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BEACON CONFERENCE

A conference for SCHOLARS at Two-Year Schools

LCCC



June 3, 2011

The Beacon Conference is an annual conference that recognizes and celebrates the achievements of two-year college students in research and writing. It is sponsored by a coalition of member colleges. It creates an opportunity for faculty to mentor students as they begin their education at two-year colleges and showcases the work of outstanding students.

The conference is held each year on the first Friday of June, and students present their work in a wide range of disciplines. Students work with their faculty mentors to prepare and submit papers that demonstrate outstanding scholarship and originality.

All papers submitted are carefully reviewed by three readers, and the top three papers in each category are selected for presentation at the annual conference in June. Presentations are judged on originality and quality of research, written work, and oral presentation. The judge for each category chooses and outstanding presenter.

Both the outstanding presenter and the presenter's faculty mentor in each panel are recognized at the closing session of the conference, and each receives \$100.00.

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The Balance of Nature and the Hunger of Children: An Ethical Exploration of Genetically Modified Organisms

Jon W. Carlson

Mentored by Professor Michael Feyers, Reading Area Community College

Yesterday, over 14,000 children under the age of five died of starvation (UNICEF 2006). Scattered throughout what is euphemistically known as the “developing world,” these children died because of iron deficiencies, low caloric intake, and a lack of vitamin A. In developing countries, 9.7 million children under the age of five die each year; 53 percent of those deaths are caused by nutrition-related issues (UNICEF 2006). Nobel Peace Prize winning economist Muhammad Yunus, who has seen the effects of malnutrition in his native Bangladesh, describes death by starvation as “the most unacceptable [death] of all. Second by second, the distance between life and death becomes smaller and smaller, until the two are in such close proximity that one can hardly tell the difference And all for the lack of a handful of rice at each meal” (Yunus 1999). While children are affected most frequently, many adults continue to suffer from inadequate access to basic necessities like food and water.

Faced with this macro-level problem that spans continents and impacts billions of people, scientists, policy makers, and other experts are focusing their attention on a very micro-level solution—the nucleus of a cell. Within the nucleus resides a set of chemicals known as DNA, or deoxyribonucleic acid. DNA contains a biological code in its sequences of the compounds adenine, guanine, cytosine, and thymine. By controlling the manufacture of proteins within cells, this code controls the attributes and behaviors of organisms, from the color and texture of fruit to the breeding capabilities of animals. Since DNA controls so many functions of an organism, some scientists believe that the manipulation of DNA in food sources, like corn and rice, can help to alleviate global malnutrition. These genetically modified crops may be engineered to be resistant to drought, disease, and infestation, or designed to produce more Vitamin A or iron. Many remain skeptical of genetically-modified organisms (GMOs) and

raise concern that this artificial manipulation of DNA may pose a threat to the delicate balance of nature.

Humans' understanding of the role DNA plays in an organism has developed over the past 150 years. According to the National Institutes of Health (NIH), Gregor Mendel, an Austrian monk, identified a basic understanding of heredity starting in 1865 (NIH 2010). Although Mendel never saw the inner workings of a cell, his research conclusively showed that many of an organism's characteristics are not random, but rather determined through heredity. Heredity refers to the process of offspring inheriting certain traits, such as the color or seed shape of the peas Mendel studied, from its parents. In 1869, Friedrich Miescher, a Swiss biologist, isolated DNA from white blood cells, calling it "nuclein" (NIH 2010). Although Miescher never made the connection between his research and Mendel's, the fluid he isolated contained the workings of heredity that Mendel described. When an organism reproduces, DNA carries information from parent to child, working as the mechanism of heredity.

Research into the cell continued in the twentieth-century. "William Astbury, a British scientist, obtained the first X-ray diffraction pattern of DNA" (NIH 2010). Building on this image of DNA, two scientists named Francis Crick and James Watson identified and described the structure of DNA—an elegant double helix (NIH 2010). In a 900-word paper published in the journal *Nature*, the scientists correctly noted that "the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material" (Watson and Crick 1953). By identifying the shape of DNA and pointing to a replication mechanism, Watson and Crick provided essential insight into the mechanisms of genetic heredity. The double-helix uncoils and separates during cellular reproduction, and identical genetic material is copied according to the DNA's code. Armed with this information, a new generation of geneticists set out to shape the future.

In 1972, the first recombinant DNA molecules were created (NIH 2010):

Recombinant DNA technology involves the joining of DNA from different species and subsequently inserting the hybrid DNA into a host cell, often a bacterium. Researchers at UC San Francisco and Stanford used restriction enzymes to cut

DNA from different species at specific sites, and then fused the cut strands from the different species back together. (NIH 2010)

While at first this seems shocking—the idea of an artificially created organism that differs at the molecular level from anything else in existence—one should note that humans have been tinkering with other organisms’ reproduction for millennia.

Interrupting natural processes to achieve desired outcomes is nothing new: Some anthropologists suggest that domestication through selective breeding of plants began 13,000 years ago. Farmers have always sought to maximize their efficiency and yield by encouraging plants and animals with certain traits to breed.

Recombinant DNA, however, is different: rather than guiding and shaping natural processes (as is done with selective breeding), scientists are now able to alter the genetic composition of an organism through entirely artificial means. Rather than encouraging two dogs with different fur color to mate and produce offspring with a specific fur color, scientists can now take a segment of DNA from a jellyfish, insert it into a mouse, and create glowing mice. The mechanisms of natural reproduction would prohibit this because jellyfish and mice do not share the compatible reproductive organs required for mating. Such creatures are referred to as “transgenic,” because their DNA structure shares pieces of genetic code from two or more different species. Only recombinant DNA makes these particular transgenic creatures possible—a revolutionary, rather than evolutionary, leap forward in humanity’s quest to dominate nature.

Paul Berg, one of the scientists involved in the creation of the first transgenic organisms, quickly recognized the promise and peril posed by this new technology. He drafted a letter, “along with ten other researchers, to the journal *Science*. In the letter, they urged the National Institutes of Health to regulate the use of recombinant DNA technology and meanwhile, they urged scientists to halt most recombinant DNA experiments until they better understood whether the technique is safe” (NIH 2010). The NIH issued a document entitled “Guidelines for Research Involving Recombinant DNA Molecules” in 1976. Less than twenty years later, another federal agency, the Food and Drug Administration, would approve transgenic

organisms (referred to as “Bioengineered Foods”) for human consumption (U.S. Food & Drug Administration 2010).

The application of recombinant DNA technology for the development of food follows a predictable pattern. The aforementioned domestication of plants, the transition of humans from hunter-gatherers to agriculturalists, and the development of tools and weapons have all been, at least partially, efforts to assure the procurement of food. Nearly any technological advancement, from gunpowder to the combustion engine to recombinant DNA, will eventually be utilized to supply food.

Beginning in 1995, the FDA approved transgenic soybeans, tomatoes, potatoes, and more, each modified to enhance desirable characteristics like “tolerance to the herbicide glyphosate” (soybeans); “delayed softening due to reduced ethylene synthesis,” “delayed softening due to reduced pectin degradation,” and “delayed ripening due to reduced ethylene synthesis” (tomatoes); and “resistance to Colorado potato beetle” (potatoes). Each of these genetically-modified organisms was approved in a single year. Since then, the FDA has approved over one hundred different alterations to the genetic structure of plants, which are then released into nature and into the food supply.

The first of these approved plants, soybeans with “tolerance to the herbicide glyphosate,” was designed for an unsurprising purpose: pest control. Darwin, in his theory of natural selection, posits that the world has scarce, or limited, resources. Because of this scarcity, individual organisms and entire species compete for natural resources like water, nutrients, and even sunlight. Since the advent of agrarianism, humans have worked to give competitive advantages to organisms they intend to eat. From building fences to pulling weeds, human farmers have sought to ensure that desirable plants and animals obtain the resources they need to thrive.

Glyphosate, more commonly known as Roundup, is an herbicide developed by the Monsanto Corporation. Herbicides are chemical compounds designed to kill leafy plants. When used for agricultural purposes, herbicides are used to kill weeds or invasive plants, which would otherwise compete with crop plants for resources. The most successful of these

chemical herbicides has been glyphosate, an artificial molecule discovered in 1970 by John E. Franz. Reflecting on his work, Franz says, “I think it's benefited mankind. It has increased fiber and food throughout the world by increasing yields and eliminating weeds” (Stong 1990). Monsanto’s own description of the product, however, reveals how glyphosate can be a double-edged sword: “Roundup brand agricultural products are broad-spectrum, non-selective herbicides, which are active on most species of green plants” (Monsanto 2005). The herbicide, if applied without precision, can kill both the invasive plant and the plant intended to be saved. Genetic modification provides a solution to this challenging conundrum.

By altering the DNA of the plant seed—first with soy, then with cotton, then with oilseed rape (canola), and eventually sugar beet, wheat, and alfalfa—Monsanto creates in essence a super-plant, one that can thrive in the midst of herbicides. These GMOs are both poison and antidote, sword and shield. In Monsanto’s words, “this means you can spray Roundup agricultural herbicides in-crop from emergence through flowering for unsurpassed weed control, proven crop safety and maximum yield potential” (Monsanto 2010). Monsanto claims that these genetically modified crop seeds allow “farmers to conserve fuel and decrease the overall amount of agricultural herbicides used” (Monsanto 2010). Monsanto claims that through the altering of DNA, they have once and for all perfected the domestication of food. Not all scientists agree.

According to the Union of Concerned Scientists (UCS), the problems with Roundup and Roundup Ready plants are two-fold: first, “glyphosate is highly toxic to plants and fish,” and second, “herbicide-tolerant crops can transfer their tolerance trait to nearby related plants and weeds.” In the UCS’s understanding, increased usage of Roundup Ready crops will result in increased usage of Roundup, which the UCS believes will harm other wildlife. Monsanto disputes this accusation. The USDA classifies glyphosate as “Practically Non-toxic to tested insects and birds” for a single lethal dose and “no more than Slightly Toxic to birds” if ingested during multiple dietary doses (USDA 2010). Setting aside acceptable levels of toxicity, however, the UCS’s second concern merits attention: the possibility of genetically modified traits passing from one generation or species to another.

As Mendel indicated in his studies, many of an organisms' traits are heritable, passed on to successive generations. Subsequent studies have demonstrated that DNA functions as the means of heredity. GMOs differ at the genetic level, having different DNA from their naturally-existing counterparts. One should ask, then, how this genetically modified DNA affects heredity, and how widely GMO traits could spread into the wild. Stewart, Halfhill, and Warwick, writing in the journal *Nature*, explore this very question. First, they note the distinction between introgression and F1 hybridization. Introgression is "the permanent incorporation of genes from one set of differentiated populations (species, subspecies, races and so on) into another" (Stewart et al. 2010). F1 Hybridization, however, is "The initial cross between parent plants of different varieties, subspecies, species or genera." They suggest that while F1 hybridization between GMO and non-GMO species is quite possible and has likely occurred, introgression (the more concerning of the two) requires a very specific set of circumstances:

Transgenic crops and sexually compatible wild plants must grow near one another and have overlapping flowering times.... Also, F1 hybrids must persist for at least one generation and be sufficiently fertile to produce backcross (BC1) hybrids The transgene must have a selective advantage for the wild relative that is greater than the sum of any selective disadvantages.... (Stewart et al. 2010)

The authors conclude by stating that "large-scale genetic modification should be avoided for high-risk crops in which introgression is well documented. However, our assessment is that, in most cases, the risks and benefits of transgenes should be considered on a case-by-case basis." In short, while some GMO crops may pose an ecological danger through the potential of introgression, most GMOs are unlikely to cross with other plants.

These findings have done little to alleviate the fears of those concerned about GMOs. Monsanto's aggressive litigation against farmers over seed-saving and unauthorized use of Roundup Ready seeds has done little to improve the reputation of GMOs (Barlett and Steele 2008). In parts of Europe, including Hungary and Austria, GMO crops are banned, despite a

finding by the European Food Safety Authority (EFSA) that “there is no reason to believe the GMO product poses any risk to human health or the environment” (Spongenberg 2007). Crops in Europe have been destroyed, and some countries have banned the import of GM foods.

While Monsanto sues farmers for millions of dollars, environmental groups protest, and European parliaments debate, people are dying. Hundreds of thousands of people in the developing world die from food insecurity and malnutrition. Connie Hedegaard, a Danish environment minister, drew attention to this by encouraging the European Union to “look at how it could help improve the situation of food security in the third world, promoting a more ethical GMO industry there than the one run by big US biotech firms” (Spongenberg 2007). John Franz, the inventor of glyphosate, believed his discovery helped the world, but that promise has yet to be fully realized.

The challenges facing the developing world differ from the ones faced by US farmers. Roundup Ready crops offer little benefit to communities still using preindustrial agricultural techniques. However, other genetically modified crops hold promise. Ingo Potrykus and Peter Beyer together invented a crop they now call “golden rice.” Rice serves as a dietary staple in many developing countries, yet the edible portion (the endosperm) lacks the beta-carotene necessary for vitamin A production. By inserting two genes into the rice genome, Potrykus and Beyer created a plant that produces and accumulates beta-carotene in the endosperm. They aim “to be capable of providing the recommended daily allowance of vitamin A—in the form of β -carotene—in 100-200 g of rice, which corresponds to the daily rice consumption of children in rice-based societies, such as India, Vietnam or Bangladesh” (Golden Rice Humanitarian Board 2005). Golden rice is currently tied up in regulatory hurdles, but the Humanitarian Board backing its usages anticipates a final approval in 2011.

Once approved, Golden Rice and other humanitarian-oriented transgenic crops still face significant hurdles. With many European countries banning the import of transgenic crops, and many European consumers unwilling to purchase food that may have been genetically modified, many small farmers in the developing world are concerned that planting GM crops could hurt their meager export business. Much of this fear and skepticism is based on

ignorance. In 2005, only 41% of Europeans surveyed were able to identify this statement as true or false: “Ordinary tomatoes do not contain genes, while genetically modified tomatoes do.” Only 34% could correctly identify this: “Human cells and human genes function differently from those in animals and plants,” and only 31% could correctly identify this: “It is not possible to transfer animal genes into plants.” All three statements are false (Gaskell et al. 2006). To think that the ignorance of some endangers the health and well-being of others affronts human decency and ethics.

Biotechnology remains a complicated challenge. Humans have been manipulating and attempting to control plants and animals for thousands of years, yet intrusion into the nucleus of the cell represents a new level of control, and brings with it a new set of challenges. The promise of a world without hunger shimmers as a shining beacon of hope for humanity. “Superweeds” and a profound disruption of the subtle, slow flow of evolution could lurk as dangers around the corner. Successfully using transgenic organisms to improve the lives of humans requires consistent vigilance. However, we cannot deny the least of these—children living in the poorest parts of the developing world—the opportunity to grow and to thrive. GMOs may be frightening, but used properly and with adequate study, they hold tremendous potential to alleviate suffering.

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Redefining Beauty Standards: The Negative Influence of the Western Aesthetic of Thinness

Sarah Chan

Mentored by Professor Efstathia Siegel, Montgomery College

In a culture besieged by celebrity worship, beauty pageants, and Weight Watchers, Americans are bombarded with convoluted messages about physical appearance. In particular, negative body image in the U.S. has been reinforced by media and advertising businesses, and the ensuing pursuit of an ideal body image has produced, in many cases, extreme repercussions. As a result of societal pressures, an outbreak of eating disorders has plagued the Western world, as women self-inflict physical suffering in an effort to meet these conceptualized demands. In the U.S. alone, over 10 million females are struggling with an eating disorder such as anorexia or bulimia (“Statistics”). However, the issue of eating disorders is not solely a Western phenomenon. Recent studies have shown the pervasive nature of such disorders as anorexia and bulimia in Fiji, as well as signs of disordered eating behaviors in other non-Western countries. Specifically, in cultures that have traditionally retained their own concept of beauty, there is concern over the cause of their apparent alignment with Western ideals of beauty.

While it is rational to assert that Western values are being disseminated to other regions of the world through globalization, it is difficult to claim that exposure to Western media is the sole cause of the emergence of eating disorders in the non-Western world. Authors Derenne and Beresin explain: “Although it is tempting to blame today’s [Western] media for perpetuating and glorifying unrealistic standards of physical beauty, the truth is far more complicated...however, today’s culture is unique in that the media...is a far more powerful presence than ever before” (Derenne). As a result of globalization, the spread of information through the international scene is characterized by its incredible speed and great depth. Consequently, the individual possesses an enhanced access to other cultures’ values and norms

through a web of interconnectedness. Exhibiting prominence in the global stage, the West, especially the U.S., holds a position of power to exert influence over other countries. Moreover, despite the complexity of the issue, a question of pertinence still remains: Is the growing inclination towards thinness a sign of cultural imperialism and what are the effects of this trend on women?

Undoubtedly, the question is one that has stirred considerable controversy. Proponents of the negative influence of Westernization argue that Western body ideals have permeated throughout global society, thus imposing beauty values and culturally redefining perspective towards body image. In contrast, opponents assert that the globalization of beauty has simply made thinness attractive. Rather than a spread of negative body image through cultural forces, opponents argue that thinness has naturally become a preferred aesthetic ideal. Despite varying levels of divergence, the issue warrants investigation because of the negative implications on the self-image and health of women.

Considering all facets of the discussion, a legitimate argument is that the messages which Western media project have served as the impetus for the diffusion of Western body ideals to other cultures, which has ultimately altered traditional perceptions of beauty. Although limited in availability, current data observations suggest that the emergence and rise in eating disorders in non-Western countries is linked to the internalization of Western beauty ideals, which is largely facilitated by an exposure to Western media. While the majority of studies that support this connection have focused primarily on affluent, white population samples, the same approach and reasoning can be applied to non-Western populations. As a result of marketing industries' focus on profit, an increased level of widespread awareness and internalization of media messages, and the desire to emulate the West, non-Western women have mistakenly equated the Western ideal of extreme thinness with success and beauty. Subsequently, it is likely that the gradually developing culture of body dissatisfaction and weight obsession in non-Western countries is drifting in the same direction as the eating disorder epidemic that was formerly prevalent in only Western countries.

The Development of Thinness in the West

In the West, there is an overwhelming preoccupation with thinness. Since culture shapes belief, women are led to believe that they must fit a certain profile in order to be considered attractive. In a chapter of *Anthropology Matters!*, Shirley A. Fedorak discusses the impact of the push for the perfect body on the self-image, health, and comfort of women. She argues: "In North America the pursuit of the perfect body has taken on a will of its own" (Fedorak 91). As women are increasingly defined by their bodies, women experience extreme pressure to abide by societal standards. According to the 2004 article "Prevalence of Eating Disorders: A Comparison of Western and Non-Western Countries": "Population-based and clinical-based estimates of anorexia nervosa in Western countries ranged from 0.1% to 5.7% in female subjects, and that of bulimia nervosa ranged from...0.3% to 7.3%" (Makino). Overwhelmed by a sense of body dissatisfaction and a desire to meet these expectations, Western women have often resorted to physically detrimental endeavors as a means of coping with their negative body image.

Furthermore, an investigation of Western media and its relation to body image will demonstrate the ways in which broadcasted social and cultural portrayals drastically impact women's concept of appearance and self-worth. According to *The Media and Body Image*: "Between 1400 and 1700, a fat body shape was considered sexually appealing...By the nineteenth century, a plump shape was replaced by a voluptuous hourglass figure...[which] persisted through the early part of the twentieth century, eventually replaced by the slender flapper of the 1920s" (Wykes 36-7). Although there has always been a focus on beauty ideals and body image, Western media has exacerbated the body shape ideal of thinness through film icons and fashion trends. For example, as Fedorak communicates: "the contemporary obsession with a thin body in Western society can be traced to the 1960s when British fashion model Twiggy came on the scene...and the desperate quest for thinness began. [Likewise] Barbie, the fashion model doll...inspired young girls and women to strive for her impossible-to-emulate beauty standard" (93).

In essence, the pursuit of a so-called "perfection" is reflective of a rather extensive series of transformations in relation to body image ideals and perspective. However, within the

recent century, the pervasiveness of the thin ideal has dominated Western culture. As noted in ““Beauty” a Public Health Concern”: The trends exhibited in the United States have also been entrenched in Western European countries for decades, resulting in the understanding of a young, thin, light-skinned, fashionably dressed, and well made-up woman as the ‘Western beauty ideal’” (Lownik 6).

Overall, the Western ideal body concept embodies a “fear of fatness” and an increasing obsession with body shape, which ultimately serves as a precursor for the “cult of thinness”. Emphasizing the extreme nature of the pursuit of the “perfect” body, Fedorak refers to Carole M. Counihan’s work *The Anthropology of Food and Body: Gender, Meaning, and Power*: “The pursuit of thinness among Western women is highly valued...Counihan [however] has never encountered a culture where it is acceptable to starve in order to attain a thin body, and contends that the self-destructive relationship many Western women have with their bodies is different than that of women in non-Western cultures” (Fedorak 93). In other words, although thinness is a commonly-known body ideal, the exceptionally abnormal methods of achieving this body type originated in Western culture.

In *Never Too Thin: Why Women are at War with Their Bodies*, Roberta Seid describes: “We pursue thinness and fitness with a fervor that borders on the religious...We believe in physical perfectibility and see its pursuit as a moral obligation” (18). Seid equates the American obsession with appearance to a religious cult, in the sense that individuals become possessed by their quest for thinness. As a result of the development of thinness as a beauty aesthetic, Western women have avidly pursued the ideal in a variety of forms, ranging from dieting and cosmetic surgery to compulsive exercising and eating disorders. For example, a 1996 study found that “80% of American women are dissatisfied with their appearance” (“Statistics”). Continually, as discussed in *The Media and Body Image*, experts argue that media influence affected the development of thinness as a beauty aesthetic, which is indefinitely linked to the escalating body dissatisfaction and the increase in eating disorders. Maggie Wykes and Barrie Gunter assert: “it is evident from media texts that they promulgate the current trend towards

very slender female body types and evident from statistics that many people read or view these messages on a regular basis” (37).

Cross-Cultural Comparisons: Thinness vs. Plumpness

Although the emphasis on thinness has been a predominantly Western norm, non-Western cultures’ body ideals have differed substantially. As discussed in *Anthropology Matters!*, there are numerous cross-cultural examples that can be made, affirming that non-Western traditional standards of beauty contrast with Western ideals. From a Westcentric perspective, it is difficult to accept the notion that a fat, plump figure is physically appealing. However, in several other cultures, this belief is commonly accepted. Divergent from Western belief, a robust body-type has positive connotations. Fedorak describes: “Southeastern Nigerians identify curvaceous women as the ideal. They see a plump woman as healthy, her family as prosperous, and her sexuality as alluring” (97). In particular, the traditional custom of the fattening rooms emphasizes a strong dissimilarity with Western notions.

Continually, in certain Latin American countries, there was formerly little incentive for women to lose weight. For example, “being overweight offered a certain amount of freedom to Puerto Rican women—they were allowed to leave their homes without fear of being accused of infidelity” (Fedorak 93). In “I’m not Fat, I’m Latina,” Christy Haubegger expresses the positive connotation of a larger figure: “At home, we’re called *bien cuidadas* (well cared for)...it’s the curvier bodies like mine that turn heads” (Haubegger). In contrast, as a result of increased exposure to Western ideals, Fedorak reveals: “girls in private schools in Brazil have adopted Western body ideals, leading to abuse of laxatives and diuretics” (98).

Furthermore, Fedorak reinforces the idea, noting that in Korea, China, Japan, and the Philippines, plumpness is associated with “prosperity, good health, and beauty” (98). Although Western beauty ideals promote the cult of thinness, there are considerable discrepancies between Western and non-Western concepts of the ideal body image. In “Eating Disorders Go Global,” Sonni Efron supports Fedorak’s findings: “South Korea is perhaps the most interesting case study since, until the 1970s, full-figured women were seen as more sexually attractive—and more likely to produce healthy sons” (2). Similarly, anthropologist Anne Becker’s study on

Fijian eating habits support that “[the] nation that has traditionally cherished the fuller figure, has been struck by an outbreak of eating disorders since the arrival of television in 1995” (“TV”). Subsequently, Becker’s research provides a link between the emergence of eating disorders in Fiji and media influence.

In her actual report “Television, Disordered Eating, and Young Women in Fiji: Negotiating Body Image and Identity During Rapid Social Change,” she describes: “Data in this sample suggest that media imagery is used in both creative and destructive ways....Study respondents indicated their explicit modeling of the perceived positive attributes of characters presented in television dramas, but also the beginning of weight and body shape preoccupation, purging behavior to control weight, and body disparagement” (Becker 533). Although Becker’s research is one of the few cross-cultural longitudinal studies that confirms a direct connection between media exposure and the emergence of eating disorders, it is clear that traditional standards of attractiveness are drastically changing over time. Wykes and Gunter emphasize: “Despite the early observations of cross-cultural differences in body shape ideals, evidence has begun to emerge that Western-style concerns about body shape occur in non-Western populations” (7). Moreover, it appears that these global cases are reflective of a drifting alignment with Western culture’s beauty ideals and standards.

In cultures where plumpness was a sign of health, social status, and fertility, there is question as to why the traditional mindset has changed. In *Unbearable Weight: Feminism, Western Culture and the Body*, Susan Bordo asserts: “In the early 1980s, with growing evidence, not only of an overall increase in frequency of the disease [anorexia nervosa], but of its higher incidence in certain populations, attention has begun to turn, too, to cultural factors as significant in the pathogenesis of eating disorders” (140). Although further cross-cultural research is needed, the study of minority populations in the U.S. also reveals a telling trend. According to “Minority Women: The Untold Story,” there are considerable stereotypical perspectives in the beliefs surrounding eating disorders. Authors Fitzgibbon and Stolley describe: “And despite the common wisdom that minority women have a kind of cultural immunity to developing eating disorders, studies indicate that minority females may be just as

likely as white females to develop such debilitating problems” (Fitzgibbon). Overall, while there are undoubtedly numerous cases associated with the development of eating disorders, the global phenomenon of altered perceptions of beauty raises the issue of Westernization and the power of the media.

Thinness as a Commodity

In *The Beauty Myth*, Naomi Wolf compares “beauty” to “a currency system like the gold standard” (Wolf 12). In essence, commercialization has made body image marketable because a culturally imposed physical standard has placed a value on women’s bodies. Big advertising businesses utilize culturally-created beauty ideals to prey on the insecurities of the public; consequently, these companies benefit from the consumers’ obsession with reaching unrealistic physical demands. Wykes and Gunter assert: “Modern institutions of advertising, retailing and entertainment produce vivid notions of beauty that change over time” (8). In essence, cosmetic, fitness, fashion, and dieting industries all thrive as a result of cultural constructs that implicitly mandate that women must be a specific size and shape and look a certain way in order to be considered attractive. In order to achieve the desired body type, considerable financial spending is invested into an assortment of beautification companies. For example, “Americans spend over \$40 billion on dieting and diet-related products each year” (“Statistics”). Subsequently, these marketing industries profit off of the failures of their customers.

Continually, although the media is not the cause of eating disorders, media portrayals are directly linked to the development of societal perception of the ideal female. *The Media and Body Image* effectively communicates: “the thin message is neither singular nor sudden. Nor is it merely a modern mass media construction. Rather, the mass media reinforce and reproduce thinness within a whole history of cultural constructions of femininity which make it acceptable to audiences and so sellable to advertisers” (Wykes 207). As discussed in “The Diet Business: Banking on Failure,” the slimming business is rather lucrative because the endeavor to lose weight is not something that is easily achieved (Cummings); consequently, these industries are guaranteed a constant influx of customers. Echoing the concern over profit,

Patricia Leavy reiterates: “a hyper-thin body type presents tremendous profits for body-based industries...Because of the enormous profits flowing from the female body ideal, capitalists are now exporting their body ideal to the rest of the world through distorted imagery and advertisements” (6). Moreover, thinness is highly valued in Western society, both as a culturally engrained aesthetic ideal and as a source of income. However, in non-Western countries, the increasing inclination towards thinness seems to be more reflective of the latter.

The “Thin” Incentive for Developing Countries

Referring to the idea of thinness as a profitable ideal for Western body-based industries, Patricia Leavy argues: “With economic globalization comes cultural globalization, and in this instance, the two are intimately linked. We are now seeing the rapid dissemination of the American body ideal throughout the industrial and developing world” (6). As previously discussed, most non-Western countries have traditionally valued plumpness, not thinness. So, if Western media is guilty of manipulating beauty ideals, in what ways is thinness promoted around the world? How is thinness (formerly an “unattractive” ideal) marketed as “attractive”?

Beauty pageants and modeling agencies have made thinness a prized aesthetic. In the 2001 Miss World beauty pageant, Agbani Darego became the first Nigerian to claim the title. According to “Globalization of Beauty Makes Slimness Trendy”: In a culture where....voluptuousness is celebrated and ample backsides and bosoms are considered ideals of female beauty, the new Miss World shared none of these attributes. She is 6 feet tall, stately and so, so skinny. She...[is] a white girl in black skin” (Onishi). Moreover, the international competition left a significant impact on Nigerians’ views of beauty. Continually, the article summarizes: “The change is an example of the power of Western culture on a continent caught between tradition and modernity” (Onishi), communicating that the victory is, perhaps, a sign of a cultural shift. As a result, women, especially the younger generation, are beginning to associate “thinness” with money, fame, and success. In competitions where “the winner is promised a three-year, \$150,000 modeling contract with the Elite agency in New York” (Onishi), conforming to an alternative body type has never been more enticing.

Additionally, the American-based *Cosmopolitan* magazine has become a popular international magazine for women, with many countries adopting their own versions of *Cosmo*. According to Elizabeth Lownik, in Nairobi, Kenya: “A trip to any newspaper/magazine stand provides another plethora of images, particularly magazines such as *True Love*, *African Woman*, *Glamour East Africa*...[which] are all strikingly similar in content and images to magazines like *Cosmopolitan* and *Glamour* in the United States with an emphasis on beauty and sexual prowess as a means to happiness and female independence” (Lownik 11-12). Even though thinness may traditionally not be considered appealing, the promise of recognition and the chance of a better life are what make thinness “attractive”.

For the average individual, far from the world of beauty competitions and modeling, Western media projects images that also equate thinness with success. In her well-known report, Anne Becker describes specific findings from her interviews: “there was a widespread admiration for Xena from *Xena, Warrior Princess*...generally Xena was admired for her abilities, not just her figure, and some girls said they liked her because she was powerful and represented the possibility that women could work” (Becker 545). Although the effects of media are not always negative, in this case, the exposure to television created a link between a character’s physical profile and her abilities and success. Additionally, Becker effectively explains:

“...discourse on weight and body shape is suffused with moral as well as material associations...That is, repeatedly expressed sentiment that excessive weight results in laziness and undermines domestic productivity may reflect a concern about how Fijians “measure up” in the global economy. The juxtaposition of extreme affluence depicted on most television programs against the materially impoverished Fijians associates the nearly uniformly thin bodies and restrained appetites of television characters with the (illusory) promise of economic opportunity and success.” (Becker 552)

Becker’s research reveals that, for Fijian women, the thinness ideal embodies a sense of hope and opportunity for advancement. Similar to the case in Nigeria, the desire to be “modern” often serves as incentive to assimilate to Western ideals. In essence, Western media portrayals

often function to distort the audience's ability to rationalize and distinguish between fiction and reality.

Trends, Implications, and the Role of Globalization in Treatment and Prevention

As a social phenomenon, the obsession with thinness is certainly becoming a global pattern. In ““Beauty” as a Public Health Concern,” Elizabeth Lownik argues: “In the age of unprecedented globalization and cultural amalgamation, this Western ideal [thinness] that has proven so damaging to women, minority women in particular, in the United States and Europe is rapidly spreading throughout the world through advertisements, television, magazines, and print media” (6). As exemplified through the cross-cultural comparisons, exposure to Western media and the subsequent awareness and internalization of Western ideals has undoubtedly resulted in altered traditional perceptions of beauty. According to “Prevalence of Eating Disorders,” studies “indicate abnormal eating attitudes in non-Western countries have been gradually increasing...[and] population-based and patient-based estimates of anorexia nervosa in non-Western countries thus ranged from 0.002% to 0.9% and that of bulimia nervosa ranged from 0.46% to 3.2% in female subjects” (Makino). Although it is still unclear whether or not media exposure is a primary cause of the emergence and rise of eating disorders in non-Western countries, a correlation definitely seems to exist. As the ideal of beauty is increasingly defined by Western standards, the implications are rather foreboding.

It is not to say that the redefining of traditional beauty standards has ultimately led to the emergence of eating disorders in non-Western countries or that the prevalence of eating disorders in these regions will continue to rise. However, if the West is a legitimate indication of the relationship between negative body image, an obsession with thinness, and eating disorders, then it seems likely that the non-Western world will follow the same trend. According to *The Media and Body Image*: “cultural imperialism is spreading the ideals of frail, pale femininity globally via the media, making the investigations of an explanation for eating disorders an urgent matter” (Wykes 13). As the affinity for the thin ideal continues to increase, further cross-cultural research becomes all the more critical because the potential effects are anything but positive. Presently, in the cases where eating disorders have already developed,

evidence supports that Western influence has contributed to an internalization of the aesthetic of thinness and a distorted perception of the ideal's connotation. In her report, Becker concludes: "...disordered eating among Fijian schoolgirls in this study appears to be primarily an instrumental means of reshaping body and identity to enhance social and economic opportunities" (552). Despite the lack of empirical evidence to link media exposure as the cause of eating disorders, it is clear that media messages have presented the thinness ideal in a marketable manner. As Western images penetrate non-Western cultures, traditional beauty perceptions have begun to mirror the distorted Western model, and the behaviors and symptoms of eating disorders are seemingly representative of the change in cultural definitions of beauty.

