitarian state of marriage. Giele (2008) states that "women constitute the majority of university students around the world, and their participation in national economies is correlated with economic growth" (pp. 393). I would have guessed this was the case: many of the colleges I was interested in were composed of no less than 60% women, many with a student body that contained more than 70% women. Women are clearly more than ever interested in participating in the financial support of themselves or their family. Giele later speaks of studies in Great Britain and the United States that challenge this newly egalitarian marriage ideal. Giele (2008) claims, "recent books and popular magazines in the U.S. have addressed the unexpected number of economically successful and well-educated mothers who have left their careers for full-time homemaking and motherhood" (pp. 393). This study proves that although gender ideals have changed in the workplace, those in the home have not. This supports my theory that women are still expected to be the primary caretaker of children and household responsibilities while maintaining a career and contributing to the family financially. It also contributes to the observation that men have not been as present in the household as women have been in the workplace over the past several decades. This makes me, as a young woman, nervous for my future. I feel pressured by my surrounding college society to pursue a full-time career. If I am successful on whatever career path I choose, I fear that I will have to leave what I have worked so hard for if I choose to have children. And the same is true for the opposite; I fear that if I choose to

only work within my home as a mother, I will be judged for not taking advantage of the opportunities I have been given. Giele's article reinforces this imbalance of household labor duties between women and their spouses. What ever happened to seizing the opportunity biology has graced us with—to carry and bring into the world a human life? Seeing as this process carries with it a lifetime of responsibility, love, and hard work, it seems preposterous to ridicule women for not pursuing a career on top of the one to which they are already fully committed. Should a married woman decide to bear and rear children and pursue another career, it goes without saying that she should be pardoned of the pressure to do the bulk of the housework.

As a young woman in 2009, I cannot help but feel pressured by society to choose a different path than the one that I may desire: to be a wife, mother, and full-time homemaker. Seeing as I am only 21 years old, I change my decisions about my future daily. However, I think it is unfair and unnecessary to feel guilty should I choose not to pursue a full-time career that contributes to my family financially. The books and articles previously referred to display several different ideals for gender and the roles of men and women in the workplace and the home. It is evident through the studies shown in these articles that something has to change in order for women to be recognized as the hard workers they truly are. Society must alter its expectations of women and men to achieve a balance that allows for less pressure on men to work outside of the home and on women to maintain a satisfactory household as well as workplace duties. In other words, what will be achieved is an equal division of labor. If women are not given some slack from the social pressure to work, they (or we?) should, at the very least, be given more of a helping hand in the home.

Works Cited

Amadiume, I. (1987). Male Daughters, Female Husbands: Gender and Sex in an African Society. Atlantic Highlands, New Jersey: Zen Books Ltd.

Austen, J. (1964). Mansfield Park. New York: Penguin Books.

Brines, J. (1994). "Economic Dependency, Gender, and the Division of Labor at Home", *American Journal of Sociology, 100*(3), 652-688.

Giele, J. Z. (2008). "Homemaker or Career Woman: Life Course Factors and Racial Influences among Middle Class Americans", *Journal of Comparative Family Studies, 39*(3), 393-411.

Kimmel, M. (2004). The Gendered Society. New York: Oxford University Press.

Sayer, L.C., England, P., Bittman, M., Bianchi, S.M. (2009). "How Long is the Second (Plus First) Shift? Gender differences in Paid, Unpaid, and Total Work Time in Australia and the United States", *Journal of Comparative Family Studies, 40*(4), 523-545.

Schieman, S., McBrier, D.B., & Van Gundy, K. (2003). "Home-to-Work Conflict, Work Qualities, and Emotional Distress", *Sociological Forum, 18*(1), 137-164

Webber, G. & Williams, C. (2008). "Part-Time Work and the Gender Division of Labor", *Qualitative Sociolo*.

"The Inky Lifeline of Survival": The Discovery of Identity Through French Culture and Standardization in *School Days* and *Balzac and The Little Chinese Seamstress*

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Being educated and going to school is an experience that is universal; at some point in a person's life, they must go to school, and discover all that comes along with gaining knowledge and socially interacting with peers. For the protagonists in *School Days* (1994) by Patrick Chamoiseau and *Balzac and the Little Chinese Seamstress* (2002) by Dai Sijie, education is a part of their lives that shapes and changes their identities. Through their different types of education, the characters discover themselves and begin to understand the world around them. For the protagonist in *School Days*, the little black boy, education is something that is at first revered and then quickly transformed into that which produces fear and humiliation. As a boy growing up in Martinique, he must go through the French schooling system because of its status as a colony, where he learns much about France but is separated from his Creole culture. The narrator in *Balzac and the Little Chinese Seamstress*, however, must go through the process of "re-education" as part of the Cultural Revolution of China in the 1960s; he is completely separated from his known way of life in the city. During his time in re-education, he discovers a novel by Balzac which opens his eyes to all that is Western. The two main characters are at once separated from their cultures and brought closer to a discovery of their identities through standardization. Though both are "re-educated", the little black boy is brought closer to his own culture through recognizing the differences, while Sijie's narrator is pulled further from his own culture. However their identity is realized, French culture deeply affects the two characters.

"The little black boy", or the main character in Chamoiseau's *School Days* illustrates a typical Martinican child as he begins with his schooling in the French education system. Martinique was colonized by the French in the 17th century, and eventually became a *département d'outre mer,* or a French overseas department in 1946 (Hillman 95). This meant that although Martinique is no longer a colony of France, it is still recognized as a part of France that has elected representation in the government as

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well as French legislature (Hillman 95). For the little black boy growing up in Martinique in the 1960s, he is required to enroll in a school system designed by the French and based on the idea of Standardization; all of the lessons are taught in French and based on concepts of French culture. This presents many problems for the boy, who has grown up speaking the native language, Creole, and suddenly finds himself learning in a language unfamiliar to him, about subjects which he has never seen or heard of.

He begins the novel by expressing his envy towards his siblings, who "started going off somewhere each morning" while he is left at home, waiting for them to return after "vanishing over the horizon carrying strange bags," (Chamoiseau 13-14). After being informed that he will also be going to school soon, he is speechless and excited; he then attends a preschool with Mam Salinière. For the little black boy, school with Mam Salinière represents a comforting, weaning time which eases him into the concept of schooling. It is during these preschool days when the little black boy, as well as the other students, begin to feel as though they are agents of their own educations: "He felt as though he were teaching her things; he could amaze her by drawing a letter, by caterwauling Do-Re-Mi-Fa-Sol…by mixing two colors together to make a new one…Everything he did was lovely, clever and brave," (Chamoiseau 28). This early education begins to shape the little black boy as he begins to take education as a step towards interacting with other students, his siblings, and his family. Through the child narration, however, it is difficult and almost impossible to see that even in preschool he is beginning to be pushed into the French thought; he draws her "a witch, a fir tree, an apple tree, a snowflake", and other objects that are not associated with Martinique (Chamoiseau 28). However, because he is not integrated into the French school system at this time, he is still in the "comfort zone" of his Creole background; at this point, he still does not recognize the "ethnic and cultural boundaries of identity" which will eventually shape him and change his perspective on his Creole heritage, though they are faintly present in his preschool education (Murdoch 25).

It is only when the little black boy begins to attend French school, the École Perrinon, that he begins to understand the concept of standardization and his separation from Creole culture. Even upon arrival at the school, he feels that "the atmosphere was frightening, severe, echoing, anonymous…Nothing and nobody would coddle him there," (Chamoiseau 35). The teacher instantly begins speaking in French as he welcomes the class, and insulting the boys for not being able to pronounce the letter "r" during role call. Almost immediately, the little boy and his classmates become alienated by their own culture's language; they begin to live in fear that if caught speaking Creole, they will not only be ridiculed by the Teacher and possibly other students, but will be punished

(Murdoch 31). The division of language occurs when the little boy realizes that the teacher is not speaking Creole: "The division of speech had never struck the little boy before. French (to which he didn't even attach a name) was some object fetched when needed from a kind of shelf, outside oneself," (Chamoiseau 47). It is in this moment that the colonial presence is identified in the novel; though the reader is aware that the teachers are different, this "division" of language separates the boy from the authoritative positions of the teacher and Monsieur le Director. This separation, according to Murdoch, is an emphasis on "the ineluctable fact that the Creole language possesses both a logic and histoirco-cultural tapestry that will forever separate it from French," (31). In other words, as the boy becomes further disconnected with Creole, he sees that his lessons also draw him further away from his environment.

The characters of *Balzac and the Little Chinese Seamstress*, however, experience standardization in a much different way. Under the Mao communist government in China in 1965, Mao himself urged party leaders to begin what he called a "cultural revolution" after deciding that novels and literature had dominated the party through its "bourgeois ideology" which had been producing capitalist thinking (Meisner 311). In order to rejuvenate socialist thinking throughout the country through proletariat ideology the masses would transform themselves and ultimately their country to be more pro-communist (Meisner 312). This "revolution" lead to the mobilization of Red Guards to burn any books that promoted "bourgeois ideology", and the cleansing of bourgeois society. Many young intellectuals were forced to leave their homes and work in remote villages in order to understand the proletariat struggle, and to be punished for their rebellion (Yongyi 330). Sijie's two main protagonists find themselves in just this situation; separated from their families, they must move to a mountain village to work and connect with the poor people.

The narrator of the story (who is never named) and his best friend Luo are sent to Phoenix of the Sky in order to pay for the crimes of their reactionary parents. Unlike the little black boy, these two characters are not taught a brand new culture that is foreign to them; they are, in fact, completely separated from any type of culture they know from growing up in the city of Chengdu, and are forced to work extremely arduous jobs like digging for coal in a collapsing mine. Fortunately for the two characters, they begin their self-revelation after the discovery of a secret trunk of "reactionary" bourgeois literature belonging to another boy separated from his family. Though all books that promoted "reactionary" or "revolutionary" thought were banned by the government, many underground reading groups sprang up throughout the country, and "represented a new height of awakening for the younger generation of the Cultural Revolution," (Yongyi

331). Four-eyes, the character who owns the trunk, belongs to the underground movement which eventually leads to the self-discovery of Luo and the narrator.

In the secret trunk, they read and discover the world of Honoré de Balzac, and become enthralled by the forbidden reading materials of the West. Through Balzac's description of real human emotions in *Ursule Mirouet*, the boys become awakened to their own emotions and adolescent desires:

> Picture, if you will, a boy of nineteen, still slumbering in the limbo of adolescence, having heard nothing but revolutionary blather about patriotism, Communism, ideology and propaganda all this life, falling headlong into a story of awakening desire, passion, impulsive action, love, of all the subjects that had, until then, been hidden from me, (Sijie 57).

They learn about themselves, as well as sexuality, through the banned Western book; in opposition to the little black boy who becomes separated from his own culture through education, Luo and the narrator are already separated from their culture by education, and therefore begin to discover their identities through inward reflection based off of the French literature they immerse themselves in.

The narrator and Luo, through their own personal "re-education", begin to better understand the world around them after reading the texts kept hidden from them by the government. First, the narrator sees and recognizes the differences between his own Communist society and that of 19th century bourgeois France, and subsequently, the West. Through the novel *Jean-Christophe* by Romain Rolland, the narrator understands the concept of individuality, something completely foreign to his communist upbringing: "But Jean-Christophe, with his fierce individualism utterly untainted by malice, was a salutary revelation. Without him I would never have understood the splendor of taking free and independent action as an individual," (Sijie 110). He desires to be an individual amongst a country full of sameness, which leads to his yearning to own the book personally, rather than sharing it with Luo (McCall 163). This individuality also leads to the discovery that all literature can be interpreted and experienced differently by each individual who reads it. For example, the narrator and Luo must house the village tailor in their room and the narrator decides to indulge in the retelling of *The Count of Monte Cristo* from memory. The tailor, to both boys' surprise, not only enjoys the story greatly despite the foreign words and images, but "some of the details he picked up from the French story started to have a discreet influence on the clothes he was making for the villagers," (Sijie 127). The narrator realizes that literature can affect anyone as positively or surprisingly as it has affected himself.

The two characters also make it their mission to "civilize" the little seamstress through their new knowledge of the West. Luo believes that now he is cultured, and that by reading Balzac to the seamstress, "'That would have made her more refined, more cultured, I'm quite sure,'" (Sijie 61). Along with recounting the stories for the little seamstress, Luo falls in love with her, and they begin to have an affair as they discover their blossoming sexuality. Through this notion of educating themselves through ideas and concepts that are foreign to them, yet nonetheless represent the West, the characters recognize the power that literature has to "transform, infiltrate, and civilize the wider societies they penetrate," (McCall 166). They also understand that although they may not be able to picture 18th century France (just like the students in the Martinican classroom), they are impacted it by it nonetheless; the forbidden literature undermines the oppressiveness of the communist country because through it they discover their truest selves.

French culture, as it is represented in both the novels, impacts the different protagonists in many different ways. For Chamoiseau's little black boy, his experience with French culture is that which serves to further point out the differences between his own Creole heritage and the French colonial presence. After realizing that his teacher is no longer speaking Creole and has been using French in the classroom, he realizes that words "seemed to come from a distant horizon and no longer had any affinity with Creole. The Teacher's images, examples, and references did not spring from their native country anymore," (Chamoiseau 47). The education system, because of the colonial French power, is focused on a standard French education, which entails learning about French elements of culture that do not exist in Martinique. For example, they must do math problems using apples and apple trees and reference points, and are constantly reminded of the "blue-eyed Gaul with hair as yellow as wheat" as their ancestors (Chamoiseau 121). For the little black boy, French culture is something which alienates and isolates the boy from his Creole heritage, forcing him to recognize the differences between himself and the French, as well as the superiority of French over Creole.

On the other hand, Sijie's characters see French culture as the ultimate ideal of Western living; the idolization of French society and ways of life in the novels illustrate that for the boys, French culture is superior to the oppressive Chinese society they are a part of. As McCall notes, the two characters do not analyze the literature as much as they revere all of the other aspects, like spacial settings, characters, and portrayals of society (163). The narrator even imitates "a sense of courtesy and respect for womanhood that I had learned from Balzac" when interacting with the seamstress, and declares passionately that he finally grasps the "notion of one man standing up against the whole world," (Sijie

151, 110). French culture, though just as far away and separated from the narrator and Luo as it is for the little black boy, affects the way in which the characters see themselves and their own community; their interaction with French culture through literature is positive and aids them in their journey to self-discovery.

The effects of re-education are also different for each character, though both types of education shape the identities of the characters. Chamoiseau's little black boy becomes more aware of his own culture through French standardization and how he is excluded from it, and perhaps how he will always be excluded from his native Martinique (Murdoch 28). He is not "awakened" like the other characters because of education, but does recognize the effects of colonialism in his own personal ideology. For example, Creole becomes the language of the playground, used by the children out of earshot of the strict, no-Creole teachers: Degraded to contraband, it grew callous from its freight of insults, dirty words, hatreds, violence, and tales of catastrophe. Creole wasn't used anymore to say nice things. Or loving things, either…The little boy's linguistic equilibrium was turned topsy-turvy. Forever," (Chamoiseau 66). His own language becomes the lesser language, as well as the lesser culture, as the children are told that without their French education, they would be back in the sugar cane fields. French culture represents the opposition to the little black boy's native heritage, which slowly becomes more separate as his own mentality becomes divided.

Sijie's narrator and Luo, however, ascertain more about the West through their re-education rather than their own culture during the Cultural Revolution. France becomes the utopia that they long for, because it represents the land of individualism and passion, where desire and sexuality are not taboo. Nevertheless, the ending suggests that perhaps this type of self education is as corrupting as Chairman Mao claims it to be; the little seamstress, now fully "cultured" by the two boys, leaves to be a modern woman (which is suggested to mean a prostitute). She claims to have left the village because of the inspiration of Balzac that "a woman's beauty is a treasure beyond price," and in response, the narrator and Luo burn their treasured, secret books (Sijie 184). The ending suggests that perhaps Westernization is corrupting, but that perhaps it is *translation* which corrupts; Balzac's stories have only been told to the little seamstress through the boys, rather than through her own reading of it (McCall 166). In this sense, education must be something personal for each individual in order to understand and determine their identities.

In the end, the little black boy and the narrator do discover and form their own identities despite their strange educations. In *School Days*, the little black boy gains from education a more clear sense of self, though divided between and across two cultures; he

sees his Creole self amidst his French education. While in *Balzac and the Little Chinese Seamstress*, identity is formed through an experience with culture that is foreign to them, yet idolized and revered as being superior to their current society and culture. French culture becomes all that is good and right in their world. Interestingly enough, both texts present French ideology as the basis of the characters' re-education, and it is interpreted and illustrated as both a positive and a negative element. Through education, the little black boy and the narrator realize their identities despite a split from their own native cultures.

Works Cited

Chamoiseau, Patrick. School Days. Lincoln, Nebraska: University of Nebraska Press, 1994.

Flambard-Weisbart, Véronique. "'Ba-er-za-ke' ou imaginaire chinois en français", *Contemporary French and Francophone Studies*. 11.3 (2007), 427-34.

Hillman, Richard S. and D'Agostino, Thomas J. Understanding the Contemporary Caribbean. Boulder, Colorado: Lynne Rienner Publishers, Inc., 2003.

Knepper, Wendy. "Colonization, Creolization, and Globalization: The Art and Ruses of *Bricolage*", *Small Axe 21*. (2006), 70-86.

McCall, Ian. "French Literature and Film in the USSR and Mao's China: Intertexts in Makine's *Au Temps du Fleuve* and Dai Sijie's *Balzac et la petite tailleuse chinoise*". *Romance Studies*. 24.2 (2006), 159-68.

Meisner, Maurice. Mao's China: A History of the People's Republic. New York, New York: The Free Press, 1979.

Murdoch, H. Adlai. "Autobiography and Departmenaltization in Chamoiseau's *Chemin d'école*: Representational Strategies and the Martinican Memoir", *Research in African Literatures*. 40.2 (2009), 16-40.

Sijie, Dai. Balzac and the Little Chinese Seamstress. New York, New York: Anchor Books, 2000.

Yongyi, Song. "A Glance at the Underground Reading Movement during the Cultural Revolution", *Journal of Contemporary China.* 16.51 (2007), 325-33.

Jewish Identity in Fin-de-Siècle Vienna: The Lives of Sigmund Freud, Stefan Zweig, and Arnold Schoenberg

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Turn-of-the-century, or "fin-de-siècle" Vienna was a place of tremendous artistic and intellectual opportunity, and for this reason the city attracted many different nationalities and ethnicities. Among these were the Jews, who started to arrive towards the end of the eighteenth century. By the early twentieth century, there were nearly three million Jews living in the city of Vienna. During the fin-de-siècle in Europe, fields such as psychology, philosophy, law, music, literature, and art flourished with Jews as their main contributors. Some renowned Jewish intellectuals included Gustav Mahler, Victor Adler, Arthur Schnitzler, and Marcel Proust, but this essay will focus on the lives and works of three figures in particular—Sigmund Freud, Stefan Zweig, and Arnold Schoenberg.

It is ironic that Vienna attracted so many Jews because even before both world wars, it was one of the European cities with an anti-Semitic party as a major governmental influence. Subsequently, as the progression of History suggests, it became unsafe for Jews to reside in Vienna. When Austria-Hungary became Austria-Germany, Jewish identity in Vienna stood out as a prevalent issue. Ultimately, there was a shift from a three-part Austrian-German-Jewish identity to the singular notion of a Jewish ethnicity. Some believed in full assimilation of the Jewish people into German culture. Others struggled with fully submitting to one identity due to societal pressures. Subsequently, rising political forces drove Jews to question their identity; the classification of a Jewish ethnicity, the idea of full assimilation, and the need for exile can characterize Jewish identity in fin-de-siècle Vienna. Each can be exemplified through the life and works of Viennese intellectuals Sigmund Freud, Stefan Zweig, and Arnold Schoenberg.

It is important to understand the complexity of Jewish identity in Vienna as a whole. Prior to the end of World War I, Jews had a three-part identity. Pre-World War I Jews in Vienna saw themselves as Austrian by political affiliation, German by cultural

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affiliation, and Jewish by ethnic affiliation (Rozenblit 136). Before the rise of anti-Semitism, Jews took great pride in assimilating to German culture. They participated in the educational system through German universities, gained professional experience, and expressed themselves artistically as Germans. Steven Beller explains that, "The identification of German as the culture of the assimilated Jews meant that in places where Jews were, so was German culture, even if there were hardly any Germans. Jews came to be the pioneers for German culture in certain districts of the Monarchy, as with the Jewish schools in various parts of Bohemia" ("Vienna and the Jews" 147). As many world thinkers and artists were culturally German, the Jews wanting to be a part of this intellectual community became engrossed in it and did not see themselves as anything but German. In this sense there was no separation between German culture, Austrian nationality and Jewish ethnicity.

Nationally, Jews lived in Austria and felt great pride towards this country. Because there was no designated land for Jews to live on as one community, those who arrived to Austria became Austrian and upheld the values of Austrian citizens. When the world began to self-destruct, Jews stood by their country. With the emergence of World War I there were rising anti-Semitic tensions, but Jews looked passed these and fought in the war with, "… the naive hope…that the war would end anti-Semitic animosity" (Rozenblit 137). Unfortunately, the political change after the war from Austria-Hungary to Austria-Germany would only fuel more anti-Semitism. The Jews' devotion to their nation was ultimately destroyed, leaving them with German culture and Jewish Ethnicity as their identity. As time passed, Jews were unable to rise professionally and were unemployed due to anti-Semitism. Their association with German culture through the arts was also stripped away through severe governmental restrictions placed on Jews in the professional world. Though Jews continued to view the city of Vienna with nostalgia as a place for them to flourish intellectually and artistically, the rising Nazi party slowly drove them towards a sense of identity independent of their Austrian nationality and German heritage. (Beller, "World of Yesterday" 42). Ultimately, they were left with a one-part identity which bound them as a community: Jewish Ethnicity.

An important figure in fin-de-siècle Vienna who learned to accept and ultimately take pride in Jewish ethnicity is Sigmund Freud. Throughout his life, Freud went through different stages of identifying himself as a Jew. In his formative years, he did not recognize "Jew" and "German" as two separate entities. With the rise of anti-Semitism, however, he considered his religion to be a burden and a threat. He eventually took pride in his Jewish identity and assumed it as an ethnicity, rather than a religion. Freud was born in 1856 to Jewish parents, but like many Jews of the time, they identified

themselves as Germans. After 1887, Freud's career in medicine and psychology began to suffer with the rise of anti-Semitism. Carl E. Shorske writes, "Freud needed no specifically political commitment to make him feel the lash of resurgent anti-Semitism; it affected him where he was already hurting—in his professional life. Academic promotions of Jews in the medical faculty became more difficult in the crisis years…" (185). Freud was unable to progress in the field he loved most. Subsequently, he became distraught, withdrew from society and started questioning his identity. He quickly recognized that his Jewish background was a burden to his professional growth. Uncertain about his future, in 1897 he joined the "B'nai B'rith", a Jewish fraternal organization (Gresser 266). There, he felt at ease and took refuge among other Jewish intellectuals who accepted and helped promote his work. As he started to question his identity, Freud published *The Interpretation of Dreams* (1900). In this revolutionary text, there are many references to Judaism and the questioning of his identity as well as the identity of Jews as a whole. For example, in discussing one of the dreams represented in this text, Schorske writes, "…its analysis showed Freud the unseemly moral consequences ensuing from the thwarting of his professional ambition by politics. His dream-wish was for the power that might remove his professional frustration…the dream also revealed a disguised wish…not to be Jewish…" (187). Through the subconscious dream world, Freud experiences both professional frustration and an identity crisis. The writing of this work and its acceptance by the "B'nai B'rith" allowed Freud to consider his identity and ultimately accept his Jewish ethnicity.