As *National Centre for Eating Disorders* author, Deanne Jade, describes: "the media do not, by their definition, provide pure experience of the world but channel our experience of it in particular ways....there is no doubt that the media provides significant CONTENT on body related issues to young women" (Jade). Critical to this argument is an understanding of the extreme difficulty in changing a cultural mindset. If traditional values are in fact altered, it would be logical to assume a strong force of persuasion penetrated the cultural barriers. Moreover, a closer and more extensive examination of the manipulative power of the media seems all the more pertinent, especially considering the negative health effects and implications. Continually, the notion that the "globalization of beauty" has simply made thinness a cherished aesthetic is invalid because the Western beauty standard has not obtained value through circumstantial means; rather, Western marketing industries have advertised thinness as a prized commodity through media messages. As a result, non-Western countries are more willing to assimilate to Western standards even though this conformity contradicts with their traditional beauty ideals. In *Am I Thin Enough Yet?*, Sharlene Hesse-Biber asserts: "A woman...is judged almost entirely in terms of her appearance, her attractiveness to men, and her ability to keep the species going...The split between mind and body is a central idea in Western culture" (17). Hesse-Biber's assessment illustrates the extent in which women are often objectified through their portrayals in the media. Similarly, in *No Turning Back*, Estelle

Freedman argues that commercialization has “linked images of women with products that seemingly had little to do with sex” (209). On the contrary, Becker summarizes the perspective of a non-Western culture: “Traditionally for Fijians, identity had been fixed not so much on the body as in family, community, and relationships with others, in contrast to Western-cultural models that firmly fix identity in body/self” (551). These two perspectives demonstrate the discrepancy between Western and non-Western countries’ value of the body.

The nature of the global scene has facilitated an enhanced cultural exchange; consequently, while there are benefits to increased access, globalization has resulted in the spread of negative ideals. For example, Efron remarks: “[the] standards of beauty have changed dramatically since the 1990s with democratization as South Korea’s government has decontrolled TV and newspapers, allowing in a flood of foreign and foreign-influenced programming, information and advertising” (2). In India, “[there is] greater emphasis on meeting international standards in every sphere...[and] studies that have examined the variables of body image and eating disorders among Indian female populations and compared with Western samples have found similar levels of body dissatisfaction and fear of fatness” (Shroff 199). Although the spread of a beauty ideal with negative effects may not be a deliberate intention of Western media, the marketing industries’ focus on profit seems to override the severity of the health implications. Evidently, it is presently impossible to blame the media for causing a pandemic of eating disorders; nevertheless, it is rational to evaluate the global messages that the media project and assess the ways in which these images define and direct the audience’s perception of beauty.

Essentially, in investigating the extent in which the prevalence of eating disorders can be attributed to Westernization, the question is not whether or not the media causes eating disorders but rather how the broadcasted American aesthetic of beauty has permeated non-Western cultures. Jade effectively summarizes: “the latest “postmodern” thinking on the role of the media is that it provides learning that is incidental rather than direct, and it is a significant part of the acculturation process” (Jade 1). According to George Gerbner’s Cultivation theory, prolonged media exposure ultimately shapes viewers’ perception to

emulate the media message. As discussed in “Media Exposure and the Subsequent Effects on Body Dissatisfaction, Disordered Eating, and Drive for Thinness: A Review of the Current Research”: Cultivation theory, therefore, also predicts how media exposure might influence attitudes and behaviors concerning body image, drive for thinness, and disordered eating. If individuals are repeatedly exposed to the television “worldview” of the ideal body, one may misinterpret such portrayals as being representative of the ‘real world’ rather than those of the ‘media world’” (Cohen 59). Cohen argues that certain individuals who experience long-term media exposure may be prone to develop an eating disorder. Moreover, although the relation between mass media and eating disorders is reflective of correlation not causality, the gradual global internalization of thinness as an attractiveness ideal has led to an increase in body dissatisfaction. In turn, body dissatisfaction serves as the link between the media and the spread of eating disorders. Rather than pursuing a healthy lifestyle, women are becoming consumed by the media’s message of thinness equating attractiveness and success. Consequently, eating disorders are on the rise, as the media continues to circulate negative body images.

Despite the negative role of globalization, in the consideration of how to treat and prevent the spread of negative body image, body dissatisfaction, and eating disorders, globalization may also provide the means through which a reeducation and promotion of a positive body image can occur. The emergence of eating disorders in non-Western countries and the altered perceptions of beauty are two phenomena which emphasize the necessity to promote global health, specifically a positive body image. Additionally, there is an increased sense of urgency to address the issue because the thinness ideal is potentially more dangerous in the non-Western world. An extremely thin body shape is impossible for many people to obtain, and in many developing countries hunger is still prevalent. According to “Eating Disorders Go Global”: “Anorexia has even surfaced among the affluent elite in countries where hunger remains a problem, including the Philippines, India and Pakistan” (Efron). Although there is little accessible evidence to support the notion, the potential implications of self-starvation in the midst of poverty are disturbing.

A primary example of using the mechanism of globalization to broadcast a positive message is Dove's Real Beauty Campaign. Based off of "The Real Truth About Beauty: A Global Report," the movement strives to promote self-esteem and rejects the current, narrow definition of beauty. In the report itself, surveys support that 76% of women wish "female beauty was portrayed in the media as being made up of more than just physical attractiveness...[and 75% wish] the media did a better job of portraying women of diverse physical attractiveness –age, shape and size " (Etcoff 43). The study explains how the media wrongly projects that "beauty" is functionally defined as "physical attractiveness". Essentially, "The Real Truth About Beauty study is the first attempt to both 'deconstruct' and 'reconstruct' women's perceptions of female beauty using applied research across ten countries" (Etcoff 47). The mission of the Dove Real Beauty Campaign is to challenge beauty stereotypes and encourage the media to advertise a more realistic portrayal of women. The campaign is a global effort, promoting its message to over 30 countries, including Brazil, Mexico, Korea, the Philippines, Singapore, and Vietnam.

Need for Global Awareness

Ultimately, the media does not cause eating disorders; however, media messages "help to create the context within which people learn to place a value on the size and shape of their body" ("The Media"). As the negative aesthetic of thinness becomes engrained in the mindset of a culture, the "ideal" serves to replace previous beliefs about the cultural definition of beauty. Consequently, as beauty perception is altered to the detriment of women, negative repercussions ensue. In this sense, eating disorders seem to represent a developing outcome of the growing trend. The drive for thinness is becoming a global effort; consequently, a global effort needs to be enacted in order to treat and counteract the negative influence of the Western aesthetic. Since there is no strict formula for determining the cause of eating disorders, it is imperative to evaluate all potential factors that may contribute to the growth of the global phenomenon. At present, even research of minority populations in Western countries remains in its infancy; consequently, increased awareness on a global scale and further investigation of the negative influence of thinness in non-Western countries is

extremely pertinent. The Western perpetuation of inauthentic beauty is a global health issue and must be stopped.

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“Caste-ing” Call for the Social Network: Leveling the Playing Field in India

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Currently, there are over 500 million active users on Facebook, 70% of which are outside the United States. Facebook has been translated into over 70 different languages from every continent and more still being created. Social networking sites have revolutionized the way individuals connect and interact with each other. The vast array of social networks has seemed to appeal to every generation and almost all demographics. Originating in the United States, social networks, such as Facebook and Orkut, have become embedded in the American culture. However, the real discussion is how this social networking craze has been able to penetrate into the cultures of countries around the world. From Poland to India, these sites have been gaining more and more popularity and interest. Even countries such as Saudi Arabia, that heavily stresses the purity of its people, engage in the Facebook revolution.

In hierarchical societies, such as India, oppression and segregation among social classes are harsh realities. Social movement is very uncommon and difficult, especially for those who have no aid or way to climb up. However, these social networks have introduced a new method to battle this prevalence of discrimination and inequality. This new concept has created a paradigm shift in the way people can deal with this problem. A new way to give a voice has emerged for the oppressed classes in Indian culture. Have social networking sites, such as Facebook and Orkut, helped break down the barriers of social classes and create a more leveled medium for people to interact and create connections in India?

Since the origination of the internet for the public in 1991, life has moved from the real world to the cyber world. With electronic mail, instant messaging, video chatting, and a plethora of new ways to connect, no one has to be confined to the distance between two

individuals. This new medium of the internet has been effective in linking people from around the globe. For the first time ever, a person can literally have the world at their fingertips.

With the world linked by the concept of the internet, cultures began to interconnect. In the article "Cyber Influence and International Security," authors Kramer and Wentz describe that the internet has the "capacity to search for and provide useful information for action and/or education, and an ability to create influence through the communications empowerment of individuals or groups" (np). Based on this quote, the internet has created the ability for influence to be made over others by groups or even an individual. With this tool, countries can impact and influence the previously established dynamics of a culture or nation. American culture has seemed to diffuse into several other nations with distinct cultures. This connection is not always regarded as a positive, however. In the article "A European Considers the Influence of American Culture," Gienow-Hecht cites examples of countries that "deplore the demise of their cultures with the rising influence of Anglo-American television and culture" (np). Regardless of whether the reception is positive or negative, the influence of the United States is happening and a great deal is accredited to the popularity of the Western culture of the internet.

Although the negative side has been elucidated, there is still a great advantage of connectivity among cultures through the use of the internet and other technological advances. The internet enables us to tap into information and knowledge that was previously unavailable and unreachable. Dr. Rubina Bhatti states in her article "Internet Use among Faculty Members in the Changing Higher Education Environment" how the internet has improved her academic life by providing her with much more information. She says "the internet makes it possible for users to have access to large volumes of information, irrespective of their geographic information" (np). Clearly, the internet has been successful in providing a tool for those in other countries who do not necessarily possess the same resources as others.

With the rise and popularity of the internet, the creation and utilization of social networking sites followed. So what exactly is a social network? There are two classifications of social networks. The first is an "indifferent social network." Indifferent social networks are ones

that “have no bias, or prejudice, against their users (Sharma 6). The other option is a “niche network.” This is a network where an invitation is often needed and is limited to a certain group or members (Sharma 7). However, the social networks, such as Facebook and Orkut, fall under the “indifferent social networks” category. This means they do not discriminate against their prospective users. These networks are the ones that are striving to cut across social boundaries.

There are a vast amount of social networking sites. Although there were minor sites that emerged around 2000, the real emphasis on the use of social networking sites was when the site MySpace.com became popular. Following the popularity and enthusiasm of MySpace, other sites such as Friendster and Facebook came about. This is when the sudden proliferation of social networking sites began. Hi5, Orkut, Cyworld, Mixi, LunarStorm, and other similar sites began appearing in different regions around the world (Fraser 4). The interest of social networking sites was so widespread that enrollments were countless. Fraser points out in his book “Throwing Sheep in the Boardroom that “the appeal of social networking sites cuts across national boundaries, aggregating networks representing every conceivable community” (4). These social sites have been successful in sparking the interest of those around the globe.

Social networking sites have permeated through several different cultures, even those that are not fully dissociated from discrimination of its people. India is a flourishing country which has been recognized as one of the up and coming superpowers. However, it does also have its downfall, the caste system.

Although the caste system has been abolished, the distinctions are still observed by many of the citizens. The origination of the caste system dates back to 1200 BCE under Hindu principles. The classes are created according to intended profession. Those born into a particular caste are destined to continue the tradition of that particular occupation. The supreme class of people for the Indians was the Brahmans. Their duty was to become priests and they were normally the educated class. They were well respected and considered to be god-like. The next class following the Brahmans is the Kshatriyas. These people were regarded as rulers and warriors. They generally were the property owners. While the Brahmans were still the supreme class, the Kshatriyas were still highly regarded. Next are the Vaishyas. The

members of this caste normally had commercial livelihoods. They were merchants, laborers, and textile workers. After this sect were the Shudras. These people were generally in the service industry. They were farmers, fishermen, and other day laborers. Finally, the final caste and the most discriminated against were the Dalits, or the “untouchables.” Clearly from their name, the position of these people was nearly nonexistent. These people were obligated to become servants, cleaners, and other lowly jobs. They were often not allowed into the temples and rarely were allowed into the common areas. The untouchables were treated as chattel (History of the Caste System in India). These class distinctions were present in the Indian system for centuries, but later abolished due to its demeaning nature and discrimination.

At the time while the British were reigning over India, the effectiveness of the caste system was subtly downplayed. Although it was still existent, the divisions were not as practiced. When India finally gained her independence in the 1950’s, the new constitution abolished the recognition and practice of the ancient caste system (George). The government attempted to ban this horrible practice, but their efforts were subpar. As quoted in Nirmala George’s article “India Caste System Discriminates,” even though the caste system was deemed illegal, the “efforts to end caste discrimination have not been implemented as rigorously as they should” (np). Clearly the Indian government has not enforced their established law and tightly as one would hope. There are some measures taken to assimilate the “untouchables” into regular Indian society. In her book “Planet India” by Mira Kamdar, the author cites some efforts the Indian government has taken to aid the untouchables. She shows how the “Mandal Commission proposed raising the 22.5 percent of university admissions and public-sector job slots reserved for lower castes to 27 percent” (233). The government is trying to make a difference, but on a smaller scale. Some receive this change with open arms, but some feel it is infringing on their well deserved opportunities. Even though the Indian government is trying to help this issue, George’s article cites that “the Indian government wants to keep the matter out of the international spotlight” (np). It is known to the Indian government that this system is unethical and wrong, so to avoid looking subordinate in the eyes of the world, this issue is trying to be suppressed and minimized.

The caste system, although abolished, is still prevalent in Indian society. Many groups of people still recognize and follow the caste system customs. The main prevalence of the use of the caste system settles with the lower classes. The article "Caste in Modern India" talks about how those living in villages uses castes to "dictate marriages, rituals concerning birth and death as well as occupation which all in turn have a large role in economic status" (np). Those who are members of the lower classes still engage in the activities involved in the previous caste system. They are not able to move up classes as readily. Their social mobilization is handicapped. Nicholas B. Dirks describes in his book "Castes of Mind" that "caste remains the single most powerful category for reminding the nation of resilience of poverty, oppression, domination, exclusion, and the social life of privilege" (16). The practice of the caste system has been removed from societal law, but it still leaves an imprint in the minds of Indian citizens.

As India has changed politically, they also have advanced technologically. The growing use of the internet, television, cellular devices, and other media contribute to its growing information technology field and computer sciences. This also deals with their every increasing interest in social networking sites. The modernization of Indian culture has included the concept of "going mobile." The introduction of the internet and telephones created a new culture that has swept through the nation. Kamdar cites the example that even a "clothes presser, for example, may live in a one-room shack, but he has a cell phone" (106). The prominence of the technological world has infiltrated even the most unsuspecting hosts. In addition to mobile devices, the amount of personal computers and laptops users are also rising. Computer sales would generally rise at around 30% annually. However, in May of 2006, "notebook sales climbed a gigantic 168 percent" (Kamdar 108). The amount of Indian citizens engaging in the technological world seems to rise as the years progress.

India is a country rich in history and age. Many customs and traditions are engraved in the minds of the people and passed on for future generations. However, with the recent introduction of the internet and subsequently social networks, some worldviews and norms have been questioned. Facebook, Orkut, and other social networking sites have tried to look past social classes and distinctions in India but are unable to create a more uniform medium for

those of all social ranks to bond and connect. There may have been specific cases where this is invalidated, but in the overall grand scheme, social networks have failed at creating more caste to caste interactions and caste equality.

Along with the increase in use of the internet, the registration for social networking sites increase as well. Social networking sites are not limited in the cyber realms of India. From Facebook to Shaadi.com, these sites are prevalent on the internet and have distinct purposes. Initially, Orkut gained a major portion of India's social networking shares. It claims to have over 13 million members that are considered active users. (Win np). With its swift move into India, a majority of the social networking users are associated with Orkut. Although the site "Facebook.com" was present in the nation, the fan base had to steadily increase over time. Now, Facebook has exploded to be the major social networking site in India (Prabhudesai np). It brags an estimated 20 million users (Social Bakers np). However, Facebook is still catered to its North American users, rather than internationally, like Orkut. For example, Orkut displays a decorated logo on the popular Indian holiday Diwali. Facebook still remains to stay in the American culture moreso, rather than reaching out to other cultures. Sites such as Shaadi.com are used explicitly for locating relationships and possible marital spouses. Also, other social networking sites, like Twitter, LinkedIn, and MySpace, are present in the Indian social networking community, but are not as active and influential as Orkut and to an extent Facebook (Java np). Social networking sites have created a new way for people to communicate in India that was previous foreign or unattainable. For example, due to matrimony sites, finding significant others and dating is not too difficult. Also, connecting with friends is much easier. The goals of all social networks are being accomplished in India as well as the other counties it inhabits. Not only are social networking sites becoming popular in India, so are blogs and bloggers. The amount of bloggers and readers of blogs is immense. The most active amount of bloggers in Asia is present in India (Social Networking for Employment in India). Out of all of India's internet users, about 83% are considered active bloggers (Vardaan np). Active bloggers are those that either compose their own blog pages or contribute to other bloggers. There are

many forms and variations of the social networks in India, but they are all influential, to some degree.

For over 50 years, the caste system has been outlawed in India, but equality is not easily gained in this short period of time. Those of higher castes generally are still well off financially and socially. They are able to gain internet access more readily than those who are hindered by their position in society. The modern innovation of the internet is not a commonality in homes of the lower castes. Mostly higher castes have internet access, leaving lower castes unable to connect and interact on social networks. Social scholar Gaurav Mishra discusses how “higher, more powerful, castes like Brahmins, Rajputs and Yadavs tend to have more money and easier access to the internet and old disparities are further accentuated by the internet” (np). Since lower classes are unable to gain equal access to the internet, they are underrepresented on these social networks. Caste to caste interaction is limited and can create a sense of elitism among the higher classes.

Some argue that internet access is slowly becoming interjected into the villages and lower class communities. The majority of internet users are able to access the internet through the use of cybercafés. In another section of the study done by the “Internet and Mobile Association of India,” it says that “cyber cafés continue to rule as the most prominent point of internet access” (np). Even though the amount of users is from offices and workplaces, cybercafés still remain the main source for internet access. In addition, the Indian government has implemented the “National e-Governance Plan.” The aim of this initiation that will be “improving delivery of Government services to citizens and businesses” (e-Governance np). According to the Indian Development Gateway Organization, as a “part of the National e-Governance Plan vision, one computer and internet enabled Common Service Center” for every six villages will be established (np). The accessibility of the internet is being dealt with for those living in villages with limited technological ability. An internet-linked computer may not be present in every Indian household, but measures are being taken so connectivity can be reached.

However, even though this is all true, the amount of lower caste users is very limited. The National e-Governance Plan is not aimed to help the lower classes access Facebook or Orkut, but rather to help them connect to their government. Not downgrading the motivation behind the plan, but it does not help the underrepresented gain access to these social networks. The argument of cyber cafes still stands, but most of the cafes are concentrated within in the major, metropolitan cities. India is striving to help modernize their population, but the process is just beginning.

For those who can access the internet, creating a social networking account is simple. After opening an account and setting up profiles, users of these social networks are free to friend, defriend, post, and upload anything they please, that coincides with the terms of use of course. So one would only assume that users cross social boundaries and look past distinctions in order to gain a more rounded group of friends and create a more diverse repertoire of interactions. However, this is seldom the case. In fact, users maintain their same caste interaction, rather than branching out and exploring their unknown. A huge indicator of this type of cliquish behavior is drenched in the groups formed and the members that associate with them. The effort required to create a group is very minimal and options can be placed to have the output what the creator imagines. Undoubtedly, there are groups that link common interests or associated opinions, but Facebook and Orkut have also become breeding grounds for caste based groups as well. In her article in the Times of India, Mansi Choksi reported that “social networking sites Orkut and Facebook have become a fertile ground for scores of groups based on ethnicity and caste” (np). A feature that was supposed to link those of different backgrounds and statuses together is strengthening a division and encouraging segregation. Groups are plentiful and include all castes. As Choksi continues, some examples of Orkut groups in existence are “'Brahmins Culture and Tradition' , 'I Hate Intercaste Marriage' and 'The Great Maratha'” (np). Clearly, caste identify has been exemplified on these social networks. Members of these groups are joining them to associate themselves with their castes and making it known where they stand in Indian society. In addition to upper caste affiliations, groups such as “Dalit Feminism” are also present on these social networks. A group that

promotes women rights in the lowest group shows empowerment and consolidation among those of the lower castes to rise up and become more prominent. This does seem like a worthy cause, but why does it have to be restricted to solely the Dalit class? This movement should penetrate all classes and divisions to fight for all women. Although Facebook and Orkut are tools to help empowerment and motivate people, it does not necessarily link those of different castes together and look past the discrimination. Monty Munford writes in his article “How Indians are using Facebook to Fight the Caste System,” that “Facebook and local social networking site Orkut and even Twitter (with a mere 1.5 million users) are widely accessed and the caste debate has led to the creation of hundreds of groups” (np). Because the use and recognition of the caste system is widely debated in the real world, this argument is taken to the cyber world as well. Unfortunately groups are created that emphasize how distinguished these different views are, rather than connecting them. Munford later goes on to say that “the forums on these sites only underscore how divided these communities still are” (np). Those who are debating whether this belief system should be accepted or not are not reaching common view point or some common ground, but are just strengthening their own views and dismissing the opposing ones. So although all the tools are there to help desegregate those of different castes, they are not always used to their best ability.

Users bring their same discriminatory beliefs and mindsets they possessed in the real world to the internet and social networks. And even if they try to maintain peace among the different castes, that can often backfire. Choksi elaborates in her article that “most groups are updated almost every minute, and some of them spew so much venom that scraps are reported and subsequently deleted. Hearteningly, there are also communities against casteism, but, again, sometimes these too are prey to casteism. In one community called ‘We hate caste feeling’, for instance, a member posted a discussion asking how many members were from the upper castes” (np). The presence of separate caste mentality has not necessarily been eradicated from the social networking realm. Even if there are pushes to move towards equality, there are always opponents and those who subtly dismiss this notion. It’s as if equality takes two steps forwards and three steps back.

Not only are caste recognition present for the users own self, but for their family. Since the caste system has been engraved and stressed in the minds of most individuals in India, it is customary for people to marry within their own caste. The real world with arranged marriages are normal for some families, but love marriages are not uncommon either. What many young adults look for in a mate is not just education and religion, but also caste. Being a point on their checklist, modern bachelors and bachelorettes use these social networks to find love, within their own castes. Munford also discusses how even though “these groups profess to allow different caste members to shout and scream, there were a lot more posts about boys and girls hoping to find somebody from their own social group or caste to hook up with. Somebody for their parents to approve of” (np). Family acceptance is something most people long for when looking for marriage material, so this new generation can look for love on these social networking sites, while maintaining that family expectation of spouses in their same caste.

A huge advantage of the internet is the anonymity and ambiguity of it. Since there is no face to face interaction, users of social networks can potentially become whoever they please. One is able to highlight their strong features and downplay their weaknesses. This may be beneficial to some extent, but cannot mask the caste association and label of people. Facebook and Orkut require a name and have the option of placing a photo on the user’s profile. The caste system has been designed to easily identify a person to their caste solely based on their name and occupation. Choksi recognizes this in her article and addresses it regarding Facebook. She says “while Facebook has fewer caste-based groups, friend requests from people who identify one’s caste through their name is not a rarity” (np). It is easy to identify a person caste through their name and occupation. Many users see this as a deterrent in reaching out and associating themselves with these people. Even if the rest of the profile can appeal to an individual, the sole detail of one’s name can act as a repellent for a friendship to occur.

Through all this push for social equality and deterioration of the caste system, there is very little degradation overall in the country. The step of outlawing the caste system was revolutionary, but erasing a law from the books does not erase it from the minds of people that have been abiding by it for decades. There are ways that the caste system has been

unrecognized, such as in the work force. In fact, there are initiatives as cited by Munford in his article saying that Dalits “by law are guaranteed between 7.5 per cent and 15 per cent of vacancies in Indian Government jobs” (np). So clearly the government is trying to level the playing field for the lower castes. However, this is their form of affirmative action, which is motivated solely by the government and not necessarily by the citizens

Of course, there are some cases where an individual from a lower caste gains political power and rises up from their suppressed conditions. For example, K.R. Narayanan was able to beat the harsh caste system and gain a name for himself and his caste. Not only was Narayanan a political leader in India, he was elected President in 1997. An article in *The Economist* triumphs that Narayanan “was born at the very bottom, into the group of “out-castes” once called “untouchable” and now known as *dalits*. Yet he rose to the top, serving as the country's president from 1997 to 2002” (np). This accomplishment was a breakthrough for the lowest caste in India. Not only were the “untouchables” able to gain place in the political arena, but they were able to lead. This is indeed a huge accomplishment for the Dalit caste, however it is not necessarily pointing to any conclusion. In the article, it talks about how K.R. Narayanan was a very brilliant and bright individual, which allowed him to win several scholarships and gain several opportunities to move up the ranks. This opportunity is very rare and can be argued next to impossible. In addition, most people who live in the villages and are members of the Dalit caste do not attend school, but rather are taught to learn their trade, whether farming or like jobs. This case is a huge step for the Dalit caste, but is not very common or expected.

In actuality, the decreasing of caste mindset is mostly present in the urbanized cities and modern thinking individuals. The villages and small towns still exercise the caste system. The article “Caste in Modern India” explains how “though in many respects caste is diminishing, in many others it is still an important part of Indian society. In the villages especially, caste dictates marriage, rituals concerning birth and death as well as occupation which all in turn have a large role in economic status” (np). The rural areas of India still believe in the caste system and stick to the ancient teachings of it. This may be seen as a small population and a somewhat insignificant one. However, the majority of Dalit caste is concentrated in these

villages and rural areas. The social networking medium does not reach these traditional folks and have no bearing on their belief system.

The caste system is not diminishing in the way society would like. There are many opinions that suggest since the internet, India will be able to look past caste and now forge forward to a more unified, equal society. But author Hanna Win cites from an article written by Gaurav Mishra that “as more Indians go online, and the internet reaches beyond the most urban and educated layer of society, caste activity will become only more prevalent” (np). Some may think that the revolution of the internet and social networks is an answer to the ongoing debate of the caste system and its acceptance, but this may not be the case. This new idea can actually be a new way to exercise the discrimination of the caste system.

Social networks have exploded and become an international phenomenon. The versatility, functionality, and mobility that are linked to these websites appeal to a wide range of individuals from all walks of life. Of course the westernized world accepts social networks with open arms and views it as a tool of connectivity and unity. Their government and liberties allow this reception and acceptance. However, sometimes this effect is not universal.

Countries that still have social stratification, such as India, do not yield the same positive results of globalized social networks as developed countries. The concepts and ideas Facebook and similar social networks promote are not wrong or a hindrance in any way, but just because the tools are available doesn't mean that they will be utilized to the best ability. David Kirkpatrick discusses in his book [The Facebook Effect](#) the motives of Facebook in the globalized world. He shares a quote by Facebook board member Peter Thiel saying “the key value in my mind is tolerance” and later goes on to finish “globalization doesn't necessarily mean you are friends with everybody in the world. But it somehow means that you're open to a lot more people in a lot of contexts than you would have been before” (278). In their minds, Facebook is a valuable tool that can intercede in the complexities of socially divided societies and enable users to fight these predisposed assumptions and roles that they are forced into. This may be indeed valid; however the users in the developing countries are not necessarily sticking to the plan. Instead they are falling into the same distinct social roles that have been engraved in their

minds, just on a new medium. Kirkpatrick assess this theory and arrives at a similar conclusion. He says “Zuckerberg’s values reflect the liberties of American discourse. Facebook carries those values around the world, and that’s having both positive and negative effects.” He continues by saying “in the United States, people take certain amount of transparency and freedom of speech for granted, but it comes at a great cost in some other cultures” (279). Kirkpatrick delves into several specific examples and how Facebook has not been as successful in promoting peace and equality as it does in other countries. Although this tool can be an instrument of change, it can also be used as an instrument of continuity.

India has been gaining in its battle to diminish the caste system and social discrimination. Several factors have contributed to the diminishing of this inequality and helped promote the vision of the future, but some means are not necessarily aiding in this fight. Social networks have enabled users to become more uniform in their communication and interaction; however they have been unable to decrease the levels of the caste system dramatically. In Hanna Ingber Win’s article, she quotes the social media expert Gaurav Mishra concluding “surprisingly with urbanization, with education, with more people traveling and getting exposed to other cultures, these divisions have not really gone away. Caste even now — even in urban, educated India — is still an extremely big issue” (np). Social networks, even if they are prevalent and widely used in India, are not succeeding in their quest to link diverse people together. Social networks do seem to have this profound effect on developed countries. However this does not always get translated exactly in other developing countries. Centuries of social stratification have created distinct limitations on connectivity and communication between classes. The freedoms expressed among Western users in developed countries are not available as yet to those in developing countries, especially on these Westernized social networks.

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So What's the Deal With the Value of the Renminbi Anyway?

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Introduction to the Renminbi

For more than a decade the United States has been urging China to let its currency, the Renminbi (RMB), appreciate due to market forces. The Chinese government has intervened on multiple occasions to limit the rise in value of the RMB against foreign currencies. Some label these interventions as currency “manipulation” and argue that China’s policies regarding its currency are allowing China to have an unfair advantage in the world economy. Chinese officials firmly believe that their currency policy promotes domestic economic stability and does not negatively affect other countries. The Chinese have pegged their currency to the dollar meaning that as the dollar appreciates or depreciates so does the RMB. Recently the Chinese have been criticized due to their slow rate of RMB flexibility reform because of the economic crisis. Economists note that there are positive and negative effects of the current value of the RMB as well as what the consequences would be if the Chinese allowed their currency to appreciate. Some of the major issues surrounding the RMB are its affects on trade balances with its partners, most notably the U.S., and its affect on long-run economic growth for China. This paper is intended to summarize the economic consequences of the RMB as it is and as it would be if allowed to appreciate or float freely in the markets.

Historical Background of the Renminbi and China’s Economy

In 1994 the Chinese pegged the RMB to the dollar. Before this the Chinese had two exchange rate systems. From 1994-2005 the Chinese pegged the RMB to the dollar at an exchange rate of 8.28 (Morrison 1). The Chinese did this to promote stability in the Chinese economy for foreign trade and investment because by keeping the RMB pegged to the dollar

would prevent large swings in exchange rate. To keep the exchange rate the Chinese central bank bought and sold “dollar-denominated assets in exchange for newly printed yuan [RMB] as needed to eliminate excess demand (supply) for the yuan” (Morrison 1) This means that the Chinese were printing currency to purchase assets that were bought and sold in dollars to appreciate or depreciate the value of the Renminbi and keep its exchange rate constant with the dollar. In 2005 the Chinese changed its policy and allowed its currency to appreciate 2.1%, to 8.11 to the dollar as well as allowing it to fluctuate up to 0.5% against a market basket comprised of different currencies (Morrison 2). After its initial appreciation, the Chinese allowed the currency to appreciate slowly but steadily and reached an exchange rate of 6.83 to the dollar, or another 18.7% between July 21, 2005 and July 21, 2008 (Morrison 2). Economists call this a “market float” meaning that “market forces determined the general direction of the RMB’s movements, but the government retarded its rate of appreciation through market intervention” (Morrison 2). This means that the market determines whether the currency would appreciate or depreciate on any given day, but the Chinese would intervene to limit the currency’s fluctuations. When the economic crisis struck in 2008, the Chinese stopped its policy of RMB appreciation and held it constant at roughly 6.83 to the dollar (Morrison 2). In June of 2010, the Chinese stated that they would, “proceed further with reform of the RMB exchange rate regime and to enhance the RMB exchange rate flexibility” (Morrison 2). However, their new policy would still prevent any large fluctuations. Since its most recent currency policy in late June of 2010, the RMB has appreciated 1.9% (Morrison 2). Currently the RMB is valued at 6.6545 to the dollar as seen in the graph below. The graph shows that in the recent recession the value of the RMB has been held relatively constant.

1 USD = 6.6545 CNY -0.00900 (-0.135%)

Dec 17, 8:00PM

 1: (No result) [Dis](#)



The Status Quo

Although the RMB has appreciated there exist many critics who argue that the appreciation is moving at too slow a rate. They argue that the Chinese economy is fueled by its large export sector and by keeping its currency undervalued they can keep its export sector flourishing and sustain high economic growth. Many Chinese officials contend this issue and argue that their currency policy is intended to promote economic stability. They argue that their large export sector provides jobs and attracts investment into the country. Economist Joseph Stiglitz stated to the Financial Times that between 1981 and 2001 the Chinese economy has lifted 422 million people out from absolute poverty. This is due in large part to its export industry which has grown over the years and continued to provide and create jobs for workers. In Morrison and Labonte's congressional report they quoted Chinese officials as stating that, "it would be difficult to make the case of an immediate Renminbi appreciation in a country where 40 million people live on less than 1 U.S. dollar a day." They fear that the wrong currency policy would be detrimental to their people. In response to criticism that the Chinese policy

negatively affects the global economy, Chinese officials state that the greatest way to contribute to global economic stability is to promote rapid domestic growth due in part to their export sector. Critics believe that the Chinese trade surplus is proof that the Renminbi is unfairly valued. In economic terms a surplus is a sign of inefficiency. For the first eight months of 2010 Chinese imports have risen at a higher rate than exports, decreasing their trade surplus. The Chinese believe this is proof that their currency policy does not “restrict trade or promote Chinese economic growth at the expense of other countries” (Morrison 11). The economic stability of the Chinese economy is critical for sustaining political stability as well. Chinese officials fear that reforming their currency policy and making the RMB free floating could negatively affect the economy and cause unemployment (Morrison 11). As a result of the economic crisis their export sector dropped and factories had to shut down causing over 20 million workers to lose their jobs (Morrison 11). The economic crisis instilled fear in the Chinese officials and brought up questions of their ability to manage their economy and continue its rapid growth in the upcoming years (Morrison 11). In other words, if the Chinese economy performs poorly the government will be blamed and create political turmoil. Therefore the Chinese are reluctant to alter the status quo that has treated their economy so well in the past.

Arguments in Support of Renminbi Appreciation

Leading the oppositional forces to China’s currency policy is the United States. US officials charge the Chinese with manipulating their currency to make Chinese exports cheaper and imports more expensive. Having a cheap currency makes Chinese products cheaper causing nations to import Chinese goods as opposed to the good of other nations. It also makes imports from other countries more expensive, most notably the United States and decreases net exports of competing countries. Critics argue that the undervalued currency is partly responsible for the large trade deficit between the US and China which grew from \$10 billion to \$266 billion between 1990 and 2008 (Morrison 6). Some analysts believe that there exists a correlation between the U.S. trade deficit and U.S. job losses. China’s manufacturing industry is highly competitive because of its cheap labor rates. Many argue that these rates are

responsible for the loss of jobs in the American manufacturing industry. In addition to this some analysts believe that other East Asian economies are intervening in their currencies so that they can compete with Chinese exports. This prevents the dollar's depreciation against East Asian currencies and decreases U.S. exports further (Morrison 6). Economist C. Fred Bergsten believes that if China's currency were allowed to freely float it would appreciate heavily as well as other Asian currencies. This would boost U.S. exports, which would gain in competitive advantage and create 600,000 to 1.2 million jobs in the U.S. (Morrison 6). Another argument for the appreciation of the Chinese currency comes from economist Paul Krugman. Krugman, "contends that the undervalued RMB has become a significant drag on the global economy recovery, estimating that it has lowered global GDP by 1.4% and has especially hurt poor countries" (Morrison 6.)

The American Opposition and Tactics

Global concern over China's currency policy has led to mounting pressure on China to reform its policy. The U.S. leads the coalition against the Chinese. President Barack Obama and Secretary of State Hillary Rodham Clinton have visited East Asian countries to increase their influence in the area and counter China's. In "U.S, China battle for allies in the Renminbi dispute," the writer (author unknown) states that the purpose of Obama's and Clinton's visit to East Asian nations "is to establish a joint stance toward China in order to apply international pressure on Beijing to make flexible response on a number of pressing issues," the most important being China's currency policy (4). The United State's power to influence other nations is limited to politics because the large U.S. deficit prevents the U.S. from investing abroad. The article states that, "American officials are depending on common interests, such as democracy and human rights, to set the nation apart from China." China on the other hand has around 2.6 trillion in foreign reserves and is heavily invested in other economies (U.S. 2). Investment from China allows for the creation of jobs in foreign economies. This makes China a powerful ally economically. Chinese officials have also visited members of the European Union to strengthen trade agreements as well as to create new ones (2). In the recent G-20 meeting of the 20 largest economies, the U.S. led discussions urging the Chinese to let the RMB

appreciate. The Chinese agreed to allow their currency to appreciate but did not agree on any terms to its appreciation leading to the belief that the value of the RMB will be decided on China's own terms.

Affects of Renminbi Appreciation on the US

Many believe that if China allowed its currency to appreciate U.S. exports would rise and imports from China would fall causing the U.S. trade deficit to decline immediately. Currently the deficit is -226,749.8 million dollars as seen in the chart below.

Trade with China : 2010

NOTE: All figures are in millions of U.S. dollars on a nominal basis, not seasonally adjusted unless otherwise specified.

Month	Exports	Imports	Balance
January 2010	6,888.8	25,185.1	-18,296.3
February 2010	6,855.1	23,363.8	-16,508.8
March 2010	7,403.6	24,300.2	-16,896.6
April 2010	6,591.2	25,905.7	-19,314.5
May 2010	6,752.7	29,036.8	-22,284.1
June 2010	6,715.0	32,866.5	-26,151.5
July 2010	7,344.7	33,260.0	-25,915.3
August 2010	7,253.5	35,288.5	-28,035.0
September 2010	7,168.2	34,999.2	-27,830.9
October 2010	9,303.4	34,820.2	-25,516.8
TOTAL	72,276.2	299,026.0	-226,749.8

However, the issue is not as black and white as believed and there would be short-term as well as long-term repercussions. It is also true that exchange rates are only one of many factors that affect international trade. A clear example of this is the fact that “despite the RMB’s appreciation from 2005 to 2008, the U.S. trade deficit with China still rose 30.1%” (Morrison 16) which can be seen in the graph below. Another factor affecting U.S. imports from China is the fact that many Asian countries have moved their manufacturing plants to China causing the growing bilateral trade imbalance between China and the U.S. Imports to the U.S. that once came from several non-Chinese countries are now being imported from China causing their trade surplus to increase and the U.S. trade deficit to grow. In Chinese plants, only around 3% value is added to each unit produced and is even less significant compared to an item’s retail

price. Analysts argue that because a lot of Chinese imports are inputs for manufacturing items which are then exported, an appreciated RMB would have small impact on the prices of Chinese exports and therefore bilateral trade flows would only be impacted slightly. This is due to the small amount of value added to each final product exported. It is easy for the U.S. to blame the Chinese for their economic instability however; an appreciation of the RMB would only have a negligible impact on the United States. Economists believe that the large disparity between China and the U.S. is largely due to the high savings rate in China compared to the low savings rate in the United States. If the RMB appreciated the trade imbalance would still exist (Morrison 17).

Effects of a Market-Based Renminbi on the United States

An economist would argue that the Chinese, as well as all countries, should allow their currencies to float freely, or be determined by the market. Economists believe that a market-based currency would be the most efficient in allocating resources. Currently, the value of the RMB favors some and hurts others and the same would be true if the currency was allowed to appreciate. Morrison and Labonte state that a market-based exchange rate would ultimately increase U.S. exports and ease the competition between U.S. firms and Chinese firms (19). An appreciation of the RMB would not be solely an advantage to the United States. An increase would mean that U.S. citizens would have to pay higher prices for Chinese goods which would diminish the amount of money they had to spend on other goods and services. In addition, firms that use Chinese inputs would experience a rise in prices and make them less competitive as a result (Morrison 19). Currently, the Chinese invest in the U.S. through its purchase of assets which allows U.S. capital investment. If the RMB appreciated capital investments would increase because there would be a greater demand for U.S. assets. This in turn decreases U.S. interest rates which allow for an increase in the demand for loan-able funds. This would increase aggregate spending in the short-run and increases long-run economic growth by increasing capital stock (Morrison 19). The U.S. realizes China's affects on interest rates so while U.S. officials are pressuring the Chinese to let their currency appreciate they also urge them to continue purchasing U.S. securities.

Implications of an Undervalued Renminbi

If the RMB is to be considered undervalued than there are numerous implications for the Chinese economy considering its growth strategy, which is largely dependent on exports, and its currency policy. One negative aspect to a large dependence on exports is that it leaves the host country vulnerable to global economic slowdowns (Morrison 21). This means that if there is a global economic downturn there is less demand for goods and services. If there is less demand then China's export sector will experience losses which will lead to a loss of jobs and profits. This was true for the Chinese economy during the recent global economic crisis. An undervalued currency also makes imports more expensive, having a negative affect on Chinese firms that use imports for their industry (Morrison 21). China's dependence on its export sector also impedes long-term economic growth opportunities. Because the RMB is pegged to the dollar the Chinese have to divert a large portion of their trade surplus to maintaining RMB valuation by purchasing U.S. debt securities as opposed to investing in infrastructure.

Effects of a Market-Based Renminbi on China

If China adopted a market-based currency there would be costs due to the adjustment of firms to the new valuation. However, a market-based currency offers several long-terms benefits. One way it would benefit the economy would be by efficient allocation of resources away from inefficient sectors of the economy that are subsidized because they export goods and directing them toward other sectors that are more competitive (Morrison 22). It would also decrease costs of imported goods thus lowering prices for Chinese consumers and ultimately increase their standard of living (Morrison 22). Another benefit to China would be a reduction of tensions between China and its trading partners that are in support of an appreciated RMB. An appreciation of the RMB would help domestic firms by decreasing the costs of their inputs and increase output.

Results of the G20 Summit Meeting

The issues surrounding the appreciation of the Renminbi are multi-faceted and driven by domestic interests as well as the well-being of the global economy. The Chinese, being largely dependent on their export sector for economic growth, are reluctant to allow their currency to appreciate too quickly and destabilize their economy. However, the U.S. and other countries urge the Chinese to allow their currency to appreciate because they believe it would be beneficial to the global economy by making other countries more competitive. Currently, the Chinese are letting the RMB appreciate at a stable pace according to their terms. The G20 conference in Seoul, South Korea did little to impact the Chinese as far as RMB appreciation. The U.S. tried to lead arguments urging the Chinese to reform their currency policy but was met with counter arguments that the U.S. was being hypocritical because of the recent decision by the Federal Reserve to pump \$600 billion into the U.S. economy to further lower interest rates and help the economy return to pre-crisis levels (Analysts 1). The results of the G20 conference represent the United State's diminishing role as a leader in the global economy, and China's rising prominence.

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Shakespeare's Ariel and Caliban: The Others

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The presence of the "other" in Shakespeare's *The Tempest* (1610-1611) correlates the notions of racism and slavery with the relationships between the colonizer and the colonized. Ariel and Caliban are both natives of the island, but are divided into two separate types of indigenous peoples, the compliant and the savage. While Ariel's aerial disposition allows for this character's racial ambiguity, Caliban's "otherness" is much more tangible through the Early Modern English Lensin regard to his physical differences. Although Ariel and Caliban are needed equally by their colonizer, Ariel receives special treatment, thus, revealing a social stratification system within their oppression. The inability to racially and physically characterize Ariel as an "other" stimulates the disparity between him and Caliban, both slaves, in relation to Prospero.

The anxieties about race during early modern England are evident in *The Tempest*. The nature of "the other" in the play is clearly derived from the social ideals of the early 1600's. Although there was a lot of trade with Africa happening at this time, African traders rarely went to Europe; therefore the presence of blacks, other than the poor and slaves, was not common-sight in England. This establishes a "binary system of representation" in which there are those who belong and those who are "other" (Hall 11). In England, those who belong, in terms of race, are those who are white and anyone else who is of a darker pigmentation does not belong. According to George Best, it was a belief that one's blackness was not due to sun exposure but instead an "infection" (Hall 11). The "infection" obviously defined by an illness that makes one look different from another and ultimately makes them less than the other. It is important to note that to define the meaning of an "other" is subjective through the lens of the perceiver.

Because it is known that Shakespeare never visited Italy, his characters in the play, although hailing from Italy, are influenced largely by English culture. Therefore, Prospero's

perceptions of his “others” come from an English lens, instantly putting Caliban below him. Caliban is addressed as “a thing of darkness” (5.1.275) and “of a vile race” (1.2.361). Upon his arrival on the island, Prospero strips Caliban of his own history, that is, to take away one's past and any aspirations for the future formulated in that past, a familiar consequence faced by those who do not belong (Hall 13). As son of Sycorax, Caliban was to inherit the island after her death (1.2.334). Instead, all that he thought would be his and all experience he has had with the island is halted and ultimately eliminated by Prospero's arrival and assumption of power. However, in contrast to the negative effects of losing one's own history, Ariel's loss is one of slight affirmation. Prospero rescued Ariel from the confinement of a curse, which is a better state of affairs for Ariel although he did continue to work as Prospero's slave in return. Ariel was provided with some freedom from his past experience. Prospero's assumption of power is rooted in his ethnocentric white supremacy, deeming him the oppressor [p r o s p e r o] to the natives of the island.

The names of Ariel, Prospero, and Caliban, are essential in characterization and not given to them by accident. Ariel's name is thought to come from many places, but most scholars agree that Shakespeare drew his character from Isaiah XXIX, where his ethereal nature is exemplified: “thy voice also shall come up out of the ground, like the voice of a witch and thy talking shall whisper out of dust” (Isaiah XXIX in Hulme and Sherman 91). Shakespeare's Ariel exudes this sort of invisible voice throughout the entire play; he is essentially Prospero's eyes and ears where he has none. For instance, when Caliban is explaining to Trinculo and Stephano the tyranny Prospero has subjected him to, Ariel exclaims “thou liest” (3.2.42) and since he cannot be seen, Caliban thinks that the accusation comes from Trinculo. Ariel has the ability to alter public space with his intrinsic invisibility. Robert Reed draws the conclusion that Ariel's name is simply “an intentional transposition of the word *aerial*” (Reed 1), which means: “1. Existing or growing in the air rather than in the ground or in water; 2. of, relating to, or occurring in the air or atmosphere” (Webster). This interpretation of Ariel's name serves as a foil to the supposed origin of Caliban's name, “A Shakespearian alteration of the word *cannibal*” (Reed 1). Ariel is air and Caliban water. Caliban is beast and Ariel spirit. While they are both not fully

human, Caliban is the caught in the middle of an evolving human. His character acts as an interpretation of a savage human that needs to be civilized. Finally, another Shakespearean play on words, Prospero's name, like Caliban's, can neatly be rearranged to spell *oppressor* (O'Toole 5). The etymology of these character's names begin to weave together their trilateral and interdependent relationship.

The inequity between Caliban and Ariel veils the fact that although different in some respects, they are rooted together as others, natives of the island, and slaves. Their contrasting behavior serves to illuminate the stratification within their slavery. Robert Reed suggests that "Caliban is the earthen foil of Ariel" (1). Again, noting the physicality of Caliban vs. the physicality of Ariel. Caliban's "rebellious and spiteful" (O'Toole 2) temperament is directly caused by his sealed destiny. He accuses Prospero in regard to the island: "which thou tak'st from me" (1.2.335) thus showing his resentment for the position Prospero has put him in. Unlike Caliban, Ariel's disposition is one of compliance which could be accredited to the presence of motivation. Prospero has promised "After two days, I will discharge thee" (1.2.300), making the possibility of freedom tangible for Ariel and sparking his motivation to comply and to eagerly ask "What shall I do? say what; what shall I do" (1.2.302). Caliban lacks such motivation and the possibility of deference toward Prospero is diminished (O'Toole 3). Because of his "otherness" Caliban is subjugated which causes his resentment and rebellion and finally characterizes him as "those barbaric people" (Sanchez 55). At the same time, Ariel's lack of "physical otherness" and barbarity deems him the "intellectual" of the island and gives him two options: to serve Prospero in hope for his freedom or to recognize his oneness with Caliban and ally himself with Caliban in the struggle for true freedom (Sanchez 55). Ariel, in choosing the former, distances himself from his native brother thus forming a very different relationship with Prospero.

Ariel's debt to Prospero for freeing him from Sycorax's curse shapes a "master-slave" relationship. As previously mentioned, Ariel's obedience derives from the possibility of freedom. The fact that Prospero has freed him from the curse gives Ariel faith that he will free him once more from the chains of his oppression. In a tone of submission, Ariel expressively praises Prospero upon entrance: "All hail, great master! Grave sir, hail! I come/ To answer thy

best pleasure" (1.2.190). His ability to comply and to act as though he appreciates Prospero partly gives way to a "promotion" in slavery. The other part that contributes to Ariel's "emancipation to the status of privileged servant" is his ability to be the "source of information" to Prospero (Lamming in Hulme and Sherman 152-153). He is the "archetypal spy" who is able to see all that Prospero cannot. George Lamming assumes that Prospero views Ariel as the "perfect and unspeakable secret police" (in Hulme and Sherman 153). This is evident when Prospero commands a task from Ariel:

Go make thyself like a nymph o' the sea: be subject
To no sight but thine and mine, invisible
To every eyeball else. Go take this shape
And hither come in't: go, hence with diligence!(1.2.313).

Prospero insists that Ariel utilize the abilities that Prospero does not possess: his ability to be invisible to "every eyeball" and to oscillate "shape". Although it is apparent that Prospero needs Ariel, he does not have any qualms with reminding Ariel of his "servitude" (Lamming in Hulme and Sherman 153). When Ariel reminds Prospero of the promise he had made to Ariel on his "liberty" (1.2.245), Prospero responds, "Dost thou forget /From what a torment I did free thee?" (1.2.250). Lamming argues that Prospero is "an expert at throwing the past in your face" (Lamming in Hulme and Sherman 153). Prospero asserts his authority with blackmail and the manipulation of guilt. In his mind it is absurd for Ariel to ask for freedom after he has already freed him from "torment." In his mind, Ariel is in debt to him and in order to manipulate Ariel into thinking the same way, he forces Ariel to recall his past. Prospero assures Ariel that he is wrong in remembering the evil that held him captive (Sycorax), by exclaiming, "Thou hast. Where was she born? speak; tell me" (1.2.261). By provoking these memories, Prospero is hoping to regain control over Ariel, which he evidently does when Ariel responds, "Pardon, master; I will be correspondent to command /And do my spiriting gently" (1.2.297). The

relationship between Ariel and Prospero is one of deference, but only when the rules of status are adhered to and never questioned.

Unlike the mutually complaisant relationship between Prospero and Ariel, Caliban's relationship to Prospero is proven to be dynamic. Their interaction shifts from Caliban once loving Prospero to later resenting Prospero immensely. Michael O'Toole suggests that Caliban's rebellion surfaced once he received subjugation, rather than the autonomy he was expecting from Prospero when learning from him (2). After learning of the "attempted rape" of Miranda by Caliban, Prospero calls him a "poisonous slave got by the devil himself" (1.2.323) and with no remorse Caliban responds "As wicked dew as e'er my mother brush'd /With raven's feather from unwholesome fen /Drop on you both!" (1.2.324). Caliban's anger and sense of betrayal toward Prospero is passionate. Unlike Ariel, he speaks daggers back at Prospero in order to make that clear. He wants freedom from Prospero's oppression and to regain what he believes is rightfully his. Prospero continues, "For this, be sure, to-night thou shalt have cramps, /Side-stitches that shall pen thy breath up" (1.2.329). Similar to his manipulation of Ariel through the use of memories is his attempt to manipulate Caliban through the use of magic. Prospero's relationship to both slaves in terms of magic is also compelling; "whereas Prospero uses his magic in order to subjugate Caliban, he uses it to free Ariel from the curse of Sycorax" (O'Toole 3)). Also, despite his repugnance toward Caliban, Prospero greatly depends on him. Lamming comments on the dependence: "He [Prospero] needs this slave. Moreover, he must be cautious in his dealings with him, for Caliban contains the seed of revolt" (in Hulme and Sherman 152). Prospero is also aware of his [and Miranda's] need for Caliban exclaiming that "We cannot miss him: he does make our fire, /Fetch in our wood and serves in offices /That profit us (1.2.315). He understands that if he were to murder Caliban, it would be "an act of pure suicide" (in Hulme and Sherman 152). Caliban and Prospero are in a constant tug of war for power and control.

Prospero uses his "art" to aid his colonization and oppression over Ariel and Caliban. An ideal widely held during the Renaissance was one that viewed the arts as a representation of "a triumph of civilized control over the untamed wildness of nature" (Graff and Phelan 173). In the case of *The Tempest*, Prospero's "art" would be his magic and the "untamed wildness" would

correlate with Caliban and Ariel [more so Caliban]. The legitimacy of the use of such arts is subjective. Michel De Montaigne argues that “there is no reason art should gain the point of honour over our great and puissant mother Nature” (in Hulme and Sherman 107). His humanistic approach on the horrors of trying to tame Mother Nature and those that come with her is shared in Gonzalo’s speech:

I' the commonwealth I would by contraries
Execute all things; for no kind of traffic
Would I admit; no name of magistrate;
Letters should not be known; riches, poverty,
And use of service, none; contract, succession,
Bourn, bound of land, tilth, vineyard, none;
No use of metal, corn, or wine, or oil;
No occupation; all men idle, all;
And women too, but innocent and pure;
No sovereignty (2.1.145).

Although Montaigne and Gonzalo share similar views on the purity of those who inhabit a natural land, O’Toole suggests that in Prospero’s colonization, Shakespeare is asserting, “when exposed to modern civilization, the cannibals become no different than the Europeans” (O’Toole 5). This is suggesting that Caliban [cannibal] adopts the principles of the Italians which is evident when Caliban “willingly subjugates himself” to Stephano and Trinculo (O’Toole 4). Essentially, everything that he was fighting against with Prospero, he is offering to these two characters. He offers to “kiss thy foot” and he swears himself “thy subject” (2.2.145), contradicting his abhorred attitude toward slavery in attempt to get what he wants from Stephano and Trinculo: a plan to kill Prospero (3.3.100). He has adopted the ideal of the oppressor’s manipulation in search for personal gain. His freedom is no longer about escape, but instead about revenge: the very match that lights the fire in Prospero.

It is in the “Great Chain of Being” that one can note the struggle between these three characters in trying to regain natural order. Fanny Kemble comments,

Of the wonderful chain of being, of which Caliban is the densest and Ariel, the most ethereal extreme, Prospero is the middle link. He-The wise and good man- is the ruling power, to whom the whole series is subject (Kemble 128).

Kemble too points out the disparity in the physical make up of Ariel and Caliban. This places them on the great chain at two separate extremes, but their commonality is their servitude to Prospero, “the middle link.”

At the end of *The Tempest*, the restrictions of human nature are brought into focus within Prospero, Ariel, and Caliban’s trilateral relationship. O’Toole suggests that although the conclusion of the play may seem like a pleasant one, where Prospero regains his dukedom, Ariel attains his freedom, and Caliban resigns himself over to Prospero, a closer look reveals just the opposite (O’Toole 5). Although Prospero is able to avenge the usurpation of his dukedom committed by his brother, he does not seem fit to rule as can be proved by the oppression he has inflicted on Ariel and Caliban as well as the self sufficiency that he greatly lacks. Caliban’s struggle against slavery is never resolved. He merely shifts from resenting his position of subservience, to embracing it, promising to “seek for grace” (5.1.296) from Prospero. According to O’Toole, this indicates that “he will be a more willing servant and that can hardly be considered a better state of affairs for him” (O’Toole 5). He also points out that Ariel is the only character at the end of the play that is truly in a better place than he was at the beginning of the play (Toole 5). His point is compelling in that it is true, and within the relationship between the colonizer, the savage and the “privileged servant”, the only happy ending is bestowed upon the “other” that is the least human. A similar notion is portrayed in Isaiah XXIX, where Ariel is said to have originated from, it states, “Blinded are they themselves, and the

blind guides of other, they are drunken, but not with wine: they are unstable” (Isaiah XXIX in Hulme and Sherman 91). Essentially, Prospero and Caliban are blinded by those forces in human nature that limit true liberation and happiness, like the “destructive force that exerts itself when a human being takes it upon himself to control another” (O’Toole 5). Human beings, no matter whether they are the oppressor or the oppressed are in this case not good nor are they to blame. Ariel’s racial and physical ambiguity gives him freedom from all of those forces, truly making him a proper definition of an “other”: Completely non human.

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The Good, The Bad and The Hope: Remittances & Globalization

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Introduction

As the United States economy grew and globalization was born in the 1980s, the recipient economies indulged on an extra source of income and new found hope to the end of poverty, Remittances. Remittances are transfers of money sent by immigrants that cross into another country's economy. In 1990s, when globalization was in full bloom, countries, such as Mexico, suffered from massive emigration to the United States. The emigration from México was one of the consequences of globalization. Globalization is also believed to help maintain the gap between the rich and the poor and sustain poverty. Remittances been progressively been used to help family members stay away from poverty. Remittances are the possible solution to the consequence, the gap between the poor and the rich, which globalization has helped create and maintain.

Behind the Scene of Remittances

Technology evolved during globalization, facilitating remittances. A consequence of globalization is that sending remittances has become quicker and easier. In the 1980's remittances were sent via bank transfers, money orders or individuals who were traveling abroad. These are known as formal and informal channels. Although, these methods still exist, the ability for the recipient to receive remittances has become a quicker process. In the new Era of Globalization remittances can be sent via mobile phone money transfers or through online money transfers. Companies have been established, such as Money Gram, Western Union, and Wells Fargo. These companies have all adapted and become part of the remittance network. Western Union, for example, profits from the fees that remitters are charged. The remittance

companies make an average of ten percent off each transaction (Rowe, sec. 21). The increasing amount money spent on fees and hidden costs by companies, such as Western Union, have become one of the top issues discussed in the remittance conference that took place in Italy in 2010. Many individuals conclude that the hidden fees could be used to fight poverty.

Latin America is one of the largest networks of money transfers. According to *Immigration and Asylum from 1900 to Present by Abella et al.*, “the U.S. Mexico money transfer market is one of the world’s largest, with 130 companies handling an estimated 25 billion consumer money transferred a year that average about \$300 each, for a total \$7.5 billion a year transferred...” (512). Remitters will always face fees by the remittance companies. Opponents of Remittances believe that remittance money is being micromanaged by businesses that participate in remittances. According to the University of Iowa, “in many instances, neither the sender nor the receiver is aware of the actual exchange rate between the currencies and is therefore vulnerable to corrupt service providers” (Biller, sec. 5). Immigrants do not focus on the cost of sending remittances; rather the immigrants are focused on how quickly the money can arrive to their families. The companies take advantage of the immigrants and impose their fees. According to Ode Magazine, ten percent of the transfers are profited by remittance companies. If we were to use the U.S. Mexico money transfer market as an example, ten percent of \$7.5 billion is \$750 million (Rowe, sec. 21). The profit made by these companies could be used to help the recipient countries fight poverty.

The remittance companies profit on the effect of globalization, the speed which the remittance will reach the recipient. Businesses have taken advantage of remittances and are making a huge profit off remittances. Individuals who send remittance incur two fees. Senders first have to pay a flat rate in the United States. Western Union’s website, westernunion.com, offers four options of transfer services. The recipient can receive the remittance in a matter of minutes, next day, three days or go to an inmate trust fund. The quicker the recipient would like the funds to reach the sender, the more fees the sender will incur. Finally, a fee based on the exchange rate is deducted according to its destination. Globalization has taken the obstacle of space and time away.

Globalization helped engineer technology that allows for remittances to be received in a matter of minutes. The effects of globalization are positive, but “although technology offers recipient countries an opportunity to make rapid strides in developing their remittance infrastructure, it also carries risks” (Maimbo and Ratha 12). Remittances have opened the door to an informal channel of remitting, which potentially leads to money laundering, lack of transparency and/or corruption that could finance terrorism. The World Bank as well as other NGOs have come together to make remittance transactions more transparent and contain the risks that remittances carry. The following are organizations and an interagency that have formed to access and control remittances:

The World Bank, the International Monetary Fund, and the United Nations have formed an interagency, intergovernmental technical group to improve remittance statistics. The Bank for International Settlements and the World Bank have formed a special task force on international retail payment systems, to improve transparency in remittance transactions. An interagency task force on remittances led by the U.K. Department for International Development and the World Bank has been in operation since the International Conference on Migrant Remittances: Development Impact, Opportunities for the Financial Sector, and Future Prospects held in London October 9–10, 2003. (Maimbo and Ratha 2)

These companies and agencies are trying to decrease the lack of transparency of remittances. The NGOs are also trying to find ways that remittances can help further develop and benefit the recipient country. Remittances are a positive tool, which when utilized the correct way can potentially help eliminate the gap between the poor and the rich, which globalization has helped create and maintain. All those agencies listed above are believed to help guide the development of remittances. Remittances, though, would not be possible if it were not for the immigrants whom send remittances.

The Determination and Motivation of Immigrants to Send Remittances

Immigrants share a common motivation when it comes to immigrating, which in result effects remittances. The more immigrants present, the greater the amount of remittances. Migration and remittances share a cause and effect relationship. Migration is the cause and remittances are the effects. The driving forces behind both of these are the shared values among immigrants. Immigrants migrate because they feel that they do not have future in their own country and hence decide to emigrate out of their home country and into a country that they see a bright future in. Individuals, such as those in Mexico believe there is no future for them and their families in Mexico. The economic situation in Mexico, as previous mentioned, motivates individuals to migrate. There is a huge gap between the wealthy and the poor in developing countries.

Immigrants are determined to help their families abroad. The immigrants see the inability for one to succeed in their home country and therefore, persevere to constantly send remittances to their families. The rich in developing countries, such as México, see opportunities, while the poor see the lack of opportunities. The poorer population migrates because of the lack of jobs in developing countries. Immigrants also are determined once in the United States to keep their job. Mexican immigrants are determined to keep their job and stay in the United States because of the lack of jobs in Mexico. At the same time they send remittances home for their family members who did not get a chance to migrate with them to the United States. Hence, the immigrants' motivation drives the rate remittances increasing. Immigrants, though, face an obstacle, the fear of the sending country citizen.

Obstacles for Remitters

Remittances are indirectly affected by the anti-immigrant situation that the world is currently in. Many companies are choosing not to hire immigrants, to be specific illegal immigrants. This means that illegal immigrants are not working and therefore do not have the

money to send remittances home. Although companies are not hiring illegal immigrants, many of the companies still are. Immigrants are cheap labor as well as expendable. Hence, many citizens fear that the lack of jobs is due to immigrants. Citizens believe that immigrants are taking the jobs of the lawful residents or citizens. This is one of the reasons for the anti-immigration movement worldwide. The United States faces a huge flow of illegal immigration yearly. They have become in the past years anti-immigration.

Opponents not only are concerned with corruption and remittances; they are concerned with the transparency of remittances and the financing of terroristic activities. "Informal remittance-service providers have been used to launder money, and fund terror or other criminal activities" (Biller, sec. 5). After September 11, 2001, remittances have been scrutinized. According to the World Bank, individuals can use "personal remittances... [as] an efficient way of laundering or illegally transferring sizeable amounts of funds" (Maimbo and Ratha 12) that could be used to fuel terroristic activities. All of these factors play key roles in the growing anti-immigration movement in the United States and an obstacle for remitters.

Migration & Remittances

According to the World Bank's *Migration and Remittances Fact Book 2011* by Silwal, et al. most emigrants from developing countries, such as Mexico's final destination is the United States. Out of the total 11.9 million people that emigrated in 2010 from Mexico, 11.6 million immigrated to the United States. Mexico's emigrants make up about twenty seven percent of the United States total 42.8 million immigrants in 2010. Both Mexico and the United States were the top countries for people emigrating and immigrating. Remittances were also reflected in the Fact Book. Mexico in 2010 received about \$22.6 billion, whereas the United States sent a total of \$48.3 billion remittances in 2010 (13). The theory that migration affects remittances is a valid claim.

Remittances have a cylindrical effect with migration. As migration increases, the more amounts of remittances increases. Those whom do have the opportunity to migrate send

remittances home. As individuals notice the benefits that immigrants are providing to their families they too decide to migrate. There is a correlation between the increasing amount of remittances, the increasing amount of migration and the state of the U.S. economy. Statistics in the *Migration and Remittances Factbook 2011* demonstrates when the U.S. economy was at its peak in 2006, Mexico received \$25.6 billion in remittances. Then when the U.S. economy continued to prosper, Mexico received \$26.1 billion in remittances (19). But when the U.S. economy began to spiral downward in 2008, the remittances sent to Mexico decreased to \$25.1 billion and continued to decrease in 2009 to \$21.2 billion (19). The effects of globalization incentivize individuals to migrate to find a better future. According to the United Nations, “migration, both within and between countries, is another aspect of globalization... As foreign investment often creates job opportunities in the cities of host countries, rural workers move to the cities” (“Globalization”, sec. 4). The money that immigrants make abroad tends to be remitted to their home country.

Remittances are used to help provide for family members who were not able to migrate. Remittances do not reach everyone. Individuals whom do not have access to migrate will never get the opportunity to indulge from remittances. Remittances will only affect those whom are able to migrate. Those individuals whom do migrate create a link between the host and the home country’s economies, for example Mexico and the United States.

The Interconnection between Mexican Economy & The U.S. Economy

The Mexican economy and the U.S. economy are interconnected. Mexico and the United States share a border as well as economic and cultural ties. Both countries participate in NATO as well as are one of the largest trading partners. According to the Congressional Research Service document, U.S.-Mexico Economic Relations: Trends, Issues, and Implications, by Angeles Villarreal, “Mexico is the United States’ third-largest trading partner, while the United States is, by far, Mexico’s largest trading partner” (Villarreal 2). A free trade agreement between Mexico and the United States has helped build the dependence on one country to

another. In 1994, the North Atlantic Free Trade Agreement (NAFTA) was signed by Mexico, the United States and Canada. NAFTA created a barrier free, tariff free, form of trade between the signing countries. Therefore, when either economy is in a recession, the other economy will be affected.