Like most Jews of the time, Freud was stripped from his national and cultural identity, but became more comfortable with his Jewish ethnicity. He becomes a humanist Jew and took pride in the aspects of Jewish religion that valued Jewish history. Judaism is the history of the survival of the Jews and their ability to prevail through all of God's obstacles. They are God's sacrificial people and will persevere through mankind's ill treatment of them. (Smith, 181) Freud, through the study of his religion, recognized that Jews were an oppressed people who had experienced persecution. Through his studies, Freud came to terms with his ethnicity and related it to his field of study. Critic Gresser suggests that, "…Freud identifies so deeply with Jewish tradition and the history of his people, that he sees his own life and work as its extension. It is through the spiritual values contained in *ideas* that the Jews have survived, and psychoanalysis will survive in the same way…[he] identifies his own underlying purpose and ultimate survival with that of the Jewish tradition" (230). Freud ultimately took full ownership of his ethnicity when he related it back to his self and his passion: psychoanalysis. Freud entered the third stage of his Jewish identity when he became a Zionist Jew. He ultimately "moves from

naïve identification, through ambivalent questioning and distance, to a proud commitment to a Jewishness that expressed humanitarian ideals through a particular Jewish alliance defined both in ethnic and intellectual terms." (226)

Once he had come to terms with his identity as a Jew, Freud began to view the anti-Semitic movement as yet another struggle for Jews to overcome. He now felt that being a Jew was an advantageous opportunity as Jews were enlightened and the Nazis were regressive. (230) This view is exemplified in a letter to his friend Max Graf, in which he advises Mr. Graf on how to raise his child. Freud writes "…he will have to struggle as a Jew and you ought to develop in him all the energy he will need for struggle. Do not deprive him of this advantage" (234). Freud insists at length on the fact that his friend should raise his son as a proud Jew. His views are also clearly confirmed when he states, "…I consider myself no longer German. I prefer to call myself a Jew" (235). As a new Zionist, Freud began to feel unsafe in Vienna. Deprived of his national and cultural identity, in 1938 he left Vienna for London, where he lived in exile until his death a year later.

Another Viennese Jew of the period, author Stefan Zweig, did not relate to the notion of Jewish identity, but rather believed strongly in full assimilation of the Jews to German culture. Zweig was born in 1881 into an assimilated Jewish family, and he wanted to uphold this tradition. "My mother and father were Jewish only through accident of birth", he once said in an interview. He believed in the ideal of a European and ultimately, human identity that did not classify people into distinct categories. Zweig's social and political ideals are clearly perceived through his autobiography, *The World of Yesterday* (1943). He writes, "If I were to choose a phrase which would sum up the time before the First World War in which I grew up, the most suitable would be to say that it was the golden age of safety. Everything in our almost thousand-year-old Austrian Monarchy appeared founded on permanence, and the state itself was the highest guarantor of this stability" (Beller "World of Yesterday" 38). Here the author is referring to an old Vienna which benefited from the comforts of having a stable government who upheld notions of peace. Furthermore, for Zweig old Vienna represented a time of freedom in which the notion of Jewish identity per se did not exist. He felt strongly that any form of religious classification was irrelevant because it did not contribute to the overall moral progression and betterment of Europe. In a sense, Zweig opposed the notion of a Jewish ethnicity because he did not see it as being relevant to the overall well being of mankind.

Like Freud, Stefan Zweig identified himself mostly through his role as an intellectual. Through his writings, Zweig reconnected with the traditions and values of

old Vienna while distancing himself from the world around him. As a novelist, he used literary fiction as a tool to recreate the Vienna of his youth that did not require him to identify with anything other than literature itself. His short story *Buchmendel* (1929) exemplifies this idea. Critic Frieden discusses the creation of the main character, Mendel. He writes, "…the narrator situations Mendel's tragedy elsewhere, at a safe distance from the situation of Viennese Jewry and of Zweig himself… the narrator seems to place the responsibility for Mendel's demise on this man's own one-sidedness and lack of a secular education" (3). First, the author situates the story in Vienna's XIX century, a time period in which the protagonist does not have to face the struggles of Judaism. He does, however, portray Mendel as a religious person, but passionately illustrates that worldliness is more important than religion. For Zweig, identity revolves around secularism and the betterment of humanity as a whole.

Unfortunately, Stefan Zweig could not fully detach himself from the political activities taking place in Vienna at the dawn of the XX century. Because of his Jewish origins, the Nazis sanctioned his works and deemed them to be "degenerate". In 1934, Zweig's personal collection of books was burned by the Nazis and he came to terms that regardless of his intellect or his profession as a writer, he was still Jewish. Critic Roshwald agrees that, "The history of Europe, which engulfed Zweig along with his contemporaries, awakened him from this illusory reality" (372). Zweig began to understand that being Jewish is a transcendent position. As Roshwald states,

> …First, he experienced the public burning of the 'forbidden' books, which included the German publications of Jewish writers. All of a sudden he felt cut off from his German readers. Then came the annexation of Austria, accompanies by acts of public humiliation of Jews in Vienna, which he describes in painful detail in *The World of Yesterday*. While Zwieg could make his escape to England…he would witness in horror the plight of the Jewish refugees desperately looking for a country which would admit them. The human degradation was insufferable (373).

Zweig viewed the brutal treatment of Jews in Vienna with pain and horror. Despite his hopes for a united Europe, he soon came to realize that if Jews could not prevail, there was no chance for humanity as a whole either. Zweig and his wife Lotte ultimately fled Austria in 1934. After living in England and the United States, they fled to Brazil in 1941. Distraught over the horrors of the Nazi regime in Europe, the couple committed suicide together in 1942.

Zweig and Freud's exile was not uncommon for most Viennese Jewish intellectuals at the time. Austrian Jewish composer Arnold Schoenberg also met this fate.

Like Freud, Schoenberg identified with his Jewish roots during certain points of his life, but he also went through various stages before accepting his true identity. He, too, recognized the oppression of the Jewish people and identified with the fact that they underwent "social rejection and self-sacrifice" (Hooper 267). As a composer, Schoenberg defied tradition in every sense and was harshly judged and misunderstood by the society of his time. Opposing Vienna's traditional musical tradition, Schoenberg introduced notions such as "dissonance", "atonality", and ultimately developed a "twelve tone technique" in order to delve into a deeper understanding of music. Hooper explains that, "According to Schoenberg, the Idea… can be described as 'Music for Music's sake… conventional compositional practices obscured the purity of the Idea Schoenberg sought to express in each piece. His theory of twelve-tones, however, offered limitless possibilities within a defined set of rules. (268) Schoenberg aimed to defy theory in order to exemplify the true existence of music for the sole purpose of music itself. Schoenberg clearly had a revolutionary approach to music, although it was poorly received by the Viennese. Besides the fact that his music defied what people expected and loved about music, another reason for his rejection as an artist can be traced to his religious roots.

Schoenberg struggled with his Jewish identity through most of his adult life. He was born an Orthodox Jew, became a Lutheran Christian, then an atheist, and finally returned to Judaism. In a sense, Schoenberg defied religion in the same way that he defied musical tradition. As musical critic Hooper states, "…Schoenberg questioned his belief system, exploring one after another without fully committing to any" (270). He opposes Judaism for the sake of intellectual and spiritual exploration, because the structure of this religion had been engrained in him from a young age. As he began his professional career as a composer, Schoenberg believed that he would gain public acceptance if people accepted his religion. The fact that critics continued to condemn his music because he was of Jewish origin affected him deeply. In fin-de-siècle Vienna, he was unable to escape his Jewish identity despite his conversion to Christianity. Critics continued to recognize him as a Jew and he "…had to come face to face with a society where all they say is: 'He is a Jew'" (Tugendhaft 1). Having accepted this, Schoenberg ultimately accepted his faith and his identity as a Jew in Viennese society. At the same time, he decided to fully commit to his theories on music despite public disapproval. His passion for music thus became closely linked to his spirituality.

Schoenberg's religious and political resistance can be exemplified through his opera *Moses und Aron* (1933). Written in the early 1930s after his re-conversion back to Judaism, Schoenberg uses this opera as a way to make deep religious and political statements. He bases the work on the Jewish bible and creates parallel characters, two

opposing leaders—Moses and Aron. While struggling to find a sense of Jewish identity, Schoenberg made a conscious decision, similarly to Freud, to embrace Judaism and ultimately provide security for Jews as a whole. His idea that Jews are God's chosen people are strongly exemplified throughout this opera. Critic Tugendhaft correctly suggests,

> Schoenberg's main point lies in the relationship between Moses and Aaron, and the question of which one of these two is better suited to leading the Jewish people to their ultimate goal…He has more on his mind than just figuring out what took place in the wilderness four-thousand years earlier; he wants to see how the text applies to his own time. Schoenberg has chosen this biblical story to operate as a vehicle for his exploration of the role and the future of the Jewish people in the modern world (1).

Schoenberg skillfully connects biblical characters and contemporary preoccupations through Moses and Aron, while he explores the struggle of the Jewish people as a whole. He condemns secular Jews who have fully assimilated to Austrian nationality and German culture because they have lost their purpose and their ideals. When the character Aron ultimately fails in the opera, Schoenberg suggests that the secular Jews who believe in full assimilation will also fail.

If Schoenberg fully accepted his identity as an untraditional musician and a Jew, he was also aware of the consequences that this entailed. In a letter to fellow Austrian composer Alban Berg, he writes, "…I'm constantly obliged to consider the question whether and, if so, to what extent I am doing the right thing in regarding myself as belonging here or there, and whether it is forced upon me…Today I am proud to call myself a Jew; but I know the difficulties of really being one" (Hooper 270). Like so many of his contemporaries, Schoenberg was forced into exile after Hitler's rise to power. He viewed this exile as an intellectual voyage because he could not fully express himself as a Jew and as a musician in Vienna anymore. He also writes, "… I knew I had to fulfill a task: I had to express what was necessary to be expressed and I knew I had the duty of developing my ideas for the sake of progress in music, whether I liked it or not; but I also had to realize that the great majority of the public did not like it" (272). Schoenberg left Europe for the United States, where his music and his religion were accepted in public spheres. Ironically, after having left Vienna, he began to compose more structured pieces as he assimilated into American culture during the final stages of his life. He died in Los Angeles in 1951.

The election of Adolf Hitler in 1933 led many Jews to flee Vienna almost as quickly as they had arrived to the city at the turn of the century. Sigmund Freud, Stefan

Zweig, and Arnold Schoenberg were ultimately driven out of Austria because they were Jewish. Freud, who viewed Judaism as an advantage, was forced to leave as he was unable to progress in the fields of medicine and psychology. Zweig, who had been a pacifist his entire life, was labeled a decadent writer by the Nazis and ended his own life, unable to face Europe's tragic destiny. Schoenberg, who finally came to terms with his Jewish identity, left a country that shunned his artistic and religious values. These three thinkers recognized that life in Vienna under the Nazi regime was no longer possible. Unfortunately, many others did not escape in time, and the Nazis would eventually kill over six million Jews by the end of the war. Jewish identity at the turn of the century was complex and difficult to grasp for many. Tragically, even for those who finally came to terms with their identity as Jews, their new sense of awareness was short lived.

Works Cited

Beller, Steven. "The World of Yesterday Revisted: Nostalgia, Memory, and the Jews of Fin-de-Siècle Vienna." *Jewish Social Studies* 6 (1997): 37-53.

--- Vienna and the Jews, 1867-1938; A Cultural History. Cambridge: Cambridge UP, 1989.

Gresser, Moshe. "Sigmund Freud's Jewish Identity: Evidence from His Correspondence." *Modern Judaism* May (1991): 225-40.

Hooper, Lisa. "Themes of Exile in the Music and Public Writings of Arnold Schoenberg." *Amsterdamer Beiträge zur Neueren Germanistik* (2009): 265-79.

Kaplan, Robert. "Soaring on the Wings of the Wind: Freud, Jews and Judaism." *Australasian Psychiatry* (2009): 318-25.

Ken, Frieden. "The Displacement of Jewish Identity in Stefan Zweig's `Buchmendel'." *Symposium* (1999): 232-39.

Roshwald, Mordecai. "Stefan Zweig and Franz Kafka: A Study in Contrast." *Modern Age* (2005): 371-75.

Rozenblit, Marsha L. "Jewish Ethnicity in a New Nation-State." In Search of Jewish Community. Ed. Michael Brenner and Derek J. Penslar. Bloomington: Indiana UP, 1998. 134-54.

Schorske, Carl E. Fin de Siècle Vienna- Politics and Culture. New York: Vintage Books, 1980.

Smith, Huston. The Illustrated World's Religions. New York: Harper Collins, 1991.

Behind Closed Doors

Anonymous[1]

Early on in life, I was raised to believe that boys were superior to girls. My father made sure he taught my sister and me this lesson, while teaching my brother what it means to "be a man." To my father, being a man entailed having control and demanding respect from his wife and daughters. Creating a home environment entrenched in patriarchy, my father held all of the power in our household. According to de Chesnay, Marshall, and Clements (1988), a natural father that creates a patriarchal household predicts severe abusive behavior toward family members. A father is also more likely to be controlling toward his daughter than his son, demanding respect and obedience (Nelson & Oliver, 1988). This gendered behavior can set the foundation for a father to sexually abuse his daughter, further reinforcing that the daughter's role is to serve her father (Nelson & Oliver, 1988). When growing up, my sister and I were treated like we were born for the sole purpose of bowing to my father's power, while my brother was highly entitled to have any of his needs and desires met. In patriarchal families, girls are allowed to be abused because they are seen as possessions, while men are taught that their needs and desires are priority (Nelson & Oliver, 1988). We eventually learned that this was unfair, but for most of our childhood this behavior was simply understood and accepted without defiance.

I grew up in a traditional Italian Catholic household. My mother stayed at home to take care of the house and her three children while my father worked all day as a police officer. My siblings and I went to a small, Catholic, predominantly white, middle class elementary school. My mother and father were involved in the parents' guild, and were active members in our parish. We dressed up and went to church every Sunday morning as a family. To the naked eye we were a "picture perfect" family; if only people looked more closely. The inside of our house represented the patriarchal and abusive ideology that drove my father to familial power; every door knob was infected by his touch, and the walls were bleeding with violence. My father created a battle zone, physically and verbally abusing our family, and instilling in us a sense of tremulous fear that could only be reduced by instinct. de Chesnay, Marshall, and Clements (1988) found that families living in the same house and neighborhood for the duration of the abuse are found to

[1] Written under the direction of Dr. Amy Eshleman (Psychology).

endure more severe abuse for a longer period of time. When the neighborhood is comfortable and seemingly knowledgeable about the families that live there, it is easier to hide family dysfunction. My mother and father clearly concealed our battlefield home life through their involvement in our school and parish, teaching my siblings and me to follow suit. I like to argue that people only see what they want to see, and this was certainly the case in my family's situation.

My father was the master at "saving face" in public. For example, when I was twelve years old I can remember a particular Sunday morning that my sister, who was seven years old, was being difficult about going to church. Instead of rationally telling her that she needed to attend Mass with the family, my father decided to choke her until her face turned purple. He did not stop choking her until my mother pried his hands off of my sister's neck. My father was able to physically abuse my sister without any consequences, mainly because no one in my family reported the abuse; we rarely even talked about it amongst ourselves. Priebe and Svedin (2008) found that victims of sexual abuse are not likely to report the abuse to authority figures. When evaluating disclosure patterns to authority figures, these results can also be applied to my sister's experience being physically abused. Priebe and Svedin (2008) concluded that the people reporting abuse are usually victims of more severe cases. This conclusion can be challenged in my family's experience. The abuse was not reported to authority figures because my father was an authority figure, not because it could be considered a less severe case. His occupation as a police officer prevented us from reporting this abuse, especially because he threatened to shoot us with his gun if anyone in our family ever said anything.

After choking my sister at home, my father made it his priority to show our community that he was a caring father when we arrived at Mass. He even sat next to my sister and rubbed her back. His behavior illustrates that abusers tend to be low in conscientiousness because they do not think about how their actions will affect others (Dennison, Stough, & Birgden, 2001). My father was protecting the illusion that we were an active and healthy family in the parish; no one wants to be that family in the center of the ooos and ahhs of gossip in the front of the church after Mass is over.

My father always made me feel like being a girl was a belittling role. When I was eight years old and my brother was six years old, we were quarreling, as most siblings commonly do, over a *Nickelodeon* magazine. The magazine belonged to me, and while I was reading a story, my brother grabbed it out of my hands. We started fighting over it, trying to grab it out of each other's hands and yelling back and forth at each other. I finally took the magazine back, and my brother started crying. My father ripped the magazine out of my hands, tore it into pieces, and threw the ripped pieces of paper in my

face. As if that was not punishment enough, he went on to say that reading was a privilege for girls, and my misbehavior deemed me unworthy of that privilege for the rest of the night. My six year old brother laughed and said, "That is what you get for being mean to boys." Through this situation, male dominance was being reinforced. Family violence was occurring and there was no communication between other family members that this behavior was not acceptable (Alaggia & Kirshenbaum, 2005). We were taught to keep our abusive home life a secret; therefore none of these issues were ever addressed. This further isolates the victim of this abuse because there is no one to talk to or connect with, and the victim will feel as though he/she does not fit in with the family (Alaggia & Kirshenbaum, 2005).

At the time, I did not realize the important lesson about gender that my father was teaching me in this moment. Apparently, my gender required permission to read. I was being trained to fit his definition of my gender's roles and expectations. This further reinforces that in patriarchal households, women's lives are subjected to men's power (Whealin et al., 2002). Men feel that they have the right to take privileges away from women because women's lives should be focused on men's needs (Nelson & Oliver, 1998). In patriarchal households, needs and desires are interchangeable terms for the man holding the power. A desire was perceived as being just as necessary as a need, and it did not matter if they were appropriate. Attending to needs and desires were mandatory acts of service, and their necessity or appropriateness were never questioned. My father believed that my purpose in life would be to serve him until I was married, and then I would serve my husband. I wish that I was aware of his definition of service, maybe I would have been more prepared for how our relationship would unfold. Perkins (2001) found that girls labeling their fathers as seductive felt as though their fathers did not understand their emotions and needs. My father did not take into consideration the possibility that I even had needs of my own, and even if he recognized my needs he did not deem them important. He knew that this idea was not commonly accepted by society anymore, which is why he liked to hide these prejudiced thoughts from the public and only discriminate against me at home.

I always wondered why my father developed these sexist thoughts. Thinking back now, I can understand that his family played a major role in the development of this mentality. When I was younger, my family occasionally made trips to visit my father's parents for Sunday dinner. I remember a particular visit quite well. I was ten years old, my brother was eight, and my sister was five. My grandfather was asking my brother about his favorite subject in school, and his future aspirations. I foolishly decided to join in on the conversation and say that I wanted to be a scientist. My grandparents laughed,

and my grandmother told me "Don't be silly, you're going to be a Las Vegas Showgirl, serve those men!" At ten years old I did not know what a Las Vegas Showgirl was, but I knew that it was nowhere near being a scientist. I also saw the way it bothered my mother whenever my grandmother made those comments. Patriarchal families allow girls to be seen as sex objects (Whealin et al., 2002). Nelson and Oliver (1998) found that when women are forced to use their sexuality as a way to serve men, people believe that the women are being passive and weak. Contrary to this finding, my family saw a woman's sexuality as a strong way to serve men. This patriarchal mentality is a predictor of incestuous relationships between adult family members and children (Whealin et al., 2002).

My father was one of five boys in his family. He and his siblings grew up watching their father physically and verbally abuse their mother. My father was acclimated to this lifestyle while growing up; he did not know any other way to interact with family members. Parker and Parker (1986) found that family life during childhood does not have a significant relationship in predicting the abusive behavior that the abuser exhibits as a parent. This research was collected from a sample of abusive fathers (compared to a sample of fathers without a history of abuse); therefore these results can be criticized because abusers may not perceive their childhood lives as being abusive. This is especially true if an abusive father grew up in a patriarchal household (Whealin et al., 2002). My grandfather showed his sons that a woman's job is to serve her husband, and my grandmother tolerated the abuse. I would even argue that she let him brainwash her into believing that mentality, especially because she was encouraging her granddaughter to do the same. My mother did not want to become my father's mother; she did not want to further the cycle of abuse, and she especially did not want to teach her daughters that they needed to be servants to the men in their lives. She still needed to find the strength to break that cycle.

Living with my father became exponentially harder with time. My mother and father were constantly fighting, my brother was constantly being pampered, and my sister was constantly acting as my father's human punching bag. Where did I fit into this dysfunctional family dynamic? I did not know how to define my relationship with my father; I guess I was confused about how we were supposed to interact. He had a collection of about twenty pictures of me displayed on a dresser in his bedroom. I was the only one of my siblings that was represented in this manner, and I was the only person in every picture. This shrine of my pictures was rather discomforting, especially when it was my brother that he seemed to favor. He started to become obsessed with going on "trips" with me, even if it was just to the mall to buy me a movie. I would receive cards

from him; love cards that someone would give to his significant other. On a particular night that my mother was not in the house, my father asked me to spend some time with him in his bedroom. We were sitting on his bed watching television when he began to stroke my leg with his hand. His hand inched further and further to my upper thigh; I looked at him and he eerily smiled back at me. I wanted so much to get up and run away as far as I could, but I was too scared. He always told me "I have a gun in my closet and I am not afraid to use it." As he ran his hands up my shirt, he said "I will always love you." He kissed me repeatedly on my cheek and neck, and as I began to cry he told me to go to bed. He decided to further terrorize me later that night; I still have the image of him standing over my bed, staring at me while I was sleeping.

A sexual relationship between a father and daughter is detrimental to the daughter's identity formation (Whealin et al., 2002). In this patriarchal setting, my father was teaching me that it is socially acceptable to be a sex object in order to fulfill my father's desires (Whealin et al., 2002). Dennison, Stough, and Birgden (2001) describe a sexual abuser as having low openness to values, while being conservative and close-minded. They also describe sexual abusers as seeming humble and shy, having low self-esteem, and feeling inadequate in their lives. These findings can be challenged because the participants in this research were sexual abusers. They may describe their personalities in ways that hide their true characteristics. After being sexually abused by my father, these research findings are offensive because they create empathy for the abuser. The morning after this interaction with my father, I woke up and went to school as if nothing happened. I would never tell anyone about the creepy, sick, and disgusting event that occurred in the place I was supposed to call home, with a man I was supposed to call daddy. Non-disclosure about sexual abuse is commonly found in more severe and/or frequent occurrences of the abuse, and also results from the type of relationship between the abuser and victim (Priebe & Svedin, 2008). I knew that this behavior between a father and daughter was not considered normal in our society, and I was not going to let anyone know that maybe my life was not considered normal.

I went to an all girls' Catholic academy, consisting of girls from mainly middle and upper class families. When I started high school, I learned some new definitions of the word "daddy." I noticed that many of the girls were considered "daddy's little girl." Their daddies would drive them to school, or pick them up from swimming practice at night. I was almost shocked that a father could dote on his daughter in that way. I guess it hurt when all of my friends were going to the Father Daughter Dance with their daddies, and I did not have a daddy. I distinguish between father and daddy because "father" is a biological/genetic definition of our relationship, but "daddy" is a role that he did not fill

for me nor is it a label that he deserved. According to a biological definition explaining parent-child bonding, a daughter is more likely to be sexually abused by her father if this bonding does not occur early in the child's life (Parker & Parker, 1986). Bonding was operationally defined as a father physically caring for his daughter by dressing and feeding her, caring for her when she was sick, and showing her appropriate affection as an infant (Parker & Parker, 1986). My father did not participate in these activities when I was an infant, and continued this pattern for as long as he was involved in my life. It can be argued that this bonding is a branch of the definition of love. In my high school, I was surrounded by girls with fathers that loved them. I always wanted to know how that felt.

All through high school I felt stigmatized, even though no one knew anything about my life. I always felt like people were looking at me differently, or judging me. I felt trapped inside my own body. It was as if I was drowning in an ocean of my own emotions; turbulent waves of extreme pain were pushing me into a rip tide and I had no way to escape. I was searching for answers to unanswerable questions. Why? Why me? Why now? What did I do wrong? When a victim blames him/herself for the abuse, he/she is more likely to feel stigmatized for the abuse (Peters & Range, 1996). This feeling of shame can lead to social withdrawal, creating a low support level and predicting a victim's lower self-esteem (Griffing et al., 2006). I was constantly paranoid that people would find out, and if they did I knew they would immediately judge me. Davies and Rogers (2009) found that when reporting abuse, people believe younger victims more than they believe older victims. People may assume that an older child is lying about being sexually abused, especially if the abuser is the child's father. This ideology provides support for the abusive father, because he is not considered guilty for the abuse if it is possible that the child is lying. The participants making these judgments in this research study were members of the general public, without any experience with sexual abuse. This research methodology supports that it is easier to avert disclosure to others about being sexually abused, especially when people that have not experienced sexual abuse can be critical judges. If I told any of my peers about my experience, they would think that I was gross and weird, and probably would not want to be associated with me. Besides, I knew that no one would understand, so it remained my secret.