Mexico has become more and more dependent on the United States' investments. One of the reasons behinds Mexico's dependence is that "the United States is the largest source of foreign direct investment (FDI) in Mexico" (Villarreal 2). Therefore, when the United States went into a recession and as their foreign investments dropped, the amount of FDI Mexico received plummeted, affecting Mexico's economy. According to the World Bank in 2001, "the United States account[ed] for 20 percent of the capital investment in microenterprises in urban Mexico" (Maimbo and Ratha 87). Both economies benefit from one another. Investments from the U.S. to Mexico account for about one fifth of the Capital invested in micro-enterprises (Villarreal 12). The United States and Mexican economies are intertwined.

Remittances are one of the connections between the U.S. economy and the Mexican economy. According to the Research conducted by Angeles Villarreal for the Congressional Research Service, "there is an interrelationship between remittances to Mexico and economic growth in the United States, such as 2004 and 2005, in which the U.S. economy grew by 3.6% and 3.1%, respectively..." (Villarreal 12). Immigrants who immigrate to the United States to remit money to their families contributes to the U.S. economy. The immigrants must find a place to live as well as use their earnings for familiar uses. Remittances are not only affected by the U.S. economy, but as well as the global economy too. According to the report, U.S.-Mexico Economic Relations: Trends, Issues, and Implications , "the global financial crisis, and the subsequent downturn in the U.S. economy, resulted in the sharpest economic contraction in the Mexican economy in twenty years" (Villarreal 16). The report demonstrated that the Mexican economy is dependent on both remittances and the global economy, specifically, the U.S. economy.

Remittances & the Economy

In the 1970s when globalization had yet to take off, remittances were at a minimal amount of money worldwide. Slowly when globalization began to develop, "remittances peaked in the early 1980s at over 70 percent" (Acma 9). According to Stark and Russel, migration has produced the "new economies of labor" known as remittances, "which has been prevalent since the 1980s". This time period, the 1980s, is the beginning of globalization. In the 1990s remittances were stabilized. Economists saw a constant increase worldwide in remittances to developing countries. Remittances began to make an impact in the receiving country's economy. In Mexico "total remittances were equivalent to 12 percent of merchandise exports in 1994" (Acma 10). Many of these developing economies began to become dependent of remittances. Mexico is still dependent on the income of remittances.

In the 1980's Mexico, China and India were already known as one of the top recipients of remittances and the United States was known as the top sender of remittances. Their positions on the remittances charts have yet to change even after thirty years (Silwal, et al. 13). Although, all three of these countries are part of the top recipient economies, remittances do not have an immense impact on their economies. Economies, such as Mexico, China, and India have a large GDP. Therefore, remittances do not affect their economies as much as it would affect for example, Honduras, who has a relatively small GDP. Developed countries, such as the United States have a huge GDP; therefore remittances are only a miniscule factor in the economy. Remittances do not have a greater impact on the United States economy because compared to their GDP; remittances are only a small percentage.

Remittances are at the mercy of the global economy. According to Outlook for Remittance Flows 2011-12 by the World Bank, "the outlook for remittance flows, however, is subject to the risks of a fragile global economic recovery, volatile currency and commodity price movements, and rising anti-immigration sentiment in many destination countries" (Mohapatra, et al. 1). Hence, in 2009, when the world was in an economic recession remittances saw a 5.5% decrease worldwide. The economic situation worldwide has begun to recover, and remittances

are expected to increase by 6% in 2010. According to the World Bank, remittances are expected to continue to increase in 2011 by 6.2% and then in 2012 increase by 8.1% (Mohapatra, et al. 1). Remittances are believed to have prospered even through the global economic recession for various factors. According to the World Bank, “migrants tend to increase remittances in times of economic hardship or crisis for their families...” (Maimbo and Ratha 86). The World Bank’s case study found that an “economic recession and low domestic employment opportunities may induce more workers to migrate to increase the resources available for families at home, remittances are relatively insensitive to cyclical swings” (Maimbo and Ratha 86). Therefore, when the United States and/or Mexico are in an economic recession remittances tend to remain constant.

Mexico is not an exception; they too have become dependent on Remittances. According to “the Banco de México, Mexico’s Central Bank, [they] reported that remittance inflows fell 16.0% in 2009 to \$21.1billion” (Villarreal 12). The report that the Banco de Mexico produced in January 2010 blames the downfall in remittances “to the global financial crisis and the slowdown in the U.S. economy as the rising jobless rate has taken a toll on Mexican immigrants in the United States. Mexico’s close economic ties to the United States, particularly in the housing and services sectors, which have both been negatively affected by the financial crisis, contributed to the decline” (Villarreal 12). The interconnection between both economies is what effects Mexico’s economy as the U.S. economy sees a recession. The interconnection of global economies is one of the effects of remittances.

Remittances & Their Effects on Recipient Countries

Remittances are used to help individuals with necessities of their daily lives. Mexico is an example of a recipient country which has been affected by remittances. According to a study done by the Mexican government it was estimated “that 80% of the money received by households goes for food, clothing, health care, and other household expenses” (Villarreal 12). Proponents of remittances say that remittances help eliminate poverty. Remittances have had

an economic impact in the poorer states. The government in Mexico has begun to channel the funds directly for the use of infrastructure and investments, instead of consumption in Mexico. Remittances have also been used “for about 27%, and up to 40% in some cases, of the capital invested in microenterprises throughout urban Mexico” (Villarreal 12). The investment of remittances contributes to the Mexican economy. Remittances have had a positive effect in the economy when they maintain a steady flow of funds, but the dependence on remittances is shown when remittances begin to decrease. Remittances have also had negative effects on the recipient countries.

The possibilities that remittances has created in developing countries open motivates more people to migrate, illegally. Individuals from developing countries are emigrating and leaving behind their families. The massive amount of individuals leaving developing countries is a concern. The theory of brain drain is prevalent in recipient countries worldwide. Individuals leave their country of origin to find opportunities that are in the host countries that lack in their country of origin. Many emigrants of Latin America go to the United States, while many emigrants of Europe go to Spain, France and/or England. The immigrants leave their country of origin to find a new job and to remit income to their families. Iran has been experiencing brain drain because there is no job security, economic problems and freedom. A year ago, the International Monetary Fund said Iran had “the highest rate of brain drain of 90 countries it measured” (Harrison, sec. 2). The intellectuals see opportunities abroad and migrate. They leave their families at home, but send remittances. While the host country is becoming rich, educationally speaking, the home countries are losing their intellectuals because of the brain drain and lack of opportunities.

Remittances will always affect the economy. The money remitted to the recipient country, helps “generate positive effects on the economy by stimulating demand for other goods and services” (Maimbo and Ratha 5). Although remittances stimulate the economy, remittances create a dependent relationship between the sending country and the receiving country (Maimbo and Ratha 87). According to the World Bank’s case study on Remittances by Maimbo and Ratha, “dependence on remittances leaves households vulnerable to changes in

migration cycles” (95). Remittances can also “increase inequality between households (those with access to remittances and those without)” (95). Mexico, a recipient country, has seen both effects. A primary source, Miguel Meneses, a recipient of remittances in Mexico, has had remittances stolen from him. He explained in Spanish, “tengo que esconder las remesas que mi hija me manda de los Estados Unidos porque la gente envidiosa me lo quiere robar” (Menses). Translated, he said, I have to hide the remittances that my daughter sends me from the United States because jealous people will try to take it. Miguel is only one of many who depend on remittances every month to stay out of poverty in Mexico. Remittances provide hope to people like, Mr. Menses, who are too old to work and depend on remittances to survive.

The Hope

Remittances are the rays of hope to families living in poverty. Remittances provide for medical bills, food, education, rent, etc... Remittances are either the main source of income or the second source of income in households. According to *Migration, remittances and development* by Fatallah Oualalo, for “560,000 families [in Mexico,] the remittances represented their only source of income” (83). Remittances are the hope for families in poverty whose governments lack in providing any aid. Remittances help families stay away from absolute poverty. The hope for a socially equal world is possible through remittances

Remittances provide hope for the future generations. Many recipient families are dependent on remittances, but the aim is for the future generation not to be dependent on remittances. Families whom receive remittances are able to keep their children in school. According to the International Monetary Fund (IMF), “households with remittances seem to spend more on education; an average of USD 200 per year more than the households not receiving remittances” (Ara, sec. 2). In a country like Mexico, 200 dollars equals about 2,400 pesos, which goes a long way. The recipient children are able to get an education and become professionals because of remittances. Children are usually taken out of school to work because their families cannot provide for themselves financially. In a case study done by the University

of Illinois in Mexico and El Salvador, there is “evidence that remittances can increase children’s school attendance, decrease infant mortality, and reduce child illiteracy” (Acosta 6). Children are able to stay in school because remittances are supporting their families. Therefore, there is no need for the children to work. Remittance help families pay bills, food, and afford tuition for their children’s education. In return, the recipient children are less likely to be dependent on remittances because they will be able to have a career which will allow the recipient children to financially provide for themselves and their families without remittances.

Remittances provide hope to individuals whom are caught in wraith of globalization. Remittances help decrease the gap between the rich and the poor. Remittances provide a second source of income to their families abroad. Remitters potentially take their recipients out of poverty. According to the United Nations Development Programme:

Remittances represent an important way out of extreme poverty for a large number of people. They fundamentally differ from other financial flows in that the remittances are based on social ties and networks of responsibility and affection. Remittances are a financial manifestation of a complex network of relations that are established between migrants, their families, and communities of origin... Apart from augmenting individual incomes, at the macro level they contribute to the foreign exchange reserves of the recipient countries.
 (“Gender”)

Remittances mainly benefit the receiving country because remittances are used to sustain families from being in poverty. Through various case studies, The United Nations determined through “available data, [that] remittances have been associated with reduced poverty in several low-income countries such as Uganda (11% reduction), Bangladesh (6% reduction), and Guatemala (20% reduction)” (Carrasco, sec. 2c). Remittances are not the only factor which helps the fight against poverty. The impact of remittances on economies and families creates the hope that remittances can reduce and/or eliminate poverty and promote social equality.

According to the World Bank remittances stimulate the recipient economies, which in a result helps the recipient economy grow. Rodolfo de la Garza, a professor at Columbia University does not believe that remittances help the recipient economy grow. In an interview conducted by Daljit Dhaliwal from World Focus, Rodolfo de la Garza, said, “Remittances go to families for familiar consumption. They don’t generate development... They don’t get used for building investments. They don’t buy new companies. They don’t create jobs. They reduce familiar costs thereby reducing poverty...” (Garza). Mr. Garza’s claim substantiate that remittances help reduce poverty, but not explain whether remittances can eliminate poverty. Although, the gap between the rich and the poor is minimized at the moment that remittances decrease, the gap will increase. Remittances are the short-term solutions. As soon as remittances stop, the family is once again in a financial poverty.

Remittances do help reduce poverty, but do not attack the core cause of poverty. According the case study, *Remittances, Inequality and Poverty* conducted by the World Bank, remittances do not get to the root of the problem. Remittances reach families of low income, but not those peasants, in a small urban “pueblo” that will never have the resources to migrate (Adam 105). Therefore, remittances help those who are low income, but not those who are in extreme poverty. Remittances do not reach every community that is in poverty. Remittances reach those individuals and families that have the ability to migrate. Inequalities emerge between household that receive remittances and those whom do not receive remittances. The “increased income to remittance-receiving families can lead to the formation of ‘affluent’ neighborhoods that stand apart from the rest of the poor village. The poorest families thus seem to be even poorer in comparison to the much-improved lifestyles that remittance money allows some families to suddenly have” (Carrasco, sec. 2c). Remittances will therefore, only help those whom have a family member whom is able to migrate. According to the theory of *Remittances and Development* by Enrique Carrasco, a member of the University of Iowa Center for International Finance and Development, remittances would only emphasize the gap between the those who receive remittances and those who do not. Remittances do reduce the initial gap between the rich and the poor, but then it creates another gap between those who

receive remittances and those who do not. A gap between recipient families and non-recipient families is created as a consequence to remittances.

The hope to reduce and eliminate poverty requires that remittances stimulate the receiving economies. Remittances do not provide the correct type of growth or stimulation to the recipient economies. "The additional income from remittances becomes embed within structures that perpetuate poverty in the developing countries and can promote economic stagnation rather than economic growth" (Maimbo and Ratha 88). Remittances are beneficial to the developing countries, but if remittances decrease, the developing countries will be affected in a negative way. Remittances do reduce poverty in the short run, but "long term poverty reduction is unlikely" (Maimbo and Ratha 88). Remittances provide money for food, medical costs. Most recipients do not save remittances for emergency situations. Thus they live day to day off remittances. Therefore, remittances create "a level of dependence, where the only rational strategy for labor is to migrate..." (Maimbo and Ratha 88). Not only will remittances create an economic dependence for the receiving economy, according to the World Bank, "the local community, [the sending country,] will not benefit but rather will lose resources" (Maimbo and Ratha 88). Remittances will not stop poverty; rather remittances will provide a temporary fix. The conclusion to the case study done by the World Bank determined that "remittances support is not a substitute for poverty type reduction program and economic growth" (Maimbo and Ratha 88). There is no doubt that remittances help individuals worldwide, but they are neither the solution for poverty nor the solution to the elimination of the gap between the rich and the poor that globalization has help maintain.

Conclusion

Remittances are great assets to developing countries. They help economies in difficult times of crisis, as well as provide for familiar causes. Remittances help families to get educations. The children in return are able to become professionals in the future and not be dependent on remittances. Remittances, though, do create a dependence on the sending

economy and the receiving economy. Remittances do not eliminate poverty; rather remittances are only a temporary solution. On the individual level, remittances help improve the daily lives of the recipients. Remittances do not reach everyone; remittances only reach those whom are not able to migrate.

Remittances have been facilitated by Globalization. Remittances demonstrate that globalization does not only benefit the rich, developed countries. Rather, globalization helps contribute to social equality worldwide through remittances. Remittances help the developing economies more than remittances affects the developed economies. Although, globalization maintains the gap between the rich and the poor, Remittances, which are facilitated by Globalization helps, decrease the existing gap. Globalization has fueled the possibility for there to be social equality worldwide through remittances.

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The End of Religion: An Epistemo-personal Exploration

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Introduction: Accidents of birth

With very few exceptions, the religion which a man accepts is that of the community in which he lives, which makes it obvious that the influence of the environment is what has led him to accept the religion in question.

Bertrand Russell

By the margins of the Ganges, a young woman accompanied by her child and thousands of other people performs a ritualistic practice, a tradition that dates back centuries in ancient India. Dressed in a red cotton sari and covered with traditional Hindu markings over the head, she plunges her body into the cold waters of the river, as she begins in a whisper to recite the words of a sacred text. And in the scalding heat of the sun and the strong odor of the place, there is a sense of both bewilderment and peace, as she and many other believers perform this act. It is a practice that is believed to be the washing away of one's sins, the balancing of karma, and the ending process of reincarnation. The Kumbh Mela, as it is called, is not only a religious festival that marks this woman's dedication to accept such acts as an integral and disciplined cultus for her life, but also marks her ongoing commitment to live and behave in accordance with the environment in which she lives.

The place where we are born, the site where we develop and grow, ultimately leads us to ponder the beliefs and practices that we acquire throughout our lives. This "accident" of birth, the sheer conditionality and contingency of what we are first exposed to, is the

primordial event that creates us and provides the ground for whatever beliefs we are to hold and practices we are to undertake as we live out our lives. And when one is dealing with a certain societal sphere, in most cases, that of a culture that is utterly entwined with a religious understanding, the investigative posture that needs to be considered is that of a thorough and frank acknowledgment of this fact of our accidental appearance in a certain place at a certain time.

What is religion? Or what does religion mean? The approaches used for the understanding of religion, or the notion of a meaningful religious sphere, challenge our ability to fully comprehend its meaning. The central ideas and meanings of religion's practical and theoretical dimensions seem almost beyond explanation. But one may find that when approaching its interpretation, the prospect of success lies in an elaborative exploration rather than a single narrow solution. In this essay, I will explore the nature of religion, some of the problems posed by exclusive claims made by religions in a religiously pluralistic world, and a possible reinterpretation of religion that might help to resolve some of those problems.

Part I: Interpretations of Religion: Perhaps we are lost

I understand by 'religion' any system of thought and actions shared by a group which gives the individual a frame of orientation and an object of devotion.

Erich Fromm

People are often misled to define religion solely on the basis of familiar names such as Christianity, Islam, Judaism, Buddhism, and the like. But one must look deeper into the different streams of its meaning to find a new array of interpretations.

Initially, we may be tempted to look at a dictionary for the true meaning of the word, and it is not a bad place to begin. As the Concise Oxford Dictionary states, religion is “the human recognition of a superhuman controlling power and especially of a personal God or gods entitled to obedience and worship.” True enough when it comes to faiths like Christianity or Islam. But it soon becomes inappropriate to speak this way when other well-known world religions such as Buddhism, Confucianism and Taoism, which do not involve the need for a deity, are brought into the discussion.

In order to overcome simplistic definitions, some have defined religion as “what the individual does with his own solitariness,” (Kaufmann, p. 350); or, as William James once put it, as the “feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider divine” (quoted in Hick, p. 2); or more simply, as the “bond that unites us” (Smith, p. 31); or what one “would die for rather than abandon” (Kaufmann, p. 100); and, possibly, what we consider “about life and the universe as a whole” (Smith, p. 21). Others have taken a step further and given a more social and critical interpretation: religion is “the opium of the masses” (Karl Marx); or the “institutionalized cultus or practice, which possesses identifiable social functions and which expresses certain attitudes men take toward their world,” (Angeles, p. 5); or “illusions, fulfillments of the oldest, strongest, and most insistent wishes of mankind” (Sigmund Freud).

However, as the new interpretations grow and ramify, complexities and contradictions emerge. As Giorgio Agamben explains, religion “removes things, places, animals, or people from common use and transfers them to a separate sphere” (Agamben, p. 74), and the effort to define slips into a literal emphasis on the wording itself—the Latin word *relegere*, after all, means “the act of re-reading”—which often yields evasive connotations of a still unidentifiable and unreckonable term.

Is religion a social secularized institution or a sacred separate place? Does religion deal with the human or with the divine? Or is religion, at least, as far as we are concerned, just a failed attempt to describe some something, which may or may not exist? No definition

satisfactorily answers all of these questions at once. Still, the search for an answer is worthwhile.

One must not abandon or disregard our capacities and limitations on the subject. For it is crucial that new kinds of questions and different sorts of answers be sought. Perhaps a “rigorous re-examination of our presuppositions may be a clue to some of the understanding” (Smith, p. 17) we seek. Perhaps we ought not to ask whether there is a definite meaning for the word religion per se, but whether there are rather a myriad of different approaches and uses of the word and its meaning. Perhaps in regard to the erroneous systematization and separation of that something, which was never meant to be separated in the first place, we just do not and cannot know. Perhaps, and precisely if we abandon traditional questions, we may find that we are simply confused, even lost. It may be, after all is said and done, that there is no religion at all. Still, we can look again. If we do, what do we see?

Religious Phenomena

From his different religions, man seeks the answer to the riddles and problems of human existence; these exercise him no less deeply today than in the past: What is man? What is the meaning and purpose of life? What are goodness and sin? What is the origin and purpose of suffering? Which is the way to attain true happiness? What is death, judgment and reward after death? What, lastly, is that ultimate and indescribable mystery, embracing the whole of our existence, which is both our origin and our end?

Vatican II: Declaration on the Relation of the Church to Non-Christian Religions

Walk around and look for the signs. Look for the symbols and for the many other visible expressions of religion. These vivid indications of a distinct phenomenon in the world—that may or may not pertain to the realms of one’s own personal/social/cultural life—are real. They are undeniable and observably powerful. From a Christian who donates her old clothes to a church during the winter, to the Jew who mutters the words of the Talmud on the subway car, to the Buddhist who meditates in serene silence inside a temple filled with dim candle light and heavy aromatic scents, to the Muslim worker who stops his duties in the middle of the crowded streets of Manhattan in order to perform his daily prayer, the religious experience is unquestionably a noticeable fact of our contemporary society.

But what inferences are we to make, when dealing with the religious concept, from what we can actually see?

Historically, we have been experiencing the products of all sorts of religious voices. Some have claimed that it is only through religion that we can be morally good. That religion, as many influential theologians have argued, is the genuine basis for morality, the ultimate conceptualization of our highest ends and visions of life. The local Catholic church that feeds the hungry and helps the poor, the respectful attitude of Buddhist monks towards our planet, the love and caring of a person in need by anyone of any faith. The good, the pure, and the virtuous. Religion is, for many, the most vivid expression of our true nature. However, one must not forget religion’s darker facets as well. From an early age of many gods absorbed into the peculiarities of occult practices and rituals, human sacrifices and bloodied streams of worship; centuries of impediment to man’s open-minded approach to the understanding of the universe; the atrocities and malefactors of a dogmatic set of beliefs that punishes and condemns anyone who is opposed to a particular view (think of the burning of the witches, the Crusades, the Inquisition); to religious extremists, who in the name of a literal voice, proclaim their utter and

exclusive faith, we are well aware of religion's negative influences and significance to our history.

Certainly these are only fragments, though important ones, of what we have recognized in religious phenomena. And we must ponder, as we approach a better understanding of the world we live in, whether it is acceptable to acknowledge these negative expressions as mere contingent occurrences found in all forms of religion which, in principle and in essence, are far more than their mere historical accidents. Perhaps not all of religious history is quite so accidental. One must recognize, after all, that we are not isolated islands living in the midst of a pluralistic sea, and that that same pluralistic sea raises the very prospect of the ideal of religious tolerance, of mutual respect for and with other distinct religions. Within the light of a new insightful and critical thought, we see that, far from being what Sam Harris and many others have considered to be "one of the principal forces driving us toward the abyss" (Harris, p. 15), religion may become a positive force of progress in a pluralistic and tolerant world.

In light of the phenomenon, what causes the negative expressions of religion? What drives seemingly positive religious belief into negative action? And what, if any, are the possible interpretations that would allow it to escape this problem? These are the fundamental questions we must investigate.

The problem of religion: Exclusive claims

Religion is an insult to human dignity. With or without it, you'd have good people doing good things and bad people doing bad things, but for good people to do bad things, it takes religion.

Steven Weinberg

Many have claimed that religion is the root of all evil in the world. Religion, they hold, is the blind-folded reason behind an unjustified system of belief and a, if not the, central source of all human problems and conflicts. As stated briefly above, we have seen and experienced all sorts of religiously based conflicts in the past. And still, an increasing number of new occurrences seems to continue in our midst. To this day, most wars have important roots in religious differences. It seems safe to infer that there is in fact a serious problem when dealing with religion. But what is it? And what is its source?

According to recent statistical data (Religious Tolerance 2010), there are a little over 6.8 billion people in the world. Each adheres to a certain religious view. From the top down, Christianity consists of about 2.1 billion people, Islam of 1.5 billion people, Hinduism of 900 million people, and these are followed by a continuing list of dozens of other world religions incorporating millions upon millions of other believers. And yet, as astonishing as these different numbers may seem, there is a common denominator which at once holds them all together and keeps them each in their own specific niche: faith.

Religious faith, as an affirmation of a belief, is the primordial driving force that enables a person to be a part of, or persist in being in accordance with, a certain set of doctrinal principles. And myriads of men and women have expressed, through their actions, what their faith tells them is just and appropriate. But it is important to note that it is primarily their beliefs, their particular doctrinal commitments, that are at the root of our problems, rather than their actions themselves, good and bad. For their actions follow from their beliefs.

If we look closely at the core of each religion, we will find that there is at least some small set of propositions that assure the religion's uniqueness in comparison to others. That, though they may all present themselves as assuredly good and intrinsically beneficial, certain internal claims disregard contrary claims, and often specific claims of other religions, as plainly detrimental and ultimately false. In Christianity, for instance, there is the belief that Jesus was God incarnated and that he proclaimed that only through him is there salvation and eternal life. In Islam, we find that this proposition is thought to be erroneous, and that Muhammad was the

true and final messenger of God, or Allah, thus making Islam the ultimate religion for humankind. Jews, Christians, and Muslims believe that we live only once, and that we face an eternal heaven or hell, whereas in Buddhism and Hinduism, among other Asian traditions, life continues many times, again and again. And we could elaborate indefinitely on such core disagreements, only to find that this clash between the exclusive truth-claims of religions eventually emerges as the primordial source of the perennial religious problem. Thus, a well known customary question forces itself upon us: Which religion is true?

I believe that this question does not lead us to suitable solutions to the problem. We must drop the traditional questions that demand a necessary and single answer, despite the plurality of different perspectives and voices, and once and for all. A new interpretation needs to be attempted, one that might create a new overcoming of these differences, and ultimately bring together the ideal of respect, of true religious tolerance, among believers and non-believers alike.

Part II: Reinterpreting Religion: Perhaps we are just confused

The map

The fact that different painters would paint the same scene differently does not establish the impossibility of an accurate map.

Walter Kauffman

Imagine yourself looking at the ocean. Infinite water surrounded by an infinite awe. You can see, hear, and feel the strength of this experience by the sensory apparatus of your body.

You are in that unique moment of time. You simply know. But you might wonder at some point, where does all that water lead to? Now, imagine that you have a map. A physical map of the Earth. And in that map, you can not only see the contours of the continents and the divisions of land, but the edges of the very ocean that you were pondering. The bluish tone may not reflect the true color of that water, nor capture the experience you had in the first place, but you know that what stands between your personal experience and the map is not only the representation of something less real in comparison to the original, but the prospect of finding your way across the water that same original.

C. S. Lewis compares personal experience with God with that of “gazing upon an ocean.” That very experience, in addition to those of countless other people, creates a descriptive map for all those different eyes. “Doctrines are not God,” Lewis writes, “...they are only a kind of map.” “Theology is like a map” (Lewis, p. 154).

But what exactly is the kind of map that Lewis is referring to? As one may be familiar with the numerous maps that are available to us, e.g., Physical, Political, Regional, Climatic, Topographic, and so on, it can be seen that they all share a point of reference, that they all originate from the same source, namely, this single place called Earth. Couldn't religions, then, in the same manner be some kind of maps? Couldn't it be that in describing the same ground, they nonetheless approach it in a variety of formats from a variety of perspectives? That imperfections and defective images and distortions aside, they are all inclined to project a particular something to help us make our way? This seems more likely than the exclusivists would have us believe.

Religious Pluralism as fact and value

The thing known is in the knower according to the mode of the knower.

St. Thomas Aquinas

Today, what we face in the religious realm, as in nearly every other realm where social interactions occur, is the recognition of a dense variety of different perspectives and opinions coming from distinct sources. And this fact, itself, is an implicit critique of some of our most cherished values. The recognition of a possible general and widespread religious tolerance, of a respect for and with other religions, in which none is deemed to be more fundamental than any other, and yet each is acknowledged to be fundamental in its own way, is the ethical cornerstone of the fact of religious pluralism.

As one philosopher of religion has stated, the different religions are “different streams of religious experience, each having started at a different point within human history and each having formed its own conceptual self-consciousness within a different milieu” (Hick, p. 114). That is, each religion, in its own unique sense of value and historical/cultural influence, can be described as not being intrinsically different from, nor wholly exclusive of, any other. John Hick, a prominent proponent of the pluralistic view, claims that all religions are culturally conditioned responses to the same ultimate reality. This reality, which might be called the Real, the Transcendental, or the One, as Plato called it, is the ultimate ground of all religions, no matter how differently they may interpret it. Each is a manifestation of the same source.

Conclusion: Neti! Neti! Not this, not that!

In the depth of every living religion there is a point at which the religion itself loses its importance, and that to which it points breaks through its particularity, elevating it to spiritual freedom and with it to a vision of the spiritual presence in other expressions of the ultimate meaning of man’s existence.

Paul Tillich

Growing up, I remember that going to church on Sundays and reading the Bible as a moral guide to my life were the most important practices that I had to cultivate. Raised in a family that had both strong Asian cultural values and traditional Christian beliefs in the context of a Brazilian ethos, I'd never really doubted the validity of my cultural and religious practices. I'd never really wondered whether they were importantly different from any others, or wrong. And my mother, a devout member of our local church, used to remind me of the beautiful stories of a young man named Jesus, of how he saved me from a horrendous place of infinite sorrow and tears, how he lifted up to the heavens as he defeated evil, and gave me a unique opportunity to embrace life's grandeur and joy. I was 'naturally nurtured' into the mixed belief frames of my origins and surroundings. Certainly, this is not the place to explore the particular views and beliefs that I have, nor those that I once had. But as mentioned in the beginning of this essay, the place where one is born does, without a doubt and profoundly, influence the prospects one experiences and the opinions one comes to possess as life unfolds. And whether through our ethnic background, religious experience, or cultural setting—and probably through each—we come to name our opinions.

Socrates, in one of his dialogues as transcribed by Plato, argues tentatively for a solution to the problem of defining things, to resolve the distinctiveness and shifting quality of names. He seeks to locate the source of correctness for naming things in eternal forms. The Platonic Forms, as John Cooper summarizes, are the "permanent unchanging natures of things as they are in themselves" (Cooper, p. 101, emphasis added). This understanding leads Socrates to the final stage of this quest. He knows that the knowledge of names can only reveal what "those who first introduced our words thought was the nature of reality" (Cooper, p. 101), and that that might be mistaken. Socrates seems to be guiding us towards a peculiar interpretation of the use of words, and so of the word religion. That even though our groping attempts to get at them through language and experience may distort and change, the meaning, the true meaning apart from any name, still remains permanent, perfect, complete, and intact.

Many philosophers have claimed the death of religion. Others, like Nietzsche, have claimed even the death of God. And yet, we are still able to see religion, palpably and vividly present in our midst. That just as it is our nature to seek explanations of the things of our world through personal experience and scientific inquiry, so it is our nature to seek understanding of ultimate questions through personal experience and religious inquiry. That something, however difficult to name, and perhaps nameless, seems to remain alive. That something, it seems, will never go away. Perhaps it will never die. This is the end of religion, end in the ancient sense of telos, the purpose and final goal of the religious quest—a quest of infinite interpretations.

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Medical Miracles: The Price of Creativity? Posthumous Diagnoses of Three Great Artists

Adrienne Kirk

Mentored by Professor Susan Slater-Tanner, Orange County Community College

Imagine a room. The walls are off-white, tinged with age and cigarette smoke from years past. A number of bean bags are scattered over the tile floor, and four people sit together in a close semicircle. Three of them hold trays on which sit a number of pills and a nearly overfilled paper cup with water. The fourth sits at the head of the circle, adorned in a white robe, and clutching a clipboard. A doctor. She smiles at her patients, a thin Mexican woman and two pale, gaunt men, and asks how they are doing. “Frida”, she says as the other woman lights a cigarette, “Have you forgotten that you cannot smoke in here?” She then urges her patients to swallow their medication, including Cymbalta, an anti-depressant for her female patient, and asks them each to talk about their week. The patients are Frida Kahlo, Vincent van Gogh and Edvard Munch. It is time for their weekly group therapy.

What unites these people? These three “patients” distinguished themselves as great artists, whether during their lifetimes or not. All three of them were driven by suffering, pain, and anguish, be it mental or physical, to create their art. However, not only geography, but time has separated these artists so that this scene would obviously never exist. This has not stopped modern physicians from rummaging through their documented illnesses, analyzing their artwork, and emerging with new diagnoses for the suffering of these artists. Kahlo, van Gogh, and Munch are not the exclusive subjects of these endeavors, but are only a handful of the artists and people moreover whose stories are often scrutinized by contemporary doctors in search of an explanation for their conditions or behaviors.

What is the purpose of diagnosing someone who has been dead, in many cases, longer than the person making the diagnosis has been alive? What benefit does either party receive? When Dr. Manuel Martinez-Lavin posthumously diagnosed Frida Kahlo with post-traumatic

fibromyalgia, the artist certainly saw no benefit. Dr Martinez-Lavin couldn't very well treat her with proper medication. What is the purpose?

Robert Wilkins, in his article, *Creativity, Madness and Pathography*, describes pathography as “the study of famous men by aging physicians and an acceptable way to while away the autumn of their lives” (Wilkins 1). Posthumous diagnoses, then, seem to hold no purpose other than to cure boredom. Pathography, the study of the relationship between talent and illness, goes hand in hand with posthumous diagnoses when doctors find symptoms of illnesses through the deceased's artwork, and draw connections between changes in the artists' work and their mental or physical states. This reiterates the question of purpose: how can these posthumous diagnoses that draw pathographic connections have any societal use? The function of these diagnoses, as examined in this paper, lies in the advances these diagnoses reveal in modern medicine.

Many of the emerging diagnoses investigated in this paper and countless others are of illnesses of which the doctors who treated these people had no knowledge. The novella *The Yellow Wallpaper*, fictionalizes the story of a woman suffering from post-partum depression in a time period before it was discovered. Her “treatment”, including isolation, is the absolute antithesis of current standards, simply because doctors lacked awareness of the problem and cure. So is the case with Frida Kahlo's posthumously diagnosed fibromyalgia, and of Vincent van Gogh's theoretical acute intermittent porphyria. In other cases, the diagnoses existed, but the *treatment* dramatically differs. Today, Edvard Munch probably would not have been subjected to electro-convulsive therapy. These diagnoses and analyses speak to the forward strides made by modern medicine. What effect would this modern medicine have on an artist whose art was driven specifically by their illness or pain?

What would have happened to the work of these artists if treated today? Treatment by more accurate and effective medicine would be more likely to eliminate the suffering, and sever the connection between the artist's work and his or her anguish? If Frida Kahlo, Vincent Van Gogh, and Edvard Munch lived in 2011, treated by modern physicians, then the artwork

that was so closely bound to their suffering would have been drastically different, or would never had been created.

A concrete link between mental illness and creativity is difficult, perhaps even impossible, to draw. However, Kahlo, van Gogh and Munch are no unique in their marriage between suffering and art. If contemporary medicine would significantly interfere with their art, then what effect does modern medicine have on current artists?

This paper explores these questions. It will first examine Frida Kahlo, Vincent van Gogh, and Edvard Munch, analyze their illnesses and posthumous diagnoses, and the suggested effects modern medicine would have on their work. Then, incorporating trends of anti-depressant medication, this paper suggests that contemporary medicine has hindered the artistic output of this generation.

Part I : The Artists

Frida Kahlo distinguished herself a female Mexican painter in the early to mid 1900's. Originally enrolled in Mexico City's National Preparatory School during her high school years, where she was known "as a rebellious student full of pranks, audacity and humor with a lively imagination and an astound mastery of foul language" (19). Kahlo was one of "thirty five females in a class of two thousand" (Zamora 19), and although her "school notebooks were filled with sketches" (20), Kahlo was "attracted to the intellectual pursuits of a student group known as the Cachuchas....[with] strong political concerns as well as interests in poetry, art, literature, history and philosophy" (22). The feisty little Mexican brainiac would not demonstrate serious interest in painting until an accident left her bedridden for years.

"I have suffered two serious accidents in my life", (37) Frida Kahlo has said, "one in which a streetcar ran over me.... The other accident is Diego" (37). Frida's trolley car accident not only allowed her endless hours with painting as the only distraction from her agony, but would be one of the driving passions behind her work throughout her life. The same can be said of her tumultuous relationship with Diego Rivera, which was riddled with affairs and jealousy,

including one with Kahlo's younger sister, Crystina. In September of 1925, young Frida Kahlo and her boyfriend, Alejandro Gomez Arias, were out and about in the Mexican streets to celebrate Mexican National Day (23), when the pair boarded a bus to return home to Coyoacan. The bus collided with a streetcar in mid-turn, and Frida Kahlo was found “bathed in blood, without her clothes, virtually impaled on the rod of a metal handrail” (26). This accident resulted in :

Fracture of the third and fourth lumbar vertebrae; pelvic fractures;
fracture of the right foot; dislocation of the left elbow; deep abdominal wound produced by a metal rod entering through the left hip and exiting through the genitas. Acute peritonitis; cystitis with drainage for several days. (26)

Kahlo's youthful exuberance that was known so well to her school and family only carried her recovery so far. According to Zamora, the “backwardness of medical technology of that time in Mexico” (27) was the source of Kahlo's numerous “grim periods of relapse” (27) and “resulted in some grotesque therapy” (27). With each relapse, Kahlo lost nearly all of her mobility to a splint that confined her from the neck down to protect her seemingly countless fractures. With only her arms freed, Kahlo's sole distraction was painting. Those months that incarcerated Kahlo to her bed gave birth to a lifetime of painting, which she said, “completed [her] life” (Gunderman 1).

Pain, for Frida Kahlo, was undeniably related to her work as a painter. Both the accident and her relationship with Diego Rivera are the subject matter for many of her paintings. *Tree of Hope*, *Broken Column*, and *Henry Ford Hospital* are only three of dozens of paintings that depict her physical suffering, where *Diego and I* and *A Few Small Nips* are two of many that exhibit the emotional torment Kahlo battled in her relationship with Diego Rivera. Richard Gunderman correlates *Tree of Hope*, *Broken Column* and *Henry Ford Hospital* to Frida Kahlo's suffering in his

analysis of the paintings; however, Kahlo's representations are so vivid and blunt that one does not require any background in art history or Kahlo's life to understand that the paintings are expressions of the artist's agony.

Tree of Hope sees two images of Kahlo: one sprawled on a hospital gurney, her back turned to the viewer so that two deep wounds on her back can be seen, and the other sits beside the patient dressed in fine Latin American clothing holding a brace and a flag that reads, in Spanish, "Tree of hope, stay strong" (Gunderman). According to Gunderman's analysis, *Tree of Hope* "juxtaposes the desolation of Kahlo's injuries, treatment, and subsequent relapses with her resolute determination to carry on" (Gunderman), and this is blatantly understood through the painting's images. The patient Kahlo lies on the gurney, shrouded in hospital sheets so that only her wounds are exposed. She is clearly weak, and it is understood that she is suffering. The other image of Kahlo attempts to "stay strong" in the spirit of the *Tree of Hope*; however, she sheds a tear and holds the patient's back brace. It is understood that Kahlo's happy and vigilant spirit is greatly compromised in her healing process, which would prove to be a lifelong ordeal as Kahlo underwent continuous surgeries throughout her life, including the amputation of her toes and leg after bouts of gangrene.

The Broken Column portrays how Kahlo's accident embedded itself into her life. The pole that penetrated Kahlo in her streetcar incident is depicted as her spine, and her body threatens to split in two from the deep crevice the rod has created, if not for the back brace that secures Kahlo in one piece. Tears stream down her face, and puncturing nails are scattered over her body to suggest the pain she senses over every inch of her body. In *The Broken Column*, Frida Kahlo is pain and pain is Frida Kahlo. They are bound together, and must coexist despite the torture Kahlo undergoes. *Henry Ford Hospital* is another example of dozens that portrays the relationship between Kahlo's artwork and her suffering. According to Gunderman, this painting expresses how Kahlo's body was a "vessel for suffering" (Gunderman). Kahlo's image lies on a hospital bed after a miscarriage. Blood seeps onto the white sheets as an artery connects her to six images above and below her bed, a uterus, a fetus, a snail, an autoclave, an orchid and a pelvis. Kahlo's inability to carry a pregnancy for a full term

is likely to have stemmed from the damages her uterus suffered during her accident, and *Henry Ford Hospital* expresses the physical pain that intertwines the aspects of Kahlo's life.

It is clear that Frida Kahlo's artwork was colored by her experience with pain, both physical and emotional. According to the simple fact that she utilizes her pain as subject matter for her work is evidence that if the pain did not exist, she would not have produced the art. Remove the subject matter, and the pieces would not exist. It is true that without her life's anguish, Frida Kahlo may have painted other images, but it is a given that it would be completely different from the work she actually produced. Many contemporary physicians have look into Kahlo's condition, and theorize that the artist was misdiagnosed, or had ailments that were overlooked by the “backwards medical technology” (Zamora) of Mexico that was aforementioned in an earlier paragraph. With the improvements in medical technology, and the differences in treatment, if Kahlo were treated in 2011 America rather than by developing Mexican technology, she would have been diagnosed and treated differently in such a way that would have halted her creative process that was directly influenced by her physical and emotional grief.

Contemporary physicians have drawn two distinct diagnoses that would make substantial differences in the way she would be treated today: post-traumatic fibromyalgia and spina bifida. Doctors Manuel Martinez-Lavin MD, Mary-Carmen Amigo MD, Javier Coindreau MD and Juan Canoso MD analyze Kahlo's paintings, and from the pain she visually describes and the symptoms that are literally described in her biographies and diary, suggest that the artist suffered from fibromyalgia as a reaction to her spine trauma. “The onset of fibromyalgia after physical trauma is well-recognized,” (Martinez-Lavin) the physicians state, “[in] a drawing in Frida's diary” (Martinez-Lavin) that depicts the sites where Kahlo was experiencing widespread pain. The drawing, in which “11 arrows point to anatomic sites that are near the conventional fibromyalgia tender points” (Martinez-Lavin), is only one piece of evidence to support the notion that Kahlo suffered from fibromyalgia. The condition is characterized by “persistent widespread pain, chronic fatigue, sleep disorders, and vegetative symptoms” (Martinez-Lavin), and while these are common symptoms of many disorders, syndromes and illnesses, when

coupled with the fact that Kahlo was experiencing pain in 11 of the sites where fibromyalgia is known to strike, the physicians have a very strong argument. Because “the concept of fibromyalgia as a clinical entity as we know it today was probably unknown to most physicians of the early twentieth century” (Martinez-Lavin), it is likely that the doctors who treated Kahlo did not know about fibromyalgia, and therefore could not have diagnosed her. Should Kahlo have been treated by modern physicians, the symptoms of fibromyalgia would have been recognized, and it is likely that she would have been diagnosed and would have received treatment for the syndrome.

In addition to fibromyalgia, Kahlo was likely to have suffered from a congenital disease known as spina bifida. Valamantas Budrys, in her article, *Neurological Defecits in the Life and Work of Frida Kahlo*, identifies the symptoms spina bifida in Frida Kahlo's piece, *What I Saw In The Water*, and in dismissed and often vague pre-existing diagnoses. Dissenting from the suggested diagnosis of fibromyalgia, Kahlo's doctor and friend, Leo Eloesser, noted that Kahlo's “X-rays showed a spina bifida” (Budrys), but it was never treated or seriously acknowledged as a serious contributor of Kahlo's pain. In addition to this comment, Budrys finds evidence for spina bifida in Kahlo's *What I Saw in the Water*. The painting depicts Kahlo's bleeding feet, specifically between the big and index toe, “a typical defect accompanying congenital dysraphisms, including spina bifida” (Budrys). Furthermore, Kahlo's parents make an appearance in the painting, which can allude to Kahlo's inheritance of the condition. Kahlo's contemporary diagnosis and treatment in America would likely draw a doctor's attention to her overlooked conditions of spina bifida fibromyalgia, and result in a completely different and possibly more effective treatment.

Frida Kahlo, treated by contemporary physicians who diagnosed her with fibromyalgia and spina bifida, would have undergone different treatment that could have alleviated the intense agony Kahlo battled throughout her life. Treatment for fibromyalgia includes antidepressants such as Cymbalta, which, when prescribed to fibromyalgia patients, has been shown to “relax craniofacial and skeletal muscles, improve sleep quality, and release pain-killing endorphins” (Google Health). This of course, assumes that Frida Kahlo would actually suffer

from the posttraumatic fibromyalgia after receiving the revolutionized healthcare that twenty-first century America could offer her. While Kahlo's biographies note that she was a heavy drinker, and became heavily dependent on prescribed and non-prescribed painkillers, there is no mention Kahlo was ever prescribed anti-depressants. Even if she was, medicine has evolved in such a way that the medication she would be taking in 2011 would not have been the same.

The bottom line is that with the treatment Frida Kahlo would have received in 2011, it would be very likely that her physical torments would have been resolved, and she would have lived the majority of her life pain-free. What would this have done to her work? For one, it would eliminate a great amount of her subject matter. With treatment that completely alleviated it, pain would no longer be her backbone as seen in *The Broken Column*, and her healed body would have been much more likely to successfully bear children, erasing the subject of *Henry Ford Hospital*. In painting, Kahlo found peace and freedom from her pain. Without it, Kahlo would not have been the artist that she was.

Vincent Van Gogh, thought to have suffered from epilepsy in his lifetime, is another artist whose mental illness had a substantial effect on his work. Where Frida Kahlo's work can be seen overtly relating to her anguish through the subject matter which she painted, Van Gogh's connection between his art production and his mental illness lie specifically in the way he was possibly treated in the late 1800s.

Van Gogh was institutionalized in Arles France in 1888 after the notable episode in which he cut off a portion of his right ear. It was at this time, according to Thomas Courtney Lee, MD, in his article, *Van Gogh's Vision : Digitalis Intoxication?*, "when [van Gogh] was moved to the south of France, that his psychotic symptoms became more acute" (729), his "paintings became overtly yellow" (729). What is the connection between his predilection for the color yellow, and van Gogh's institutionalization? Lee attributes Van Gogh's predilection for the color yellow in his later paintings to his ingestion of *digitalis purpurea*, or purple foxglove, which was used to treat epilepsy in the nineteenth century.

When one succumbs to digitalis poisoning, “visual changes, hazy, cloudy, or yellow vision, and red-green perception difficulties occur” (Lee 728). Other symptoms include “fatigue, abdominal pain, anorexia, nausea, vomiting, dizziness, nocturnal restlessness, mental confusion, disorientation, and delirium” (Lee 728), but of these symptoms, “visual complaints [are noted] in 95%” (Lee 728) of patients. According to Lee, van Gogh's symptoms of mental disarray “may have been due, in whole or in part, not only to epilepsy and postictal effects, but also to the toxic effects of digitalis” (Lee 729). What is pertinent to the subject of this article, is how these symptoms affected van Gogh's work.

Entrance to the Public Garden in Arles, The Sower, Still Life, Drawing Board with Onions, Raspail's Book, Absinthe Bottle, and The Night Cafe are just a handful of paintings that exhibit a powerful representation of yellow, and all were created from 1888 through 1890, when van Gogh was hospitalized. Wilfred N. Arnold, focuses on Vincent's use of yellow in a chapter of his book, *Vincent van Gogh, Chemicals, Crises, and Creativity*. Arnold explains that “Vincent van Gogh's *The Night Cafe* and Paul Gauguin's *In an Arles Cafe*, depict the same room, but the latter has a much cooler palette” (Arnold 226). In addition to his observation, his team of scientists, in order to mimic the effects of xanthopsia, “used yellow filters cut from No.8 Kodak gelatin sheets” (225), and “a color transparency of Gauguin's picture photographed through the yellow filter was received by a lecture audience in Kansas City as 'more like a van Gogh'” (226). It is possible that van Gogh simply interpreted the room differently with his use of yellow. Digitalis intoxication, however, would explain the continuous appearances of yellow in his paintings, and explain his attraction to this color.

No records exist to prove that van Gogh was indisputably treated with digitalis, but what do exist are two paintings of Dr. Paul Gachet, who oversaw van Gogh's treatment in Arles. According to Lee, in both paintings, the doctor holds a purple foxglove plant (Lee 728). During van Gogh's time, digitalis was celebrated, according to Dr. Williams of Hayward Health Asylum in 1879, as a “valuable sedative in the treatment alike of recent and chronic mania, and when these forms of disease are complicated with general paresis and with epilepsy” (729). In an 1886 article, *Traite des Epilepsies*, C.D. Philips “recommended digitalis for acute mania and in

acute insanity” (729) and “suggested use of digitalis in progressive doses in certain forms of epilepsy” (729). Van Gogh was treated at a time when digitalis was a popular medication, his paintings illustrate on of its side effects, and the artist depicts his doctor with an image of the plant. The evidence suggests that he was indeed, treated with digitalis purpurea.

Van Gogh's modern treatment would be drastically different in ways that would affect his work, due to the number of posthumous diagnoses made by modern doctors, and to the increased awareness of treatment options for his condition. In 2011, one needs only to search the internet to find that digitalis is a lethal plant, and that dosage needs to be highly regulated. It is very unlikely that van Gogh would have ever been treated with digitalis if he were treated with modern medicine, and furthermore, his diagnosis would be likely to be completely different as well. According to Lee's article, posthumous diagnoses made to van Gogh include:

“epilepsy by Birnbaum, Evensen, Leroy, Doiteau, Koopman,
Minkowska, and Meyer-Grosz; dementia, by Prinzhorn; psychopathy,
by Boiten; psychosis of degeneration, by Hutter; schizo- form reaction, by
Kahn; cerebral tumor, by Bader; luetic schizoid, by Eichbaum;
dementia praecox, by Bychowski; meningoencephalitis luetica,by Dupinet;
schizophrenia, by Kersch-baumer; sunstroke, by Grey; and psychomotor
epilepsy, by Gautaut.” (Lee 728).

The list for Van Gogh's posthumous diagnoses is so long that there is no way for him to have suffered from each of them. However, modern physicians can look at his symptoms and make diagnoses that Van Gogh's doctors either overlooked or did not have the technology or knowledge to recognize, and this promises that he would be diagnosed and treated differently today. If van Gogh had access to modern medicine, it is very unlikely that his treatment would

have included digitalis purpurea, and if that was indeed responsible for the signature color of his later paintings, van Gogh's brilliant yellows may never have shone.

Edvard Munch is another artist whose life demonstrates a clear connection between his mental strife and his artwork. Introduced to death at a young age when tuberculosis claimed his mother and sister, death is thematically demonstrated in much of Munch's work. In addition to deriving thematic material for his work from his mental illness, symptoms of Munch's disorder, in the form of auditory hallucinations, inspired his perhaps most well known piece: *The Scream*.

The conceptualization of *The Scream*, or, *The Screech*, is explained in an excerpt of Munch's diary:

I was walking down the road with two of my friends. Then the sun set. The sky suddenly turned into blood, and I felt something akin to a touch of melancholy. I stood still, leaned against the railing, dead tired. Above the blue black fjord and city hung clouds of dripping, rippling blood. My friends went on again, and I stood, frightened, with an open wound in my breast. A great scream pierced through nature.

(Rothenburg 7)

Munch describes an auditory and visual hallucination, which he transformed into his own artistic expression. Rothenburg argues that Munch was able to produce his artwork in *spite* of his illness when he puts forth the fact that the creative “homospacial process that involves the superimposition of images is a conscious intentional form of cognition and is not of

[Munch's] pathological condition" (10). Rothenburg suggests that "by and large, creativity is improved with proper treatment rather than impeded" (14). It is true that mental illness and creativity may not have direct, concrete correlations with one another, however, Rothenburg neglects the fact that Munch's work was born from an experience with his illness. It is unquestionable that if Munch hadn't suffered an auditory and visual hallucination, *The Scream* would have been silent.

In addition to acting as muse for his artistic output, Munch's grief drove him to seek solace in painting. Viederman, in her article, *Munch : A Life In Art*, suggests that Munch sought to describe a "universal existential dilemma" (Viederman 2) in his art by "unearthing and defining his own painful conflicts" (2). The artist himself said that "in [his] art [he had] tried to explain life and its meaning to [himself]. [He] also intended to help others to understand life better" (Viederman 2). To the world, Munch offered, in depictions of his own suffering, images that he hoped his viewers would find universal. He used his art as a mean to settle his "inner turmoil" (2) , and without his conflict, Munch, plain and simple, would have had nothing to resolve through his art.

Munch, unlike Kahlo and van Gogh, does not need substantive posthumous diagnoses in order to prove he would have been treated differently by modern medicine. Suggestions for Munch's illness that may or may not conflict with what is documented about the artist may exist, but they are not necessary to promise different treatment. Sue Prideaux's chapter on Munch's insanity in her book *Edvard Munch : Behind the Scream*, explores Munch's treatment by Dr. Jacobsen in his "private 'nerve clinic'" (Prideaux 248) in Copenhagen. Prideaux describes Jacobsen as "old fashioned" (248) and "not in the forefront of the revolution that was transforming psychotherapy during those early years of the twentieth century" (248). Jacobsen diagnosed Munch with "*dementia paralytica*" (248), and treated the artist with electricity. Prideaux notes that Jacobson's "electrification" (249) did not compare with the "electroconvulsive therapy" (249), but were "almost undetectable weak electric currents". Whether or not Munch was receiving shock therapy equivalent to Ken Kesey's character, Murphy, in *One Flew Over the Cuckoo's Nest* that would render him a vegetable, or he received just a few gentle

waves to his body, is not relevant. It is not likely that Munch would have received anything resembling electro-convulsive therapy if treated by present medicine. Munch's treatment would have been radically different. Munch's best-known work is a direct effect of his mental illness. Because his treatment would have changed so drastically in the twenty-first century, and furthermore, probably would have been more effective, Munch's art would have been completely different if he had lived and been treated in twenty first century America.

Part II. The Present

These three artists seem to snugly fit the archetype of the tortured, suffering artist. Kahlo, with the synergy of her rough relationship and her bodily pain; Munch with the memories of his dead family and his bipolar illness; van Gogh with his supposed epilepsy. Many doctors and scholars have attempted to draw a correlation between creativity and mental illness to try to explain this phenomenon of the tortured artist. Kay Jamison, in her book, *Touched With Fire*, explores a vast number of writers whose works were closely tied to their bipolar disorder, where scientists like Albert Rothenburg make attempts to completely dissolve any connection perceived between creativity and mental illness of any kind. One of the problems in correlating creativity with mental illness is that it is so difficult to conjure an operational definition for each. Defining creativity alone stirs up debate, let alone the vast mental illnesses that exist. However, it is irrelevant whether or not a relationship exists between creativity and suffering of any kind. The fact remains that a number of artists have suffered and drawn inspiration from their anguish for their work. Rothenberg claims that “overall there is little evidence for an association between bipolar or manic-depressive illness and creativity” (Rothenburg 5). Whether or not a correlation exists is irrelevant. The fact is, the population of the artistically creative sometimes overlap with the population of the mentally ill, and, as shown in the research on Kahlo, van Gogh and Munch, it is perfectly possible for these conditions to catalyze, rather than hinder, artwork. I am not advertising pain, and I am not suggesting that people who suffer should be locked in a room with a paintbrush and told to suck it up because they could be the next Leonardo Da Vinci. I merely speculate that the advances in medicine will inevitably effect those who lie in the center of the ven diagram that

links the ill to the artistic. It has already been shown what effect modern medicine can have on those who derive their artistic abilities from their suffering. The three examined artists in this paper alone exhibit the amazing plateaus artists can reach through the synergy of art and suffering. So what is the modern doctor to do? Is he or she to analyze the patient's artistic ability and find their threshold for tolerance of their condition with the hopes they can give humanity the next *Sistine Chapel*? Of course not. But the profession of medicine, especially psychiatry, does seem to need attention.

Between 1990 and 1995, prevalence of depression medication rose by a third, and from 1995 to 2005 it doubled. If this trend continues – or has continued – then the number of medicated people in this country has steadily continued to soar. What is responsible for this? It's highly unlikely that the number of depressed people in the United States has risen, so that just means that more people are being given anti-depressants that wouldn't have been getting them before. Rather than getting to know and understanding the patient, the doctor follows a procedure of meet, diagnose, prescribe, rather than seeking different methods to cope with the depression. An article in the NY Times in February of 2010 examined the upsides of depression, and examined the work of a number of psychiatrists, including Andy Thomson at the University of Virginia. "Yes, they're working great", said a patient of his about her anti-depressants, "I feel so much better. But I'm still married to same alcoholic sonofabitch. It's just now he's tolerable" (NY Times 5). Sometimes there is a *reason* the individual is depressed. Would it not be better for the patient to actually solve the source of the depression instead of numbing the symptoms? The rise of anti-depressant medication illustrates how little doctors actually engage with their patients to analyze their situation to see if they actually suffer from a chemical imbalance where medication is necessary.

Depression is only one aspect of psychiatry, but it serves as an allegory for how patients ought to be treated. Doctors need to get to know their patients and understand their circumstances, and to the extent they actually *need medication*. In his article, *Hearing Voices* M. Rome and A. Escher share their experiment with schizophrenic patients who heard voices. A number of patients took medication for the voices, however, couldn't function regularly on the

medication. A number of patients also *learned to live with the voices*. While many of the patients needed hospitalization because the voices posed a threat to themselves or others, “many had very different ways of understanding these experiences and appeared to be competent, not disabled, depending on one's view of the nature of voices” (Escher 210). This experiment illustrates the importance of engaging doctors for people who suffer from mental illnesses. When medication complicates the ability to function, doctors need to look for alternate ways the patient can cope with the illness. This story shows that it is entirely possible to live with a mental illness without medical treatment. The same way that Edvard Munch learned to cope with his “angels of anxiety and despair” through painting, the people who underwent this experiment lived peacefully side by side their mental illnesses. This obviously does not work for everyone, and many people do need medicine. Given the research on Frida Kahlo, I would not advocate her denial of the anti-depressant Cymbalta to relieve her pain on the basis that she would cease to be the same artist that she was. However, doctors cannot look at patients in black and white scale where those who are ill receive medication and those who are not do not. Mental illness requires an engaging doctor who can determine whether or not the patient can learn to coexist with their illness, or if they do need medicine to function.

The purpose of this paper is not to make pointed statements at the pharmaceutical industry, however, the rise in anti-depressants could illustrate negligence on its behalf, and furthermore, offer speculation into what impact this negligence has on the population. Clearly, pain and suffering reverberate throughout one's life from which both positive and negative effects can be drawn. This paper focuses on the positive creative effects that sprout from anguish, particularly mental anguish. Frida Kahlo, living in the 21st century in America, would have likely been treated by much more skilled professionals who could have identified congenital diseases and other conditions to which physicians of her milieu did not have access. Her work, which is so blatantly knotted to her agony, would have seen incredible difference. While such changes might not be as drastic in Vincent van Gogh's work, if he was indeed treated with digitalis and underwent intoxication that transformed his earth-toned palette to the bright yellow of his later works, that would have been eliminated entirely by contemporary

treatment. Edvard Munch, like Frida Kahlo, depicted his suffering visually, and even treated art as a therapy of sorts, and sought refuge in his work. Examined by contemporary physicians who would treat him with medication for bipolar illness early in life may have detached him from painting early on – or at least inhibited him from producing hallucination-based paintings such as *The Scream*. It is doubtful that these three artists are exclusive in their bridging of creativity, mental illness, and suffering. As noted, there needs to be no relationship between creativity and anguish or mental instability for a population to exist that shares creative talents and mental disorders. This information may have no direct link to the rise of use in anti-depressant medication, however, the augmentation does indicate that more individuals in this country are on anti-depressants than ever before. It could exhibit negligence on behalf of the psychiatric industry; it could simply show that there are more depressed people in America than there have ever been before. What are the effects of a nation that has doubled its number of anti-depressant users? There are not many answers, however, the data introduces a number of provoking questions. Is there a correlation between the incredible advances in medicine and the production of art in this nation? Kahlo, van Gogh and Munch are hardly the only artists ever to live with mental or physical illness. What if there are dozens of Kahlos and van Goghs in America being handed Cymbalta, instead of a paintbrush, for their conditions? I am not suggesting that people ought to be forced to live with their pain in order to unearth some suffering artist within. I am simply suggesting that one of the opportunity costs of a nation that is advanced medically, could be a nation that is stunted artistically.

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The Irish Potato Famine: Act of Genocide?

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In the twenty-first century, when one hears the word “genocide” a few certain historical events come to mind; the Nazi Holocaust, killings by the Khmer Rouge in Cambodia, and the slaughter of the Tutsi people Rwanda. During all three of these catastrophes millions of people were led to death through starvation and mass killings. Hitler was on a mission to exterminate all people who were not German and Christian, especially targeting the Jewish people, killing more than six million. In Cambodia, the Khmer Rouge group took control and in order to “cleanse” and rebuild the nation they went on a killing spree for three years, murdering nearly two million. In Rwanda, the Tutsi and Hutu people engaged in a civil war and Tutsi rebels killed almost one million Hutu people in just one hundred days. Webster's Collegiate Dictionary defines genocide as, “the deliberate and systematic extermination of a national, racial, religious, political, or cultural group.” By definition, the events in Europe during the Holocaust, Cambodia during the Khmer Rouge regime, and Rwanda during the Tutsi and Hutu civil war, are considered acts of genocide by historians. One similar dark period of history, however, is often overlooked when one thinks of awful acts of genocide; The Great Irish Famine. Beginning with the first failed crop in 1845 and lasting until 1849 the potatoes in Ireland became infected with a fungus which made them completely inedible. Nearly two-thirds of Ireland's population depended on the potato for survival, and when the blight struck, the people were in desperate need of governmental aide. Some would say that the blight was an act of God, but the famine, I argue, an act of British Policy. Parliament's non-action, to provide relief to ease the slow and painful starvation of millions in Ireland, was a systematic plan to eliminate the followers of the Catholic faith.

Stemming from years of religious conflict, Britain ruled Ireland according to a set of laws that did not even give Catholics the chance to pursue a life of prosperity. These “penal

laws,” essentially prohibited the people from owning and leasing land, voting, living within five miles of a corporate town, and obtaining an education. The Catholics endured this impossible life for nearly two-hundred years before the blight struck, so when it did, its outcome was devastating.

In order to truly understand the depth of the oppressive relationship between Ireland and England one must examine Irish and English history dating back the late 1100's and the Norman conquest of Ireland. Under Norman control King Henry II moved quickly to establish new leadership, appointing three new Lords who ruled in Ireland, but served the King¹. The Norman conquest was England's first attempt at controlling their neighbor, Ireland, beginning a legacy of English abuse that came to surface in the years of the famine.

In the year 1509, King Henry VIII, was crowned. He was self-righteous, threatening, and even morbid. Henry immediately moved to conquer France, Spain, and Italy, and, since he had inherited the title of “Lord of Ireland,” as well as the crown of England, he believed he was the true, rightful King of Ireland². From the moment of his crowning, there was tension between Henry VIII and Garret Og, the Lord of Kildare, who was the most powerful man in Ireland³. This tension, as well as Henry's personal religious conflict, which escalated when he wanted to divorce his first wife and marry Anne Boleyn, led to a deepening religious conflict between Ireland and England. This religious conflict ultimately led the British to do nothing to aide the starving Irish, centuries later, during the famine.

Henry's conflict with the Catholic Church led him to work with English Parliament to officially separate England and all it's territories from Rome. Henry VIII became the ruler of the people, and land, and he declared himself leader of the Church of England and Ireland. after a reign of thirty-eight years of separation between the Church of England and the Catholic Church, Henry died, leaving the throne to his, then, nine-year old son Edward.

1 Amy Hackney Blackwell and Ryan Hackney, *The Everything Irish History & Heritage Book: From Brian Boru and St. Patrick to Sinn Fein and the Troubles, All You Need to Know About the Emerald Isle*, (Avon: Adams Media 2008), 81

2 J.A. Guy, *The Tudors*, (New York: Sterling 2010), 30-31

3 Hackney Blackwell and Hackney, 83

Edward, though very young, left a very lasting legacy. Just days after Henry's death, the men elected the earl of Hertford to be young Edward's "protector"⁴. The protector became the leader of the church, and he was a Protestant. It is unknown exactly how, but Edward became a very strict Protestant himself. About six years after he inherited the crown, he became ill and the throne was passed to Mary who was a very dedicated Catholic. Not only was she a strict Catholic, she was married to Philip, who was to become the King of Spain⁵. Mary had her heart set on a reunion with Rome and began to prosecute all Protestants in sight. So began "Mary's Reign of Terror," as well as her powerful disagreements with the well-established (protestant) English Parliament. They disapproved of her attempts at removing the land ownership of nearly eight hundred protestants, and they did not support the reunion with Rome. War and revolt ravaged the rest of Mary's reign, and she died in 1558⁶. Consequently began the reign of Queen Elizabeth I, a woman who would directly affect the Irish people in an extremely negative way. Mary's religious conflict and, now, the reign of Queen Elizabeth would deepen the conflict between England and Ireland even further.

Queen Elizabeth I, "... controlled her policy; her instinct to power was innate"⁷. She never married, which created a problem in identifying her heir, she had unusually great military successes, and was very private in her decision making. One of her first orders of business was to establish the Official Church of England and to make all of England, including Ireland, officially Protestant. The Irish people began to revolt against the English leaders. Religious conflict was heightened even further by the fact that the Queen did not marry. Her court was worried about guaranteeing a Protestant succession, and the threat of Catholicism from surrounding countries caused them to tighten the leash on neighboring Ireland. The conflict grew to an almost full on war with Spain which quickly spread to Ireland⁸. The Spanish attacked Ireland at a time when the nation was already extremely weak. When the Spanish attacked, Elizabeth saw the golden opportunity to take control over Ireland for good. The conquest

4 Guy, 64

5 Guy, 88

6 Guy, 95

7 Guy, 97

8 Guy, 114-115

which was completed by 1603, rather than unifying Ireland and England, created an even more tense situation⁹. Queen Elizabeth I created a deep and lasting conflict between the Catholics, who were the majority of the Irish people, and the Protestants. The results of this religious conflict will be seen in the events of the Irish Famine, more than two hundred years later.

The conflicts between Ireland and England, Catholic and Protestant, continued. In the year 1691, Irish Parliament, which was made of Protestant English landowners and Irish Lords who were lucky enough to own land, passed the “Penal Laws.” Some of these new laws forbid Catholics from education, marriage to non Catholics, traveling overseas, and living near busy cities. The laws also did not allow Catholics to sit in the Irish Parliament or vote and they were forced to pay tithes to the Protestant clergy and support their local priest. The restrictions of these Penal laws placed great hardships on Catholics, making any kind of comfortable life nearly impossible for them in an English territory. The one main resource Ireland had during this period, was their fertile soil, perfect for grazing and pasturing, supporting the export of cattle, butter, and cheese and a possibility to make a healthy living. However, through the “Penal Laws” Parliament disallowed any Irish exports into Britain because they no longer wanted to support any economic thriving in Ireland, sparking a downward spiral toward extreme poverty and starvation for the Irish people¹⁰. Catholic land ownership went from sixty percent to less than five percent in the years under the Penal Laws. The Laws stripped Irish Catholics of all their rights, and were a clear statement from the English that the Catholic religion was no longer acceptable.