The way my father abused me is easy to hide because he did not leave any physical marks on my body, but as the physical marks on my sister's body increased, my mother gained the strength to divorce my father. I was fifteen years old when my mother filed for a divorce, and my father was no longer allowed to live in our house. My mother does not know about what happened between me and my father, and I thought I would be strong enough to keep my own secret. In Hunter's (2009) research, victims of sexual

abuse that did not disclose their experience to family members report that they did not experience impairment in their functioning. Hunter's (2009) research was based on victims' self-reports about their experiences with abuse. These results can be challenged because the victims may have disclosed their experiences to others that do not include family members. Also, the results might be flawed if the victims reporting their experiences did not want to share that they experienced impairment in functioning. Contrary to Hunter's (2009) findings, I found being silent to be extremely difficult throughout high school. It was already bad enough that most of my friends' parents were married and mine were in the middle of a rather brutal trial to be divorced, but what made it worse was that a life changing experience of mine was being stifled inside my fifteen year old body. I needed to find an outlet to release the intense emotion that was numbing my body and making life seem like a blurry twilight zone.

As a victim of child sexual abuse, there was a higher chance that I could become depressed or anxious, develop a conduct disorder, or turn to substance abuse (Hunter, 2009). Instead, I chose the swimming pool as my outlet. I learned to separate myself from the frustration and shame that I was feeling as a victim of sexual abuse (Hunter, 2009). I was also choosing to express my feelings through a sport, rather than speaking about it with others. Victims of sexual abuse are more likely to detach themselves from relationships with others, becoming withdrawn in social situations (Griffing et al., 2006). When interacting with others, I felt as though my personality was tied to a leash; I could only reach a certain length of expression before I would be harshly pulled back by the history I had with my father. I knew that I could be my true self and the swimming pool would not judge me. I would not be labeled as weak, broken, or scarred. I would not be stereotyped as a "guidance girl" at school because I had "issues." Guidance girls were labeled as such because they were mandated to see the guidance counselors once a week at school. This was a stigmatizing event because these girls were labeled as weak, weird, attention-getters, and broken. I certainly did not want those labels applied to myself from peers at school. Furthermore, I would not need to worry that people were being fake when they were being nice to me or that friends just felt bad for me. The swimming pool would not feel inclined to try to cheer me up; it is as if it already knew that only makes it worse.

Before I could consider how this experience shaped my identity, I first needed to take an important step. I needed to realize that I had an identity. I grew up being taught that I was my father's object. I did not know that I could be, or had the right to be, anything more than his property. Victims of sexual abuse want to be seen as people rather than be associated with their childhood maltreatment (Hunter, 2009). I defined myself by

the act taken upon me because I saw myself as the abused, not as the person being abused. I could not separate myself from the abuse, mainly because I was taught that I was an object of male's sexual desires (Nelson & Oliver, 1998). I felt stigmatized because my life circumstances made me vastly different from my peers. When growing up in an atmosphere that promoted male dominance and power, I did not know how to make sense of what happened to me in the context of my gender and the norms in my culture. At home I was taught to serve my father; at school I was surrounded by "daddy's little girls'"; and according to society, my father would have been seen as an abuser.

After I lost contact with my father, I was able to process my experiences and learn more about myself as a person and the role this experience has played in shaping my identity. I first had to understand that gender is learned, and that my father was not a good teacher. He taught me that my gender determined my role in life, which included attending to his wants and needs. In patriarchal abusive households, a girl's gender is defined by the abuse, teaching girls that they are possessions and objects (Whealin et al., 2002). When I was no longer living as his human object, I was able to construct my own definition of gender. Gender does not dictate the roles that a person plays in life, but rather it describes how the person fulfills those roles. I was then able to realize that my gender was not the reason that I was abused; he was the reason that I was abused.

By making these vital distinctions, I was also able to minimize the control that stigma had over my life. Victims of sexual abuse report feeling alienated and misunderstood by their fathers (Perkins, 2001). I felt stigmatized mainly because I always felt inferior. My father never made me feel like I was good enough, and when he abused me I felt like I deserved it because I was not living according to his standards. When victims of sexual abuse blame themselves for the abuse, they are more likely to be suicidal, to experience depression, and to engage in self-mutilating behaviors (Peters & Range, 1996). I thought people saw me the same way I saw myself, as a weak, incompetent, and bad person. By thinking this way, I was allowing stigma to control my thoughts and my relationships with others. When victims engage in emotion-focused thinking, it interferes with their ability to process information (Griffing et al., 2006). This could affect the way victims interpret social cues, especially if they feel they are being judged. Victims also feel ashamed for even being involved with the abuse, which prevents them from disclosing their experience with others (Hunter, 2009).

When I no longer lived at my father's command, I could let some of that stigmatized feeling subside and live life for myself. I will not say that I have a very strong sense of self and that I have fully "recovered" from the way that I have been treated. There are still times that I do not feel "good enough," and I center my life on pleasing

others before myself because their needs are more important. My sense of self feels masked because this experience is vital to the person I have become, but it will always be hidden from others. I feel more affected by keeping this experience a secret from others, and might not be able to function as efficiently as Hunter's (2009) silent participants described. I still feel stigmatized for being abused, mainly because I blame myself for what happened between my father and me. There has to be something that I did to elicit this type of abuse, but I have not figured that out at this current time. Peters and Range (1996) found that sexually abused victims that blame themselves for the abuse had weaker coping beliefs. Maybe I blame myself for the abuse because it is the only way that I know how to cope; it is the only explanation that seems plausible right now. I know that I am not the person I would have been if this did not happen to me, but I can come to terms with that because it makes me feel stronger knowing that I could still live a functioning life despite my father's wishes.

Works Cited

Alaggia, R., & Kirshenbaum, S. (2005). Speaking the unspeakable: Exploring the impact of family dynamics on child sexual abuse disclosures. *Families in Society*, *86*, 227-234.

Davies, M., & Rogers, P. (2009). Perceptions of blame and credibility toward victims of childhood sexual abuse: Differences across victim age, victim-perpetrator relationship, and respondent gender in a depicted case. *Journal of Child Sexual Abuse*, *18*, 78-92.

de Chesnay, M., Marshall, E., & Clements, C. (1988). Family structure, marital power, maternal distance, and paternal alcohol consumption in father-daughter incest. *Family Systems Medicine*, *6*, 453-462.

Dennison, S. M., Stough, C., & Birgden, A. (2001). The big 5 dimensional personality approach to understanding sex offenders. *Psychology, Crime & Law*, *7*, 243-261.

Griffing, S., Lewis, C. S., Chu, M., Sage, R., Jospitre, T., Madry, L., et al. (2006). The process of coping with domestic violence in adult survivors of childhood sexual abuse. *Journal of Child Sexual Abuse*, *15*, 23-41.

Hunter, S.V. (2009). Beyond surviving: Gender differences in response to early sexual experiences with adults. *Journal of Family Issues*, *30*, 391-412.

Nelson, A., & Oliver, P. (1998). Gender and the construction of consent in child-adult sexual contact: Beyond gender neutrality and male monopoly. *Gender & Society*, *12*, 554-577.

Parker, H., & Parker, S. (1986). Father–daughter sexual abuse: An emerging perspective. *American Journal of Orthopsychiatry*, *56*, 531-549.

Perkins, R. M. (2001). The father-daughter relationship: Familial interactions that impact a daughter's style of life. *College Student Journal*, *35*, 616-626.

Peters, D. K., & Range, L. M. (1996). Self-blame and self-destruction in women sexually abused as children. *Journal of Child Sexual Abuse*, *5*, 19-33.

Priebe, G., & Svedin, C. G. (2008). Child sexual abuse is largely hidden from the adult society: An epidemiological study of adolescents' disclosures. *Child Abuse & Neglect*, *32*, 1095-1108.

Whealin, J. M., Davies, S., Shaffer, A., Jackson, J. L., & Love, L. C. (2002). Family context and childhood adjustment associated with intrafamilial unwanted sexual attention. *Journal of Family Violence*, *17*, 151-165.

Terror In Algeria

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The Algerian War (1954-1962) was one of the most gruesome wars that took place during the twentieth century. It was characterized by an Algerian terrorist group called the FLN (National Liberation Front) committing terrorist acts against their French occupiers. The terrorism by the FLN occurred because they were trying to make Algeria an independent country thus breaking free from French rule. France still wanted to hold onto Algeria and used torture to gain intelligence to stop those attacks. By analyzing three specific cases of terrorism and torture in the Algerian War, we can examine the problems that plagued France's counter-terrorism strategies and show how France became like the FLN.

In the early to middle 1800s, France became increasingly interested in acquiring Algeria. "In 1830 Algeria was suffering from acute political instability internally and therefore presented a feeble exterior to the world outside" (Horne 29). It was clear to European countries and to the United States that Algeria was headed toward collapse. Many of the leaders in the country met violent ends and the overall political system was failing. Something needed to be done to help Algeria before the government collapsed and chaos ensued.

There were two significant reasons why France wanted to acquire Algeria. A representative called Bugeaud points out the first one. In an 1840 address to the National Assembly in France, Bugeaud said, "wherever there is fresh water and fertile land, there one must locate colons, without concerning oneself to whom these lands belong" (Horne 30). The French wanted to gain fertile land to plant crops, which would increase trade around the Mediterranean Sea. This would hopefully grow and strengthen France's economy. As Bugeaud said, it doesn't matter who's land the French are taking in Algeria, as long as it is fertile.

The second reason why France acquired Algeria is because the French wanted to 'civilize' the Algerian people. Napoleon III passed a law in 1863 "aimed at 'reconciling an intelligent, proud warlike and agrarian race'" (Horne 31). In this second reason, France wanted to 'civilize' the Algerians to make them intelligent and proud. After many French people began to support the idea of acquiring Algeria, the French military went to

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fight the Algerian resistance and in 1848, Algeria became a part of France. In addition, some French citizens began to move to Algeria and treated it like a second home.

The FLN wanted Algeria back to the independent country it was before France intervened in 1830. To do this, they organized and carried out terrorist attacks in the hopes that the French would leave. The first terrorist attack by the FLN occurred on All Saints' Day, November 1, 1954. This day became known as Red All Saints' Day because of all the bloodshed that took place. The FLN decided to make their first attack on this day because it held the most significance. "Striking on a night when the staunchly Catholic *pieds* noirs were celebrating so important a festival would, it was argued, find police vigilance at its minimum; while the choice of such a date would carry with it the maximum propaganda impact" (Horne 83). It was believed that security would be at a minimum because everyone would be celebrating the holy day of All Saints. In addition to the lack of security, organizing a terrorist attack on this sacred day would make a larger symbolic impact than attacking on a regular day. All Saints' Day is a day of peace used to celebrate the lives and works of saints. Committing an act of terrorism on a holy day, especially in an area so heavily populated by French Catholics, would send a strong message that the FLN was dedicated to the removal of the French in Algeria.

Although the attack on All Saints' Day was somewhat of a shock to the French, it was not a total surprise. The French were somewhat aware of what might happen on that day. "In Algiers, a steady flow of disquieting intelligence was reaching the competent director of the Sûreté, Jean Vaujour, including a list of camps inside Libya where Algerian guerrillas were being trained" (Horne 85-86). Ironically, the French authorities in Algeria knew that an attack might occur on All Saints' Day because they had local intelligence informing them about it. Unfortunately the French were unaware of the exact time and place of the probable attack.

Because France knew that some kind of attack was going to occur, they began to take precautionary measures. An ethnologist named Jean Servier, who was living in the Aurès (a mountain range in eastern Algeria) at the time, received a warning from an official that the attack would happen on All Saints' Day. Because of this warning, "all French schoolteachers were also ordered out of Aurès" (Horne 88). Since the French thought that 'liberal' schoolteachers might be a target of the attacks, all schoolteachers were told to leave the Aurès. Only two teachers could not be reached about the news, the Monnerot's. Guy Monnerot and his wife were returning from their honeymoon and did not receive the message to stay out of the Aurès. The result of them not receiving this information proved to be fatal.

Probably the most tragic episode of killings on All Saints' Day occurred when the FLN hijacked a bus carrying innocent people including Guy Monnerot and his wife. Also on the bus was a loyal caid Hadj Sadok, "who had the previous day received a roneo copy of the F.L.N.'s proclamation - which he had thrown away in contempt" (Horne 91). The driver of the bus was told by the FLN to stop the bus at a certain place and he did. Once stopped, Chihani (a member of the FLN) leapt onto the bus and told Sadok and the Monnerots to go outside. Chihani wanted to know what Sadok thought about the proposal the FLN sent him (i.e., which side he was joining, France's or the FLNs). Angered by the entire incident, Sadok told them he refused to speak to bandits.

This response did not sit well with Chihani. "It then seems that the *caid* (Sadok) made a move to reach a pistol under his cloak. Sbaihi fired a burst with his Sten, mortally wounding Sadok and also hitting Guy Monnerot in the chest, his wife in the side" (Horne 92). After the shooting subsided, Sadok was taken to the town of Arris and the Monnerots were left on the roadside. "Guy Monnerot had already bled to death; miraculously his wife was still alive...in view of the pattern that the war was to assume, there was something tragically symbolic in the fact that among the seven to die on that first day would be a loyal *caid* and a 'liberal' French teacher" (Horne 92). This attack was symbolic because the FLN, from that point onward, would kill and injure many 'liberal' people by the way of cafe bombings.

France's response to the All Saints' Day massacre was similar in nature to the horrific actions of the FLN. The French government in Algeria was caught 'sleeping on the job' so to speak and sought to redeem itself quickly. "First comes the mass indiscriminate round-up of suspects, most of them innocent but converted into ardent militants by the fact of their imprisonment; then the setting of faces against liberal reforms...followed, finally, when too late, by a new, progressive policy of liberalization" (Horne 96). Essentially, the French rounded up 'the usual suspects,' many of whom were innocent. These people included past criminals but also people that the French police thought might act against the government, e.g., Algerians who were anti-France. Next, they rounded up the Algerians who were completely anti-liberalization, i.e., against France and the Western world. Finally, France instituted a new policy of reformed liberalization that was designed to spread the idea of liberalization more positively throughout Algeria.

To the public, France was just making arbitrary arrests searching for the planners of the All Saints' Day massacre. However, behind the scenes, France was doing something much more horrific. "Paul Teitgen, secretary-general of the *préfecture* in Algiers...resigned when he finally realized that the army had used his house arrest orders

of suspects as a prelude to summary killings: out of 24,000 arrest warrants signed by him, 3,024 persons had disappeared"(Beigbeder 112). France was arresting suspects and killing some of them after they were interrogated. This is a specific example of how the French were starting to become like the FLN. The FLN attacked the Monnerots, whom were innocent teachers. They killed Guy Monnerot and seriously wounded his wife. Similarly, the French randomly arrested 24,000 people and out of the 24,000 arrested, 3,024 of them were killed.

France's use of arbitrary arrests was its first counter-terrorism strategy. The main problem with this use of counter-terrorism was that it led to summary killings. After the French arrested thousands of mostly innocent Algerians, they questioned them and usually killed them. "Only rarely were the prisoners we had questioned during the night still alive the next morning. Whether they had talked or not they generally had been neutralized. It was impossible to send them back to the court system, there were too many of them and the machine of justice would have become clogged with cases and stopped working altogether" (Aussaresses 126). Originally, France's goal was to arrest thousands of people to try and find the planners of the All Saints' Day massacre. Even if most of them were innocent, eventually they believed they would find some guilty people. Once they found the guilty people, they could let the innocent ones go. However, this never happened because random arrests turned into mass killings so all the prisoners would not clog the court system.

Hypothetically, even if France allowed all the prisoners to go through the justice system, there was another problem. "Sending prisoners who had committed murder to wait in camps for the judiciary to hear their cases was also impossible because many would have escaped during transfers with the help of the FLN" (Aussaresses 127). In essence, if the French had prisoners who were guilty or perceived to be guilty, they could not send them to trial. This is because if the prisoners were given a trial, the FLN would have helped them escape while they were on route to a holding facility. Ergo, France felt that the summary executions were justified because it was the only way to keep Algeria under control.

France however did not feel the need to make summary executions public. "Summary executions were therefore an inseparable part of the tasks associated with keeping law and order...counter-terrorism had been instituted, but obviously only unofficially" (Aussaresses 127). France clearly said that summary executions were necessary to keep the court system from getting clogged and to prevent prisoners from escaping. Although this counter-terrorism consisting of random arrests and summary executions had been in effect, it was in effect unofficially, i.e., the French government

never had a press conference about it. This is because France could not have the word get out that they were killing most of the people they arrested, regardless if they were innocent. This would surely push all the Algerians that supported France toward supporting the FLN.

Despite its horrific nature, the All Saints' Day massacre did not achieve the ultimate goal of removing the French from Algeria. Because of this, the FLN decided that they needed to orchestrate another set of terrorist attacks. This second set of attacks was part of the Battle of Algiers, which took place in 1956 and 1957. Although the French were victorious in this battle, the FLN carried out hundreds of bombings and shootings every month. The first and the most talked about attacks were organized by Saadi Yacef, a military commander in the FLN. "On September 30, 1956, a Sunday, the first bombs were ready, nine-inch-long cylinders with heavy cast-iron casings. Yacef summoned Drif, Lakhdari, and Bouhired, all French-speaking and wearing European clothes, and carrying beach bags" (Morgan 110). Yacef got these young women who were dressed in European clothing to carry these bombs in beach bags. It was summer in Algeria and they would blend in with the general population extremely well.

The decision to use young Arab girls to carry the bombs was a crucial one. "Moslem women were kept in such a subversive state that they did not arouse suspicion and could move in and out of the Casbah without being searched" (Morgan 108). If the women did arouse suspicion, they would probably be arrested and would never be able to place their bombs. Ergo, these women were crucial to Yacef's plan and without them, the bombing missions might not have succeeded.

Each of the girls was assigned a target to leave their beach bags in. "The Cafeteria, and the Milk Bar, both near the university and popular with students, and the Air France terminal" (Morgan 110). Because these targets were popular with younger people, Lakhdari questioned Yacef about it. "But in those places", Samia Lakhdari said, "it's not just soldiers, it's women and children"(Morgan 110). Lakhdari might have seemed concerned but a swift word from Yacef and she went along with the bombing. "Look at it this way", Yacef said, "the French have killed tens of thousands of our women and children, through famine and disease"(Morgan 110). In the end, Lakhdari takes her mother and goes along with the bombing.

After each woman left her bomb in a relatively simple place (e.g., under a chair or table) she left. "Zohora Drif arrived at the Milk Bar...ordered a sherbert, and paid as soon as she was served. When the clock on the wall said 6:15, she pushed her bag under a chair and left" (Morgan 110). This type of attack was simple and easy to execute. Drif

ordered some sherbert, dropped her bag under a chair and left. Sometime later the bomb blew and killed many people in the Milk Bar.

The bombs placed in the Cafeteria and at the Air France counter in the Mauritania building were done similarly to the bomb placed in the Milk Bar.

> In a breach of security, Samia Lakhdari brought her mother with her (to the Cafeteria) for comfort. They sat near the jukebox to the right of the entrance and stuck the bag between the jukebox and the wall. At the Air France counter in the Mauritania building, Djamilah Bouhired asked for a flight schedule, sat across the waiting room in an armchair, and placed her bag beneath it (Morgan 110).

Although the Air France bomb failed to go off because of a faulty timer, the results from the bombs in the Milk bar and Cafeteria were devastating. "The carnage was particularly appalling in the Milk-Bar, where the heavy glass covering the walls was shattered into lethal splinters. Altogether there were three deaths and over fifty injured, including a dozen with amputated limbs, among them several children" (Horne 186). It's hard to fathom that these three young women, only eighteen years of age, could carry out these horrifying attacks against innocent people. None of them even had any serious doubts about their actions.

France's response to the Battle of Algiers was even more dreadful than their response to the All Saints' Day massacre. This is because the French used electrotorture as a counter-terrorism method. In France, this period of time simply became known as la torture. In an effort to gain control of Algiers, the French used torture to try and gain information about the people responsible for the attacks, how to stop current attacks and information about future attacks. General Massu, of the French military, was perhaps the foremost proponent of torture. Massu claimed that there was no "other option in the circumstances then prevailing in Algiers but to apply techniques of torture" (Horne 196). Basically, Massu argued that French victory in Algiers was absolutely necessary and therefore, the use of torture had to be utilized.

Jacques Massu also said "in the majority of cases, the French military men obliged to use it to vanquish terrorism were, fortunately, choir boys compared to the use to which it was put by the rebels. The latter's extreme savagery led us to some ferocity, it is certain, but we remained within the law of eye for eye, tooth for tooth" (Kaufman 2). Massu felt that the use of torture was justified because the Algerians were committing equally vicious acts and therefore, he adopted the view an eye for an eye and a tooth for a tooth.

France's response to the Battle of Algiers was similar to how they responded to the All Saints' Day massacre. First, they rounded up 'the usual suspects', including past criminals and anti-France supporters. Like the people taken in the All Saints' Day massacre, the ones taken during the Battle of Algiers were taken without any warrants or official charges. Nevertheless, "between thirty and forty per cent of the entire male population of the Casbah were arrested at some point or other during the course of the Battle of Algiers" (Horne 199). Rounding up 'the usual suspects' was usually done at night so they had virtually no warning and could not flee. The suspects (many of whom were innocent) then arrived at a French facility for interrogation and if they did not give any useful information, they were generally tortured.

The most common type of torture used against the suspects during the Battle of Algiers was called the gégène. The gégène was carried out by using a "magneto (electrically charged magnets) from which electrodes could be fastened to various parts of the human body - notably the penis. It was simple and left no traces" (Horne 199). This type of torture was tested and said to be fine by Massu himself. However, he did not test it to any extent, e.g., Massu attached one electrode and got shocked once and that was the entire test. He also knew he was not going to be shocked again so he, unlike the torture victims, had complete knowledge regarding the torture session.

Despite Massu's light hearted response to the gégène, the real reaction to the technique could be described vividly by Henri Alleg. Alleg was the communist editor of the *Alger Républicain* and was tortured while under interrogation during the Battle of Algiers. He was rounded up like the other suspects and tortured by the gégène technique three times, with each time more intense than the previous one. The first time there were small electrodes attached to an ear and a finger, the second time there was a larger magneto used and the third time the electrodes were placed in his mouth.

> (Alleg's response to the first time) A flash of lightning exploded next to my ear and I felt my heart racing in my breast. (Alleg's response to the second time) Instead of the sharp and rapid spasms that seemed to tear my body in two, it was now a greater pain that took possession of all my muscles and tightened them in longer spasms. (Alleg's response to the third time) My jaws were soldered to the electrode by the current, and it was impossible for me to unlock my teeth, no matter what effort I made. My eyes, under their spasmed lids, were crossed with images of fire, and geometric luminous patterns flashed in front of them (Horne 200).

There was clearly a major problem with using electrotorture as a counter-terrorism tactic; it could not be controlled. The French military officers were told that a

particular type of electrotorture was allowed in order to gain information about future attacks. This meant that the French could use small electrodes to shock their victims as an attempt to get the information they desired. However, Alleg was originally shocked using small electrodes attached to one ear and a finger. Since he did not tell the French what they wanted to hear, they took a larger magneto to shock him for the second time. Alleg once again did not tell the French what they wanted to hear, so they took the electrodes off of his finger and ear and placed them in his mouth. The military personnel were instructed to torture a prisoner a specific way by using small electrodes attached to an ear and a finger. It escalated quickly because Alleg was not telling the French what they wanted to hear. In the end, electrodes were connected to a larger magneto and Alleg was electrocuted through his mouth.

If the torture left marks on the victim or if the victim did not give the information the French wanted to hear, the French "had to imprison those tortured long enough 'for the marks to clear up'...or they had to kill them surreptitiously" (Rejali 164). Essentially, if the electrotorture left marks or if the victim did not talk and give the 'right' information, the French could not let the victim go back into the public. This is because the victim would probably tell everyone that the French were torturing their prisoners. Also, if they had marks from being tortured, those marks would tell the story alone. Ergo, the victims either had to be held in prison until the wounds healed or had to be secretly killed.

The way the French disposed of the bodies of their victims was gruesome. "Courrière writes of bodies dropped out in the sea by helicopter, and of a mass grave between Koléa and Zéralda" (Horne 201). Although the validity of the mass grave is still in question, the bodies dropped from helicopters does not seem to be debated. The reason why the French had to make the bodies 'disappear' is because they could not allow the Algerians to see what was happening. Everything had to be kept a secret because if word got out that the French were killing and then secretly burying the bodies of guilty and innocent people alike, the French would lose support for the war. Subsequently, the FLN would gain tremendous support.

The French won the Battle of Algiers thus suppressing the FLNs constant attacks. As a result of France's victory, the FLN became even more enraged and carried out its final terrorist attack called the Oran Massacre. This was the last time that violence would take place between the French and Algerians. Technically there was a cease-fire during the Oran Massacre but nevertheless, on July 5, 1962 violence erupted once again. "According to the figures given by Doctor Mostefa Naït, director of the hospital complex in Oran, 95 people, including 20 Europeans, were killed (13 were stabbed to death). In

addition, 161 were wounded" (Stora 105). (It is important to note that some estimates exceed 1,000 casualties; 95 was specific to the hospital complex that Doctor Mostefa Naït worked in). The events that took place in Oran were obviously horrific and it all happened after a supposed cease-fire.