Throughout the 1700's the Irish people were fighting for individual rights and freedom from the English. Protestants and Catholics joined forces in a group that called themselves the United Irishmen and planned a rebellion in Dublin in 1798. However, British troops arrested the leaders of the group. Many still rebelled, but without their leaders in Dublin, their efforts

9 Guy, 135

10 “The Penal Laws In Ireland,” [<http://www.libraryireland.com/articles/Eighteenth-Century-Ireland/Irish-Penal-Laws.php>]

very unsuccessful and thousands of people lost their lives¹¹. Early in the year 1801, the English Parliament passed the Act of Union, creating the “United Kingdom of Great Britain and Ireland,” ending the Irish Parliament all together, and opening a few seats for Irish representatives. This act struck a hard blow for the emancipation of the Irish Catholics in Ireland, for the very few Protestants that actually supported them, were now legally required to align with the Protestants of England. The United Irishmen dissolved and dependance on England became essential for any semblance of a stable life¹². At this point, Irish Catholics only owned about five percent of the land in Ireland, yet the majority of the population depended on the land to survive. Moving into the nineteenth century, Ireland's population grew rapidly but the economy did not.

After centuries of religious conflict and persecution, the resulting system of life in Ireland under the Act of Union was extremely unbalanced. Millions of deaths during the famine were a direct result of it. The landowners in Ireland began to divide up the big, profitable pieces of land that they owned and rent out very small parcels to tenant farmers. It was nearly impossible for these tenant farmers to make any profit from their small pieces of land, however, they were able to pay rent, feed their families, and survive. These tenant farmers were allowed to vote, but there was absolutely no voting privacy and landlords were able to influence and basically control who their tenants voted for. Because they would lease out their land to many farmers, they had a huge amount of control and were able to influence their tenant's voting greatly. Additionally damaging were the taxes. Landlords were not taxed but the tenant farmers were. Soon, more laws were passed such as the Catholic Emancipation Act, passed in 1828¹³, which worsened the situation for the majority of Irish Catholic tenant farmers because it left their landlords without any incentive of keeping the small tenants on their land. Landlords started to let go of their tenants, leaving the majority of Ireland landless, and

11 Hackney Blackwell and Hackney, 103

12 Maire Brien and Conor Cruise Brien, *Ireland: A Concise History*, 3rd ed. (New York: Thams and Hudson 1995), 97

13 Brien and Cruise Brien, 101

vulnerable to the starvation that was about to come¹⁴. Even during the time of the Industrial Revolution, Ireland did not catch on like the rest of Europe. They remained a nation completely dependent on agriculture, and the population continued to increase rapidly.

Dependency on Ireland's major crop, the potato, increased. Potatoes were the ideal crop for the amount of land most people had, which was very little, because they can literally grow anywhere. Potatoes do not need much space or attention to grow an abundant crop, plus they are extremely nutritious so they could feed the large Irish families and keep them relatively healthy. Over two-thirds of the Irish population depended on them for survival¹⁵. The success of the potato crop was a major factor in the extreme population growth that Ireland went through from the 1700's to 1800's, but the more people that came to Ireland, the more dependent they became on the potato. Families would split up their minimal farm land between their sons which mean that Irish families started depending on smaller and smaller plots of farm land. The poor Irish families living in this system struggled because they were forced to depend on a barely liveable piece of land and made no profit. They were able to survive, but they were held under tight control by their landlords. The system, weak as it was, came to a screeching halt during the fall harvest of 1845. The crop had been contaminated with a fungus, causing all the potatoes to turn black and rotten. The counties that were hit hardest were in the Southwest and West of Ireland, also the counties where the Catholics were sent to work on the Protestant's giant farms. The effects of the blighted crop were felt almost immediately by the poorest farmers, and even within months people were dying of starvation. The British Prime Minister, Sir Robert Peel, reacted quickly, by hiring Scientists to examine the issue. They reported back with an extremely grim outlook for the next few crops, but Peel took little action, believing people were overreacting¹⁶. Historically, Peel's lack of action may be thought of as neglectful but further decisions argue against that perception. As the people's potato supplies began to shrink, there was a hope for survival by accessing the abundant oat crop they had harvested that year. They begged Parliament to discontinue exporting the oats.

14 Hackney Blackwell and Hackney, 105

15 Hackney Blackwell and Hackney, 147

16 "The Penal Laws In Ireland"

But the Parliament continued the exporting, essentially depleting that supply. No longer able to raise their food, people were forced to have to buy it, but were prohibited because the price of potatoes and grain almost doubled¹⁷. The people of Ireland were literally starving to death under the watch of Prime Minister Peel and the Crown.

Meetings began to form in and around Dublin to plead with the English for relief. The people were begging Peel to allow tax free importation of foreign grain, a loan of one million pounds to lower food prices and bring in more food, and to stop the export of the abundant oat crop. The Lord Cloncurry who was a representative from Dublin Castle pleaded with Peel, and told him, more realistically, they needed a loan of one and a half million and to start “workhouses”¹⁸. These were places where people could go after losing everything, as a last resort for survival, having to leave their land to enter the houses and have a chance to eat.

The workhouse system was dreadfully unsuccessful. They were paid for by a poor tax that landlords collected from their tenants. Essentially, the poor tenant farmers were forced to pay for the workhouses that, if they could no longer afford to pay for, they would end up entering. The workhouses were soon over-crowded with sickly, emaciated people, forced to work themselves to death, to try to survive. However, if a peasant was denied entry there was no possibility of survival.

Peel resigned only months after the first failed crop in 1845, and appointed Charles Edward Trevelyan to handle the situation with Ireland. Trevelyan had absolutely no sympathy for the Irish. He was not fond of the Irish people and had only visited Ireland once, however, he used that fact as a justification that the distance helped him remain unbiased. “He was a firm believer in laissez faire and thought donated food actually exacerbated the problem by relieving the Irish of the obligation to feed themselves”¹⁹. Clearly, Trevelyan did absolutely nothing to relieve the people from starvation. Many of the people of England believed that the blight that struck the potato crop was the work of the Holy Spirit, and was punishment for their sins of

17 James S. Donnelly, *The Great Irish Potato Famine*, (Thrupp, Stroud, Gloucestershire: Sutton 2001), 49

18 Donnelly, 53

19 Hackney Blackwell and Hackney, 152

over population and Catholicism²⁰ and that God thought the Irish inferior. This shows how deeply the historically religious conflict between England and Ireland had an effect on the response to the famine. The English Parliament were unconcerned with the fate of the Irish people.

Trevelyan also oversaw the public works projects that were suggested to Peel. The condition of these “workhouses” was unbearable. The already weak and sickly peasants had to work hard laboring jobs all day for a chance to eat. All of the houses were separated into male and female groups breaking family bonds and support. Facilities were completely overwhelmed with people by the second year of the famine. The peasants, whose immune systems were significantly weakened by a year of starvation, began to contract diseases like Typhus and Yellow Fever, making them unable to work. During the year 1847, thousands of people died each week from Typhus²¹. Again, the British government stood by and watched as more and more Irish Catholics were removed from Ireland by starvation. The administration knew that a full blown famine was in effect nearly a year earlier but refused to provide any sort of governmental food supplement for the people. Trevelyan declared that the government should not offer any food until there is no longer any available for purchase. However, insisting that people purchase their food would require them to be making enough profit to do so. With this “no exceptions” policy in effect, the English Parliament watched as millions starved.

Many of the people hit hardest by the famine did not own the land that they lived on. They were tenant farmers of the large landowners and rented small pieces of farmland and houses. When their potato crop failed, they had no way of paying rent to their landlords and, in most cases, were evicted from their plot of land. This was absolutely devastating for a family that was already struggling just to eat. When their homes were taken away, the families would either move into a workhouse or build makeshift huts in the hillsides and cover them with peat, the mossy plant that covers most of Ireland²². The attitude in England continued to be that of

20 “The Penal Laws In Ireland”

21 Hackney Blackwell and Hackney, 149

22 Hackney Blackwell and Hackney, 154

the Irish exaggerating and being deserving of the “punishment” for their sins. The English Parliament watched over one million people die of starvation from 1845-1850, during the potato blight, and watched another one million people leave their home country and immigrate to America²³.

The blight gradually faded out, and by 1852, the Irish agricultural system was almost fully restored to where it had been before the famine. However, Ireland made a few key changes. Families would choose one heir to their small farms and pass down all the land, rather than divide it between children. Farmers also began to depend more on livestock than crops. Beyond these natural changes following the famine, came some national identity changes. Before the famine, Ireland had been a majority Irish speaking country. In the years of passive dependence on England, the English language became more dominant and spread. After the famine, the Irish language had almost completely disappeared. “After the famine one senses a new quality, something grimmer and tougher, among the survivors and their children, the Irish of the later nineteenth century”²⁴. Was the famous cheer of the Irish people just bruised or was it damaged forever? Thousands of Irish men, women, and children also went to prison during the famine. Kilmainham Gaol (Jail), a facility on the outskirts of Dublin, was so extremely crowded with people of all ages that they began to ship prisoners with long stays to Australia, resulting in extreme over crowding and unlivable conditions in the jails.

Following the end of the famine, there were many political changes . The millions that immigrated to America during proved a valid threat on the strength of Britain's control over Ireland after the famine. This put a large part of the Irish population “out of reach” of the English and Protestant's reach. America's position in world politics was growing stronger and stronger at this time, and the large Irish population in the States began to thrive on this new founded freedom. In Ireland, a radical group of men formed a group and called themselves the Young Irelanders. They were Irish nationalists and patriots that was more concerned with

23 Brien and Cruise Brien, 104

24 Brien and Cruise Brien, 106

ending Ireland's unity with Britain than trying to fix the current system²⁵. The men planned several rebellions but were, ultimately, unsuccessful. However, they did leave a lasting legacy because they told the world about Britain's horrific treatment of the tragic situation. The famine also brought together the Catholic and Protestant people of Ireland. They were both finally unified on one extremely important idea; separating from the British and having their own system restored. Through their long struggle with the British, the Irish were finally mostly united as one nation.

Looking deeply into the tragedy that was the Irish Potato famine, one might question whether or not it was an act of mother nature, or a true act of genocide by the English. A common quote the Irish used often provides the clearest insight to the question, "God gave us the potato blight, but the English gave us the famine"²⁶. Referring back to Webster's Collegiate Dictionary for the true definition of genocide one reads, "the deliberate and systematic extermination of a national, racial, religious, political, or cultural group." The British policy went from a scientific examination, to the refusal to budge on collecting taxes, to the continuation of grain exports that could have fed thousands, to workhouses and watching millions starve to death. The actions, or non-actions, of Trevelyan and his administration were a deliberate attempt to exterminate a religious, national, and cultural group. One might even think it even more terrible that the Irish were allowed to die slowly and suffer so greatly as they starved to death, rather than die quickly in mass killings. The Irish potato famine is one of the worst tragedies in history. Not only were millions of lives lost, but the spirit of a great nation was lost.

25 Brien and Cruise Brien, 108

26 Hackney Blackwell and Hackney, 158

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Creating the Terrorist: The Psychology of Group Dynamics

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Introduction

In December of 1992, U.S. troops were preparing for a humanitarian mission in Somalia when suddenly they heard a bomb go off in the hotel in which they were staying. Two Austrian tourists were killed. A year later, a bomb went off in the underground garage of the World Trade Center, marking the first World Trade Center attack and terrorist attack on America. The results were more destructive—six people were killed and 1,500 wounded. Fast forward to September 9, 2001. The news reports that two Moroccan men posing as journalists killed themselves and the leader of the Northern Alliance, an organization that is supported by the U.S. and fights against the Taliban (Who, 2001).

Forty eight hours later... The silent crash of a jet into the World Trade Center was viewed on television screens around the world for all to witness the horrific capabilities of humankind. 2,793 people died (Riedel, 2008). Watching from home, the events filled civilians with horror and disbelief and perpetuated a desperate desire for explanations. As a result of September 11, 2001, Americans anxiously questioned what could have motivated a group of individuals to willingly crash into the Twin Towers, killing innocent victims and themselves.

What could be the commonality of all four inexplicable attacks? The most obvious and clearest answer is that the attackers were from a group known as al Qaeda. Thus, in an attempt to search for possible explanations and solutions to the terrorist attacks described above, counterterrorism experts have closely studied the group of al Qaeda to explore the potential motivations behind their behavior.

Deputy Director for the Missile Defense Agency's Airborne Laser Program, Laurence Drobot (2007), claims that al Qaeda and its leader, Osama Bin Laden, use the tenets of Islam to justify a Jihad or holy war on the U.S. Fundamental to the Islamic faith, is a belief that Islam

stands superior to all other religions and should be “spread by force to bring peace to the world” (Dobrot, 2007, p. 1). This suggests that the al Qaeda members believed their terrorist activities on 9/11 were justified based on their Islamic ideologies.

In addition to Jihad, Adam Silverman (2002) explains in his article “Just War, Jihad, and Terrorism,” that the hijackers likely viewed their actions as following the Islamic belief of martyrdom—a term used to describe suffering death for religious reasons (Merriam-Webster, 2011). As Islamic martyrs, according to Bergen (2001), the hijackers believed their actions represented worship and would instantly take them to paradise.

Overall, religion has been primarily put in the spotlight as a reason for al Qaeda’s activities. However, doing so has potentially led to dangerous consequences. Indeed, utilizing the tenets of Islam to understand terrorist behaviors has prompted Americans to associate the ideals of the Islamic religion with al Qaeda’s terrorist activities. The rationalization of religion as the main explanation was most likely largely responsible for the rise in hate crimes toward Muslims. As a result, in 2001 there were approximately 554 victims of crimes that were motivated by bias towards the Islamic religion (Federal Bureau of Investigation, 2001).

Following 9/11, [Former] President George W. Bush declared a war on terrorism on September 12, 2001. Additionally, on November 13, 2001, he outlined procedures and policies for detainees in the new war, and Guantanamo Bay was established as the facility that would house suspected high-threat and high-intelligence individuals (Cucullu, 2008). Finally, Bush enacted the Patriot Act to try to prevent another 9/11.

Today, more than ten years after 9/11, despite counterterrorism efforts, instances of terrorism continue to be a source of fear and worry for many Americans. Experts have clearly looked towards religion to explain the issue, but Islamism does not completely explain the behaviors of al Qaeda. Could we be missing something? What is really propelling Islamic fundamentalists to continually join al Qaeda and partake in terrorist activities?

In point of fact, when interviewed, terrorists who had been recruited as suicide attackers from radical religious groups, such as Hamas and the PIJ, did not generally mention religion as their main motivation (Berman, 2009). The fact that there are religious radicals who

do not reference religious tenets may very well imply that al Qaeda members have other motivations that may not include religion.

Indeed, Silverman (2002) argues that religious factors, such as Jihad and Shahid (another term for martyrdom) do not justify killing innocent people and non-combatants, and according to Eli Berman (2009), “the pious jihadist, programmed with an ideology of hate to be a human guided missile, or dreaming of virgins in heaven, makes for compelling news broadcasts and emotional sound bites, but the concept does not stand up to scrutiny” (p. 9). What could this imply about our understanding of al Qaeda? Possibly, that despite the role religion may play in Islamic terrorism, we have used religion as the comfortable way to explain and make sense of al Qaeda’s behaviors, and as a result, have neglected to consider other factors. Following are some of the prevailing psychological approaches to explain terrorist actions.

One view on terrorism, according to New York Times journalist Sarah Kershaw (2010), is based on the belief that terrorism can result from the inception of extremist views at an early age. These views can include the fear that a special nationalist, ethnic, or religious group is in danger of extinction, and in reaction, there is a desperate desire to reverse the projection and protect the group (Kershaw, 2010).

From a psychoanalytic approach, in Islamic culture, Nancy Kobrin (2010) claims that there may also be a need to hate and have an enemy that is learned in the home while at the mother’s breast, and then further reinforced in the school and social environment. In fact, Kobrin (2010) believes that Islamic boarding schools may play a significant role in the indoctrination process of hatred. As a result of these “learned” beliefs, she claims that some may use Islam to act out their hatred, and the murderous rage can be unconsciously meant for the terrorists’ mothers. For those who are non-Muslim and harbor a need to hate, Kobrin (2010) believes that they can identify with the Jihadis and may convert to Islam to act out their hatred. The tendency for people to form relationships with others based on shared interests and problems, such as the need to hate, is what Kobrin (2010) refers to as “assortative relating” (p. 90). Within the terrorist group, these similarities in beliefs may play a role in forming a bond among the group members.

Other factors that may play an influential role in the unity of the group are the common personality traits and background of the group members. When looking at the individuals who join terrorist organizations, Walter Laqueur's research indicates that often individuals who join exhibit similar characteristics. They tend to be action-oriented, aggressive, and in search of excitement. This could suggest that individual or personality factors may play a role in who decides to join a terrorist organization. Additionally, another factor that tends to be common among the members of the terrorist group is a feeling of weakness or lack of a position of power to act on beliefs. As a result, seeking membership in a terrorist organization is seen as a solution (Hudson, 1999).

Once joining the group, it appears that that the group environment may play a larger role than might have been imagined. Indeed, an individual's desires, actions, and beliefs may be intensified given that group membership "provides a sense of potency, a close and interpersonal environment, and social status" (Hudson, 1999, p. 35). Evidently, the effects of the group may prompt individuals to begin to view themselves more highly when enrolling in the group, which may induce them to more readily go along with what the group promotes. This may be significant in identifying an under recognized contributor to the behaviors of terrorists—the group environment.

The questions then to be considered are:

1. How significant is the influence of groups on individuals' behavior?
2. To what extent, does the group play a role in an individual's decision to carry out terrorist activities?

These questions relate to the compelling study of group dynamics, a social science and communication field of study that is dedicated to studying the development, nature, and relationships within groups (Forsyth, 2009). Given that much research has focused on using religion to help explain the behaviors of al Qaeda, studying the group dynamics of the organization has been overlooked, when in reality, the group dynamics could likely play a significant role in the justification and intensification of extremist action.

A key aspect of group dynamics is the role of the leaders and their methods to keep group members in line. According to Hudson (1999), a commonality in terrorist groups is that leaders often lead by frightening or pressuring their followers. This certainly suggests that leaders have a unique advantage in terrorist groups and can easily get group members to agree with them. Additionally, peer pressure, which can be defined as the influence a social group has on an individual ("Peer Pressure," 2011) can be used as a method to keep members in terrorist groups in line (Borum, 2004). According to Rapoport, in terrorist organizations, peer pressure is often implied through "ritualized struggle sessions," which may generate guilt (Rapoport, 1982, p. 103). In these sessions, members are required to have open confessions of past mistakes or "wrong thinking" (Rapoport, 1982, p. 103). This may lead group members to fear doing anything they believe the group will disagree with, and as a result, the group can have a dangerous hold on the individuals. In addition to peer pressure, according to Crenshaw (1992) (as cited by Borum's article, 2004), other methods to manage group members can include mutual interdependence, sensitivity to betrayal, and security threats. The variety of methods suggests that leaders of al Qaeda are able to manipulate members within the group.

In fact, leaders likely play a role in manipulating Islamic ideals among the individual members of the terrorist organization. Peter Bergen (2001) states when describing the 9/11 terrorists' appearance, that they did not nearly resemble the impoverished suicide bombers of the Palestinian intifada, but instead, appeared to be technologically savvy men who fit well into their American communities. Some of the men involved in the attacks even drank on occasion, which is a serious sin for dedicated Muslims (Bergen, 2001). The possible reasons for the sinful behavior and surprising appearance of the 9/11 Islamic fundamentalists can be looked into further using psychiatrist Marc Sageman's research. After interviewing al Qaeda members, Sageman implies that members knew so little about religion (Banks, 2005) due to exposure of the outside world and years of Western education. Sageman argues that the outside influence paired with little knowledge of religion makes members more vulnerable to the discourse and distortions in Islam made by their leaders (Banks, 2005). Thus, it could be argued that westernization and the common professional background of individuals in specific terrorist

organizations uniquely puts members at risk to go along with an Islamic leader, when in fact, we would expect the opposite.

Effective leadership plays a key role in the cohesiveness of any group. Cohesiveness can be defined as the extent to which members are willing to work with each other (West, 2010). According to Kassin (2011), highly cohesive groups are especially vulnerable to making dangerous decisions. Once a set of activities emerge as norms, Kassin (2011) believes that highly cohesive groups have the most difficulty breaking norms because members fear going against the group. But, how do we know for sure that the terrorist organization of al Qaeda is a highly cohesive group?

For one, characteristics of cohesive groups tend to include a feeling of commitment to the group members and a sense of group pride (Kassin, 2011). Terrorist individuals are uniquely vulnerable to exhibit these aspects within the group because they tend to have preexisting bonds with members prior to joining the terrorist organization, and some may view the organization as a replacement of the family. When interviewed by Sageman, about 68 percent of members said they had preexisting friendship bonds (Banks, 2005). This certainly suggests that prior to joining the terrorist group, individuals may already feel commitment to one another. Also, looking at al Qaeda's recruitment procedure, according to Sageman, people will join to follow their friends and there is no sign of brainwashing when individuals first enroll (Banks, 2005), which suggests that members willingly desire to engage in the activities of the group. The willingness may stem from a wish to maintain important relationships considering that when recruiting for al Qaeda, "social bonds come before any ideological commitment," (Banks, 2005, p. 677). However, as discussed earlier, highly cohesive groups can become dangerous because the concern then may be more focused on keeping the unity of the group rather than on the outcomes of the decisions made by the group. As a result, individuals may have "affiliative constraints" (West, 2010), meaning that they withhold their own opinions rather than risk being rejected by the group. Affiliative constraints may prompt individuals to override their normal inhibitions against violence and consequently willingly engage in harmful activities to avoid dishonoring their peers.

In addition to preexisting relationships, psychoanalyst and counterterrorism specialist, Nancy Kobrin (2010), author of *The Banality of Terrorism*, argues that the close bonding among terrorist group members may be a result of traumatic early childhood experiences, primarily with the mother. Kobrin (2010) claims that this condition in early childhood can lead to a desperate desire to seek and join a group for a feeling of belonging and as a replacement of the mother. In fact, Kobrin (2010) believes that suicide and murder within the terrorist organization of al Qaeda are “manifestations of traumatic bonding’s maternal attachment” (p. 85) and that the act of being a shahid can also be understood as a way in which to gain acceptance into a family. In accordance with Kobrin’s theory, the bin Ladens do not consider Osama’s mother to be part of their family because she was divorced from Osama’s father decades ago (Bergen, 2001). Certainly, Kobrin’s Freudian perspective could imply that a quest for belonging resulting from negative early childhood experiences plays a significant role in the great feeling of allegiance that individuals experience when they are finally able to form a bond or connection with others.

Evidently, loyalty to the group, which may stem from pre existing relationships or negative childhood experiences with the mother, can play a big role when becoming a part of a terrorist organization. As a result, members may engage in the required activities to remain in good standing with all the members of the group. For instance, members of al Qaeda are required to perform bayat—“a quasi-mediaeval oath of allegiance to their emir, or the leader” (Bergen, 2001, pg. 28). When Bin Laden pressed an individual named Khalid to join al Qaeda, Khalid was required to pledge loyalty to Bin Laden as its leader (Riedel, 2008).

If an individual does not follow the required activities, such as bayat, he or she can be seen as committing an act of betrayal to his or her fellow group members and can lose important social relationships, which may result in a tainted reputation. Indeed, according to Berman (2009), “those who sacrifice gain acceptance as full members,” and those who don’t, suffer from shunning, marginalization, or expulsion” (p. 16). It could be argued this is designed strategically to ensure that only the most willing and dedicated people join al Qaeda.

According to Forsyth, author of *Group Dynamics*, the dedication members have towards the group may stem from a distorted sense of identity. With terrorist groups specifically, Forsyth (2010) states that membership “provides a sense of identity or belonging for those personalities whose underlying sense of identity is flawed” (p. 26). Is it realistic to say that all individuals who join a group and feel an intense allegiance to their group members have a flawed identity? According to Hudson (1999), this may be the case. He claims that joining a terrorist organization is similar to becoming part of a religious sect or cult because there is a requirement of total commitment from members and relations with people outside of the group is often prohibited. But, responding yes to this question would imply that many of us have a distorted self-identity when in reality it is perfectly normal to feel a sense of belonging within a group. Looking at our Western society, this general feeling of allegiance that makes members loyal to one another should not sound strange at all as we tend to identify with the group too. Indeed, individuals within groups that are socially acceptable to us, such as the Marines, experience an intense feeling of belonging within the group. What could this say about how our Western society has historically viewed the al Qaeda terrorists? Possibly that we have focused a tremendous amount of time studying what makes the terrorists different from us, supposedly their Islamic beliefs, and have neglected to look at obvious similarities, such as the need to belong.

Ultimately, the group environment gives any set of individuals a feeling of belonging, and once joining, they often want to hold onto that feeling and not risk being excluded, even if it means getting involved in risky activities. In fact, according to psychological studies and research, an individual is more likely to get involved in risky behaviors, when becoming part of a group. This can relate to the concept of de-individuation, a term Sigmund Freud used to describe “a state of affairs in a group where members do not pay attention to other individuals, and correspondingly, members do not feel they are being singled out by others” (Adamatzky, 2005, p. 6). In other words, the group creates a mob-like environment where it is identified as a single unit, and consequently, the opinions and strengths of specific individuals play less of a role. Certainly, as discussed earlier with affiliative constraints, this may prompt individuals to

ensor any opinions they have that might cause conflict within the group. As a result of de-individuation, Andrew Adamatzky (2005) believes that there is a “reduction of inner restraints in the members” (p. 6), and a display of “automatic, delusive, and irrational behavior” (p. 6)—similar to what may have been witnessed on September 11 with the individuals of al Qaeda.

Risky behavior might also be more likely to occur within groups because initial tendencies can be exaggerated among group members through group discussion. This phenomenon is known as group polarization (Kassin, 2011). According to Kassin (2011), any group decision can be influenced by group polarization from serious decisions about how to allocate resources to more commonplace decisions such as what to eat for dinner. This certainly suggests that group polarization could have occurred within the terrorist organization of al Qaeda most likely with Islamic religious ideals. Indeed, by closely interacting with people of similar thoughts, members of the group could have intensified their beliefs.

The effectiveness of group polarization can be attributed to Janis’ theory about the “Overestimation of the Group,” which occurs when there is a belief that the group is more important than it really is (West, 2010). This appears similar to a delusion of grandeur, which is when “a holy mission or some other type of supreme value is vested in the group by its members” ([Rapoport](#), 1982, p. 106). Rapoport, author of *Rationalization of Terrorism* claims that a delusion of grandeur is one of the different types of delusions that terrorists believe.

According to Janis (2010), a belief in the greatness and invincibility of a group may stem from a belief in the inherent morality of the group. In other words, you assume that because the people in the group may be good, the decisions made in the group are also good. Among the terrorist individuals, Eli Berman (2009) claims that there is a common belief that they are altruists in their own communities, and thus within the ideologies of the group, there is research to suggest that the attackers believe their courageous act will bring great benefits for some cause. As horrific as this may sound to one part of the world, this concept can be applied to groups of people around us, such as police officers and firefighters. The similarity is that all these groups believe they are protecting their country from harm. However, according to the findings of Israeli psychologist, Merari, suicide attackers lack empathy for victims and are

altruistic towards their own cause or side (Berman, 2009, p.11). This can also be seen as in group favoritism, whereby members of a group believe that their actions and behaviors are always good, and there is a tendency to discriminate against any individuals in the outgroup (Kassin, 2011). Thus, there is evidence to suggest that members within terrorist organizations believe that their decisions are for the benefit of humanity.

An overestimation of the group paired with a belief in the group's morality may lead members to participate in a dangerous group process called groupthink—a form of thinking that is common among members in a close group who are striving for unanimity to arrive at a common position (Fraser, 2010). Homogeneity, or in other words, group similarity can also help foster groupthink. With the individuals in al Qaeda, as discussed earlier, there is a tendency among members to feel victimized and express certain traits. Ultimately, when the homogeneity and sense of unity helps lead the group to groupthink, it overrides members' motivation to realistically evaluate alternative courses of action (Fraser, 2010). Irving Janis argues that some policy disasters, such as President Kennedy's decision to invade Cuba at the Bay of Pigs, occurred because of groupthink (West, 2010, p. 241). Additionally, the Challenger disaster can be seen as a tragedy that occurred as a result of groupthink among homogenous advisors. In this case, a group of engineers opposed the launch of the shuttle, but NASA officials who were suffering from an "illusion of infallibility" didn't bother to tell the top NASA executive of the engineers' concerns. The result was a disaster (Griggs, 2009, p. 307).

Essentially, the role of the leader, the sense of cohesion, and dangerous group processes, such as groupthink can signify the key defining factors of what in its most basic form can be called a group culture, whereby members willingly assimilate with the prescribed rules and beliefs of the group and do not use the opportunity to speak up in reaction against them.

Thus, the group culture is what becomes important within the terrorist organization. Many Westerners, however, tend to not take this into consideration and simply attribute the terrorists' behavior to their Islamic religion and background. They tend to forget or neglect looking at the group culture, which can be play a powerful contributing role to terrorists' behavior.

Indeed, something we need to consider is the fact that identifying with the group may be a strong part of the Middle Easterners' culture. According to Kassin (2011), while America and other individualistic countries tend to view individuals as autonomous and unique in their own way, collectivist countries promote conformity and being a team member. Thus, those who stand out are seen as outcasts in collectivist societies due to the fact that individuals typically associate themselves with the group (Kassin, 2011).

With this in mind, it is highly likely that the terrorist individuals identify themselves with the terrorist organization, and in order to better understand terrorist behavior, it is necessary to consider that terrorist organizations support certain activities that individuals are required to carry out. Thus, the main motivations of extremist action can be attributed to adhering to the ideologies of the group in addition to the ideals of the religion. Certainly, religion plays a role in the formation of these organizations; however, I see group culture as an additional force in transforming religious extremists into terrorists. When applying this to 9/11, it can be said that one of the reasons terrorists engaged in that horrific behavior was to follow the group culture of al Qaeda, not just to follow the religion of Islam.

Future Implications

Therefore, when looking at the individuals who were involved in September 11 and other terrorist acts, it is necessary to examine group dynamics. A combined feeling of cohesion and allegiance within the group, paired with potentially dangerous group processes could have been major contributing factors to the terrorists' ultimate decision to implement the attacks on the World Trade Center and the Pentagon.

How does this conclusion affect the grand scheme of things? For one, it could suggest that instead of declaring a war on terrorism, President Bush should have focused more of his attention and energy on destroying the group network of al Qaeda.

It appears that more recently the U.S. government has come to realize the importance of the group dynamic of al Qaeda. In 2006, the National Strategy for Combating Terrorism addressed the security challenge posed by terrorism and made its near-term goal to destroy the larger al

Qaeda network (Dobrot, 2007). This could help weaken some of the key aspects of the group dynamic of al Qaeda.

Essentially, as much as we may tend to deny it, we may share similar experiences with terrorists when becoming part of a group. The power of the group is important to keep in mind when trying to in some coherent way explain the behaviors of the individuals who perpetrated the attacks of 9/11. Thus, in the future it would be prudent to conduct further research on the group dynamics of terrorist organizations in order to analyze patterns within the groups that quite likely play a fundamental role in terrorist acts of all kinds.

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The DeLacey Family; the True Creators of Frankenstein's Creature

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In Mary Shelley's *Frankenstein*, after bringing to life his infamous creation, Victor Frankenstein flees his workplace in terror. Abandoned by his creator, the creature's mind is as blank and unformed as that of a child, despite physically being an adult when brought to life. After wandering alone in the woods for a time, the creature hides in a hovel adjacent to a cottage owned by the De Lacey family. Although Frankenstein created the creature and brought it to life, making him the closest thing the monster has to a father, the creature has a much stronger bond with his unwitting roommates, the De Laceys. The creature silently observes them for months from his hiding place, and in this time the De Lacey family is responsible for shaping the creature's character and personality, as well as leading the creature down a path of destruction, thus having a more profound role in the creature's life than even Victor Frankenstein himself. It could be said that while Frankenstein created the creature, the De Laceys made him a monster.

The entire De Lacey episode is recounted as narration by the creature when he addresses Victor Frankenstein on the mountains of Geneva. Their encounter comes shortly after the murder of Victor's brother William and the subsequent wrongful execution of Justine Moritz. The creature explains the De Lacey episode as a way of rationalizing his murder of William and framing of Justine, as well as a way of persuading Victor to comply with his demand of creating for him a female Eve, telling Frankenstein, "I entreat you to hear me before you give vent to your hatred on my devoted head" (86). This statement shows the creature himself believes the De Lacey episode to be crucial in turning him into a hate-filled destroyer. The statement also shows the creature's casting off of responsibility for his own actions, preferring to believe the events leading up to his violent actions are to blame. Although the creature becomes hate personified after being rejected by the De Laceys, he was kind and gentle when

he first began observing them, showing how profoundly the episode changed his outlook on humankind.

While being unwittingly observed by the creature, the De Lacey family teach Frankenstein reverence for beauty and music, as well as teaching him sociology, history, and language. These lessons have a tremendous impact in shaping the child-like mind of the creature. In the essay "Abandonment and Lack of Proper Nutrition," Anne K. Mellor notes that the creature "sees before him a living example of benevolence, affection, industry, thrift, and natural justice in the actions of the De Lacey family" (74). Mellor points out that the creature learns "because he wishes to emulate and be accepted by the De Lacey family... clearly an unloved child will not learn well-- the creature's education effectively ended when the De Lacey family abandon him" (76). While the creature is fascinated by the De Lacey family's teachings, he learns them mainly to gain acceptance into the De Lacey family and is therefore all the more enraged when they abandon him, feeling his hard work and education were for naught.