At about eleven in the morning, Muslims went into Oran (mainly a European city) and began shooting people and committing their own form of ethnic cleansing. "In the suddenly empty streets, the hunt for Europeans was on. On boulevard du Front de Mer, there were several dead bodies...shots were fired at motorists, one of whom was hit and collapsed at the wheel as his car crashed into a wall...Near the 'Rex' cinema, one of the victims of that massacre could be seen hanging from a meat hook" (Stora 105). Europeans were being killed in their cars, in their homes and in the most gruesome ways. Despite this horrific violence, French and Algerian authorities did little to nothing to stop it. At five o'clock the gunfire began to subside. Nevertheless, hundreds, if not thousands of innocent civilians were either injured or killed.

It is important to note that the FLN not only killed French and Europeans, but they also killed their own Moslem countrymen who supported the French. "F.L.N. gunmen herded more than 300 peasants into the village of Kasba Mechta, and, when darkness fell, passed among them shooting and stabbing until all were dead" (Time 7). This type of mass murder was common among the FLN as they felt they needed to silence all support for France. Once it was dark outside, the FLN went to the Moslem villages where there was the most outspoken support for France. Once they arrived, they gathered the supporters up in a group, like in Kasba Mechta and shot or stabbed them until they were all dead. By murdering as many supporters for the French as possible, the FLN assumed that there would be no support left for France.

If the FLN did not kill certain Moslems, they would be "found alive but minus ears, noses or tongues" (Time 7). This created fear within the Moslem population in Algeria. The theory was that if the Moslems saw their fellow people being killed or severely disfigured because they supported the French, then they might be less likely to publicly support France. Essentially, the Moslems who were disfigured could give the message back to the other Moslems that if they supported France, they too would be killed or disfigured.

Similar to France's response to the Battle of Algiers, the French used electric torture during the Oran Massacre. However, in addition to electrotorture, the French also instituted water torture and eventually genital torture. There were various forms of water torture that were used but all were horrific techniques designed to make the person feel as if they were drowning. "Heads thrust repeatedly into water troughs until the victim was

half-drowned; bellies and lungs filled with cold water from a hose placed in the mouth, with the nose stopped up" (Horne 200). The victim could not hold their breath for long and they eventually gave in. This was the ultimate goal of water torture and then the torturers would stop once they realized the victim would talk.

A specific instance of torture in the Algerian War that went public in the New York Times in 2002 talks about the accusation that Jean-Marie Le Pen water tortured and electroshock tortured a man named Ammour. Mr. Ammour was forced to lie naked on the floor with his hands bound and the French men connected electrodes all over his body. "I was screaming. They took dirty water from the toilets and made me swallow it through a floor cloth held over my face. Le Pen was sitting on me. He held the cloth while someone else poured the water" (Cowell). This was the standard type of water torture. A cloth was placed over the victims face and then water was poured into their mouth to simulate the feeling of drowning.

The other type of torture instituted by the French was genital torture. Although this was less common than electric and water torture, it was still used on suspects. "Bottles thrust into the vaginas of young Muslim women; high pressure hoses inserted in the rectum, sometimes causing permanent damage through internal lesions" (Horne 200). This type of torture, especially if it was followed by the killing of the tortured person, displayed how the French became as gruesome as the FLN.

Despite the widespread torture committed by France, there were some people who objected to it and firmly believed that it was not necessary. "Yves Godard, Massu's chief lieutenant, had insisted there was no need to torture. He suggested having the informant network identify operatives and then subject them to a simple draconian choice: Talk or die"(Rejali). Godard argued that some sort of informant network would have produced the same results as torture without the damage that torture causes. Essentially, this type of counterespionage would mean that France would infiltrate the FLNs network and use its own spies and informants to gather information about its next target.

The British used precisely this type of counter-terrorism during World War II against German spies. "British counterespionage managed to identify almost every German spy without using torture -- not just the 100 who hid among the 7,000 to 9,000 refugees coming to England to join their armies in exile each year...but also the 70 sleeper cells that were in place before 1940" (Rejali). By using its own covert agents, Britain managed to expose German spies hiding within its own country.

Most of the time when the German spies were discovered and apprehended, the British would make them double agents. "Only three agents eluded detection; five others

refused to confess. Many Germans chose to become double agents rather than be tried and shot. They radioed incorrect coordinates for German V missiles, which landed harmlessly in farmers' fields" (Rejali). Basically, once these German spies were captured, they agreed to become double agents in lieu of being tried or killed. As double agents, they would provide incorrect intelligence to Germany thus saving British lives.

Yves Godard believed that this type of counterespionage would have been successful in Algeria and should have been instituted instead of torture. French spies could have infiltrated the FLN and maybe even gained informants who were already in the FLN. Subsequently, the spies and informants would gain reliable intelligence as to the whereabouts of the next attacks or possible targets, similar to the British in World War II. However, France felt that torture was a faster way to gain intelligence and that was the counter-terrorism tactic that they instituted.

Despite the mass murder and widespread torture in Algeria, the United States took no direct role in the war but instead acted behind the scenes, to some extent. It was only around ten years since the end of World War II, and because of this, the United States was not terribly anxious to get involved in another long war. In addition, the U.S. would soon be involved in the Korean War and then shortly thereafter, the Vietnam War. As a result, the U.S. took a behind the scenes role in the Algerian War. Ironically, the same time the United States was pressuring France to regain control of Algeria, it was being somewhat sympathetic toward the Algerians because of their strive for independence.

After World War II, the United States was not in complete support of French colonialism, but it felt that it was the best thing for Northern Africa. "After the war the Americans concluded that preserving French hegemony in the region was the best way to guarantee North African security" (Wall 12). The United States wanted security in an unstable region and for the time being, France could be that security. And in a way to help the French, the CIA warned them in 1952 that the situation in Algeria would probably be a large problem in the near future. This is because the native Muslim majority's demands were being unrecognized thus causing upheaval within the country. Obviously the CIA was correct because the Algerian War began two years after their warning.

Although the U.S. warned the French and pressured them, it took no direct role in the war. There were two possible reasons why the United States did not directly intervene with the Algerian War. First, Algeria was covered by the NATO alliance of 1949 because of the insistence of France. Second, Algeria was populated with over one million Europeans who dominated the politics and economy of the country. "For these

reasons Washington understood that any American attempt to influence French policy in Algeria would inevitably raise charges by the French of direct interference in their internal affairs" (Wall 12). If the United States were to directly intervene with the Algerian War, the French would say it was a direct intervention of internal affairs. This is because Algeria was essentially part of France and a direct intervention by another country in Algeria would be like an intervention in France itself.

But perhaps the most compelling argument why the United States did not intervene militarily, like it did with Korea and Vietnam, was because Algeria was a revolution it could accept. "Algeria was a clear case of a Third World revolution that Washington believed it could accept; it appeared to have the capability of producing a noncommunist, if not a democratic, regime" (Wall 15). The United States did not use its military to intervene because it was able to accept the possible outcome of a noncommunist and possibly democratic Algeria. Algeria was significantly different when compared to Korea and Vietnam. The United States was not concerned with Algeria becoming a communist country because there were no communist country's backing the FLN. As a result, Algeria could possibly become a democratic nation, if it broke from French rule.

Throughout the Algerian War, the United States "attempted the almost impossible task of continuing constructive dialogue throughout the crisis with both parties to an intractable dispute, the French government and the rebel Algerian National Liberation Front" (Wall 15). In order not to break ties with France or the rebels in Algeria, the United States talked with and supported both sides in the war. The U.S. seemed somewhat flummoxed because it did not want to just support France because then the rebels in Algeria would be abandoned. Yet at the same time, the U.S. did not want to just support the rebels, because then it would lose its long time ally France.

In the end, the United States gained the confidence of the French and the FLN. As a drawback to supporting both sides, the United States could not intervene with its military. If that occurred, the U.S. would have to publicly choose which side to support and fight for. And if the United States knew of the widespread killings and torture, it was most likely ignored. Without using its military, the United States only had limited influence in the Algerian War. This was especially true because of "the chronic state of chaos that seemed to characterize internal French politics. Government instability in Paris allowed cabinets to come and go and policy to remain paralyzed" (Wall 15). Since the leaders in the French government were constantly changing due to the growing disapproval for the Algerian War, it was extremely difficult for the U.S. to have a large political influence over France. In addition, since France was trying to capture or kill

leaders in the FLN, the United States found it difficult to have a significant political influence over the FLN. As a result, most of the bombings and torture committed by the FLN and France were publicly ignored by the United States.

The counter-terrorism that the French used in the Algerian War led to various brutal forms of torture. Their main justification for using torture as a counter-terrorism tactic was to prevent near-future terrorist attacks. This idea is quite similar to the 'ticking time bomb' scenario which is sometimes used as a justification for torture. The ticking time bomb scenario is a useful tool for counter-terrorism and in the most extreme situations it can be instituted. However, if it is abused it can be a tremendous problem.

The scenario is extremely appealing and seductive. "Blanket condemnations of torture are often countered with a hypothetical situation in which a captive knows where a time bomb has been hidden and refuses to divulge the information. In such a case, the argument goes, torture would be necessary in order to save many innocent lives and thus be justified" (Pfiffner 134). Essentially, in this scenario a person knows information about the whereabouts of a bomb but will not tell anyone where it is. Ergo, torture would be justified in this case because the person knows where the bomb is but will not tell anyone else so they can disarm it. This is a typical example for the ticking time bomb scenario.

This scenario is popularized by television's critically acclaimed show *24*. "...intrepid terror fighter Jack Bauer foils fictional attempts to kill Americans with deadly weapons. Often he is forced to resort to extreme measures (and the torture is usually graphically depicted) to get the bad guy to answer his questions, which sometimes leads to saving innocent lives in the nick of time. Bauer is portrayed as the patriotic hero, and his brutal means are necessary to save the day" (Pfiffner 134). In essence, Jack Bauer captures a terrorist who knows where a bomb is but the terrorist does not talk. Because the terrorist is not talking, Bauer tortures him and eventually he talks. Hopefully the bomb can be reached in time thus saving innocent lives.

The ticking time bomb scenario that is sometimes portrayed on *24* is so seductive that "the Secretary of Homeland Security, Michael Chertoff, lent the prestige of his office to the message of the TV program by visiting the actors when they were filming an episode in Washington, D.C" (Pfiffner 134). Even the Secretary of Homeland Security is moved and persuaded by it. The ticking time bomb scenario is seductive because it tells people that torture can be justified under the right circumstances, e.g., to save innocent lives.

Of course there are concerns with this scenario as there is with everything. In order for a ticking time bomb scenario to be genuine there are some requirements that

should be met. “There must be a planned attack (the bomb is still ticking), the interrogators must capture the right person, the captive must know about the planned attack, torture must be the only way to obtain the information, the captive must provide accurate information... ” (Pfiffner 135). These conditions and others are essential in identifying a situation as a ticking time bomb one.

Even if all these conditions are met for the ticking time bomb scenario, there still might be some problems. “There may be no attack planned, the captive may not know of the attack, torture may cause unintended death; thus potential information will be lost...” (Pfiffner 135). The reason why the ticking time bomb scenario is so complex is because multiple conditions must be met in order for it to be considered a genuine ticking time bomb scenario. After that, different conditions must be met in order for torture to even work. Say, for example, the US captures a terrorist and questions him about a bomb. However, say that terrorist does not know anything about that specific bomb. Ergo, it might be that no amount of torture will get credible information because he really knows nothing of the bomb. Because of this possible outcome, it is imperative that all the conditions be met for the ticking time bomb scenario before authorities start treating an incident like one.

In a genuine ticking time bomb scenario, "torture might be justified to obtain specific information that would almost certainly save innocent lives. But if the preconditions for the ticking time bomb situation mentioned above are not rigorously adhered to, any tactical situation could lead to torture" (Pfiffner 136). If the preconditions are not followed to the strictest standards, any situation can be perceived as a ticking time bomb one, e.g., France’s perception of Algeria. France treated every situation like a ticking time bomb one and because of that, widespread torture ensued.

The Algerian War showed how France’s counter-terrorism techniques evolved to become just as horrific as the FLNs terrorist attacks. Both killed and tortured innocent people to try and achieve their own goals. In an effort to prevent horrific terrorist attacks by the FLN, the French used gruesome torture techniques that escalated in severity as the war progressed. By treating every situation like a ticking time bomb scenario, France ended up torturing and killing thousands of innocent people. The Algerian War displayed how horrific terrorism can be and also how counter-terrorism can become a form of terrorism itself.

Works Cited

"ALGERIA: The Reluctant Rebel", *Time* 13 Oct. 1958.

Aussaresses, Paul. "The Battle of the Casbah: Terrorism and Counter-Terrorism in Algeria 1955-1957", *Enigma*, 2006.

Beigbeder, Yves. Judging War Crimes and Torture: French Justice and International Criminal Tribunals and Commissions (1940-2005). Leiden: Martinus Nijhoff, 2006.

Cowell, Alan. "Le Pen Accused of Torturing Prisoners During Algerian War", *The New York Times*. The New York Times, 4 June 2002.

Horne, Alistair. "A Savage War Of Peace", *The New York Review Of Books*, 1977.

Kaufman, Michael T. "The World: Film Studies; What Does the Pentagon See in 'Battle of Algiers'?", *The New York Times*. The New York Times, 7 Sept. 2003.
Mahan, Sue. Terrorism in Perspective. Thousand Oaks: Sage Publications,, 2008.

Morgan, Ted. My Battle Of Algiers. New York: HarperCollins, 2005.

Pfiffner, James P. Power Play: The Bush presidency And The Constitution. Washington, D.C.: The Brookings Institution, 2008.

Rejali, Darius. Torture and Democracy. Princeton: Princeton UP, 2007.

Rejali, Darius. "Does Torture Work?" *Salon.com*. 21 June 2004.

Stora, Benjamin. Algeria, 1830-2000: A Short History. Ithaca: Cornell UP, 2001.

Wall, Irwin M. France, the United States, and the Algerian War. Berkeley: University of California, 2001.

The Spotted Death: Smallpox and the Culture of Eighteenth Century America

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Smallpox was once considered one of the world's deadliest diseases, but today can only be found in the freezers of science. It was once able to wipe out unsuspecting populations such as Native Americans, though now it is almost extinct. Most nations do not offer the vaccination today, the World Health Organization (WHO), however, declares it as a problem and a source of biological warfare, and therefore a potential problem. Smallpox is as old as human civilization and has wreaked havoc on human populations. The Columbian exchange assisted in the exchange of people, plants, and most importantly, disease. This was the primary reason for the spread of smallpox from Europe to the rest of the world, while also being responsible for the initial wave of death among the native populations. The following thesis attempts to map out the history of smallpox, and more specifically, the history of inoculation. Smallpox had many social and cultural implications in the American colonies, especially at the start of the eighteenth century. Several major outbreaks in the cities of Boston, Charleston, and in New York State caused panic among citizens, and subsequent outbreaks throughout the years led to a mandated inoculation program at the time of the Revolutionary War. By the start of the nineteenth century, the invention of vaccination helped to substantially lower the instance of the disease, and proved a safer way to confer immunity. Smallpox was once the scourge of the human race, but thanks to the work of the colonial doctors and preachers, it was the first illness to receive an effective treatment.

Initially, smallpox is hard to distinguish from other illnesses. Some of the first symptoms include fever, malaise, head and body aches, and in some cases, vomiting. The fever is usually high, in the range of 101 to 104 degrees Fahrenheit[2]. A few days later, a rash emerges first as small red spots on the tongue and in the mouth. These spots develop into sores that break open and spread large amounts of the virus into the mouth and throat. At this point in the succession of the disease, the person is most contagious. Around this time, a rash appears on the skin, starting on the face, the arms and legs and

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[2] "CDC Smallpox | Smallpox Overview," http://emergency.cdc.gov/agent/smallpox/overview/disease-facts.asp

then spreads to the hands and feet. In most cases, the rash spreads to all parts of the body within 24 hours. This rash develops into a series of raised bumps, and then they fill with a thick, opaque fluid. Often times, the rash has a depression in the center that looks like a bellybutton. This bellybutton appearance is considered the major distinguishing characteristic of smallpox[3]. Once full of fluid, the bumps become pustules, which are sharply raised, and usually round and firm to the touch[4]. These pustules begin to form a crust and then scab, covering the body about two weeks after the onset of the rash[5] where the pustules had been. The scabs then begin to fall off, leaving marks on the skin that eventually become pitted scars that remain with the person for the rest of their life. Until all of the scabs have fallen off, the person is still considered contagious and should be kept away from other human contact. The full duration of the disease is anywhere from three to four weeks[6]. In many instances, there are also several other complications that can result, such as sterility, hair loss, and blindness in one or both eyes.

The Origin of Smallpox

The origin of the disease has been sought after for many years. It is believed to have appeared around 10,000 BC, at the time of the first agricultural settlements in northeastern Africa. It is possible that it spread from there to India by means of ancient Egyptian merchants who traded there. The earliest evidence of skin lesions resembling those of smallpox can be found on the faces of mummies from the time of the 18th and 20th Egyptian Dynasties (1570–1085 BC)[7]. Even with this evidence, it is still within human nature to blame a scapegoat in the population. Many nineteenth and twentieth century discourses count China as the original source of smallpox[8]. Missionaries had been observing the disease in China since the 10th century[9], lending support to it being the original location of the illness. Cibot was a missionary sent to China in the fourteenth century, and he frequently wrote back to Europe. One of the main topics of discussion in these letters was the practice of inoculation and other elements of Chinese medicine[10]. Cibot certainly helped to prolong the idea that the Chinese were responsible for smallpox

[3] Ibid.
[4] Ibid.
[5] Ibid.
[6] Ibid.
[7] "Edward Jenner and the history of smallpox and vaccination," Baylor University Medical Center, January 2005, http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1200696/
[8] Larissa. Heinrich, "How China Became the "Cradle of Smallpox": Transformations in Discourse, 1726-2002," *positions: east Asia cultures critique* 15, no. 1 (2007): 10.
[9] Ibid, 22.
[10] Ibid, 18.

by mentioning "only a few words about the origin and cause of smallpox, but it is remarkable that the letters insist that smallpox was unknown in high antiquity, and that it did not begin in China until the Middle Ages, in other words, under the Zhou dynasty which began 1122 years BC"[11]. Part of the reason for reporting back to the homeland was that "the knowledge about foreign practices such as inoculation could prove useful in Europe[12]," although most of the time they were not accepted. However, the missionaries had trouble convincing even themselves of the usefulness of procedures when many of the Chinese doctors would not even perform them on their patients[13]. The Chinese held religious beliefs that prevented the use of these procedures in many cases. Generally, the Chinese believed in the concept of taidu, or fetal toxin: a heat toxin that could be passed to the infant by either parent before it is born, or activated through the mother's milk afterwards[14]. The toxin lurked in the formed fetus and acted up when prompted. Most considered it an inevitable part of life[15]. The missionaries were fascinated by the similarities between taidu and original sin, which was something that all humans were born with according to the Christian church[16]. The known presence of smallpox in China lead many people to believe it lacked modernity[17] and were therefore correct in their assumptions about the origin of the disease. If China was still a major stronghold of the disease, then the general consensus was that this had to be the original location of smallpox.

In modern times, the idea of China as the original location of the disease has since been proven incorrect due to the presence of much older samples. Egyptologists have found that Pharaoh Ramses V died from smallpox in 1157 B.C.[18] because of the pockmarks found on his face, a characteristic of the disease. These discoveries lead to the belief that Egypt was actually ground zero of the smallpox virus, or at least the earliest area with evidence of an endemic[19]. With this new source, it is interesting that the disease is absent from both the Bible and the literature of the Greeks and Romans. It would seem unlikely that such a major disease would have escaped the attention of the

[11] Ibid, 18.
[12] Ibid, 10-11.
[13] Ibid, 10-11.
[14] Ibid, 20.
[15] Ibid, 20.
[16] Ibid, 20.
[17] Ibid, 9.
[18] http://www.microbiologybytes.com/virology/Poxviruses.html
[19] Yu Li et al., "On the origin of smallpox: Correlating variola phylogenics with historical smallpox records," *Proceedings of the National Academy of Sciences* 104, no. 40 (October 2, 2007): 15787-15792, doi:10.1073/pnas.0609268104

Greek physician Hippocrates (460-370 BC),[20] so it can be assumed that no major outbreaks occurred during this time. The disease was seen in medical writing from ancient China and India, around 1122 B.C. and 1500 B.C. respectively,[21] dating the disease older than Hippocrates. Writings from the Roman period mention the arrival of bubonic plague and smallpox from the east[22], and a major epidemic of the smallpox from AD 165 is said to have killed 2000 people a day for 15 years,[23] which is after Hippocrates, leaving an interesting gap in information. It is thought that the disease reached Europe in 710 A.D.[24] via trade routes. In the 9th century the Persian physician Rhazes (865-923 AD), provided one of the most definitive observations of smallpox. He was also the first person to differentiate smallpox from measles and chickenpox in his *Kitab fi al-jadari wa-al-hasbah* (*The Book of Smallpox and Measles)*[25], but it also appears as though he obtained a great deal of this information from Aaron, a native of Alexandria who lived around AD 622[26]. It has also been speculated that Egyptian traders brought smallpox to India during the 1st millennium BC, where it remained as an endemic for at least 2000 years. Unmistakable descriptions of smallpox first appeared in the 4th century AD in China and the 7th century in India. Smallpox was likely introduced in China during the 1st century AD from the southwest, and in the 6th century was carried from China to Japan[27]. Upon reaching Europe, it was then thought to have been transferred to America by Hernando Cortez in 1520, causing the death of 3.5 million Aztecs over the following 2 years. In the cities of 18th century Europe, smallpox reached epidemic proportions, as well as the death of five reigning European monarchs[28] from the disease. The middle Ages saw a huge increase in the number of cases during the Crusades, thanks in most part to the movement of large numbers of people and the establishment of large

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[20] Ibid.
[21] Ibid.
[22] Jared Diamond, *Guns, Germs and Steel: The Fates of Human Societies*, First Edition. (W. W. Norton & Company, 1997), 330.
[23] Barry Zimmerman and David Zimmerman, *Killer Germs*, 1st ed. (McGraw-Hill, 2002), 223.
[24] http://www.microbiologybytes.com/virology/Poxviruses.html
[25] http://en.wikipedia.org/wiki/Smallpox#cite_note-68. Please see the citations that are available on this page for reference.
[26] Ola Elizabeth Winslow, *A destroying angel: The conquest of smallpox in colonial Boston* (Houghton-Mifflin, 1974), 36.
[27] Katherine Bourzac, "Smallpox: Historical Review of a Potential Bioterrorist Tool," Journal of Young Investigators, 6 (2002): http://www.jyi.org/volumes/volume6/issue3/features/bourzac.html
[28] http://www.microbiologybytes.com/virology/Poxviruses.html

cities and towns[29]. Regardless of where the origin of the disease is determined to be, it caused serious problems from the first case. For this reason, many civilizations began to experiment with ways of preventing the disease. This included the relatively new idea of inoculation.

Inoculation was allegedly first practiced in India as early as 1000 BC, and involved either nasal inhalation of powdered smallpox scabs, or scratching material from a smallpox lesion into the skin. Recently, this idea has been challenged as few of the ancient Sanskrit medical texts of India described the process of inoculation. Accounts of inoculation against smallpox in China can be found as early as the late 10th century, and the procedure was widely practiced in the 16th century, during the Ming Dynasty. If successful, inoculation produced lasting immunity to smallpox[30]. In the eighteenth century, inoculation was being performed as close to Europe as Constantinople, Turkey, where the technique was used and supported by Lady Mary Wortley Montague[31]. Having known about the procedure previously through word of mouth, and knowing that it was forbidden in England, she decided to have her children inoculated at the first available location[32]. As the wife of an Ambassador to Turkey, she was in a position of power upon returning to England, which enabled her to share her experiences of the procedure with the royal court. Eventually, the procedure was brought to the American colonies, but from a different source. Puritan minister Cotton Mather was to play an important role in the history of this disease as well.