The creature believes being able to speak with and understand the De Lacey family to be crucial in gaining their acceptance. Though he attempts to learn from the conversations between the family, the creature's newborn mind is unable to comprehend their words. He notes, "I ardently desired to understand them, and bent every faculty towards that purpose, but found it utterly impossible" (106). The creature's education does not truly begin until Safie, whom he affectionately refers to as "The Arabian," appears at the De Lacey cottage. The object of affection of the young Felix De Lacey, Safie cannot understand their language, so Felix endeavors to teach her. The creature sees an opportunity, noting, "She was endeavoring to learn their language; and the idea instantly occurred to me that I should make use of the same end" (105). The creature learns with Safie; he says, "She and I improved rapidly in the knowledge of language" (106), though he also brags, "I improved more rapidly than the Arabian" (106). The beautiful Safie becomes an unwitting fellow student to the creature as Felix teaches her the language.

After learning the language spoken by the De Lacey family, a new world of knowledge is opened to the creature, who notes of his achievement, "Every conversation of the cottagers

now opened new wonders to me" (107). For example, he gets a lesson in history when Felix reads Volney's *Ruins of Empires* to Safie. The creature notes that these lessons gave him "insight into the manners, governments, and religions of the different nations of the earth" (107). These lessons profoundly affect the monster, teaching him "the strange system of human society" as well as the potential of man to be "so virtuous and magnificent, yet so vicious and base" (107). This statement seems an ironic summary of the creature himself, as he begins a vengeful killing spree shortly after his rejection by the De Lacey family.

The equality and unity the creature observes in the De Lacey family is especially appealing to him. Mellor points out in her essay "Possessing Nature: The Female in *Frankenstein*" that "the structure of the De Lacey family constitutes Mary Shelley's ideal, an ideal derived from her mother's *A Vindication of the Rights of Women*" (277). Felix's sister Agatha and Safie play as much a role in helping the blind old father and caring for the house as Felix. Safie is herself a strong female character, oppressed by her Turkish father but encouraged by her late mother "to aspire to higher powers of intellect and an independence of spirit forbidden to the female followers of Muhammad" (112). Safie seems the exact type of strong, independent female Mary Wollstonecraft envisioned when she wrote her essay.

Through his observance of the De Lacey family, the creature feels many emotions and sensations for the first time. While observing the De Lacey family the creature feels emotions he has never before felt, the strongest of which is love, making their rejection of him all the more painful. Shortly after first entering the hovel adjacent to the cottage, the creature observes the blind old patriarch playing his violin, the sound of which the creature describes as "sweeter than the voice of the thrush or the nightingale" (95). The young daughter Agatha begins sobbing as her blind father plays, and the sight of the old man comforting her and smiling induces in the creature "sensations of a peculiar power and nature... a mixture of pain and pleasure, such as I had never before experienced" (96). Like a baby smiling for the first time, the creature is experiencing these powerful emotions for the first time in his life. The scene between Agatha and her father spawns powerful new emotions in the creature, and these powerful new feelings he never knew when living in isolation act like a drug on him. The

creature himself is aware of the hold these sensations have on him, lamenting, "Oh, that I had forever remained in my native wood, nor known nor felt beyond the sensations of hunger, thirst, and heat!" (108) Reinforcing this idea in his book *Frankenstein: Character Studies*, author David Higgins rightfully points out, "[I]t is significant that the creature does not describe himself as feeling lonely during the early stages of his life; this only begins when he encounters the De Lacey family" (63). Among the things the De Laceys teach the creature is a yearning for the kinship of others, a yearning that drives him to madness when his desire is unfulfilled.

The De Laceys' kindness toward one another greatly shapes the creature's initial views on morality and virtue. Upon seeing the De Lacey children go hungry so that their elderly father may eat, the creature says, "This trait of kindness moved me sensibly" (99). He stops secretly stealing food from the De Lacey's own stock and instead sustains himself on food from the surrounding wild. The creature also attempts to emulate the kindness of the cottagers by collecting firewood for them.

However, not everything the creature learns from observing the De Lacey family is positive. Simply by observing them the creature finds a contrast to his own hideous figure, and this new ability to compare himself to others is crucial to his turning toward destruction. The beauty he observes in the cottagers only causes the creature to hate himself more, as when he notes, "I had admired the perfect forms of my cottagers-- their grace, beauty, and delicate complexions; but was I terrified when I viewed myself in a transparent pool!" (101). Becoming more aware of his own hideous appearance by contrasting it with the "beauty" of the De Laceys, the creature sees himself as too physically different to ever be accepted by humans.

By contrasting his hideous figure with the "perfect forms" of the De Laceys, the creature comes to fear they will not accept him, though he longs to join them. His fear causes the creature to hesitate at a crucial moment. Coming out of hiding when the others are away, the creature tells the blind old De Lacey he is "a traveler in want of a little rest" (121). The creature recounts the tale of a "French family" that is "prejudiced against" him. De Lacey asks, "May I know the names and residence of those friends?" (123). The creature's fear gets the better of

him, and he hesitates to answer long enough for Safie, Felix and Agatha to return from their walk, Felix chasing the creature away out of horror.

His observance of the De Lacey's also causes the creature to compare himself socially and economically to other men. Through Felix's lessons on society, the creature learns "of the division of property, of immense wealth and squalid poverty, of rank, descent, and noble blood" (107). The creature explains that these lessons "induced me to turn toward myself" (108). He comes to believe "high and unsullied descent united with riches" is the thing most sought after by men, and believes that men without these things are "doomed to waste [their] powers for the profits of the chosen few" (108). Upon reflecting on these things, the creature asks, "What was I?... I knew that I possessed no money, no friends, no kind of property" (108). Although this view certainly holds some truth, it also makes the creature all the more desperate to be accepted by the De Lacey's, seeing them as his last hope to live a socially and economically stable life.

The creature's learning how the De Lacey's came to be in their current situation must have had a profound effect on him, making him believe they were all the more likely to accept him. The De Lacey are outcasts, much like the creature, exiled from their native France after Felix was discovered to have helped Safie's father, a Turkish merchant condemned to execution, escape imprisonment. The fact that Felix sacrificed his well-being to save the life of a stranger he felt was given a "barbarous sentence" (111) must have made it all the more shocking to the creature when Felix "dashed [the creature] to the ground and struck [him] violently with a stick" (124) after seeing the monster clinging to the knees of the blind old De Lacey patriarch. Though a minor character in the creature's narrative of his encounter with the De Lacey family, the Turk freed by Felix is the reason for their exile, and is therefore partially responsible for the creature finding the De Lacey's. The creature views the Turk (his real name is never revealed) as "treacherous" and notes that "on discovering that his deliverer [Felix] was... reduced to poverty and ruin, became a traitor... and quitted Italy with his daughter [Safie]" (113). Perhaps if the creature had considered the Turk's crucial role in his chance encounter with the De Lacey's, he wouldn't have such harsh feelings towards him. On the other hand,

given his painful rejection by the De Laceys, such a notion may only cause the creature to hate the Turk more.

This narrative of the Turk's betrayal offers an interesting parallel between the Turk's rejection of the De Laceys and Victor Frankenstein's rejection of his monster, both events which led to the creature encountering the De Laceys. In both instances the men involved refuse to take responsibility for a situation they created; Frankenstein refuses to take ownership for what he describes as "ugly... a thing such as even Dante could not have conceived" (44). By fleeing from the creature instead of taking responsibility for his actions, he puts into motion a chain of events that bring about his ruin. The Turk also refuses to take responsibility for his actions by betraying the very family that delivered him from death, the De Laceys becoming impoverished and exiled as a consequence. Both men's actions can be said to have resulted from prejudice. Frankenstein is prejudiced to the hideous form of the creature, fleeing rather than reasoning with it. The Turk is prejudiced against the De Laceys not only for their poverty, brought on by his own actions, but also because of their cultural and religious background. In his retelling of the De Laceys' exile, the creature says the Turk "loathed the idea that his daughter should be united to a Christian." (113). Both Frankenstein and the Turk are driven by selfish motives, though while the Turk gets away without consequence, Frankenstein pays with the blood of his friends and family for abandoning the creature.

By instilling in the creature desires he aspires to but ultimately cannot attain, the De Laceys make the creature all the more violent by their rejection. Author Mary Lowe-Evans notes in her book *Frankenstein's Wedding Guest* that the creature's immediate obsession with the "angelic beauty" of Safie is "the first significant event leading to his transformation from philanthropist to criminal misanthrope" (56). The creature himself notes that the appearance of Safie "impressed me with feelings which, from what I had been, have made me what I am" (104). The happiness Safie brings to the De Laceys gives him the desire for a mate of his own, but he laments "No Eve soothed my sorrow or shared my thoughts" (120). Lowe-Evans notes "the creature's unfulfilled desire for his Safie-inspired Eve combines with his thirst for revenge to produce one of the richest and most enigmatic scenes in the novel" (56). Lowe-Evans goes

on to say it is this very thirst for revenge that causes the creature to frame Justine Moritz for the murder of William Frankenstein, a crime the creature himself committed. When rationalizing the framing of Justine, the creature explains himself to Frankenstein, claiming it was the “lessons of Felix” that taught him to “work mischief” (132). The monster claims, “Not I, but she, shall suffer; the murder I have committed because I am forever robbed of all that she [Justine] could give me, she shall atone (132).” Again the creature refuses to take responsibility for his own actions, instead rationalizing that Justine’s fate was deserved, assuming she would reject him like everyone else.

The creature’s murder of the young William Frankenstein is a result of his unfulfilled desire for a family brought on by the De Laceys. Author U.C. Knoepfelmacher points out in his essay “Thoughts on the Aggression of Daughters” that Felix was seen by the creature as a brotherly figure. The author notes, “In its own way, the murder of William was a delayed fratricidal act” (101) to Felix’s harsh actions in chasing the creature from the De Lacey home and later abandoning the cottage so that the creature cannot find them. In reaction to losing the brother he could have had in Felix, the creature murders his creator’s own brother, and again, as in his framing of Justine Mortiz, he is punishing others for what he can never have.

Even after his rejection, the creature retains some kind of bond to the De Laceys that he never had with the Frankenstein family. The creature notes, “I could with pleasure have destroyed the cottage and its inhabitants and have glutted myself with their shrieks and misery” (125), but he instead restrains himself. While he does burn their house in a fit of rage, it is only after the De Laceys have abandoned the cottage for fear of the creature. Given that throughout the novel the creature uses his inhuman strength to stalk Victor Frankenstein throughout Europe and methodically kill his family members and friends one by one, it would have required little effort for the creature to find the De Laceys and destroy them.

The Frankensteins and the De Laceys are each in their own way the creature’s family; yet the creature destroys the Frankenstein family with no remorse and swift action, so that by the novel’s end, when he kills Henry Clerval and Victor’s wife Elizabeth, he seems to revel in the bloodshed. This could be because the creature has no reason to love the Frankensteins, having

spent no time learning or growing with them as he had with the De Laceys. The creature's refusal to harm the De Laceys as he harms the Frankensteins shows that despite their cruel rejection of him, the creature stills sees them as the closest thing to a family he'll ever have.

Sowing Wild Oates: Sex, Fairy Tales and Rock and Roll Joselida Mercado

Mentored by Professor James Zorn, Bergen Community College

“And they lived happily ever after...” Everyone loves a wholesome, classic fairytale, but have you ever wondered what life would be like if fairytales didn’t exist? It sounds like a pretty inane question, but think about it: fairy tales are more than just fantastical fables with mythical creatures and imaginary settings; fairy tales serve as maps to help children navigate reality and real world situations. We spend time reading them to kids in hopes that one day they will put those tried-and-true lessons to use when children are posed with a future dilemma. What if those priceless morals were never learned? Joyce Carol Oates’ expertly tackles the probability and outcome of that question in her O. Henry Award-winning short story “Where Are You Going, Where Have You Been?” Not only is it the consummate fairytale of adolescence, Oates’ work is a critique of the failing moral fabric of our society.

The story’s protagonist, Connie, is a fifteen year-old girl living a humdrum life in 1960’s suburbia. It is summer vacation, and she is your typical spiritless teenager with exceptionally good looks and a penchant for pop music. As adolescence would have it, Connie frequently defies authority, driven by an intense curiosity about the opposite sex. She spends most of her time duping her mother and sneaking off to fool around with older boys. One fateful Sunday afternoon, Connie insolently rejects the idea of attending a family barbeque and stays home alone while idly passing time. Soon after, an unexpected visitor pulls up the driveway in a flashy gold jalopy, and Arnold Friend steps out of the car. Connie remembers seeing him at the drive-in restaurant one night and dismissing his creepy advances. What she doesn’t remember is his comment to her: “Gonna get you, baby.” More than a brazen remark, it is a promise Arnold Friend intends to keep with the help of his cryptic comrade, Ellie, and their trifecta of terror: coercion, manipulation, and *murder*.

Arnold Friend is a blood-thirsty con artist with an unintentionally beastly disguise. He is described as having a mask-like appearance, wearing heavy makeup and a pitiful wig. Marking his predatory nature, his nose is “long and hawk-like, sniffing as if she were a treat he was going to gobble up” (Oates 479). Like Little Red Riding Hood observing the Wolf in sheep’s clothing, Connie notices what big white teeth Friend has. Instead of grandmother’s nightgown and bonnet, however, he dresses “the way all of them dressed” and tries desperately to utilize the juvenile vernacular of the time in an effort to seem younger than his thirty years. “He also has trouble standing and moving about, which suggests a four-footed animal masquerading as a man” (Schulz and Rockwood 124). Although this description sounds like it can only be made up by a creative author with a wild imagination, Oates cannot take all of the credit: Arnold Friend’s character is based on a *real* man.

The inspiration for “Where Are You Going, Where Have You Been?” stems from actual events. In 1966, Don Moser’s article “The Pied Piper of Tucson” was published in Life Magazine. It describes the tragic stories of three girls killed by a psychopath known as Charles “Smitty” Schmid. A twenty-three year old disturbed narcissist and compulsive liar, Smitty would often fabricate stories that would either make him out to be a victor worthy of praise or a victim fishing for pity. But really, he was neither; he was an imposter. Comparable to Arnold Friend, he wore makeup and “habitually stuffed three or four inches of old rags and tin cans into the bottoms of his high-topped boots to make himself taller than his five-foot-three and stumbled about so awkwardly while walking that some people thought he had wooden feet” (Moser 53). Smitty was known to haunt the local high school and teen hangouts in his flashy, fast cars while on the prowl for young girls who would take the bait. Although his peculiar antics and appearance would raise flags for the average person, the impressionable Tucson youth revered him for spicing up the town’s painfully boring tranquility. Smitty’s bewitching persona and “the disturbing fact that a number of teenagers – from ‘good’ families – aided and abetted his crimes,” was the deciding influential factor of Oates’ work (Caldwell 4).

Interestingly enough, Don Moser also had a bit of help from an outside source when coming up with the title for his article. It stems from the fairy tale “The Pied Piper of Hamelin”

in which a man is hired to lure vermin plaguing the German town to their death with the trance-inducing music his magic flute plays. Although he is promised compensation for his skill, the townspeople repudiate their offer and refuse to pay the Pied Piper. In retaliation, he returns to Hamelin while the townspeople are at church and plays his pipe, this time to lure the children out of the safe confines of the village and into a cave. They are never seen again. This cautionary tale warns of the repercussions society will have to confront if it fails to prepare children for life's invisible and imminent dangers.

We can see music used as the vessel for temptation in both stories. Parallel to the "Pied Piper of Hamelin," Arnold Friend uses music to seduce Connie to her doom. Her mind is constantly flooded by "trashy daydreams" induced by the songs she listens to and the movies she watches. "Connie's very life seems dependent upon the music she hears that serves as a drug to both exhilarate her and drive her dangerously into fantasy" (Caldwell 4). Since her moral compass lacks direction because of strained parental relationships and the absence of piety, Connie becomes vulnerable to the corrupt and skewed messages of love and sex delivered through the media, believing it is always as sweet and gentle as it is portrayed. Arnold Friend exploits this fact, along with her curiosity, and uses the medium to make the connection that will ultimately cost Connie her life.

"Hey, Ellie's got a radio, see. Mine broke down." He lifted his friend's arm and showed her the little transistor radio the boy was holding, and now Connie began to hear the music. It was the same program that was playing inside the house.

"Bobby King?" she said.

"I listen to him all the time. I think he's great."

"He's kind of great," Connie said reluctantly.

"Listen, that guy's *great*. He knows where the action is"

(Oates 478).

"Where Are You Going, Where Have You Been?" is permeated with allusions to music. In fact, the story is dedicated to legendary singer/songwriter Bob Dylan. Oates could not have

selected a better muse. Dylan was a folksy storyteller of the social and political strife of the 60s, with most of his songs depicting somber tales of the human condition and an emphasis on death or the end of suffering. "It's All Over Now, Baby Blue" is no exception, and is symbolic of Connie's precarious predicament:

Leave your stepping stones behind, something calls for you
Forget the dead you've left, they will not follow you
The vagabond who's rapping at your door
Is standing in the clothes that you once wore
Strike another match, go start anew
And it's all over now, Baby Blue (Sony Music Entertainment).

The most fascinating part of all this is that it still rings true today. The media, music in particular, is the means by which youths gauge their behavior. Music, now more than ever, is rife with innuendo and outright sexual cues primarily directed toward unassuming children and adolescents. Celebrities can be seen writhing onstage in skimpy costumes and showing up in tabloids flaunting their questionable morals. With both parents typically working nowadays, it's hard for kids to get the priceless quality-time of decades past, causing these accidental "role models" to become the guiding forces in young people's lives. Though some may say it's harmless, there are dangerous consequences to giving children the language and showing them images of things they have yet to understand. Popular culture determines what is cool, and peer pressure, unfortunately, only further enforces those messages. Although a kid may not understand what he or she is saying, their peers have different expectations. If they are talking about sex, they must comprehend it, right? That is hardly ever the case, and this misconception makes it easier for sexual predators to entrap their prey.

As for Connie, like other pubescent girls, she is at an awkward-yet-critical point in her life where she is shedding the skin of her childhood self, but is clearly not ready to carry the burden of womanhood. In other words, she is not a girl and not yet a woman. Oates hints at this dichotomy when she explains that everything about Connie "had two sides to it, one for home and one for anywhere that was not home" (475). She is unaware of the dangers of

attracting the wrong attention, realizing only the positive effects of her beauty (Caldwell 2). Despite coming across as a sexually alluring woman, “her confrontation with Arnold Friend makes her more childlike, not less” (Schulz and Rockwood 125). This situation appears identical to Little Red Riding Hood, whose regression is “impressively exaggerated” as in one popular Victorian illustration of the fairy tale in which “she grows smaller and smaller with each frame” (Orenstein 46). It is ever so evident when Connie’s flirtatious charade turns into sheer panic as Friend nonchalantly declares, “I’m your lover. You don’t know what that is yet but you will” (Oates 482). Essentially, Connie never stands a chance of evading Arnold Friends’ wolf-like rapacity; she is destined to become a victim from the start, due to her flimsy foundation. In the end, the Wolf eats the girl and Connie succumbs to the pressures imposed by her perpetrator. Both events symbolize the loss of virginity, or her premature thrust into “the vast sunlit reaches” of unrecognizable land known as womanhood (Oates 486).

Could Connie have been saved? In later versions of Little Red Riding Hood, “a hunter or woodsman comes to the rescue, imparting the revised moral that a good man – a father – can save a woman from her folly” (Orenstein 5). Likewise, if Connie’s mother or father had asked her the conspicuous questions, “Where are you going?” or “Where have you been?” as the title suggests, it is likely the tragedy could have been avoided. However, the best question to ask at this point is: could Connie have saved *herself*?

Sex and sexuality are understandably difficult to talk to children about. However, we need to eradicate the belief that they will never be ready to learn about one of the most organic milestones in life. Parents need to take the reins of their children’s education inside and outside of the classroom before the wrong entities infiltrate their susceptible young minds. The forbidden and implicit nature of sex is all the more enticing to inquisitive adolescents. Oates skillfully demonstrates that more harm is being done than good when people shy away from their responsibilities and leave the potentially uncomfortable discussions for something or someone else to handle. According to Schulz and Rockwood, the solution to the problem is as simple as reading kids bedtime stories. “Had she been nurtured on fairy tales instead of popular songs and movies, she would not feel at such a loss; she would have ‘been’ to this world before,

through the vicarious experience offered by fairytales, and she would have some sense of how to survive there now" (128). There must be a compound effort between society as a whole and individual families to take on the sensitive and complex issues of the day. As the old adage goes, desperate times call for desperate measures.

Every fairy tale has its moral. Most of the time, they are blatantly obvious and anticipated, like "don't talk to strangers" or "obey your parents," both of which are specific to Little Red Riding Hood. But, a new class of fairytale also needs a modern moral. With this quote from her "Reflections of the Grotesque," Oates eloquently defines the true, dark precept of her masterpiece: "This is the forbidden truth, the unspeakable taboo - that evil is not always repellent but frequently attractive; that it has the power to make of us not simply victims, as nature and accident do, but active accomplices."

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Containing the Scourge of AIDS: A Case Study on Brazil

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Weak and thin, Atlwanang Seako was unable to work or sustain herself, her child and her mother. She suffered knowing she would not be present to see her child grow. The child innocently wonders: “what is happening to Mommy?” This is the image that now composes what have become Atlwanang’s shattered dreams at only twenty-eight years of age. In quite a different scenario: Sheila Mosarwa has found that a normal life can be a miracle. She and her husband have a second chance at life. After being aware of the symptoms of Human Immunodeficiency Virus (HIV), and getting tested, they were able to acquire adequate treatment. Twenty years-old Sheila has the confidence that she can go out, be tested, obtain the treatment for herself and her husband and that neither of them will be stigmatized by others. Both these women share a cruel reality: they have both tested positive for HIV. Why the significant disparity if they both live in developing countries? Confronted with an epidemic capable of transcending national barriers, leadership of any nation becomes essential to determining whether an HIV-positive person receives adequate treatment. Unfortunately, Atlwanang happens to reside in a country where the lack of necessary infrastructures required to effectively manage this global epidemic has left Atlwanang sick, hopeless and powerless (Miller, 2003).

Seako and Mosarwa only represent two out of the current 33.3 million people living with HIV around the world. The United States’ Centers for Disease Control identified the HIV/AIDS epidemic in 1981 (*The global HIV/AIDS timeline*, 2007). Prior to this point, it was extremely difficult even for medical workers to explain the progressive weakening of many humans. Although awareness of the epidemic has progressively increased over time, it has now become humanity’s plague. According to *The Politics and History of AIDS Treatment in Brazil* (2009) by Nunn, “more than 25 million people have died of HIV/AIDS worldwide” (p. 2) since

the disease was first discovered. The Report on the Global AIDS epidemic published by UNAIDS (2010) reported that 2.6 million people became infected with the virus in 2009, with 1.8 million men, women and children losing their lives to it (p. 133).

HIV, the causing agent of Acquired Immunodeficiency Syndrome (AIDS), brings devastating consequences not only to families, communities and countries, but also to entire continents. Besides broadening the knowledge of the topic, the shrinkage of time and space between countries around the world due to the phenomenon of globalization has also enabled the actual virus to cross national borders. Lazzarini's (2003) essay "Making Access to Pharmaceuticals a Reality: Legal Options Under TRIPS and the case of Brazil" warns of the threat that this rapid propagation of HIV poses to the world's security "by harming economies, destabilizing societies, and leaving large numbers of children without parents, education, homes, or socialization" (p.136). Today, as indicated by Biehl (2007) in "Pharmaceuticalization: AIDS Treatment and Global Health Politics," the epidemic represents "the first epidemic of present-day globalization" (p. 1086). Its magnitude thus requires immediate action. On that note, what are countries doing to control it?

Brazil in particular stands out as a world leader in the global AIDS treatment and prevention movement. In 2000, UNAIDS recognized Brazil's National AIDS Program (NAP) as the best AIDS program in the developing world and later in 2003 the program also earned the Gates Award for Global Health (Biehl, 2007, p. 1089). As a possible model to other countries, which factors of globalization and the country's culture have enabled Brazil to successfully contain HIV/AIDS? Thomas Friedman, a columnist for the *New York Times* and author of his most recent account on globalization *Hot, Flat, and Crowded 2.0* opines that in a globalized world, "leadership matters more, not less" (2002, p. 66). He refers to good governance, a process of democratization, institution building and free press as fundamentals in order to effectively be part of globalization. By adhering to these fundamentals, Brazil has been able to successfully contain the epidemic of HIV/AIDS in that country.

HIV has affected Brazilians for nearly three decades now. The first recorded case occurred in 1982 (“HIV and AIDS in Brazil,” 2010). The affected population initially consisted mainly of urban men of middle and upper classes from the southeastern part of the country (Loup, 2009, p.1108). But in the 1990s, the epidemic encountered a rapid growth amongst the general population. In consequence, a prediction by the World Bank in 1994 estimated that Brazil would have 12 million HIV-positive people by the year 2000. Determined to reverse this shocking prediction, the entire Brazilian community began mobilizing to control the spread of the disease. It accordingly managed to truncate the dire number to 540,000 in 2000 (Lazzarini, 2003, p.128). The Henry J. Kaiser Family Foundation (2010) estimates that between 460,000 and 810,000 AIDS-positive people lived in Brazil during 2009 (p.2).

The case of Brazil exemplifies the essential role of political will when a country is faced with the horrors of HIV and AIDS. The government’s commitment to reduced costs of pharmaceuticals by domestically producing generic drugs¹ and negotiating with pharmaceutical industries made it possible for Brazil to effectively respond to HIV/AIDS. The document “Changing Global Essential Medicines Norms to Improve Access to AIDS Treatment: Lessons from Brazil” (2009) by Nunn, da Fonseca and Gruskin points at one particular case in 1990 (p. 132). Determined to fulfill its people’s needs rather than international interests, Brazil ignored the World Bank’s recommendations to solely focus on prevention instead of treating AIDS patients (Nunn et al., 2009b, p. 1103). Since then, Brazil’s AIDS program has consisted of providing both prevention and treatment. Today, as Nunn (2009) writes in *The Politics and History of AIDS Treatment in Brazil*: “Approximately 12% of all people receiving [highly active antiretroviral therapy also referred as] HAART² in developing countries reside in Brazil, home to the developing world’s first and now largest public AIDS treatment program” (p. 2).

In spite of international influences—such as from the United States—Brazil has constantly demonstrated the importance of maintaining sovereignty amidst a globally

¹ A bioequivalent identical copy of a proprietary or brand name drug (“AIDS, drug prices...”)

² A combination of three or more antiretroviral drug to help (“Introduction of HIV and AIDS...”)

interconnected world. The year 2000 was an important one for Brazil in the eyes of the global community. It was this year when the presentation of the resolution *HIV/AIDS: Confronting the Epidemic* during a World Health Assembly (WHA) called for transparency in drug prices, and challenged multinational pharmaceutical companies as well as the U.S. legislation regarding pharmaceuticals (Nunn et al., 2009b, p. 135).

A 2005 editorial in *The New York Times* reports on Brazil's conflict with the U.S. with regards to "copycat versions of expensive brand-name drugs" (Reel). The conflict brought attention to the World Trade Organization (WTO)'s encouragement for all its "members to use the flexibilities in the intellectual property rules to promote access to medicine for all." In the same year, the Bush Administration required countries to sign an oath condemning prostitution in order to continue receiving funds from USAID (Hinchberger, 2005). Prostitution however, is recognized as a profession in Brazil. With that in mind, the director of the Brazilian program, Pedro Chequer reacted by declaring that "for no amount of money will [they] betray [their] ethical principles and principles of citizenship...[prostitution] groups have been [their] partners since the 1980s" (Hinchberger, 2005). Despite the fact that the U.S. took away \$40 million of funds for the HIV/AIDS program in Brazil, Brazilian authorities refused to act against an aspect which they consider part of their culture. In addition, they valued and wanted to acknowledge the importance of sex workers' efforts to contain AIDS. The value placed on sexual minority groups of Brazil thus sent the message to HIV patients that they need not be afraid. Their country will defend their rights and confront the rest of the world if necessary. A clash of beliefs was once again experienced with the U.S. due to their ABC approach—abstinence, being faithful to one's partner, and condom use—toward the prevention of HIV. The problem was that although Brazil incorporated all three points, it focused much more intensely on condom use while in the U.S. this emphasis was minimized (Okie, 2006, p. 19).

Although it may have taken several years for the government to fully commit to a national AIDS program, the epidemic's rise during the 1990s served as a catalyst to act decisively in trying to treat infected HIV/AIDS persons. Fruitful beginnings were evident in 1991 when the Brazilian public health system distributed its first free medication, zidovudine, also called AZT,

to all patients with AIDS (Gauri & Lieberman, 2004, p. 16). The approval of Law 9.313 by the Brazilian congress in 1996 provided a major scale-up throughout the nation. The law guaranteed free and universal access³ to all antiretroviral drugs (ARVs) for all people living with HIV/AIDS (Nunn et al., 2009b, p. 134). Brazil's government paid for medication as expensive as \$17,000 per year for drugs like enfuvirtide, an injectable drug used "to prolong the life of AIDS patients when other medications fail" (Gauri & Lieberman, 2004, p. 15). Furthermore, "an independent advisory committee established national treatment guidelines and criteria" (Curran et al., 2005, p. 74) and integrated the treatment program into the existing health care infrastructure.

Considering the inevitable reality that universal coverage would come with economic challenges, Brazil consequently passed the Industrial Property Law, "which provided patent protection for drugs...developed after that time as long as the manufacturer conducts some part of the drug's manufacture in Brazil" (Lazzarini, 2003, p. 129). As a result, the government would be allowed to "license generic local production of eight of the twelve current AIDS medications" (Lazzarini, 2003, p. 129) as long as they did not export any of the manufactured generic drugs. Brazil also took advantage of the clause in Trade-Related Aspects of Intellectual Property Rights (TRIPS) that permits compulsory licensing²⁷ in any given case that a country deems it to be a public emergency ("HIV and AIDS...," 2010). While taking this into consideration, in 1999, Brazil's president issued a decree that would enable the country to license post-1994 drugs.

In addition to making it possible for Brazil to manufacture generic drugs, compulsory licensing also served as a strategy to negotiate with larger pharmaceutical companies. Brazil repeatedly threatened pharmaceutical companies with producing generic drugs if they did not reduce prices. For instance, in 2000, while encountering increasing costs on ARVs, Brazil threatened pharmaceutical companies with fabricating generic drugs that were currently patented if they did not lower their prices. Although it was not until 2007 that Brazil issued

³ At least eighty percent of the number of people suffering from AIDS ("AIDS drug prices, and generic drugs")

⁴ Allows countries to override patent laws and produce their own generic versions of company-owned drugs.

compulsory licenses, this 2000 event sprouted global dialogue on the subject of drug prices (Nunn et al., 2009, p. 132). Brazil showed its determination to provide free ARVs to its people in 2007 when after repeated threats, the country actually issued its first compulsory license. The license warranted a cheaper version for the patented drug efavirenz whose annual cost per patient would drop from \$580 to \$165 (Davis, 2007).

Under its provisions, TRIPS grants flexibilities to intellectual properties under either one of two circumstances: 1) a country has “made efforts to obtain authorization from the rights holder on reasonable commercial terms and conditions and such efforts have not been successful within a reasonable period of time” or 2) if the country deems it a public health emergency (Gerhardsen, 2007). In this case, Brazil attempted to negotiate with Merck, a U.S. pharmaceutical company, but negotiations failed. Once the threat for compulsory licensing was actually put in place, Merck attempted to arrive at an agreement with Brazil by offering a discount of “thirty percent on the [then] current price of US\$1.59 per tablet [but] this proposal was considered to be unsatisfactory, since Brazil would be able to obtain the product elsewhere for US\$0.45” (Gerhardsen, 2007).

The price reductions for the annual cost of antiretroviral medications per patient have seemingly been effective as shown between the years of 1997 and 2002 when ARVs’ prices dropped by 67% (Volberding, 2008, p. 698). Price reductions ultimately led to an increase of 185,000 people receiving HAART in 2009 compared to 35,000 in 1997 (Nunn et al., 2009a, p. 1104). Thus Brazil accomplished remarkable impacts on its AIDS prevalence in great part due to the country’s domestically manufactured ARVs, which as illustrated in figure 1.1, guaranteed a much lower price when compared to the original brand name of the drug. Price negotiations overall “saved the Brazilian health ministry a \$US 1.2 billion in AIDS treatment costs” (Nunn et al., 2009a, p. 1106).