England and the Story of Smallpox

In 1716, two Greek physicians practicing in Constantinople wrote to the Royal Society of London about the advantages of inoculation in preventing smallpox and recommended it for use in England[33]. Dr. Emanuel Timonius had degrees in medicine

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[29] http://en.wikipedia.org/wiki/Smallpox#cite_note-68
[30] Ibid.
[31] Shirley Roberts, "Lady Mary Wortley Montague and the Reverend Cotton Mather: Their Campaigns for Smallpox Inoculation," *Journal of Medical Biography* 4, no. 3 (1996): 132.
[32] Mary Wortley Montague, Letters of the Right Honorable Lady M--y W---y M----e :written, during her travels in Europe, Asia and Africa, to persons of distinction, men of letters, &c. in different parts of Europe: which contain, among other curious relations, accounts of the policy and manners of the Turks: drawn from sources that have been inaccessible to other travelers. (London: T. Becket and P.A. De Hondt, 1763). Written in 1724.
[33] Maxine Van De Wetering, "A Reconsideration of the Inoculation Controversy," *The New England Quarterly* 58, no. 1 (March 1985): 48.

from both Oxford and Padua, a medical school in Italy. At the time, he was living and working in Constantinople, where he had witnessed the procedure of inoculation[34]. Dr. Jacobus Pylarinum was also in Constantinople at this time, witnessed the procedure, and helped to write the article for the Royal Society in conjunction with Dr. Timnoius[35]. This article is very likely the source of Lady Mary Wortley Montague's information on inoculation, and would explain her total support of having it performed on her young son.

Lady Mary Wortley Montague was born on May 26, 1689 and was a member of prominent families from both her mother and father. She was also a very beautiful woman that had a strong personality to match[36]. Mary married Edward Wortley Montague in 1712 by elopement as her father would not give permission for the marriage. Their first son was born in 1713, and was also named Edward. After the marriage, Mary and Edward spent a lot of time at the Royal Court, where Mary was a favored companion of the Princess of Wales[37]. Tragedy struck shortly after the marriage when her brother William died of smallpox in 1713. Mary herself would contract the disease two years later, and was left with severe scarring on her face and the inability to grow eyelashes[38]. Despite these side effects, life continued in much the same way for her. In 1716, her husband was appointed ambassador to Turkey, and after a journey of about a year, they arrived in Constantinople[39]. In a letter home to a friend regarding inoculation, Lady Mary states that "You may believe that I am very well satisfied of the safety of this experiment, since I intend to try it on my dear little son"[40]. In February 1718 she gave birth to a daughter, and in March of that year, she had her son Edward inoculated, supervised by Dr. Maitland. Little Edward made it through the illness perfectly, increasing his mother's support of the procedure. In another letter to her friend, she states that "I cannot engraft (inoculate) the girl, as her nurse has not had the smallpox." In the meantime, relations with Turkey were not going well, and her husband was called back to England. They arrived back into London in October of 1718. Upon returning to the Royal Court, where she immediately regained her position, she suggested inoculation to the Princess of Wales. She agreed as long as it could be tested beforehand.

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[34] Winslow, *A destroying angel,* 33.
[35] Benjamin Scheindlin, "A Revolutionary in the Smallpox War when Dr. Zabdiel Boylston Introduced Smallpox Inoculations in Boston Nearly 300 Years Ago," *Boston Globe*, May 11, 2003.
[36] Roberts, "Lady Mary Wortley Montague and the Reverend Cotton Mather," 129-130.
[37] Ibid, 130.
[38] Ibid, 131.
[39] Ibid, 131.
[40] Ibid, 131.

Six Newgate prisoners were chosen and inoculated before she would allow her own daughters to undergo the procedure[41]. The method being used in Turkey at the time was performed by making a gash in the arm of the patient, then administering a large amount of smallpox matter into it[42]. Since this how Lady Mary had seen it performed, this was also the procedure that was used subsequently in England.

Across the pond, Cotton Mather managed to obtain a copy of the Royal Society's publication of the Timonius and Pylarinus letter and decided to try and encourage use of inoculation among Boston physicians[43]. Interestingly enough, when he decided to support inoculation, he had never actually seen the procedure performed himself and instead relied entirely upon the descriptions that accompanied the article. On June 16, 1721, Cotton Mather, citing the letters by Timonius and Pylarinus that had appeared in The Royal Societies "Philosophical Transactions", recommended inoculation to the Boston physicians[44]. Despite his authoritative position among the colonists, convincing the citizens proved to be a difficult task. One of the few doctors that responded to the plea was a man by the name of Zabdiel Boylston.

Early Inoculation in the American Colonies

Medicine in the American colonies was not very advanced by modern standards, nor was it anywhere else in the world. At the time, the popular belief about the human body was that it had four humors: blood, phlegm, black bile and yellow bile, which were all responsible for the overall health of the body. In order for a body to be in good health, all of these had to be in the proper proportions[45]. Another theory that had gained a lot of support was the idea that pathology, or illness, occurred in the body as a consequence of the decay of natural solids in the environment[46]. This decay generated disease vapors, which then spread throughout the human body when it became exposed to them[47]. However, most American colonists attributed illness to an act of God rather than actual problems with the body, and the community would act together to pacify God and get rid of the illness[48]. Due to this belief, the connection between medicine and religion was

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[41] Ibid, 132.
[42] Ibid, 132.
[43] Ibid, 134.
[44] Wetering, "A Reconsideration of the Inoculation Controversy," 48.
[45] Winslow, *A destroying angel,* 7.
[46] James P. Morris, "Smallpox Inoculation in the American Colonies 1763-1783," *Maryland Historian* 8, no. 1 (1977): 53-54.
[47] Ibid, 53-54.
[48] John D. Burton, "The Awful Judgments of God Upon the Land: Smallpox in Colonial Cambridge, Massachusetts," *New England Quarterly* 74, no. 3 (2001): 495-506.

strengthened, as Pastors were usually the only people in certain areas that had done any reading on the subject. Generally, most pastors would have been considered capable in medicine if he had simply "read medicine, and through this reading has gained some knowledge of anatomy and physiology, and some acquaintance with drugs, but usually no knowledge whatsoever about their preparation and use"[49]. Thankfully, none of the drugs that were being used at the time would have caused any serious reactions. Most medicines in colonial America were botanical in nature and mostly herbs, except for the occasional treatment involving mercury. Some of the popular concoctions in New England were sumac, elderberry, saffron, and snake root, which were used for snakebites, measles and chicken pox, as well as sassafras and witch hazel, which were used for bruises and sprains[50]. The problem with many of these drugs was the possibility of an overdose, which could have been caused by the rudimentary measuring techniques, as well as a lack of knowledge about the poisonous nature of some plants. Interestingly, the first "wonder drug" was not a product of the native landscape and instead came from India and Java. This was cinchona bark, also called Peruvian bark, and it was used mostly on fevers[51]. It can be inferred from the label of "wonder drug" that it worked well or it would not have been held in such high esteem.

In general, the treatment of illnesses was largely directed toward moving excessive or corrupted blood or juices from the interior of the body to the exterior via phlebotomy (blood removal), emesis (vomiting), defecation, urination, blistering, or sweating[52]. These were all used in an attempt to bring the four bodily juices into balance. One recorded case states that William Johnson was "blistered, purged, and twice Bled" for "a violent Inflammation[53]". The practice of inserting smallpox matter, therefore, mimicked no familiar healing practice and would have been met with a large amount of skepticism[54]. Most of the medical knowledge that the colonists practiced was shared by the Europeans, and was therefore brought to the colonies by both colonists and visitors alike. Europeans largely followed the advice of the Persian physician Rhazes: they kept smallpox sufferers warm with fires and blankets in closely shut-up rooms and gave them

[49] Winslow, *A destroying angel,* 13.
[50] Ibid, 9-10.
[51] Ibid, 10.
[52] Sara Stidstone. Gronim, "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century," *Bulletin of the History of Medicine* 80, no. 2 (2006): 255.
[53] Ibid, 255.
[54] Ibid, 255.

alcoholic drinks to keep the pores of the body open[55]. In the seventeenth century, the English physician Thomas Sydenham argued for a cooling regimen instead and encouraged open windows, fresh air, and a light diet with non-alcoholic drinks[56]. Yet a third method, so-called "dreckapotheke," promoted the ingestion of noxious substances that would encourage the venting of the disease through the skin[57]. Many Native American practices were a combination of both methods, although they were often practices that had been in use long before the arrival of the European settlers. Now they were modified for use against smallpox. General ideas for treatment of the human body lead to different theories on how patients should be prepared for inoculation. In many cases, inoculates underwent several weeks of purging, bleeding, and a limited diet, all intended to rid the body of excessive or corrupted humors before smallpox was introduced. Moreover, such preparation could be tailored to each person's constitution depending on underlying conditions[58].

Outbreaks in the History of the American Colonies

Smallpox was not something that was originally endemic to the North American colonies, and outbreaks generally only occurred after something, or someone, carried the disease to a specific area. One of the major causative agents of outbreaks in the American colonies was ships coming in from the West Indies that were infected with smallpox[59]. While in most cases this was true, smallpox did not always come from the West Indies. Originally, ships that were coming from all over Europe could be responsible for outbreaks. Francis Higginson wrote in her diary that she lost a child aboard a ship to the American colonies[60]. A smallpox infection broke out on the ship, but many of the adults had immunity from being infected when they were children and were subsequently not affected. The children, however, were at a much greater risk since they most likely were not immune at the time of the outbreak. Luckily, Francis was the only parent to lose a child on the trip[61]. While ships bearing new settlers were common, so were the ships that were bringing both slaves and goods for trade. In 1634, a Dutch ship brought smallpox up the Connecticut River, where it came into contact with the local

[55] Ibid, 256.
[56] Ibid, 256.
[57] Ibid, 256.
[58] Ibid, 257.
[59] Winslow, *A destroying angel,* 24.
[60] Ibid, 25.
[61] Ibid, 25.

Native American populations[62]. The Native Americans were not held in high regard by the colonists, so the appearance of such an awful ailment would not have been something they concerned themselves with. In fact, many people who witnessed the infection thought that God had sent the smallpox in order to eliminate the enemy[63]. In contrast to God's supposed hatred of the natives, it was always the colonists that received smallpox first and subsequently spread it to the Indians. In 1689-1690, an infection of smallpox in the Boston area was so severe that it eventually extended from Canada to New York[64]. This was followed by an outbreak in 1702 which contained a combination of both smallpox and scarlet fever, eventually causing the death of three of Cotton Mather's children[65] and a large population loss among younger children. In general, a new outbreak would appear about every twenty years, just long enough for those that had survived the previous one to have children. The outbreak would cause the death of many children since they were not immune, but those that survived would be safe for the rest of their lives.

The colonists had a very slight understanding of immunity and the results if you survived a terrible illness. Although they were not sure why, the colonists knew that once you had a disease and survived, you could not have the same disease again. Expectedly, when inoculation was introduced to the colonists, they were very suspicious. Undergoing inoculation meant purposely infecting yourself with one of the deadliest disease known at the time. Many people did not initially support the idea. Dr. Zabdiel Boylston became the first doctor to have performed inoculation in the American colonies. This was done on his six year old son Thomas in 1721[66].

Zabdiel Boylston was a third generation American, born on March 6, 1669[67]. As a member of one of the oldest families in the Boston area, he was well known. He was also the son of Dr. Thomas Boylston, a local surgeon, and often accompanied his father on visits to his patients[68]. He was the only child of twelve that showed any interest in the medical profession[69]. Due to the nature of medical education, along with the amount of time that he spent with his father, Boylston had 15 years of experience when

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[62] Ibid, 25.
[63] Ibid, 26.
[64] Ibid, 27.
[65] Ibid, 27.
[66] Benjamin Scheindlin, "A Revolutionary in the Smallpox War."
[67] Winslow, *A destroying angel*, 40-41.
[68] Ibid, 40-41.
[69] Ibid, 41.

smallpox hit Boston in 1721[70]. He had worked both as a surgeon in the army and as an apprentice to a prominent Boston physician before moving back into the countryside to practice[71]. He had been born in Muddy River, Massachusetts and chose to raise his family there as well, despite his promising future in medicine and the request of his services in Boston. He knew that good doctors were hard to find outside of the city, so he chose to remain in his hometown. It was around 1721 that Boylston became familiar with the Timonius and Pylarinus letters, as well as Cotton Mather's support of the topic. Mather had been attempting to use the influence he had among the educated elite of Boston to encourage the practice of inoculation. The only person that would initially respond would be Zabdiel Boylston.

On June 26, 1721, Zabdiel Boylston changed the face of colonial medicine when he inoculated his son Thomas, age 6, a serving man named Jack, age 36, and his son Jackie, age 2½[72]. Having never seen the procedure performed, Zabdiel simply followed the instructions within the infamous article and hoped for the best. He put much the same faith in the procedure as Lady Mary Wortley Montague, trusting simply that the process worked because other doctor's said that it did. Zabdiel performed the procedure the same as it was being done in Constantinople, which makes sense because this was the original location of the procedure. This process involved making incisions in the skin and placing smallpox matter into the opening, which was then covered in plaster[73]. Theoretically, the patient would then get a less severe version of the illness, leaving them immune once they recovered. The first experiment proved to be success, and on July 13, Zabdiel inoculated his other son John, age 13[74].

After the initial success that experienced from his first trials, Zabdiel felt comfortable enough to now perform the procedure outside of his house and decided to keeps records of all patients he inoculated. He later published his findings in a book entitled *An Historical Account of the Small-pox Inoculated in New England, Upon all*

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[70] Ibid, 42.
[71] Ibid, 42.
[72] Zabdiel Boylston, *An historical account of the small-pox inoculated in New England, upon all sorts of persons, whites, blacks, and of all ages and constitutions :with some account of the nature of the infection in the natural and inoculated way, and their different effects on human bodies : with some short directions to the unexperienced in this method of practice* (London : Printed for S. Chandler, at the Cross-Keys in the Poultry, MDCCXXVI [1726] ; [Boston in N.E.] : Re-printed at Boston in N.E. for S. Gerrish in Cornhil, and T. Hancock at the Bible and Three Crowns in Annstreet, MDCCXXX [1730]), 15. http://pds.lib.harvard.edu/pds/view/8290362?n=1
[73] Ibid, 22.
[74] Ibid, 22.

Sorts of Persons, Whites, Blacks, and of all Ages and Constitutions: With Some Account of the Nature of the Infection in the Natural and Inoculated Way, and Their Different Effects on Human Bodies: With Some Short Directions to the Unexperienced in This Method of Practice. Originally, inoculation was met with fierce opposition from the other doctors in Boston because they were worried that the practice might start an epidemic or cause more infection than would have happened naturally[75]. Truthfully, this was a legitimate concern considering how contagious the disease can be. Many people were even worried that to be inoculated would cause a man to turn into a woman[76]. Even after the publication of the book, some physicians were still skeptical about the procedure and chose to ruin his reputation instead. Despite these attempts to discredit Boylston, they could not hide the facts published in the book, and people were truly surprised by what they had found.

Of the 286 people that Zabdiel had inoculated, only 5 died. In Boston, 5,759 contracted smallpox in the natural way and 844 died[77]. A much smaller portion of the population died of the disease, showing a substantial difference, leading to much praise from Zabdiel and gaining his full support. According to his experiments, all of the patients must be in good health going into the procedure in order to have the best chance of surviving the disease. Sick persons must be "purged, vomited, bled and repeated until the person is settled and the humors are even again[78]". It is quite possible that this made a person weaker when they received the virus, but nothing has been proved to support this notion. Boylston was also able to come up with a standard process when performing the procedure. He writes "take a fine cut sharp tooth pick and open the pock on one side and press the boil, scooping the matter into your quill[79]." This is then to be kept in a keep in a cool place until it is needed. The matter is then inserted via an incision on either the outside of the arm above the elbow, or the inside of the leg in the rear, or "in the place where issues are commonly made." Two incisions were considered sufficient for one patient, each opening about a quarter of an inch long. Usually, a drop of matter was then added and covered with a sort of bandage to contain the matter[80]. The actual rash-like appearance of the disease did not appear until about the 9th day after inoculation had been performed[81]. One of the most common side effects of inoculation was usually a fever.

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[75] Benjamin Scheindlin, "A Revolutionary in the Smallpox War."
[76] Boylston, *An historical account of the small-pox inoculated in New England,* 20.
[77] Ibid, 50-51.
[78] Ibid, 60.
[79] Ibid, 63.
[80] Ibid, 63.
[81] Ibid, 63.

For this malady, a treatment of 2 or 3 ounces of oil of sweet almonds and syrup of marsh mallows[82] would be prescribed.

Occasionally, a patient would not receive enough of the smallpox matter to cause a substantial infection. These people were either unaware of a previous infection or were forced to under go the procedure again. After inoculation, if the reaction was not judged to have produced a significant enough number of pustules, the person was re-inoculated until the proper amount of pox appeared[83]. Once the process proved safe enough, Boylston attempted inoculation on sicker members of the population. For example, two days after giving birth, he had his wife inoculated. By doing the process in this way, the majority of the infection was able to coincide with her laying in period so that she would not infect other people[84]. This also gave the child a chance to be exposed early in life. The hope was that they would go through the illness together and survive, now immune to the dreaded disease. It is certainly hard to understand why most of the original cases were performed on members of his own family, and the likelihood of something going wrong would have affected him greatly. It was a surprising choice that he would inoculate his wife when he had previously discovered, through experimentation, that women who had their period at the same time as the smallpox often had a higher mortality rate. One woman was recorded as dying from the combination of the two conditions[85].

Zabdiel Boylston was truly interested in the adaptation of this process into the medical practices of colonial America. He was also deeply concerned about the health of his patients, as well as the general community. "I must inoculate all, without exception, they being in danger of having the distemper in the natural way[86]" and the natural smallpox was something that he wanted to avoid at all costs. With his full support of inoculation, the general acceptance of the procedure worked well enough that it backfired on his original intentions. He became so busy that he had to send smallpox matter out with instructions to other doctors and responsible patients rather than travelling to these people himself. He could not physically travel to all of the patients that requested his services,[87] and in many cases did not get a chance to see all of the patients at least once[88]. He was proud once inoculation became more accepted, but was never thrilled with the

[82] Ibid, 65.
[83] Ibid, 26.
[84] Ibid, 33.
[85] Ibid, 28.
[86] Ibid, 12.
[87] Ibid, 40.
[88] Ibid, 43.

little time he had left to see patients. This was one of his main concerns when originally deciding where he wanted to practice. Despite the large number of patients having the procedure performed, he was still having high success rates. The patients that he listed as having died from inoculation were also listed as being in poor health at the beginning of the process, having secondary infections, or as elderly[89]. Although these numbers and conditions cannot be proven, it does appear that these are legitimate concerns that should be considered before voluntarily undergoing such a serious disease. When the outbreak in Boston finally came to a close, his final thoughts on inoculation were "with the smallpox now leaving, inoculation is ceased and when it shall please Providence to send and spread that distemper amongst us again, may inoculation revive, be better received and continue a blessing, in preserving many more from misery, corruption and death[90]."

Cotton Mather, as mentioned before, was one of the original proponents of inoculation in the American colonies. He had received the Royal Society's printing of the Timonius and Pylarinum letter, but it also appears as though he had heard of inoculation before ever reading it. Cotton Mather owned a slave by the name of Onesimus and when asked if he had ever contracted the smallpox, his response was to roll up his sleeve and show the smallpox scars on his arm[91]. The scars were also accompanied by scars on the arms, which were left over as a result of inoculation that had been performed on him in Africa before he became a slave. Regardless of the original source of the information, Mather soon became a strong supporter of the practice and attempted to get more physicians to perform the procedure. In his own writings, Mather knew that the custom of preparation in Constantinople was to abstain from both flesh and broth for 20 days or more. Physicians would also choose to perform the operation in the beginning of winter or spring[92] rather than year round. This meant that the disease would run its course during the most favorable weather, and also would usually help to keep the patient indoors. Many inoculation procedures of the time would make two or more cuts in the skin, usually in arms, and allow drops of blood to appear. The smallpox matter was then mixed into wound, and covered in a half walnut shell, which was then covered in a bandage to contain the matter[93]. It is unsure as to why a walnut shell was used, but in practice it probably helped to localize the virus to the cut area. After seeing the positive

[89] Ibid, 13.
[90] Ibid, 50.
[91] Winslow, *A destroying angel,* 32.
[92] Cotton Mather, *Some account of what is said of inoculating or transplanting the smallpox*, (Boston: sold by S. Gerrish at his shop in Corn-hill, 1721), 13. http://pds.lib.harvard.edu/pds/view/7910093
[93] Ibid, 13.

effects in Dr. Boylston's patients, Mather became an even bigger supporter of inoculation. He saw that the operation had been performed "on persons of all ages, both sexes, differing temperatures and even in the worst constitution of the air; and none that have used it ever died of the smallpox[94]." Armed with this argument, he went to face his skeptical congregation in hopes of winning them over.

This proved very difficult. His congregation of staunch Puritans was not impressed by inoculation. They remained unconvinced of the procedure, even after positive reports were made by several different doctors. Cotton Mather, however, remained convinced of the importance of inoculation, and decided to turn to God for support. "Almighty God in his great mercy to mankind, has taught us a remedy to be used when the dangers of the smallpox distresses us" he exclaimed to his congregation one Sunday, "Humbly give thanks to God for his good providence"[95]. Not even an argument involving God, however, could sway the Puritan's, and they remained firmly against inoculation. In an attempt to reconcile, Mather's support soon moved out of the public eye as he had son inoculated in secret and wrote in his journal that the anti-inoculation faction had "Satan remarkably filling their hearts and their tongues" in not allowing the procedure to be performed in Massachusetts[96]. He had already upset too many people, however, and on the morning of November 14, 1721 a crude grenade made of black powder and turpentine was thrown into the house at around three in the morning. It sailed through a window of the guest room but failed to explode, thus sparing the life of his nephew who had been asleep[97]. The attempted bombing was the most lurid episode in a campaign of intimidation aimed at Cotton Mather and Zabdiel Boylston, whom rope-toting mobs had threatened to hang[98]. Despite the fact that smallpox inoculation actually worked, it remained a controversial topic for many years following the 1721 outbreak.

The 1721 outbreak not only caused major problems within families, it was responsible for the disruption of life outside the home as well. Once a household became infected, the inhabitants were put under quarantine and forced to remain inside. Hopefully these families had someone to help them replenish foodstuffs and maintain businesses, otherwise these families would have a hard time. Businesses were forced to close when some of the employees came down with the illness, and in many cases, new people had to be found to fill vacant positions. Harvard College, located in Cambridge,

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[94] Ibid, 11-12.
[95] Ibid, 24-25.
[96] Benjamin Scheindlin, "A Revolutionary in the Smallpox War."
[97] Frederic D Schwarz, "The Inoculation Controversy," *American Heritage* 47, no. 7 (November 1996), 157.
[98] Ibid.

Massachusetts, became deeply affected by the outbreak when students began coming down with smallpox. Many students felt threatened by the presence of the disease and decided they wanted to be inoculated. They sought out Dr. Zabdiel Boylston to perform the procedure as he was closely located. Once they had the procedure, they foolishly returned to the school. Interestingly, it is known that many students underwent inoculation, but none of the college records show the same students as having taken extended leaves of absences,[99] which should have occurred with a smallpox infection. With the large number of students, it was soon realized that the situation was getting out of control and the whole town was at risk. Special hospitals were set up in neighboring communities that could hold the patients while they recovered. One was called Spectacle Island[100], and it was intended to keep the healthy students from being infected, as well as the surrounding community members. Even with this attempt at protection, a problem arose when students would make a day trip to go and visit friends who were patients, and then return to the college on the same day. This only helped to spread the infection further. In retaliation, a rule was soon started that students were no longer permitted to visit others at the inoculation hospital and then return to the school, nor were those that had undergone the procedure allowed to return for a week after they were over the disease[101]. Harvard was also quick to notice that many students were missing large portions of the semester. While the school never officially closed, it reduced the quarter bills to half tuition due to the large amounts of absences[102]. Harvard even broke one of its own cardinal rules by allowing the graduates to accept their degree without being present at the graduation ceremony[103]. Normally, you were required to be present to accept the diploma. However, the school thought it best to avoid large gatherings of people in an attempt to avoid possibly spreading the disease.

Slowly, inoculation became more and more accepted throughout the colonies. It appears as though the colony of New York did not take a strong stance on the practice. They also tended to remain detached from arguments between colonies. No actual printed material from the colony has been found to mention inoculation, but references to the procedure were made in some articles. It can therefore be assumed that it was not a completely foreign idea[104], but, at the same time was not something that was in constant debate. Through ads found in the local New York papers, it appears as though

[99] Burton, "The Awful Judgment of God Upon the Land," 497.
[100] Ibid, 498.
[101] Ibid, 498.
[102] Ibid, 500.
[103] Ibid, 504.
[104] Gronim, "Imagining Inoculation," 251.

inoculation was something that was accepted by the majority of New Yorkers. There were many ads for those that could perform the procedure. The situation was ideal for widespread acceptance of the new technology: an urgent threat, a set of clear directions, and the concrete local experience of its efficacy"[105]. There were many doctors offering to perform inoculation for certain fees, with reports coming from all over the large colony. Outbreaks in 1738 and again in 1746 were causes for concern among New Yorkers as the younger population was once again in the primary risk group. In both instances, New Yorkers tried to curtail the effects of smallpox by dramatically cutting back on the circulation of people and goods[106], in some cases closing off the movement of goods all together. While in some cases this embargo did help to restrict the spread of the disease, most areas experienced minimal changes in the number that were infected.

Those that Supported the Process of Inoculation

In 1722, Isaac Greenwood published *A Friendly Debate* which attacked both sides of the smallpox debate. He criticized Cotton Mather because he "presented a treatise in Latin which his neighbors didn't understand[107]", and yet he could not denounce it entirely because he knew the implications of such a procedure. The Harvard *Telltale* also contributed to the debate when it published the debates of Dr. Hurry and Dr. Waitfort. Dr. Hurry was in support of inoculation, while Dr. Waitfort was against. They wrote back and forth to each other asking questions such as; Is inoculation a sin? Is inoculation self-induced illness? Is refusing to be inoculated against God's reason? If bleeding is acceptable, why not inoculation?[108] For those that read the debate, it is quite possible that they aided the colonists in which side to choose.

There were many prominent men in favor of inoculation, not including Cotton Mather and Zabdiel Boylston. Some of these men included Increase Mather, Benjamin Colman, Thomas Prince, John Webb, and William Copper, who were all ministers in favor of the practice of inoculation[109]. Many times, they, like Cotton before, had attempted to argue for God's support of inoculation in order to convince the local population. These men believed in a discovery of something that would protect citizens from such an awful disease. They believed inoculation was a gift from God and should

[105] Ibid, 252.
[106] Ibid, 252.
[107] Burton, "The Awful Judgment of God Upon the Land," 499.
[108] Ibid. 496.
[109] Roger P. Zelt, "Smallpox Inoculations in Boston, 1721-1722," *Synthesis: The University Journal in the History & Philosophy of Science* 4, no. 1 (1977), 7.

be used and seen as such[110]. Usually, those that were in favor of inoculation were highly educated, politically conservative, religiously orthodox, and members of the upper portion of the Boston socioeconomic strata[111]. If Cotton Mather was indeed writing his arguments in Latin, these educated men would have been the only members of society that could have read it. The position of these men also proved to be important for convincing the rest of the community, as these were the people that were in places of power. One other important person that became a strong supporter of inoculation was Benjamin Franklin. After losing a son to the illness, he wrote a preface to a pamphlet published on the topic and distributing it free to the poor of Philadelphia[112]. He proved to be an important character to have on the pro-inoculation side of the argument, as he had a lot of power of conviction.

Dr. Hurry, the same man who wrote for the Harvard *Telltale,* argued that inoculation improved the chances for survival and should be encouraged despite the anti-religious sentiment[113] surrounding it. In New Jersey, the Reverend Colin Campbell created a commotion in 1759 by inoculating his own family in order to demonstrate to the community the benefits of inoculation[114]. Another supporter was Thomas Robie, who was on staff at Harvard, and was also a member of the Royal Society. He had himself inoculated, and in so doing, helped the process of inoculation by reporting back to the Society in London[115]. He had many favorable reports which were then shared with the colonies once they were published. It was important that these prominent men be involved in the positive feedback of inoculation because many of the colonists believed that those "who made the claim that something was true was often as important as what the claim was[116]." A regular person certainly would not have paid the same amount of attention to Onesimus as Cotton Mather did.

Those that Did Not Support the Use of Inoculation

Just as God was used as a reason to accept the practice of inoculation, God was also used to discredit it. The general belief at the time was that God controlled whether a person became sick or not. Those that got an illness were sick because they had made

[110] Ibid.7.
[111] Ibid, 12.
[112] Morris, "Smallpox Inoculation in the American Colonies 1763-1783." 48.
[113] Burton, "The Awful Judgments of God Upon the Land," 496.
[114] Larry R. Gerlach, "Smallpox Inoculation in Colonial New Jersey: A Contemporary Account," *Journal of the Rutgers University Libraries* 31, no. 1 (1967), 22.
[115] Winslow, *A destroying angel,* 43.
[116] Gronim, "Imagining Inoculation," 249.

God angry and were facing his wrath[117]. For this reason, religion would prove to be the hardest factor to overcome in the attempt to gain support for inoculation. Puritans thought that the procedure was a sin because it was performed by a healthy person[118]. The person that performed the inoculation was then responsible for infecting a person with smallpox, the worst disease known at the time. The Puritans also thought it was a sin of pride to get inoculated because that person was attempting to put themselves above God's will[119]. Dr. Waitfort rejected inoculation for the very same reason. He felt that illness was a punishment sent by God and he questioned the appropriateness of the precautionary measure[120]. If God caused a person to obtain an illness, certainly they had done something that deserved a punishment. By making someone immune to a punishment, God's wrath could not be felt and people would not remain fearful. James Franklin, who was Ben Franklin's father and owned one of the best printing shops in Boston, was one of the staunchest anti-inoculation supporters in the colonies. He started the 'Hell Fire Club' in the New England Courant which appealed to those that were dissatisfied with the Anglican and Puritan orthodoxy. He was helped in this endeavor by John Checkley[121]. He proved an interesting comparison to his son, Benjamin, who fully supported the procedure. Along with Franklin, there were other's that argued inoculation, with its roots in Africa, Asia, and the Middle East, was a heathen practice not suitable for Christians[122]. It was especially discarded in the colonies because it originated in un-Christian lands and had no bearing in the Christian religion on which they based their lives.

William Douglass was twelve years younger than Boylston when smallpox broke out among the citizens of Boston in 1721. He was Scottish by birth and had attended Universities all over Europe[123]. In his mind, you could not learn outside of the classroom, and you were not an actual doctor unless you had a degree from a University[124]. Since many of the physicians in the American colonies would have not met this criterion, many of his objections stemmed from this belief[125]. He states

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[117] Zelt, "Smallpox Inoculations in Boston, 1721-1722," 6.
[118] Ibid, 6.
[119] Ibid, 6.
[120] Burton, "'The Awful Judgments of God Upon the Land," 496.
[121] Zelt, "Smallpox Inoculations in Boston, 1721-1722," 12.
[122] http://ocp.hul.harvard.edu/contagion/smallpox.html. Although citations are not available for this particular source, it does come from the Harvard library website.
[123] Winslow, *A destroying angel,* 42.
[124] Ibid, 42.
[125] Ibid, 42.

frequently in his writings that "simply reading books does not make someone qualified to practice medicine"[126]. In an interesting twist of fate, Douglass was the person that originally gave the Timonius letter to Cotton Mather[127]. In essence, it was this action that started the inoculation controversy that occurred in the first place. If the two men were friends before the controversy, they certainly were not now, as Douglass publically declared that the church "ought to deliver him over to Satan [Cotton Mather][128]." He was not alone, however, as a printer he refused to print something of Mather's because he claimed that Mather was "rash in his proceedings of inoculation[129]." Douglass also considered the procedure rash and once said that he would never support such a procedure, especially "that detestable wickedness of spreading infection[130]." With his support firmly rooted among the anti-inoculation faction, he was also happy to observe that "all of Boston knows that several towns have declared against inoculation until further light on the practice[131]." By waiting to decide if inoculation was something that could be approved, some of the surrounding towns began to agree with Douglass's ideas.

Samuel Grainger was also a strong opponent of inoculation. He, however, came strictly from the religious side of the argument rather than the medical. In his pamphlet *The Imposition of Inoculation as a Duty Religiously Considered in a Letter to a Gentleman in the Country Inclined to Admit it*, he writes to a friend of his who is also a supporter of inoculation. "I know you to be a great admirer of this new practice; and with many inclin'd to believe it lawful" he states on the opening page[132]. He attempts to explain why the process should not be allowed. He firmly believed that the introduction of inoculation into society meant God's wrath would not be effective any longer[133].

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[126] William Douglass, *The abuses and scandals of some late pamphlets in favour of inoculation of the small pox, modestly obviated, and inoculation further consider'd in a letter to A- S- M.D. & F.R.S. in London* (Boston: printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf's school, 1722), 20. A.S. refers to Alexander Stuart in London.
[127] Ibid.
[128] Douglass, *The abuses and scandals of some late pamphlets in favour of inoculation of the smallpox,* 17.
[129] Ibid, 17.
[130] Ibid, 20.
[131] Ibid, 11.
[132] Samuel Grainger, *The imposition of inoculation as a duty religiously considered in a letter to a gentleman in the country inclined to admit it* (Boston: Printed for Nicholas Boone at the sign of the bible in Cornhill and John Edwards, at his shop at the head of King Street, 1721) 11. http://pds.lib.harvard.edu/pds/view/7910094
[133] Ibid, 18.

Generally, the harsher the infection, the more sins a person had[134], but the introduction of inoculation meant a person might not have to undergo any illness at all. Grainger also took the bible very literally, as any good Puritan would have done. In Leviticus 19:18, God says that everyman should love thy neighbor as thyself. According to this law from God, as well as the commandment which states "thou shall not kill", Douglass believed that death by inoculation would be cause for a physician to be hanged[135]. For this reason, he also did not approve of inoculation because there was the possibility of it causing an outbreak of smallpox. This could have affected other people in a harmful manner in such a way that the bible would not have approved[136]. He was also uncomfortable with the information that the practice had first been performed and "practiced by present enemies of the cross of Christ, and infidels, who sacrifice their fellow creatures as a peace offering to the devil[137]." In a final statement, he says "is not the practice of inoculation a wall of untempered mortar…doth it not strengthen the hands of the wicked…and do not you promise him life to declare that none ever died under inoculation[138]." In promising that the procedure was completely safe, it went against the idea that God used illness as a form of punishment. In terms of religion, inoculation became a controversial issue.

Many prominent colonists were against inoculation as well, and they helped to pass laws which made the procedure illegal. William Nelson, a colonial leader stated that "if I had the power, I would hang up everyman that would inoculate even in his own house[139]." The threat of spreading smallpox from the inoculated individuals was considered too great even when performed in a controlled environment. Some colonies felt that sanctions and laws were necessary in order to prevent inoculations from being performed and therefore preventing spread of smallpox. Outright prohibition or strict control of the procedure was enacted in New York, New Hampshire, Connecticut, Maryland and Virginia[140]. These would remain laws in these colonies for many years after they were put into place.

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[134] Ibid, 18.
[135] Morris, "Smallpox Inoculation in the American Colonies 1763-1783," 48.
[136] Douglass, *The Abuses and Scandals of some Late Pamphlets in Favor of Inoculation of the Smallpox*, 27-28.
[137] Ibid, 36.
[138] Ibid, 21.
[139] Philip Ranlet, "The British, Slaves, and Smallpox in Revolutionary Virginia," *The Journal of Negro History* 84, no. 3 (Summer 1999), 218.
[140] Ann M. Becker, "Smallpox in Washington's Army: Strategic Implications of the Disease During the American Revolutionary War," *The Journal of Military History* 68, no. 2 (2004), 387-388.

Smallpox in the Colonies

As mentioned previously, one of the greatest sources bringing smallpox into the colonies was ships from all over the world. Trade ships were not usually the original source of the disease, but it did contribute in some areas. The main source was usually slave ships. Often, these ships would come straight from the continent of Africa, making no stops in between. Once the colonists were able to determine that these ships were the contributing factor, they began to stop them from entering the harbors. Often, these ships were held in limbo regardless of evidence of smallpox. In most cases, smallpox was indeed present, having come from Africa with the captured slaves. In 1758, Henry Laurens, a southern property owner, stated that "40 slaves were lying in Quarantine on account of the smallpox aboard a ship and the Matilda of Bristol arrived from Callabar, a port on Niger River, with 170 slaves infected with smallpox and must be quarantined as well[141]." However, as one of the land owning elite, Laurens realized the problem of holding all these slaves in the harbor. Quarantine caused many slaves to die of both smallpox and living conditions. At the time, they also were needed to man the warships in the harbor[142] and were instead going to waste in the harbor. This was also a problem because no one from these ships was allowed to come onto land until all the cases of smallpox had run their course onboard the ship[143]. Essentially, ships were stuck floating in the middle of the harbor for a minimum of 30 days while those that had contracted smallpox were cured. The guarantee of slave ships soon became a bigger problem when it was discovered that smallpox was ravaging the Gambia (Niger) River, which is where the majority of slaves originated at the time[144]. The American slave trade was greatly affected because many of the ships were quarantined and the cargo could not go to the slave market to be sold. The traders that dealt in slaves were losing a lot of money as slaves died, and needed an alternative option. A solution was soon discovered that the ships could stop in the West Indies first to unload cargo rather than undergo Quarantine in the colonies[145]. This attempted boycott of the American colonies greatly affected the slave market since most of the business had moved to a different location. While the theory behind the quarantine of these ships was a great idea, in practice, it was not successful and smallpox made it into the settlements anyway.

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[141] Philip M. Hamer, ed., *The Papers of Henry Laurens Volume I* (Columbia: University of South Carolina Press, 1968) 250-251.
[142] Ibid, 252.
[143] Ibid, 264.
[144] Ibid, 275.
[145] Ibid, 289.

With the oncoming threat of smallpox from all locations, "thousands of persons resorted to inoculation as the lesser of two evils[146]" in an attempt to avoid the disease in its natural form. By attempting to protect themselves and their families, those that chose to inoculate became enemies of their neighbors. The ever present threat of spreading smallpox from the inoculation process made the population extremely fearful of the procedure. On January 23, 1764 Boston passed laws which forbid inoculation unless an epidemic was declared[147]. Despite the creation of this law the first inoculation hospital was authorized on February 8, 1764 outside of Boston at Point Shirley[148]. It was approved by the town council for specific instances. Boston was the first to enact a law such as this, and the city was soon followed by other colonies and towns. On January 19, 1763 Governor James Wright issued a proclamation that imposed a strict quarantine around Charleston, South Carolina[149]. Citizens were not allowed to leave the house if someone was infected with smallpox, nor were ships allowed to come into the harbor. In Virginia, citizens believed that inoculation created more cases of smallpox than it cured. They were vindicated when, in 1768, it was charged that inoculation has caused an epidemic in Williamsburg, the capital of the colony[150].

The process of inoculation caused a great deal of fear, and for this reason, the procedure caused many social problems. Norfolk, Virginia was the location of riots involving inoculation. In June 1768 and again in May 1769, confrontations in Norfolk between pro-inoculation and anti-inoculation factions resulted in riots following the early release of some patients from a smallpox hospital[151]. Citizens that lived near both the hospital and the homes of the released patients were fearful that the area would become contaminated with smallpox and cause an outbreak. In 1768, the riot grew out of the desire for Dr. Archibald Campbell and some of his Norfolk friends to have their wives and children inoculated[152]. He wanted to have all the members of his family inoculated at the same time, allowing for the whole family to experience disease simultaneously. When several concerned citizens discovered that the illegal procedure had been performed, rioters went to the house and demanded the movement of patients to the pest house, which was a location where extremely sick individuals were taken to be removed

[146] Morris, "Smallpox Inoculation in the American Colonies 1763-1783," 48.
[147] Ibid, 48.
[148] Ibid, 48.
[149] Ibid, 52.
[150] Ibid, 50-51.
[151] Frank L. Dewey, "Thomas Jefferson's Law Practice: The Norfolk Anti-Inoculation Riots," *Virginia Magazine of History & Biography* 91, no. 1 (1983), 40.
[152] Ibid, 41.

from public[153]. To pacify the rioters, it was agreed that the patients would indeed be moved to the pest house when they were in the proper condition to do so. The following night, a mob came and "drove the patients to the pest house" in foul weather[154], making their condition worse. Without thinking of the effects on the surrounding population, this movement caused large numbers of people to be exposed to the deadly illness. These patients countered by bringing a suit against the rioters. Before going to court, the case was then grouped with some that Thomas Jefferson was defending[155]. Jefferson became involved in the cases in April of 1770, about the same time the patient's case was brought before the General Court[156] of Virginia. On May 1, Jefferson was employed by Dr. Campbell, one of the plaintiff's, to assist in the prosecution of the rioters. By October, Jefferson was leading counsel for the pro-inoculation side of the case[157], which was also the side of the argument that he heartedly supported. Due to the results of the case, 1769 brought a proposal to the House of Burgesses. It requested that the practice of inoculation be banned all together. In 1770, an official act was passed into law with a fine of 1,000 pounds for anyone who willfully imported any smallpox material[158]. Strangely, the law also stated that anyone exposed to smallpox could apply for a license to be inoculated in defense[159]. In 1777, this law was amended so that anyone might be inoculated after obtaining written consent of the majority of the house keepers within a two mile radius[160]. Thomas Jefferson was actually a member of the legislative committee which enacted the law and had his own children inoculated under the same law in 1782[161].

Despite Virginia's wholehearted distrust of inoculation in the beginning, some colonies were not so suspicious. Charlestown, South Carolina, was one of these areas. They decided to allow inoculation, but not without stipulations. When the citizens thought that the disease had lingered longer than it should, they pressed the general assembly to outlaw inoculation. They asked that anyone found guilty of receiving and

[153] Ibid, 41.
[154] Ibid, 41.
[155] Ibid, 42-43.
[156] Ibid, 46.
[157] Ibid, 48-49.
[158] Morris, "Smallpox Inoculation in the American Colonies 1763-1783," 51.
[159] Ibid, 51.
[160] Ibid, 52.
[161] Dewey, "Thomas Jefferson's Law Practice," 52-53.

communicating the disease would be fined 500 pounds[162]. The General Assembly listened but decided to enact rules that were slightly different. After June 15, 1760, anyone who performed inoculations, or caused infection in anyone within two miles of Charlestown, was subjected to a fine of 100 pounds. Anyone inoculating slaves, or whose slave came down with the disease, might suffer three months imprisonment unless they swore the offense took place without their knowledge[163]. It had become a serious offense to consider being inoculated. Despite the laws that prohibited the process of inoculation, they seemed to have had little effect on the public practice[164]. Many citizens continued to inoculate themselves and their families in an effort to prevent them from getting smallpox in the natural way.

One important citizen who decided to undergo inoculation was John Adams. He was the grandson of Dr. Zabdiel Boylston,[165] who had performed the first inoculation in the American colonies. In an effort to not catch smallpox in the natural way, he decided to have himself inoculated. Under the care of Dr. Nathaniel Perkins and Dr. Joseph Warren, he and his brother were inoculated in the winter of 1764[166]. The procedure was performed in Boston, enabling him to remain close to home, and to Abigail. The two men were given the preparation as done in the original style. This involved the consumption of milk and mercury for two weeks prior to the addition of the smallpox matter. In a letter to a friend, Adams states that "every tooth in my head became so loose that I believe I could have pulled them all with my thumb and finger[167]," a serious side effect of mercury consumption. Having had a very mild experience with the smallpox, Adams lives to tell about the time he spent in confinement. In a letter dated April 26, 1764, Adams joins his eventual wife Abigail in sadness that she was not inoculated at the same time[168]. For the purpose of her safety, he hoped that a smallpox hospital would be opened in Germantown, near enough to her so that she might undergo the procedure. He

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[162] Suzanne Krebsbach, "The Great Charlestown Smallpox Epidemic of 1760," *South Carolina Historical Magazine* 97, no. 1 (1996), 31.
[163] Ibid, 36.
[164] Ibid, 37.
[165] John Adams, *Autobiography (through 1776)* Adams Family Papers: An electronic archive. Massachusetts Historical Society [hereafter called MHS]. http://www.masshist.org/digitaladams/, 2.
[166] Ibid, 9.
[167] Ibid, 9.
[168] John Adams, *Autobiography (through 1776) Journal entry page from April 26, 1764*, Adams Family Papers: An electronic archive. Massachusetts Historical Society [hereafter called MHS]. http://www.masshist.org/digitaladams/.

even wrote that he would go anywhere to nurse her in her time of illness[169] since he would already be immune to smallpox.

Smallpox and the American Indians

The American colonists had legitimate concerns with regards to catching smallpox, but, the group that should have been the most fearful were the American Indians. Smallpox had been decimating Native American populations since it had first appeared on the North American continent. They were a fresh population for many illnesses that the Europeans brought with them. Europeans had built up immunity towards certain illnesses long before, and individuals in Europe had been exposed since birth. On first contact with Europeans, the Indians had never been exposed to any of these diseases, and even the simplest of illness could kill off large portions of the population. Those that survived were then responsible to find a cure for future infections. Charles Wolley, who spent two years in the American colonies in the 1690s, considered the Native Americans use of sweat houses, followed by a plunge in a river as generally effective[170]. He was quick to point out that this "proved Epidemical in Small-pox" since the cold river water hindered the emergence of the pox[171]. In addition to their use of sweat houses, Native Americans' also had a habit of smearing themselves with animal fat, which closed their pores and attempted to hold the pustules in the body, preventing their emergence on the outer surface of the skin[172]. It is unknown how effective this treatment actually was, but it did remain the chosen method of prevention among the Native Americans.

One of the major events that brought Native Americans into contact with European settlers was the French and Indian War, which took place from 1754 to 1764. In this series of battles, many Indian tribes chose to fight on the side of the French[173], who they felt had treated them better than the British. The war brought with it the emergence of smallpox as people began to move around, and many of the tribes had never been exposed to smallpox. This was especially true for those that were from western tribes[174]. Smallpox feeds on populations that were involved in war because they

[169] Ibid.
[170] Gronim, "Imagining Inoculation," 259.
[171] Ibid, 259.
[172] Ibid, 259.
[173] D. Peter MacLeod, "Microbes and Muskets: Smallpox and the Participation of the Amerindian Allies of New France in the Seven Years' War," *Ethnohistory* 39, no. 1 (Winter 1992), 43.
[174] Ibid, 47.

moved around a lot, exposing new groups frequently. The native populations were a perfect area to begin an epidemic. In the fall of 1757, word reached Canada of an outbreak of smallpox among the western ally tribes, who had carried smallpox back to their tribes and ended up paying a terrible price for their support of the French[175]. Here, smallpox made astonishing progress by infecting large numbers of people as causing mass causalities. The leaders of these tribes were well aware that they had contracted the illness during their sojourn in the central theater[176], which ended up causing the Indians to turn against the French and threaten a war against them[177]. This was short lived, however, as the French felt terrible for their part in the destruction and offered many gifts in an attempt at appeasement. On November 28, 1760, with the war finally over, the Hurons, Weas, Potawatomis, and Ottawas of Detroit informed the departing French commandant, in the presence of British officers, that the French surrender did not apply to them and that "they would never recognize the King of England as their Father and leader[178]."

Smallpox also affected the Indian population in other areas as well. Smallpox hit Fort Pitt in 1763 and again in 1764, both of which are thought to have been caused by the evacuation of people from Pittsburg when smallpox hit that area. The evacuation of Pittsburg was called for on May 30, and citizens were to go to Fort Pitt[179]. However, the Indians that had survived the first bought of the illness in 1763 would have then been immune to the second wave of 1764. Their immunity would have been a small comfort to the decimated population of these tribes that actually remained. William Trent, an Indian trader at Fort Pitt, wrote in his diary on June 24, 1763 that "out of our regard to them, we gave them two blankets and a handkerchief out of the smallpox hospital[180]." Native American populations were still hated by many of the colonists, even those that worked closely with them. It was always a hope that smallpox would wipe out an entire tribe, allowing free access to the land that they had previously inhabited. Infecting local tribes with smallpox purposely was an idea mentioned in journals of local men. The date of June 24, 1763 was mentioned as being the date of infection, and the idea was to give Native Americans blankets infected with smallpox. However, it is believed that the exchange never actually took place, or if it did, it did not work. This can be concluded

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[175] Ibid, 49.
[176] Ibid, 49.
[177] Ibid, 51.
[178] Ibid, 53.
[179] Philip Ranlet, "The British, the Indians, and Smallpox: What Actually Happened at Fort Pitt in 1763?" *Pennsylvania History* 67, no. 3 (2000), 435.
[180] Ibid, 428.

because Native Americans that were targeted were mentioned a month later as being in attendance at a meeting with some of the settlers[181]. If they had truly been infected with smallpox, the meeting would have been around the time of full progression of the disease. In order to test the effectiveness of the smallpox blanket idea, a scientific experiment was performed to determine whether it could have worked. The experiment determined that infected clothing, stored in a wooden box, could remain contagious for as long as 66 days[182]. The same experiment also concluded that "when clothing was spread out on a bed and exposed to indirect light" the smallpox virus on the clothing was dead "after 7 days"[183]. It does appear as though the attack could have worked if done properly, but evidence suggests that the plan was never acted upon.

Another problem that occurred among the native population was the large death rate associated with the disease. Very few people remained to continue a traditional lifestyle. In one case, South Carolina's Indian allies were decimated by a smallpox outbreak. King Hagler of the Catawbaw was unable to maintain the defensive position his tribe held against the Cherokee because he had only sixty men remaining to fight, instead of the usual hundreds[184]. This lack of males not only affected the populations in time of war, but in everyday life as well. Smallpox killed off the hunters, those that worked the fields, mothers, fathers, and town elders, just to name a few. Tribes were faced with the performance of many death rites, and a change in the traditions of tribes.

Smallpox and the American Revolution

The Americans

At the start of the American Revolution, colonies were still struggling to stay atop smallpox and the effects that it caused. In an attempt to combat the disease, smallpox hospitals were set up in inconspicuous locations in most colonies. Having gotten over the fear of inoculation in many locations, it now became an approved method of prevention. In 1771, The New London Gazette announced the partnership of Dr. John Ely and Dr. William Tallman of New York in opening a smallpox hospital, which as to be located on Duck Island outside of Saybrook, Connecticut[185]. After a successful opening, Dr. Ely purchased the island outright in 1775[186]. The town selectman could then

[181] Ibid, 428.
[182] Ibid, 434.
[183] Ibid, 434.
[184] Krebsbach, "The Great Charlestown Smallpox Epidemic of 1760," 33.
[185] Newton C. Brainard, "Smallpox Hospitals in Saybrook," *Connecticut Historical Society Bulletin* 29, no. 2 (1964), 57.
[186] Ibid, 57.

annually grant permission to perform inoculation on the island, which could accommodate 30 or 40 patients at a time[187]. Many felt as though this was a step in the right direction, as it did allow inoculation to be performed in some manner.

The variola virus, or smallpox, loves the conditions that are present during a war. It spreads most virulently in unsanitary and crowded conditions, and the disease especially flourished when large groups of previously unexposed populations converged, as they did in army camps during the Revolutionary War[188]. Ever since the beginning of the war and the gathering of troops, smallpox joined in the fight as well. George Washington assumed command of the Rebel forces in Boston. The year was 1775, and smallpox was on the rampage among the troops[189]. Boston had been under siege for 9 months by the Americans after the British captured the city[190]. During the siege, Washington had restricted camp access, checked refugees, and isolated his troops from the contagion to avoid the spread of disease[191]. At this time, inoculation was illegal in the army. Washington did want to risk infecting healthy members of his troops, and the most likely cause of smallpox in the field was from soldiers who had attempted to inoculate themselves and ended up infecting other people. In a direct order from General Washington, officers were to examine troops and prevent inoculation among them. For any soldier caught being inoculated, there would be a severe punishment: any officer caught would be discharged with his name published in the papers as a traitor and enemy to the country[192]. A General Order, which was sent to the entirety of the American forces, stated that "no person belonging to the army is to be inoculated for smallpox, and those currently in the process or that come down with the infection are to be removed to Montresor Island and any violations will be punished[193]". The desire of the soldiers to protect themselves from smallpox severely curtailed Benedict Arnold's ability to sustain an effective army in the field. Having seen the fatal consequences of smallpox taken the natural way, American prisoners and soldiers in Canada insisted on self-inoculation[194]. Arnold even went as far as to forbid the procedure in orders dated February 11 and March

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[187] Ibid, 57.
[188] Becker, "Smallpox in Washington's Army," 389.
[189] Ibid, 393.
[190] Ibid, 393.
[191] Ibid, 397.
[192] George Washington and United States George Washington Bicentennial Commission., *The writings of George Washington from the original manuscript sources, 1745-1799* (Washington: U.S. Govt. Print. Off., 1931), volume 7, 82-83.
[193] Ibid, volume 5, 63.
[194] Becker, "Smallpox in Washington's Army."

15, but the smallpox danger was so real to the soldiers that they refused to stop. Though inoculation was punishable by death at that time, Charles Cushing acknowledged that "it was practiced secretly, as they were willing to run any hazard rather than take smallpox the natural way[195]." Hoping to curtail the effect of the disease, Arnold wrote to the congressional commission charged with monitoring the condition of the Northern Army on May 15th: "I should be glad to know your sentiments in regards to inoculation as early as possible. Will it not be best, considering the impossibility of preventing the spreading of smallpox, to inoculate five hundred or a thousand men immediately, and send them to Montreal…which will prevent our army being distressed hereafter." The next day, with the commission's acquiescence, Arnold instituted a short-lived policy permitting the procedure[196]. It was not only the soldiers that could be infected, but the officers as well. The Canadian campaign was abandoned after the death of Major General John Thomas of smallpox. Without their leader, the Northern Army struggled to even retreat[197]. On July 29, 1776, Washington received word from General Horatio Gates on the Canadian campaign.

> "Everything about this army is infected with the pestilence; the clothes, the blankets, the air, and the ground the troops walk on. To put this evil from us, a general hospital is established at Fort George, where there are now between two and three thousand sick, and where every infected person is immediately sent. But this care and caution have not effectually destroyed the disease here; it is not withstanding continually breaking out[198]."

The Revolution hung in the balance of the fight against smallpox. Unfortunately, in the beginning smallpox was winning.

One of the first things that the British did upon entering the colonies was to take over the town of Boston. This was one of the most important cities at the time, and the capture was a serious blow to the rebel cause. As if in an act of redemption for the colonists, as soon as Boston had been captured, smallpox began its attack. Not only were the British soldiers at risk, but those citizens that had remained behind in Boston were also in the warpath. In July 1776, General Ward refused to permit non-immune troops to enter Boston in an effort to prevent the spread of the disease. This was especially enforced in the case of New England troops who were careful to avoid exposure to

[195] Ibid, 414-415.
[196] Ibid, 415-416.
[197] Ibid, 419.
[198] Ibid, 420.

smallpox due to their high susceptibility[199]. Most New Englanders had never been in contact with the disease during their lifetime since the majority of recent outbreaks had been in the southern colonies. Charles Cushing, a soldier in the Continental Army, wrote to his brother from Canada that "The New England forces had begun to be very uneasy about the small-pox spreading among them, as but few of them have had it[200]." To make matters worse, Washington experienced difficulty arranging for the inoculation of his soldiers. He found it necessary to work with local authorities in New England to request their permission to inoculate his troops[201] because so many had laws against it.

During the capture of Boston by the British, many inhabitants became sick with the smallpox virus. In an attempt to rid the city of disease, the British began to send the infected citizens out of the city on ships and send them down the river or into the harbor. In one instance, a ship of 300 Boston inhabitants arrived off Point Shirley. Shortly afterwards, some of the passengers started dying of smallpox and the ship was not allowed to enter Cambridge[202]. In an effort to stop the spread of smallpox, anyone who left camp to go to Boston was not allowed back once they returned to camp[203]. When the British finally abandoned Boston, Washington blamed them for spreading the smallpox virus and was afraid of further spread. Despite the absence of the British, soldiers were required to have expressed orders to leave Cambridge or to enter Boston[204]. In many cases, those that had already acquired immunity to smallpox were allowed into Boston, but were required to undergo a form of decontamination before returning to the American camps.

George Washington himself was a strong supporter of inoculation. As a young man, he had acquired smallpox the natural way. In 1751, Washington traveled to Barbados with his brother Lawrence, who was suffering from tuberculosis, with the hope that the climate would be beneficial to Lawrence's health. Washington contracted smallpox during the trip, which ended up leaving his face slightly scarred, but gave him

[199] Ibid, 403.
[200] Ibid, 403.
[201] Ibid. 388.
[202] Washington and United States George Washington Bicentennial Commission., *The writings of George Washington from the original manuscript sources, 1745-1799*, volume 4, 118.
[203] Ibid, 122.
[204] Ibid, 389.

immunity to the dreaded disease in the future[205]. He knew that inoculation was not widely supported, however, and chose to keep his views on the subject quiet during the heated debates. During the Revolution, Washington's stepson Jack was inoculated in 1771 in Baltimore, while Martha was inoculated in Philadelphia on May 31, 1776. He wrote in his journal that "Mrs. Washington is now under inoculation, has very few pustules, and is not allowed to write for fear of conveyance[206]." But, smallpox continued to attack the vulnerable troops, leaving many soldiers out of commission and leaving an even smaller number of soldiers available to fight at any given time. In January 1777, however, Washington instituted a new military strategy to protect his troops and sustain the Revolution: systematic troop inoculation[207]. In a letter to Dr. William Shippen, Jr. dated January 6, 1777, Washington makes the first declaration of his decision. "I have determined that the troops shall be inoculated," he wrote, knowing that he could then control the number that had the disease, and the lessened effects that occur after inoculation would have been better than a full scale infection[208]. For this reason, he wanted to begin systemic inoculation as soon as possible. At the time of his declaration, Philadelphia was in the midst of a smallpox outbreak. This caused Washington to forbid the Southern troops from entering Philadelphia. He told them instead to remain in Germantown, just outside the city[209]. Many of the southern troops had never been exposed to smallpox because cities in the southern colonies were so spread out. Washington actually took a great military risk by instituting mass inoculation. The preventive measures needed to eliminate smallpox induced the disease, which thereby effectively removed large numbers of soldiers from active duty. This affected his ability to function militarily[210]. It also proved difficult because the need for secrecy was great, as the British would have had a significant advantage if had they known of the debilitated condition of the American troops as they recovered from smallpox[211]. Washington knew

[205] http://en.wikipedia.org/wiki/George_Washington%27s_early_life The citations for this information can be found on the website, but they all come from biographies and writings on George Washington.
[206] Ibid, volume 5, 93.
[207] Becker, "Smallpox in Washington's Army," 390.
[208] Washington and United States George Washington Bicentennial Commission., *The writings of George Washington from the original manuscript sources, 1745-1799*, volume 4, 473.
[209] Ibid, volume 7, 72-73.
[210] Ibid, 129.
[211] Ibid, 129.

that the war was slowly starting to unravel, and made inoculation "of greatest importance[212]."

Despite the addition of inoculation to the military program, it was slow to become beneficial. In theory, inoculation was a great idea, but in actual practice, each inoculated soldier was out of commission for about a month until they recovered from the disease. Washington was certainly mindful of numbers at this point in the game. Many soldiers were already either sick or about to be dismissed once their enlistments were up, and, to make matters worse, recruitment was not going well. "The general backwardness of the recruiting service, to which must be added the necessary delay of inoculation, makes me fearful that the enemy will be enabled to take the field before we can collect a force any ways adequate to making proper opposition[213]" he wrote one day, conveying his frustrations. The dire situation meant that Washington had to start making some choices. On May 7, 1777, a general order was served to the troops which stated that invalids were to remain behind once the rest of the battalion moved on. They were to guard the stores of ammunitions while they recovered from smallpox[214]. By using these sick soldiers in an effective way, Washington could increase the number of active troops. This increased the amount of the population which was working in the battles and helped to lower the amount of soldiers needed through recruited. Although the program was slow to be implemented and slow to take effect, Washington was still in full support of the venture. In June 1777, he claims that the practice of inoculation is safe with only a few steps required to make the patient comfortable[215]. He also wanted to discourage the Impolitic Act of Virginia, which would allow every child to be inoculated in an attempt to prevent smallpox, and failure to do so would result in penalties for the parents[216]. Clearly, Washington was a strong supporter of inoculation, evident by his push to make inoculation mandatory. Finally, a general order issued on April 18, 1778 called for the recruited soldiers to be sent to their regiments, and then to receive inoculation once they had arrived in the field. This meant that the new recruits had to avoid infected towns along the way to their regiment so that they were not infected in the natural way[217]. Even by changing the process to inoculate in the field, he still had a hard time getting all the regiments to participate. In some cases, his orders were ignored and special letters had to

[212] Ibid, 129.
[213] Ibid, volume 7, 314.
[214] Ibid, volume 8, 28.
[215] Ibid, 158.
[216] Ibid, 158.
[217] Ibid, volume 11, 143.

be sent to some regiments, especially in the North. They had been told to inoculate all soldiers who had not had the disease, and not to wait until smallpox appeared[218].

One of the main reasons for Washington's concern in the spread of disease involved the British using smallpox against the Continental army in several locations as a form of bio-warfare. Lord Jeffery Amherst had been accused of using smallpox against the Native Americans in the French and Indian War. While there is strong evidence that argues this never happened, there is sufficient evidence that he used smallpox against the Continental troops in the American Revolution. In January of 1775, a gentleman in Boston asserted that British "soldiers try all they can to spread the smallpox but I hope they will be disappointed[219]." Seth Pomperoy, who knew General Gates from the French and Indian War said "if it is in General Gates power I expect he will send ye smallpox into ye army[220]." However, George Washington was not suspicious until an informant told him that "our enemies in that place had laid several schemes for communicating the infection of the small-pox, to the Continental Army, when they get out of town[221]". This refers directly to the evacuation of Boston by the British. Before they left, the British attempted to leave items infected with smallpox behind for the Continentals to find. However, they did try and use bio-warfare first. In 1775, 150 inhabitants of Boston were released from behind the city walls[222]. While this seemed like a nice gesture in releasing prisoners, it was in fact an attempt at bio-warfare. Some of the colonists who were released had been infected with smallpox and now ran the risk of infecting the rest of the surrounding troops[223]. On December 3, 1775, Robert H. Harrison, the aide-de-camp in Boston, states that "four British deserters have just arrived at headquarters giving account that several persons are to be sent out of Boston. They have lately been inoculated with the smallpox, with the design, probably, to spread the infection to distress us as much as possible[224]." However, his was not the only report coming from Boston. Around the same time as Robert Harrison, Washington himself writes that "a sailor said that a number of people coming out of Boston have been inoculated with design of spreading

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[218] Ibid, volume 14, 23.
[219] Becker, "Smallpox in Washington's Army," 399.
[220] Ibid, 399.
[221] Ibid, 402.
[222] Washington and United States George Washington Bicentennial Commission., *The writings of George Washington from the original manuscript sources, 1745-1799*, volume 4, 162.
[223] Ibid, 162.
[224] Becker, "Smallpox in Washington's Army," 400.

smallpox through country and camp[225]." This would have caused a major problem as most of the troops in the Continental Army were stationed near Boston at the time. On December 4, 1775, Washington informed the President of Congress that the British were releasing Boston civilians contagious with smallpox out of the city to make room for military reinforcements: "By recent information…General Howe is going to send out a number of the Inhabitants[226]." At the time of this development, the fledgling country was being controlled by the Second Continental Congress and President Peyton Randolph[227]. They had been meeting since May of 1775, and had been the governing body that originally appointed Washington to the post of Commander in Chief[228]. The information on the action of the British could have been used to increase the patriotism of members of the community. There has been evidence that bio-warfare was used outside of Boston as well. It has been found that Sir Guy Carleton, the military governor of Canada, ordered or condoned sending contagious victims of smallpox into enemy lines with the intention of infecting the American forces[229]. It is not known whether this order was acted upon, as it would have been an easy way to eliminate enemies.

An avid writer, John Adams was in constant contact with his wife Abigail throughout his life. He hated to be away from her and their children. During a good portion of the war, he was in Philadelphia while she remained home in Massachusetts with the rest of the family. Through him, accounts of smallpox in the American forces began to make their way to Boston. Writing at a time when inoculation was still not legal in many parts of New England, Adams wrote to Abigail about his hopes for the people of Massachusetts. "I hope that measures will be taken to cleanse the army at Crown Point from the smallpox, and that other measures will be taken in New England, by tolerating and encouraging inoculation, to render the distemper less terrible[230]." He knew that the troops arriving from New England had most likely not been exposed to the illness, and were therefore more susceptible. By encouraging inoculation, he hoped to remedy at least some of the cases within regiments. As the war progressed, however, the tone of the

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[225] Washington and United States George Washington Bicentennial Commission., *The writings of George Washington from the original manuscript sources, 1745-1799* volume 4, 145.
[226] Becker, "Smallpox in Washington's Army," 402.
[227] http://www.history.org/almanack/people/bios/biorapey.cfm The official Colonial Williamsburg biography.
[228] Betty Burnett, *The Continental Congress* (The Rosen Publishing Group, 2004)
[229] Becker, "Smallpox in Washington's Army," 408.
[230] Letter from John Adams to Abigail Adams, 7 July 1776 [electronic edition]. Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

letters changed. "The smallpox is so thick in the country that there is no chance of escaping it in the natural way. General Washington has been obliged to inoculate his whole army. We are inoculating here (Baltimore) and at Philadelphia[231]." By inoculating at home or before they joined their group in the field, the hope was to raise a much more capable army that had already had the disease, even if it was a less severe version. With this information being spread throughout the colonies, Abigail wrote to John to let him know that "the fatal effects of the smallpox in Boston have led almost every person to consent to hospitals in every town. In many towns already around Boston the selectmen have granted liberty for inoculation[232]." However, this statement does not include the town of Boston itself, which would not rescind the law until most everyone had already done so. Despite the restriction placed on members of the Boston community, Abigail wanted to take action. Without discussing it with John, but knowing that he would approve, she had herself and the children inoculated in the summer of 1776. Knowing that her husband would be worried, she writes to him about the condition of the children. "Nabby had been very ill, but the eruption begins to make its appearance upon her, and upon Johnny," she writes a few days after the procedure. "Tommy is so well that the Doctor inoculated him again today fearing it had not taken. Charlie has not complained yet, tho his arm has been very sore[233]" at the incision site. Despite known causes of the disease via contact with others, Abigail mentions the day after she had been inoculated, she attended meeting in town[234]. This was exactly the reason why the procedure was banned from Boston in the first place. The fear of spreading the disease was much too great when people did not follow protocol. Nabby did almost die from smallpox, but managed to pull through, as did the rest of the family. Even with the fear that came from the procedure, John was very proud of her decision to have the children protected. Conversely, the mandatory inoculations of the army were not going as well. Many of the procedures were failing and the doctors could not understand the reason. "The Doctor's cannot account for the numerous failures of inoculation. I can. No physician has either head or hands enough to attend a thousand patients. He can neither see that the matter is good, nor that the thread is properly covered with it, nor that the incision is properly

[231] Letter from John Adams to Abigail Adams, 20 February 1777 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.
[232] Letter from Abigail Adams to John Adams, 14 July 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.
[233] Letter from Abigail Adams to John Adams, 21 July 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.
[234] Ibid.

made, nor anything else[235]." From information available, this would appear to be the case as so many men required the procedure and so few could perform it. The doctors were overwhelmed.

The end of war brought many changes in some areas, but few in others. Many more people accepted use of inoculation, but still a large number remained weary. When John and Abigail Adams travelled to France in 1785, Abigail wished to have some of their servants inoculated. Just in case something was to happen, she wanted to make sure that they were protected from the dreaded disease. On the first attempt, still in the United States, the procedure was refused to her due to the oncoming trip. "Dr. Clark would have inoculated her [the servant] upon her first coming but I knew not whether we should stay here until she got through it,[236]" which was an intelligent move on his part. After being inoculated, getting onboard a ship would have run the risk of infecting everyone on board. Five months later, and safely in Paris, Abigail attempted to be inoculated again. Unfortunately, she was informed by the physicians that "the practice is not permitted in Paris[237]."

Another population that felt the wrath of smallpox were the free black people and slaves. Usually, the ones that were the most affected were the ones that ran away from their plantation to be a soldier in the British army. As slaves, they were told that if they joined the British army, at the end of the war, they would be free. Although the British soldiers had all been inoculated or survived smallpox in their youth, they did not take into account the non-immune slaves that were now joining their camps. Due to the station of the blacks in the colonies at the time, they were extremely susceptible to the illness. Once smallpox reached a new slave population, or a new collection of people from all over the colonies that had never had the disease, it spread quickly. The situation with infected slaves became so problematic, especially around British bases, that the only people that would actually venture over the lines were the runaway slaves[238]. Regular citizens were refusing to even bring grains and other foods to the British soldiers. These runaway slaves could have been useful to the British forces, but instead they were usually put into minimal jobs. Once the low level positions were full, the British were at a loss with what to do with the remaining slaves. In many cases, they simply followed the

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[235] Letter from John Adams to Abigail Adams, 20 August 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.
[236] Richard Allen Ryerson, *Adams Family Correspondence Volume 5*(Cambridge: Belknap Press of Harvard University, 1993) 409.
[237] Ibid, volume 6, 8.
[238] Ranlet, "The British, Slaves, and Smallpox in Revolutionary Virginia," 219.

troops wherever they went and had no actual job to do. Those that followed the troops in this manner were usually the first infected with smallpox. British General Alexander Leslie, in an attempt to lessen the strain on British forces, attempted to relinquish sick slaves onto the unsuspecting plantation owners once they were effectively useless[239]. This idea ended up working nicely since every slave owner was clamoring to get their property returned, even if that slave was infected with smallpox[240]. The promises the British made cost these men a lot of money in slave holdings. It seems very likely that Leslie did distribute at least some ill slaves among the rebel plantations as he told Cornwallis he would do, but there is also no evidence that germ warfare was the intent[241]. It seems as though he simply wanted to remove the extra strain on British resources that was caused by the sick slaves. However, I am sure the infection of the enemy with smallpox was not something that he lamented. As the colonists saw it, the British forces were followed by a wave of dying and sick free blacks and slaves. Patriot Colonel Josiah Parker wrote "a number of negroes are left dead and dying with the smallpox in both the country and city[242]." It appears as though the British were simply abandoning those that were too sick instead of wasting resources. This can truly be counted as a low point in warfare. The slaves had run away because the British had promised to take care of them. Now they were being left for dead on the side of the road. October 1781 brought official orders from Lord Cornwallis to force sick blacks to leave British camps in order to lessen the strain on British provisions. One patriot stated that "Negroes lie about, sick and dying, in every stage of the smallpox[243]." Those that were witness to the atrocities were horrified by the conditions of the slaves. They also ended up being the victims. Virginias are thought to have lost up to 30,000 slaves in 1781[244], all of whom attempted to join the British forces in a chance to fight their freedom, a large majority of who were probably abandoned without achieving that promise.

The British

At the start of the American Revolution, the British had a distinct advantage. England had periodic outbreaks of smallpox, allowing most people to have been exposed during their lifetime. The British even considered smallpox a childhood illness. However, for those that had not developed immunity, the British army routinely practiced

[239] Ibid, 219.
[240] Ibid, 219.
[241] Ibid, 220.
[242] Ibid, 221.
[243] Ibid, 223.
[244] Ibid, 224.

inoculation[245]. They attempted to have the procedure done before they left for the colonies, but in many cases, soldiers had to be inoculated in the field. One of the main locations was Boston during the siege of 1775. The British instituted a voluntary inoculation program during the siege and quarantined soldiers who refused to participate[246] to keep them from contracting the illness. It was done to prevent an outbreak. By instituting the inoculation program, it protected the remainder of the British army, and it also prevented an American attack. Washington was certainly not going to risk that health of his soldiers to attack ailing British troops,[247] especially when he had so few able bodied men. In a way, a stalemate was created where neither side wanted to attack for fear of catching the dreaded illness. Towards the end of the war, the soldiers that had undergone inoculation were now immune to the disease, which proved helpful in combat. This did not account for those that refused the procedure, however. An inoculated person had to be kept isolated for a span of about four weeks, which would have endangered the number of available soldiers. For this reason, the British decided not to start an inoculation program in the field for blacks[248]. They believed the risk was too great for those that had not succumbed to the illness yet.

During the British capture of Boston, inoculation took place among the army. This was thanks in some part to Dr. John Jefferies. Jefferies was born into a well to-do family in Boston in 1744, and graduated from Harvard in 1763. After graduation, he studied under Boston's best doctor, Dr. James Lloyd[249]. As both a prominent doctor and citizen, Jefferies chose the loyalist side and decided to remain in Boston after it was captured. Since he was still in Boston, he decided to not only maintain his private practice, but he also acted as a medical advisor to both General Gage and General Howe[250]. He also treated both British and American prisoners and inoculated soldiers and civilians against the smallpox[251] which was rampant through the town at the time. Despite his best efforts, Boston had an alarming number of smallpox cases by November, 1775. This prompted General Howe to issue a mandate requiring the troops to be

[245] Becker, "Smallpox in Washington's Army," 389.
[246] Ibid, 395.
[247] Ibid, 399.
[248] Ranlet, "The British, Slaves, and Smallpox in Revolutionary Virginia," 222.
[249] Philip Cash and Carol Pine, "John Jeffries and the Struggle Against Smallpox in Boston (1775-1776) and Nova Scotia (1776-1779)," *Bulletin of the History of Medicine* 57, no. 1 (1983), 93.
[250] Ibid, 94.
[251] Ibid, 94.

inoculated against the disease[252]. In the end, this proved to be beneficial as the number of cases decreased among the troops. Due to his outstanding skills as a physician, Jefferies was appointed director of one of the local smallpox hospitals. It is not really known why, but on September 27, 1775, General Gage removed Jefferies from his position[253]. General Howe, who took over command of the area two weeks later, reinstated him as the director. He begins to make entries in the hospital records after this date. Eventually, Jefferies is relocated to Nova Scotia by the British officers and given command of one of the smallpox hospitals there. Overall, the British were relatively lucky during the Revolution with regards to smallpox. Fewer British soldiers died from smallpox than the Americans, but the Americans would be victorious in the end.

Edward Jenner and the Advent of Vaccination

Edward Jenner was born on May 17, 1749, in Berkeley, Gloucestershire, and he was the son of the Rev. Stephen Jenner, vicar of Berkeley. Edward was orphaned at age 5 and went to live with his older brother. During his early school years, Edward developed a strong interest in science and nature that continued throughout his life. At age 13 he was apprenticed to a country surgeon and apothecary in Sodbury, near Bristol[254]. In 1764, Jenner began another apprenticeship with George Harwicke, one of the best physicians in England at the time. During these years, he acquired a sound knowledge of surgical and medical practices. Upon completion of this apprenticeship at the age of 21, Jenner went to London and became a student of John Hunter, who was on the staff of St. George's Hospital in London. Hunter was not only one of the most famous surgeons in England, but he was also a well-respected biologist, anatomist, and experimental scientist[255]. Jenner was married in 1788, and he and his wife had four children. The Jenner family lived in the Chantry House, which became the Jenner Museum in 1985[256]. Even though he was a physician, he also had a strong interest in the world around him. In May of 1796, Edward Jenner found a young dairymaid, Sarah Nelms, who had fresh cowpox lesions on her hands and arms. She had received the disease from milking a cow named Blossom[257], who was also infected with the disease.

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[252] Ibid, 95.
[253] Ibid, 96.
[254] "Edward Jenner and the history of smallpox and vaccination," http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1200696/
[255] Ibid.
[256] Ibid.
[257] Andrea Rusnock, "Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798–1810," *Bulletin of the History of Medicine* 83, no. 1 (2009): 17-36.

When she told him that the cowpox made her incapable of getting smallpox, Jenner decided to try an experiment. On May 14, 1796, using matter from Nelms' lesions, he inoculated an 8-year-old boy named James Phipps[258]. In July of 1796, Jenner inoculated the boy again, this time with matter from a fresh smallpox lesion. With the success of this experiment, he attempted the same procedure on volunteers. After several more trials contributed to the information from the original, Jenner was set to publish his findings. In 1798, he published a small booklet entitled *An Inquiry into the Causes and Effects of the Variolae Vaccinae, a Disease Discovered in Some of the Western Counties of England, Particularly Gloucestershire and Known by the Name of Cow Pox*[259]. This experiment was the beginning of vaccination, the process of which Jenner named after the smallpox virus. The publication of his pamphlet was also the beginning of support for vaccination, which shortly gained prominence all over the Europe and the United States. After his discovery, Jenner built a one-room hut in his garden, which he called the "Temple of Vaccinia", where he vaccinated the poor for free[260] in order to share his discovery with as many people as possible. In 1800, Dr. John Haygarth of Bath, Somerset received some cowpox lymph from Edward Jenner and sent some of the material to Benjamin Waterhouse, professor of physics at Harvard University. Waterhouse proved instrumental in the introduction of vaccination to New England, and then persuaded Thomas Jefferson to attempt the practice in Virginia[261].

Even with all the credit given to Edward Jenner, he was not the original person to discover vaccination. He was, however, the first person to confer scientific status on the procedure and to pursue its scientific investigation[262]. Recently, more attention has been paid to Benjamin Jesty (1737–1816) as the first to vaccinate against smallpox. When smallpox was present in Jesty's locality in 1774, he was determined to protect the life of his family. Jesty decided to use material from udders of cattle that he knew had cowpox. He did this by transferring the material with a small lancet to the arms of his wife and two boys. After the procedure was performed, the trio of family members remained free of smallpox, although they were exposed to the illness on numerous occasions in later life[263].

The discovery of vaccination would make huge strides in the field of medicine, but there were problems. The practice depended heavily on transmitting not only

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[258] "Edward Jenner and the history of smallpox and vaccination."
[259] Ibid.
[260] Ibid.
[261] Ibid.
[262] Ibid.
[263] Ibid.

knowledge of the technique but, more importantly, on the availability of cowpox itself. Because the natural occurrence of cowpox was sporadic and geographically specific, most would-be vaccinators depended on a foreign source of cowpox lymph[264]. In many cases, this was England. But, this did present another problem. The cowpox lymph now had to make it across the ocean while remaining viable. Cowpox was transported in three ways: in a dried state, in a fluid state, and by vaccinated individuals. The first method to be tried was taken directly from the practice of inoculation, and it involved sending a thread that had been soaked in cowpox lymph and then dried[265]. George Pearson, an Edinburgh-trained physician to Saint George's Hospital in London, was one of the first vaccinators to try the method using dried cowpox lymph. In 1799, he sent 200 soaked threads taken from vaccinated patients in the London Smallpox and Inoculation Hospital, which he then gave to medical men throughout Britain, continental Europe, and spread among physicians[266]. Cowpox presented a problem in itself. Samples that had been preserved on a Lancet had to be used within two to three days; otherwise, the lancet rusted[267]. To avoid rusting, expensive lancets of gold, silver, or platinum had to be specially made. Vaccinators also developed less costly quills and ivory points, "shaped like the tooth of a comb" in Jenner's words, on which lymph could be collected and transported[268]. The point was dipped into the lesion, and the fluid was allowed to dry. The precious lancets and points were then stored in larger quills or wrapped in paper to protect the cowpox matter[269]. James Smith, in Baltimore, also faced the "almost insuperable difficulty of keeping the matter active" during the steamy months of July and August. In 1803, Smith started to preserve cowpox scabs, which he would later moisten with a drop of water prior to insertion[270]. This method allowed Smith to maintain a ready supply of cowpox and also helped to avoid the difficulties associated with transportation. It is not clear why this method was not widely adopted[271]. One of the most important techniques for the maintenance of cowpox was arm to arm transfer. Once a person had received cowpox and shows visible symptoms, the lesions could be opened and transferred directly to another person. This remained the most popular technique until

[264] Andrea Rusnock, “Catching Cowpox.” 21-22.
[265] Ibid, 24.
[266] Ibid, 24.
[267] Ibid, 25.
[268] Ibid, 25.
[269] Ibid, 25.
[270] Ibid, 26-27.
[271] Ibid, 26-27.

harvesting lymph directly from calves and heifers was developed in the 1850s and 1860s[272].

Benjamin Waterhouse was born a Quaker in the American colonies. Despite the religion of his family, he was not a practicing Quaker. When he turned 16, he was apprenticed to a local doctor and started to participate in the medical profession. A few years later, he moved to England so he could study medicine at the Universities located there. By the end of the Revolution, he had made the decision to move back to the American colonies, now the fledgling United States of America. By the time of Waterhouse's arrival in Boston in 1782, the city's policy of isolation, quarantine, and controlled inoculation was meeting with some success in reducing the number of smallpox cases. Boston's average death rate from this disease fell from around 300 per 100,000 before 1764 to about 100 per 100,000 in the 1790s[273]. He was quickly elected a professor of medicine at Harvard University where he continued to practice. In his wisdom, Waterhouse maintained that the smallpox miasma, under the right conditions, could remain contagious in fresh air up to 1500 feet and possibly quite further[274]. He felt this was indeed the case, and the theory would explain why the illness spread so quickly among people in close quarters. In an attempt to combat the disease, Waterhouse wanted to introduce the practice of vaccination to the American colonies. With the full support of newly elected President Thomas Jefferson, Waterhouse made a strenuous effort to obtain cowpox matter from his friends in England. After several failed attempts, he finally received a one and a half inch piece of thread soaked with cowpox lymph and placed tightly in a stoppered glass vial[275]. As he had never seen the procedure performed, Waterhouse needed to choose a test subject. Much like Zabdiel Boylston before him, the test subjects ended up being members of his own family. His five year old son, Daniel Oliver, was chosen for his first vaccination, followed by his younger son Benjamin, who was done by arm to arm transfer[276]. When the boys came down with a mild case of cowpox, he considered the procedure a success and began to add more patients. In an effort to prove the effectiveness of vaccination, Waterhouse wanted to have some of his patients inoculated with smallpox. Although he had much to lose, Dr. William Aspinwall, proprietor of a local inoculation hospital, generously agreed to inoculate some of Waterhouse's cowpox patients with smallpox. He was also present for the entirety of

[272] Ibid, 29.
[273] Philip Cash, *Dr. Benjamin Waterhouse: A Life in Medicine and Public Service*, 1st ed. (Science History Publications/USA, 2006), 113.
[274] Ibid, 119.
[275] Ibid, 124.
[276] Ibid, 124.

the illness, which gave him enough time to compare the lesions[277] between the two illnesses. He determined that they were in fact very similar. Meanwhile, problems were still occurring with the transportation of the material, especially across the ocean, and Waterhouse was forced to perform arm to arm transfer of the virus. In late December of 1801, he publically confessed that his vaccine's potency had steadily grown weaker through arm-to-arm transfer and he speculated that "the kine pox (another name for a cow) matter became milder as it recedes from the cow, and in that process of time it gets worn out and needs to be renewed[278]. This discovery had the potential to be very damaging to the case for vaccination versus inoculation when the supply of smallpox was fresh. Despite all the work that Waterhouse put into vaccination, it has recently become known that he may not deserve all the credit given to him. Although he was the first to vaccinate successfully in the United States, he was not the first to do so in the Americas. That honor seems to belong to John Clinch of Newfoundland, a long time friend of Jenner, who was sent cowpox matter in 1798 and began to vaccinate his children and the surrounding community members[279].

Upon learning of the procedure, Thomas Jefferson wanted to implement it on his plantation. Cowpox matter sent by Ben Waterhouse arrived at Monticello on the 6th and 13th of August, 1801[280]. With the initial shipments, Jefferson was able to begin the process of vaccinating not just his immediate family members, but his slaves and workers as well. In a letter to Benjamin Waterhouse, dated August 8, 1801, Jefferson thanks him for the shipment of cowpox matter and states that "Dr. Wardlaw inserted six persons of my own family[281]." In reference to a question asked by Waterhouse concerning the legality of performing the procedure, Jefferson writes that "our laws indeed have permitted inoculation of smallpox, but under such conditions of consent of the neighborhood[282]." Several weeks later, keeping Waterhouse abreast of the developments from his plantation, Jefferson writes that "most, however, experience no inconvenience and have nothing but the inoculated pustule, well defined, moderately filled with matter and hollow in the center[283]." He appears to have strong preferences to this procedure over inoculation as he continues to vaccinate his entire plantation. In September of 1801,

[277] Ibid, 125.
[278] Ibid, 137.
[279] Ibid, 127-128.
[280] Barbara B. Oberg, ed., *Papers of Thomas Jefferson Volume 35* (Princeton: Princeton University Press, 2008), 34-35.
[281] Ibid, 47.
[282] Ibid, 47.
[283] Ibid, 120.

Jefferson receives a latter from Edward Grant, an acquaintance who had also been using the vaccination method. He informs Jefferson of the method he used to keep the matter fresh. "I had made use of the virus from the arms of those inoculated and found it did not fail in a single instance[284]," thereby convincing Jefferson to use arm-to-arm transfer. By lessening the dependence on Waterhouse and England, Grant helped make vaccination a more viable option in the United States, rather than an elite procedure involving a lot of money. Despite the success, many people still refused to look favorably upon vaccination, especially in Boston,[285] and much like inoculation, they required sound evidence of its abilities. Even after all the years, Boston still remained weary if having emerging medical practices. On the other hand, Jefferson believed in the process of vaccination so strongly that he gave some cowpox lymph to Meriwether Lewis and William Clark to take on their explorations west of the Mississippi River. Antoine Saugrain, the only practicing physician in St. Louis when Louisiana was purchased by the United States from France in 1803, received some cowpox lymph from Lewis and Clark and began to vaccinate individuals free of charge, including Native Americans[286]. As President, Jefferson would start to encourage the practice as far his influence would carry and convince many of the importance of the procedure.

Outside of both England and the United States, cowpox vaccination was also becoming popular, thanks in most part to English physicians who decided to travel around Europe and Asia. The first successful vaccination performed outside of England was by Jean de Carro. In 1799, shortly after Jenner discovered vaccination, Carro brought it to the Austro-Hungarian Empire[287] and attempted to gain support of the upper class there. He managed to be successful among the people there, as some very influential people in Constantinople took up the cause and encouraged the practice[288]. Within a year, 1000 children had been vaccinated[289] and protected from the dreaded smallpox. Joseph A. Marshall and John Walker were two English practitioners that decided to bring the practice to the Mediterranean. After learning the procedure and gathering the necessary materials, they began to travel[290]. Writing back to friends still in England they state "it was not unusual to see, in the mornings of public inoculation at the

[284] Ibid, 231.
[285] Ibid, 680-681.
[286] Andrea Rusnock, "Catching Cowpox," 34.
[287] John Z. Bowers, "The Odessey of Smallpox Vaccination," *Bulletin of the History of Medicine* 55, no. 1 (1981), 18.
[288] Ibid, 18.
[289] Ibid, 19.
[290] Ibid, 19.

hospital, a procession of men, women, and children conducted through the streets by a priest carrying a cross, come to be inoculated. The common people were certain that vaccination was a blessing sent from heaven, though discovered by one heretic and practiced by another[291]." Regardless, they were able to overlook this one minor flaw and vaccinate themselves, conferring immunity against smallpox. In another instance, Dr. Aubert was given the task of learning how to vaccinate in London, and then bring the procedure back to France and Paris[292]. A mandate from the government to learn the procedure would mean that more people would have access to it. The use of vaccination would soon become one of the most important developments in the field of public health, and it would also begin to influence entirely new areas of medicine.

Smallpox in Modern Times

Even in modern times, smallpox is still considered one of the deadliest and most painful diseases known to mankind. For this reason, the World Health Organization enacted a worldwide vaccination program in an attempt to eradicate smallpox from the Earth. By May 8, 1980, the World Health Assembly announced that the world was free of smallpox and recommended that all countries cease vaccination[293]. The United States stopped vaccination in 1970, leaving almost 40 years worth of people open to contracting the virus[294]. The only remaining samples of the virus are kept in at the Center for Disease Control in Atlanta, Georgia and Vector in Siberia[295]. Despite public outcry, these samples were kept so they could be studied by scientists. They are also available in the event that more vaccine ever needed to be made. Many people feel as though these samples should be destroyed, and the evidence against their existence is starting to mount. Throughout the 1960s and 70s, Russia was secretly working on bioterrorism weapons involving smallpox. At a lab entitled Biopreparat, scientists were attempting to combine smallpox with some of the worst diseases found on Earth, including Ebola and Bubonic Plague[296]. As of 2002, the United States had only 15 million doses of vaccine available, and many have probably been compromised in some way due to age and moisture[297]. This leaves the human race in a very precarious position. Smallpox cases are not a normal occurrence like they were in the eightieth century and certainly the

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[291] Ibid, 19.
[292] Ibid, 19.
[293] "Edward Jenner and the history of smallpox and vaccination."
[294] Zimmerman and Zimmerman, *Killer Germs*, 226.
[295] Ibid, 228.
[296] Ibid, 226-227.
[297] Ibid, 226-227.

increased population would be open to devastating effects if something were to ever happen. It is safe to say that a bio-terror attack with such an illness would cripple nations, both economically and medically. It is also amazing to think that in the technological world that we live in, a disease as old as smallpox can still bring about so much fear.

Medicine and public health have certainly come a long way in the past 300 years. With the discovery of inoculation, and, eventually vaccination, the human race was finally able to fight back against one of the worst diseases known to inhabit the Earth. This was not without its problems, however. Religion often forbade tampering with God's plans, and public officials felt as though it was better to not risk exposure to the illness in the first place. Riots occurred, laws were passing, and a war was fought, all the while the true victor was smallpox. It is thanks to several men who were able to open their minds to the unknown that mass inoculation and vaccination programs began. These men can be charged with saving millions of lives over three centuries, and it still continues today. To conquer this illness was to truly conquer one of God's worst creations, and for the time being, the human race is content not having to ever witness a smallpox outbreak in their lives. It is a disease that affected all aspects of early American lives, and was the first to have large scale public health actions taken against it. For this reason, smallpox can easily be considered the first major medical triumph.

Works Cited

Adams, John. *Autobiography (through 1776) Journal entry page from April 26, 1764*, Adams Family Papers: An electronic archive. Massachusetts Historical Society [hereafter called MHS]. http://www.masshist.org/digitaladams/.

Becker, Ann M. "Smallpox in Washington's Army: Strategic Implications of the Disease During the American Revolutionary War." *The Journal of Military History* 68, no. 2 (2004).

Bourzac, Katherine. "Smallpox: Historical Review of a Potential Bioterrorist Tool," Journal of Young Investigators, 6 (2002): http://www.jyi.org/volumes/volume6/issue3/features/bourzac.html.

Bowers, John Z. "The Odessey of Smallpox Vaccination." *Bulletin of the History of Medicine* 55, no. 1 (1981).

Boylston, Zabdiel. *An historical account of the small-pox inoculated in New England, upon all sorts of persons, whites, blacks, and of all ages and constitutions :with some account of the nature of the infection in the natural and inoculated way, and their different effects on human bodies : with some short directions to the unexperienced in this method of practice* (London : Printed for S. Chandler, at the Cross-Keys in the Poultry, MDCCXXVI [1726] ; [Boston in N.E.] : Re-printed at Boston in N.E. for S. Gerrish in Cornhil, and T. Hancock at the Bible and Three Crowns in Annstreet, MDCCXXX [1730]). http://pds.lib.harvard.edu/pds/view/8290362?n=1.

Brainard, Newton C. "Smallpox Hospitals in Saybrook." *Connecticut Historical Society Bulletin* 29, no. 2 (1964).

Burnett, Betty. *The Continental Congress*. The Rosen Publishing Group, 2004.
Burton, John D. "The Awful Judgements of God Upon the Land: Smallpox in Colonial Cambridge, Massachusetts." *New England Quarterly* 74, no. 3 (2001).

Cash, Philip. *Dr. Benjamin Waterhouse: A Life in Medicine and Public Service*. 1st ed. Science History Publications/USA, 2006.

Cash, Philip, and Carol Pine. "John Jeffries and the Struggle Against Smallpox in Boston (1775-1776) and Nova Scotia (1776-1779)." *Bulletin of the History of Medicine* 57, no. 1 (1983).

"CDC Smallpox | Smallpox Overview."
http://emergency.cdc.gov/agent/smallpox/overview/disease-facts.asp.

Dewey, Frank L. "Thomas Jefferson's Law Practice: The Norfolk Anti-Inoculation Riots." *Virginia Magazine of History & Biography* 91, no. 1 (1983).

Diamond, Jared. *Guns, Germs and Steel: The Fates of Human Societies*. First Edition. W. W. Norton & Company, 1997.

Douglass, William. *The abuses and scandals of some late pamphlets in favour of inoculation of the small pox, modestly obviated, and inoculation further consider'd in a letter to A- S- M.D. & F.R.S. in London* (Boston: printed and sold by J. Franklin, at his printing-house in Queen-Street, over against Mr. Sheaf's school, 1722).

"Edward Jenner and the history of smallpox and vaccination." Text, January 2005. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1200696/.

Gerlach, Larry R. "Smallpox Inoculation in Colonial New Jersey: A Contemporary Account." *Journal of the Rutgers University Libraries* 31, no. 1 (1967): 21-28.

Grainger, Samuel. *The imposition of inoculation as a duty religiously considered in a letter to a gentleman in the country inclined to admit it* (Boston: Printed for Nicholas Boone at the sign of the bible in Cornhill and John Edwards, at his shop at the head of King Street, 1721) http://pds.lib.harvard.edu/pds/view/7910094.

Gronim, Sara Stidstone. "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century." *Bulletin of the History of Medicine* 80, no. 2 (2006).

Hamer, Philip M. ed., *The Papers of Henry Laurens Volume I* (Columbia: University of South Carolina Press, 1968).

Heinrich, Larissa. "How China Became the "Cradle of Smallpox": Transformations in Discourse, 1726-2002." *positions: east Asia cultures critique* 15, no. 1 (2007)

http://www.microbiologybytes.com/virology/Poxviruses.html.

http://ocp.hul.harvard.edu/contagion/smallpox.html.

Krebsbach, Suzanne. "The Great Charlestown Smallpox Epidemic of 1760." *South Carolina Historical Magazine* 97, no. 1 (1996).

Letter from John Adams to Abigail Adams, 7 July 1776 [electronic edition]. Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

Letter from Abigail Adams to John Adams, 14 July 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

Letter from Abigail Adams to John Adams, 21 July 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

Letter from John Adams to Abigail Adams, 20 August 1776 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

Letter from John Adams to Abigail Adams, 20 February 1777 [electronic edition], Adams Family Papers: An electronic archive, MHS. http://www.masshist.org/digitaladams/.

Li, Yu, Darin S. Carroll, Shea N. Gardner, Matthew C. Walsh, Elizabeth A. Vitalis, and Inger K. Damon. "On the origin of smallpox: Correlating variola phylogenics with historical smallpox records." *Proceedings of the National Academy of Sciences* 104, no. 40 (October 2, 2007).

MacLeod, D. Peter. "Microbes and Muskets: Smallpox and the Participation of the Amerindian Allies of New France in the Seven Years' War." *Ethnohistory* 39, no. 1 (Winter 1992).

Mather, Cotton. *Some account of what is said of inoculating or transplanting the smallpox*, (Boston: sold by S. Gerrish at his shop in Corn-hill, 1721) http://pds.lib.harvard.edu/pds/view/7910093.

Montague, Mary Wortley. *Letters of the Right Honourable Lady M--y W---y M----e :written, during her travels in Europe, Asia and Africa, to persons of distinction, men of letters, &c. in different parts of Europe : which contain, among other curious relations, accounts of the policy and manners of the Turks : drawn from sources that have been inaccessible to other travellers.* (London: T. Becket and P.A. De Hondt, 1763).

Morris, James P. "Smallpox Inoculation in the American Colonies 1763-1783." *Maryland Historian* 8, no. 1 (1977).

Ranlet, Philip. "The British, Slaves, and Smallpox in Revolutionary Virginia." *The Journal of Negro History* 84, no. 3 (Summer 1999).

---. "The British, the Indians, and Smallpox: What Actually Happened at Fort Pitt in 1763?." *Pennsylvania History* 67, no. 3 (2000).

Roberts, Shirley. "Lady Mary Wortley Montague and the Reverend Cotton Mather: Their Campaigns for Smallpox Inoculation." *Journal of Medical Biography* 4, no. 3 (1996).

Rusnock, Andrea. "Catching Cowpox: The Early Spread of Smallpox Vaccination, 1798–1810." *Bulletin of the History of Medicine* 83, no. 1 (2009).

Ryerson, Richard Allen. *Adams Family Correspondence Volume 5*(Cambridge: Belknap Press of Harvard University, 1993).

Scheindlin, Benjamin. "A Revolutionary in the Smallpox War when Dr. Zabdiel Boylston Introduced Smallpox Inoculations in Boston Nearly 300 Years Ago." *Boston Globe*, May 11, 2003.

Schwarz, Frederic D. "The Inoculation Controversy." *American Heritage* 47, no. 7 (November 1996).

Stidstone, Sara. "Imagining Inoculation: Smallpox, the Body, and Social Relations of Healing in the Eighteenth Century," *Bulletin of the History of Medicine* 80, no. 2 (2006).

Washington, George, and United States George Washington Bicentennial Commission. *The writings of George Washington from the original manuscript sources, 1745-1799*. Washington: U.S. Govt. Print. Off., 1931.

Wetering, Maxine Van De. "A Reconsideration of the Inoculation Controversy." *The New England Quarterly* 58, no. 1 (March 1985).

Winslow, Ola Elizabeth. *A destroying angel: The conquest of smallpox in colonial Boston*. Houghton-Mifflin, 1974.

Zelt, Roger P. "Smallpox Inoculations in Boston, 1721-1722." *Synthesis: The University Journal in the History & Philosophy of Science* 4, no. 1 (1977).

Zimmerman, Barry, and David Zimmerman. *Killer Germs*. 1st ed. McGraw-Hill, 2002.