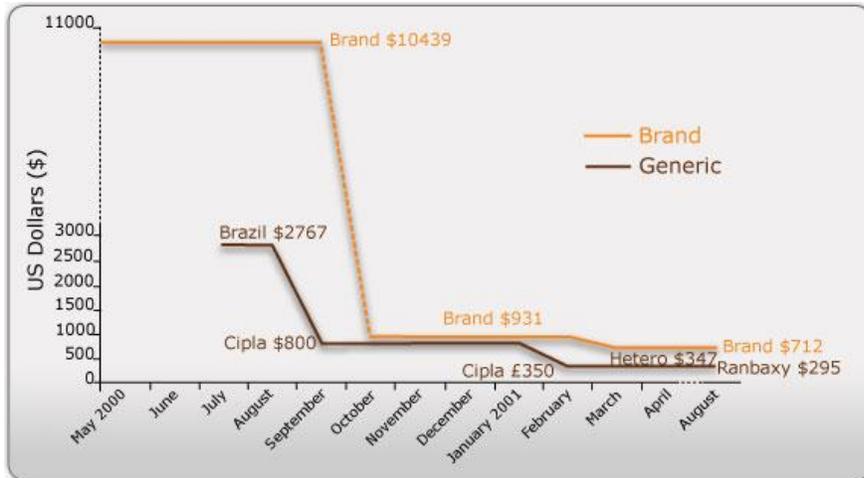


Figure 1.1: Generic competition on proprietary drug prices between 2000 and 2001. Shows the lowest world price per patient per year of HAART, made up of the combination of three drugs. Source: “AIDS, drug prices...”

A large part of the success of the AIDS program in Brazil can be attributed to the tremendous impact of the democratization process that the country underwent during the late 1980s. In spite of only a relatively small number of new cases being recorded in the years following 1982, those afflicted with HIV were now uniting forces to demand political action. AIDS was initially not a political priority because of the struggle the country was experiencing in order to abolish military dictatorships during the late 1980s (“HIV and AIDS...,” 2010). Although the government was not the initial advocate for the AIDS movement, active groups—already involved in political settings supporting democracy—pressured the government to improve the statuses of those suffering from the disease. Hence in 1988 Brazil enacted one of its pillars to the success of Brazilian AIDS program: a new Constitution. The Constitution emphasized human rights (“HIV and AIDS...,” 2010). Within these rights was the basic right to respect, especially for individuals living with HIV and AIDS. The Constitution guaranteed the right to free healthcare and to an anti-discriminatory environment with regards to personal as well as professional life, including relationships with healthcare personnel during medical visits. The ability of individuals to act on behalf of their interests illustrates the freedom granted to Brazilians especially because even though “lawmaking is the main arena of state action,” whether such

laws become practices depends on the work performed by activist groups (Biehl, 2007, p. 1096).

The democratization process of the country in the late 1980s simultaneously coincided with the appearance of AIDS and therefore established a new mindset; one that focused on providing preventive resources rather than basing itself on criticism of morals (or lack thereof) of the different lifestyles within the Brazilian population (Parker, 2009, p. S49). With that in mind the national government established the NAP in partnership with civil society groups in 1985 (“HIV and AIDS...,” 2010). NAP began focusing on distributing information about HIV and AIDS, specially to high-risk groups such as men who have sex with men also known as MSM, who accounted for many of the country’s HIV infections (“HIV and AIDS...,” 2010). The respect for sexual differences enabled the country to form alliances with different population groups. Governmental authorities presented their tolerance for differences through projects such as Somos. The project was jointly run by governmental as well as non-governmental organizations (NGOs) and aimed to empower incipient groups of MSM, through training on preventive actions including the “defense of the Human Rights of sexual minorities at high-risks of STD/AIDS” (Munhoz & Junqueira, 2000). All in all, Somos made it possible for local services and governmental institutions to “reach an average of 10 to 12 new groups per region, instead of the 6 groups previously estimated in each regional training center” (Munhoz & Junqueira, 2000). And in areas where activism and information about STD/AIDS prevention was nonexistent but had prevalent rates of the epidemic, Somos “empowered almost 40 new groups to promote prevention strategies and the defense of civil rights of sexual minorities” (Munhoz & Junqueira, 2000).

The cooperation between the national government and civil society groups showed to have a crucial role in the effectiveness of Brazil’s NAP as well. The government sought to tackle issues that would impede free access to prevention and treatment information. One of these issues was the stigma frequently surrounding HIV/AIDS, which occurs in communities worldwide. Miller (2003) acknowledges that stigmatization derives from fear and lack of knowledge. In order to properly address this stigma, besides direct governmental support

through policies like the new Constitution of 1988, Brazil's government also collaborated with civic organizations that represented AIDS-related issues. Economic investment, such as during the period of 1997 to 2005 when the government spent a total of \$3.5 billion in response to AIDS, helped sustain these organizations (Okie, 2006, p.1080). The \$2 billion spent on ARVs, plus the rest of the \$3.5 billions spent on the organizations ultimately led to a less stigmatized environment as observed by medical staff who thought that whereas people were previously fearful of declaring their HIV status, they now "tell everybody that they have the virus. They claim their rights. They know they can have the medicine, so they reveal themselves, to live better" (Okie, 2006, p. 1080).

The decentralization of the government also became a key factor on determining the speed at which Brazil responded to the AIDS epidemic. Numerous programs were organized before the epidemic proliferated at a national level. States where AIDS was more concentrated were "able to act with a speed and intensity that would have been much more difficult if [states] had needed to gain national-level acceptance"(Gauri & Lieberman, 2004, p.25). Initiatives were taken by different states according to their specific situation. The state of Sao Paulo for instance "passed a law requiring serological testing of the blood supply well before the national law" (Gauri & Lieberman, 2004, p. 27). Moreover, an alliance between Sao Paulo, Rio de Janeiro, and the broader South/Southeast "created significant pressure for the national government to follow their lead" (Gauri & Lieberman, 2004, p.26) concerning their economy, societal and political decisions in regard to AIDS. During an interview in 2003, Fernando Henrique Cardoso, former president of Brazil, alluded to a paradigm shift in Brazilian policymaking as a result of the multi-sectoral response to AIDS (Biehl, 2007, p.1100). Cardoso said that the management of AIDS clearly had "no superior intelligence imposing anything...a party, a president, [nor] an ideology," but the responsibility to control the epidemic had instead become a shared task between assemblages, alliances, and innovative strategies (Biehl, 2007, p.1100).

The liberty granted to Brazilians by the emphasis on the new Constitution channeled opportunities for committed and active groups to demonstrate their interests through different

types of institutions. For the purpose of this paper, institutions do not necessarily mean legally enforced or public policies, but they may also include cultural aspects such as traditions. NGOs were especially among the most active groups. Early in the epidemic, NGOs engaged in promoting awareness of the epidemic. Volberding (2008), author of *Global HIV/AIDS Medicine* pinpoints one of the first formed NGOs, the Brazilian Interdisciplinary AIDS Association or ABIA, established in Rio de Janeiro during 1986 (p. 696). ABIA disseminated information about HIV and AIDS and especially concentrated on “policy analysis, advocacy, public education, and research, as well as providing legal assistance to HIV-infected persons, in an effort to combat discrimination” (Volberding, 2008, p. 696). Activist groups were in fact largely involved in the imperative decision of making ARVs universally accessible. After testing trials showed that people using HAART “had significant benefits” compared to the health of people living with HIV and without the benefit of the drugs, activist groups pressured the government to act upon its pledge of free healthcare (“HIV and AIDS...,” 2010). This pivotal role NGOs played in the establishment of free access to ARVs supports the former Brazilian Health Minister Jose Serra’s opinion that “the government ends up responding to society’s pressure” (Biehl, 2007, p. 1096), yet that pressure must be present.

Brazil’s democratic government combined with the commitment of civil society embedded opportunities for public opinion and dynamic free press. Oftentimes, as Lee-Nah (2004) acknowledges, HIV results from sexual behavior, which “means that its transmission is related to activities considered taboo in many societies or criminal in others...” (p. 34). Because sexuality is the main medium of HIV infection in Brazil (Da Costa, 2003), it was vital that the country addressed it in its programs. It did this through the use of media campaigns, which encouraged the acquisition of treatment. Open messages featuring popular athletes, entertainers, and models became part of a national media campaign in 2002 promoting universal HIV testing (Okie, 2006, p. 1978). Such broadcasting is significant considering that although the concentration of HIV in Brazil is less than one percent among the general public, that percentage increases to at least five within vulnerable groups such as MSM, commercial sex workers (CSWs), and injecting drug users or IDUs (USAID, 2009, p. 1). Thus, it became clear

that Brazil's NAP had to take action among those populations in order to properly contain the epidemic.

Brazil has managed to reach out to these groups. The country practiced strategic mechanisms through partnerships formed with marginalized groups such as the Brazilian sex workers. A *Washington Post* article tells the story of Paula Duran, a prostitute in Villa Mimosa, "heavy on fishnet, tattoos, and suggestive poses" (Reel, 2006). Yet, like many other sex workers, Duran is a faithful advocate for condom use. Every time she gets a customer, she uses one—supplied by the government. Duran also shares every piece of information she learns "at a state-funded workshop for prostitutes..." (Reel, 2006). Health officials consider "partnerships with prostitutes...[to be] a key reason that [Brazil's] AIDS prevention and treatment programs are considered by the United Nations to be the most successful in the developing world" (Reel, 2006).

Emphasis on the human rights movement set the stage for an all-inclusive approach where participation in the Brazilian AIDS movement was equally open to everyone. Groups of individuals that would conventionally be marginalized became important channels for the diffusion of AIDS education. Hinchberger's (2005) article "Brazilian Sex Workers Don't Mourn, They Organize" identifies the association of the Center for Studies of Prostitution (NEP). Formed in 1989, NEP was the first group to be organized in affiliation with Brazil's National Network of Sex Workers, thus sharing the goal of defending the human rights of sex workers (Hinchberger, 2005). At the time, NEP aimed to combat two of CSWs' major problems: police violence and stigma linked to AIDS. NEP promoted knowledge of prevention and treatment tools for AIDS. Today, the center's input is widely praised by Brazilian public health officials (Hinchberger, 2005). Male prostitutes similarly participated in the attempts to address various population groups within Brazil. Geralda Rigotti, director of the Agency for the Control of AIDS and Sexually Transmitted Diseases in Rio Grande do Sul State Health Secretariat, acknowledged the importance of male sex workers' involvement in places such as gay bars, bathhouses and nightclubs when she said that "[male prostitutes] do the fieldwork that officials find difficult" (Hinchberger, 2005). NGOs Nuances and the Support Group for AIDS Prevention (GAPA)

sponsored a project that distributed 300,000 condoms a month to popular places visited by homosexuals (Hinchberger, 2005). Thus, Brazil has performed an excellent job on minimizing stigma by encouraging full participation from civic society as seen by the open mobilization of sex workers.

High-at-risk groups such as injecting drug users (IDUs) have also been addressed by the Brazilian AIDS Program. As result of IDUs forming a large portion of HIV cases during initial stages of the epidemic, Brazil implemented a wide variety of techniques involving needle exchanges. Due to efficiently reaching out to them, “the number of AIDS cases attributable to IDUs dramatically dropped from 4,814 cases in 1996 to 1,319 in 2006” (“HIV and AIDS...,” 2010) and continues to decrease as shown by the statistic of HIV prevalence in 2009 as 5.9%, noticeably lower than 52.5% and 42% in 1998 and 1999 respectively (Seffner, 2010, p. 149).

NGOs and other institutions have utilized media campaigns as a main method to provide a wide-range of activities with the goal of opening dialogue about AIDS among Brazilians. The campaigns intend to inform the general public as well as vulnerable population groups (Oliveira-Cruz et al., 2004, p. 294). A vivid example of creative techniques using media is seen in the practices of Transformarte, a small NGO that works with youth in the slums of Rio de Janeiro by promoting health and citizenship through HIV/AIDS prevention programs (Pineiro, 2005). The Global Health Council characterizes Transformarte as using the mediums of “theatre, dance, radio and television productions...to empower both its youth participants and their peers who educate in a way that only youth can” (Pineiro, 2005). The practice of innovative methods especially by youth ensures that future generations will be educated about the topic. The Brazilian government also used media to promote prevention of AIDS through institutions such as the Ministry of Health. In fact, “the Brazilian NGO community joined forces with the government to launch a massive HIV/AIDS campaign by speaking frankly about HIV/AIDS transmission and protective measures such as condom use in highly visible and open ways” (Pineiro, 2005). One media campaign illustrated a poster of a goldfish swimming inside a water-filled knotted condom accompanied by the quote “Nothing passes through a condom. Use it and Trust It” (Okie, 2006, p. 1979).

Brazil's NAP endorsement of the country's vibrant and lively aspects of culture also enables the integration of millions of individuals. The annual and highly attended Carnival defined by Reel (2006) as "the rowdy pre-Lenten festival where clothes and inhibitions are considered optional" is a particular event in which various AIDS programs participate. A high number of different prevention campaigns are held in preparation for the Carnival, which is linked to a time of increased sexual activity (Da Costa, 2003). Among the individuals giving out messages are celebrities such as Kelly Key, a sexy Brazilian singer, who was featured telling her high-school-aged fans: "show how you've grown up. This Carnival use condoms" ("HIV and AIDS...", 2010). Among the preventive tools used prior to the Carnival are large-sized ads located in highly visible settings. One billboard for instance portrayed a smiling condom accompanied by the quote "Use Condom, if not, it will jump out" in Xapuri, a municipality of the state of Acre, Brazil (Spaul, 2008). During the actual Carnival in 2006, the Brazilian government's approach to AIDS and reproductive health, in the attempt to achieve its goal of distributing 25 million condoms, passed out free condoms as if they were candies (Reel, 2006). The clear and direct messages spread by such campaigns shed light on different populations that may have been secluded from this important but often ignored information.

Interactive activities attracting passersby's attention have also been used. Another symbol representing the Brazilian Ministry of Health's efforts to broaden preventive messages was the sexometer, a depiction of a thermometer measuring body temperature (Thiago, 2009). It worked by placing both hands in a heat sensor followed by color changes depending on the body temperature. Each color had its indicated meaning at the bottom of the sexometer. If there was no color change, then it meant that the person's body was still warm. If it turned blue, then body temperature was rising. Green implied desire for sex. Red told the person that he or she was "ready to get going." All messages led to the conclusion: use a condom. The outdoor was promoted along with a film, also sponsored by the Ministry of Health. Overall, thirteen thousand condoms were distributed at the event (Thiago, 2009). Brazil's usage of the media has been evidence of the possible effectiveness of such venues in order to keep Brazilians alerted about the transferability of AIDS.

Convergence of the community with free press also contributed to an increase in condom sales as suggested by Gauri & Lieberman when they state that “before 1993 (male) condom sales were relatively flat at 10 million units per year; after that year they increased sharply each year, reaching 697 million units in 2003—270 million of those were procured by the state” (2004, p. 14). According to a study performed by the Ministry of Health, condom use at last sex among 15-24 years old adults had increased from 6.5% in 1996 to 57.3% in 2006 (Chacham, 2007). One important factor that has enabled the national AIDS program to control society has been its acceptance of unique features of the Brazilian culture. The Brazilian program coordinator, Roberto Paulo Teixeira, admitted the fact that “sex is responsible for the majority of AIDS cases” and therefore campaigns will only function if the message about sex is clearly transmitted (Da Costa, 2003). The results of the earnest encouragement of condom use that started in 1993 provide sufficient evidence to conclude that the increase in condom usage has ultimately helped lower HIV-infections in recent years as can be seen in the year of 2008 when 410 million male condoms were distributed. Better yet, this number was surpassed when 466.5 million units were distributed in the subsequent year (Seffner, 2010, p. 30).

Brazil’s AIDS program has been hailed as one of the most successful in the developing world. Together with the benefits provided by a globalized world such as the ability to manufacture generic drugs and acquire cheaper ARVs, Brazil’s government has managed to lead an effective program based on the fundamentals of globalization discussed by Friedman. Its national government’s actions have enabled Brazil to effectively contain the epidemic. The nation’s people-centered approach emphasized the need for civic participation. Acceptance for one’s difference in lifestyles or sexual preferences demonstrate that respect rather than opposition for a country’s culture is crucial when confronted with a global problem that does not distinguish between social, economic, or political status. Advocacy for human rights ensured a safe and anti-discriminatory environment where vulnerable groups would seek prevention and treatment measures without the fear of being stigmatized. The rapid implementation of these strategies within the Brazilian government demonstrated that timely action plays an equal if not more important role than the actual implementation. Although

Brazil's economic, political, and social structures remain unique to that country, the set of comprehensive strategies involving state-society partnerships make it a model from which many lessons may be learned by the rest of the developing world.

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Kidneys Anyone?

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A business traveler goes to a bar and buys himself a drink. After having a long day at work, he just wants to unwind. He is alone. Later in the night, a stunning blonde woman approaches him, strikes a conversation, and offers him another round. The man cannot believe that such a gorgeous woman is with him and quickly agrees. He sips the drink. Soon, everything goes dark. He wakes up lying in a bathtub with his body fully submerged in ice up to his neck in a hotel room. Confused, he looks around to see a message in dark crimson lipstick strewn across the mirror which instructs him not to move and to call 911. He is numb all over. The man cannot understand what is going on, and all he can remember is staring at the beautiful blonde woman chatting with him at the bar. The man calls 911. When the operator tells the man to feel his back, he finds a protruding tube running down his side. The operator informs him that one of his kidneys has been stolen and emergency medical assistance is on its way (Mikkelson).

This narrative is one of the many kidney heist stories that surfaced during the development of organ transplantations in the 1980s. Kidney heist stories are fictional tales of kidney thefts that abound in society due to ignorance and fear of organ transplantations. In the book How Claims Spread by Joel Best, Best explains, “[Kidney heist stories] describes scandals created by sellers claiming to have been deceived and robbed of their kidneys, when they thought they were ‘just’ selling blood, or taking tests that would procure them a coveted job. These scandals come mainly from India; they are splashed in the news deprived of all context and used for their shock value in ways that make them confusing” (194). Because such stories become only rumors after proven false, many do not believe the occurrence of organ thefts at all. However, there are many instances where such horror stories became reality. Recently in 2008, Mohammad Salim Khan had his kidney stolen in Guragon, India. As

stated in the article “Indian Victims Relate Horror of Kidney Theft”, “Khan, 33, said that he was taken to the three-story house where the illegal surgery took place by men who offered him construction work” (Russo n.p.). Scandals are prominent in the world today not only due to the high demand and limited supply of kidneys, but because of the economic disparity that many face around the globe which lead to the overemphasized fictional heist stories that distort reality. These stories are based on truths taken out of perspective which erodes its credibility but at the same time invokes fear into the hearts of many.

Ever since obtaining the ability to effectively transplant live and cadaver organs to living patients with renal disease toward the end of the twentieth century, the demand for kidneys skyrocketed like never before. Currently, there are 91 countries that perform kidney transplantations (Shimazono n.p.). Although it is illegal to purchase and sell organs in all countries except Iran, a Newsweek article published in 2009 states the prevalence of organ black marketing from a global perspective. It states, “... international organ trafficking—mostly of kidneys, but also of half-livers, eyes, skin and blood—is flourishing; the World Health Organization estimates that one fifth of the 70,000 kidneys transplanted worldwide every year come from the black market” (Interlandi n.p.). Globalization has shrunk the world to a size where medical tourism is possible to find the cheapest matching organ on the black market. Medical tourism is defined by which “... citizens of highly developed nations bypass services offered in their own communities and travel to less developed areas of the world for medical care” (Horowitz n.p.). In other words, transplant tourism is the phenomenon where patients go to lesser developed countries to find inexpensive organs from donors who are willing to give their organs in exchange for money. The majority of these organ transplants are not held in sanitized hospitals since it is unlawful to allow a hospital to transplant a marketed organ. Approximately five to ten percent of kidney transplants per year result from trafficking (Mayanja). Surviving on the wait list requires luck, and many are not willing to gamble their life with chance. Patients believe that transplant tourism is their only option despite the illegalities and associated medical risks in order to avoid death.

The kidney black market is not a viable method to acquire organs since it is not regulated by the government but by middlemen who acquire these organs and sell them illegally. There are many medical risks that endanger tourists due to the unsanitary environments of these unregulated treatments. Many people contract AIDS, HIV, hepatitis, typhoid or other complications that can result from the unsanitary transplant environment, or from the ineptness of the surgeon. According to in the article “Organ Trafficking and Transplant Tourism...”, Budiani-Saberi states, “Some patients return home with inadequate reports of operative events and unknown risks of donor-transmitted infection (such as hepatitis or tuberculosis) or a donor-transmitted malignancy. The source of their allografts is mainly from the poor and vulnerable in the developing world” (925). These health risks also need consideration in regards to globalization, for when these wealthy transplant tourists travel back to their home country, they bring these medical complications with them and can infect those they interact with on a daily basis. Diseases such as HIV do not only affect the transplant tourist, but also the society in which that tourist lives in.

In order to deal with the shortage of kidneys, control the organ black market and counter illegitimate medical tourism, the world needs work together to find an optimal solution which entails the creation of an international law. The World Health Organization believes that, “...the pursuit of national self-sufficiency in human organs is the only way to progress towards equitable transplantation practice on a global level” (Noël 647). In order to become self-sufficient, the United Nations, the World Health Organization, and the Council of Europe decided that member countries must work together to implement a policy with consequential sanctions if the law is not followed. Policies that various countries have implemented will be scrutinized to help guide the United Nations and its decisions. This paper will focus on the policies that have existed in the United States, the Philippines, China, and Iran.

The sale of kidneys is illegal in the United States by the National Transplant Organ Act of 1984. This act states, “It shall be unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human

transplantation if the transfer affects interstate commerce” (OPTN n.p.). The United States government created a kidney donation policy through altruism, where the donor cannot receive financial compensation for their donation. Altruism is the process where one donates an organ out of good will alone, allowing anyone to donate kidneys to recipients as Good Samaritans. However, there are currently more than 87,000 out of 110,000 people in the United States on the waiting list for a kidney, yet only about 19,000 kidney transplants were conducted in the year ending August 2010 (unos.org). Nineteen people die each day while on the waiting list (Statz). Since there is such a desperately high demand for kidneys, the only hope for patients is to turn to the black market and illegally purchase a kidney. The black market industry for organs is expanding and underground industries devise methods to obtain as many kidneys as possible to optimize their profits. Many of these methods include luring people into scandals as seen with Mohammad Salim Khan. The world is becoming insecure due to these illegalities, creating fictional stories which further heighten the scare or create disbelief of kidney shortages and the black market.

Furthermore, there are controversial subsystems of altruism that are not forbidden by law. Reproductive altruism is arguably one of the worst subsystems, for this type of altruism entails reproducing in order to have a child that matches the recipients’ tissues. If that child is a match, their family will love and accept them. But if a child grows up in an environment where they were not “good enough” (where their tissues did not match the tissues of the intended recipient), that child will consequently have little value over their life because of their uselessness. Goodwin states, “Reproductive altruism creates natural hierarchies; one child is born a supplier or healer and the other special or sacred” (Goodwin 79). Reproductive altruism makes children feel as if their purpose in life is to grant life to another.

The novel My Sister’s Keeper published in 2004 by Jodi Picoult is a gripping example of how morally and judicially compelling reproductive altruism is. Picoult presents various perspectives in first person format to show the reader what happens in the minds of those entangled in a judicial case revolving around reproductive altruism. From an attorney’s perspective, Picoult supports the child when she sues her parents for medical emancipation

by saying, “It's about a girl who is on the cusp of becoming someone... A girl who may not know what she wants right now, and she may not know who she is right now, but who deserves the chance to find out” (Picoult 407). This child, Anna, has the right to live without these medical infringements in her life to save her sister. Anna deserves the chance to learn that life really is not about going to the hospital on a daily basis to donate biological tissues. Although Anna's parents may mean well, the meaning of life for Anna becomes distorted through her responsibility to be her sister's keeper.

Although altruism has failed to treat people in great numbers and has various moral controversies, there are individual cases where altruism is entirely philanthropic and has succeeded. According to the article “Stranger Donates Kidney to 8-year old Girl” by the Associated Press, an eight year old girl, Sarah, was in dire need of a kidney in Atlanta. She was on the national wait list and her parents put up a pamphlet in search for an altruistic donor willing to help Sarah. Laura Bolan saw the pamphlet and decided to help the young girl, and both surgeries were successful. Although there are some success stories by having an altruistic model for kidney donation, not all cases can be solved this way as seen in the length of the wait list. The inefficiency of the national wait list causes many people feel as if their only choice to survive is to retrieve an organ from the black market. Sally Satel states in her policy review “Supply, Demand, and Kidney Transplants”, “The dire shortage of organs today is striking evidence of the fact that altruism is not sufficient to produce enough organs. In 2006, there were 7,180 deceased donors (yielding an average of 1.5 kidneys each) and 6,242 living donors (mainly family and friends). At the end of that year, the 67,000 candidates remaining dwarfed the number of available organs” (n.p.).

Because of such daunting numbers, transplant tourism and the black market thrive. In the Washington Post article “The Organ Market”, journalist William Saletan describes the organ black market and transplant tourism by saying, “In the past two years, Israeli organ brokers shifted their business from Colombia to China for faster service. If China closes its doors, they can shift again. In Pakistan, kidneys already sell for a [fraction](#) of what Chinese hospitals charged. Brokers can compare organ prices from country to country, just like wheat

and corn" (n.p.). The distance between countries in the world is no longer a barrier because of globalization. In fact, this distance is advantageous for patients who are looking toward the black market to purchase organs. Not only can patients outrun the law by venturing to different countries, but they can also compare prices between countries to get the best "deal", whether that entails the low prices of organs, the cleanliness of hospital facilities, or the availability of organs themselves. Providing financial incentives for donors in poverty convinces them to the point where they would gladly donate their kidney, believing the money would be the push they need to advance their economic status, which in reality, does not.

In the Philippines, the issue of organ black marketing has taken a hefty toll on its citizens. The more affluent patients, mostly from developed countries such as the United States or Britain, go and purchase organs at low prices which lower the amount of kidneys available to those who are citizens of the Philippines. According to the article "Kidney Black Markets and Legal Transplants..." by Mendoza in the Elsevier Journal, Mendoza states, "The Philippines easily became a favorite destination among transplant tourists because the illicit trade offered 'all-inclusive transplant packages' (covering travel, meals and top-rate hotels and hospitals) which were among the lowest priced globally" (Mendoza 256). He also states that the median price a typical Philippine donor receives is approximately \$2,133, while a donor from the United States would be asked to be compensated fifteen times that price for the same organ on the black market, roughly \$30,000 in the year 2007. Although the contrast in value is so great, to a man in poverty in the Philippines, two thousand dollars is a sum of money that would take years to make. Thus, the Philippines is in the top five countries for organ trafficking as ranked by the World Health Organization.

Foreign patients are the best business partners in the trade for Filipino kidneys since they are inexpensive. In order to combat the issue of the low amount of kidneys available for Filipinos due to the black market, the Philippine government in 2008 fully banned the commercial sales of Filipino kidneys to foreign buyers. However, they will allow foreigners to have their transplants conducted in the Philippines. The ban has had an apparent effect on

limiting the number of foreign transplants through the black market based by the amount of transplant surgeries from the year 2008. According to the article “Ban on Human Organ Sales Working”, “Hospital data compiled by the Philippine Society for Nephrology, a group of kidney doctors, showed transplants dived from 1046 in 2007 to 679 in 2008 as the government banned foreigners from receiving organs from Filipino donors” (n.p.). Despite the claimed success, the ban has not achieved its initial purpose of increasing the kidney supply for Filipinos which resulted in the health secretary’s judgment on the need to lift the government ban on organ donation to foreigners. It is possible that the ban simply deterred foreign buyers from the hospital to the homes of unlicensed surgeons, driving the black market further underground. For example, two years after the ban was implemented, police uncovered a ring of six Israeli organ brokers who forged legal documents and arranged airline flights for Israeli patients to have their illegal organ transplant in the Philippines from impoverished Filipino donors despite the current ban in place (Dalangin-Fernandez n.p.). Even though the ban is active, it does not fully eradicate the black market in the Philippines, yet has claimed to have made progress.

The Chinese government viewed the issue of the organ black market as a chance to earn quick money for themselves. To benefit from this lucrative economy, China passed the “Temporary Rules Concerning the Utilization of Corpses or Organs from the Corpses of Executed Prisoners” in 1984 which states, “The use of corpses or organs of executed criminals must be kept strictly secret, and attention must be paid to avoiding negative repercussions” (“Organ Procurement and Judicial Execution in China”). Until 2008, the Chinese government used the organs of executed prisoners and leaked these organs into the black market to gain profit. Due to international pressures, China agreed to allow only blood relatives to receive the organs of death row inmates, in theory, despite the rising demand of human organs (“Organ Transplants: The Gap Between...”). This was a convenient method to harvest organs and gain quick money from wealthy foreigners. Since criminals were going to ultimately be executed, the government could choose when to kill a specific criminal based on their match to an affluent medical tourist. The article “The Implications of Istanbul Declaration...” states,

“During calendar year 2006, it was estimated that at least 4000 prisoners were executed to provide approximately 8000 kidneys and 3000 livers for mainly foreign patients purchasing these organs” (Delmonico 117). China admitted to using organs of death row inmates in 2006, which were the source of over two thirds of donated organs (“China Admits Death Row Organ Use”).

To some, this may seem like an adequate method in dealing with the organ shortage since executed prisoners would essentially be put to death for their crimes, but the morals of capital punishment are not widely accepted. Furthermore, those who are condemned of crimes are typically composed of China’s poorest where they are driven to desperate measures to provide for their family, such as stealing a pig for their family to eat. Theft is one of the sixty eight crimes that are punishable by death which devastatingly follows China’s zero tolerance for crime policy (Howie n.p.). Families who are already impoverished must pay the government for the prisoner’s lodging in prison as a punishment to the family for being potentially involved in the crime. Using the organs of executed prisoners on the black market further widened the social stratification gap where the government leached off the poor. Since the rich do not need to resort to methods such as stealing pigs to feed their families, they are not likely to become executed prisoners for such diminutive reasons. Thus, the poor were ostracized in China and were used as cadavers to squeeze a good sum of money out of the wealthy tourists who are able to afford their body parts. China has recently agreed to not use organs of executed prisoners for the black market due to international pressures, which does not mean the demand for kidneys has subsided. There will be other worms that dig through the loopholes of the kidney market ban in the future that will need to be eliminated as well. If kidneys were not so scarce in the world today, China would not have resorted to such underhanded methods to obtain large sums of money.

Currently, Iran is the sole country in the world where the marketing of organs is legal. Iran is also the only country in the world where there exists no shortage of an organ supply. According to the article “Organ Sales and Moral Travails...”, a policy review by Benjamin

Hippen, the author states, “In Iran, the waiting list for kidneys was eliminated in 1999, 11 years after the legalization of organ vending, and for the past 8 years, Iran has had no waiting list for kidneys” (2). While the United States is struggling to minimize the growth of the expanding wait list, Iran has eliminated the waiting list entirely. In 1988, Iran initiated the Living Unrelated Renal Donation (LURD) program which the Dialysis and Transplant Patients Association matches kidneys to patients who have no living related donor. Donors are compensated by the government, receiving a sum of money and limited medical insurance coverage after the surgery. They are also paid by the organ’s recipient, but if the recipient is too impoverished to afford the payment, the donor is given money from a charitable organization. This non-profit system is one in which has eliminated the waiting list for over ten years. However, the United States and many other countries around the world are struggling with suppressing the waiting list, where over 110,000 people are on the national waiting list in the United States. This does not account for those that are infected with various organ diseases, but for those who qualify and are lucky enough to remain on the wait list without being removed, if one can consider being on a lengthy waiting list good fortune. As Iran is the only country in the world that has such a policy, there are many opponents to this method of allowing the marketing of organs.

One of the major concerns with Iran’s legalized organ sales consists of the medical security in allowing people to sell their organs under such a policy. This policy creates a socioeconomic barrier between the rich and the poor. Furthermore, having kidneys marketed from those exposed to harsh conditions associated with poverty may not be the best source of kidneys to pick from. Ghods and his colleagues conducted a survey to confirm the population of those who market their organs. In the results, Ghods finds, “The study of economic status of [Living Unrelated Donors] showed 420 (84%) to be in poor and 80(16%) to be middle class. None of LUD fulfilled the criteria to be wealthy. From 500 recipients, 252 (50.4%) were poor, 181(36.2%) middle class, and 67 (13.4%) wealthy” (“Comparison of Some Socioeconomic...” 2626). The poor who sell their kidney on the black market see nothing but the promise of

wealth that would be worth years of hard labor. If they sell a piece of their body for these funds, they think that it will better life for their family and would be one step closer to getting out of poverty. However, this is hardly the case. Budiani-Saberi states, “The majority of these [Commercial Living Donors] (93%) who sold a kidney to repay a debt and (85%) reported no economic improvement in their lives, as they were either still in debt or were unable to achieve their objective in selling the kidney” (n.p.). Not only are their initial objectives not met, their health is compromised and they cannot work like they used to since there are little to no medical follow-ups for the donors who sell their kidneys on the black market (L. Cohen 668). A major reason why the poor are marginalized to such an extent is because of the nature of the black market. There is nothing that prevents the brokers from keeping their promises. In fact, not fulfilling these promises is beneficial for the brokers, as it would save them time and money. The brokers of the black market see the organs of the donors more valuable than the donors themselves and use various lucrative methods to get their hands on human organs.

If the selling of kidneys ever became legalized, there is no question that the poor would still be the overwhelming majority of donors. But there would be adequate medical follow-ups for these poor donors, such as in Iran. Donors would not feel that their donation was a mistake since they would be able to return to work with little medical complications due to the sanitary surgical environment and government regulation. Furthermore, governments such as the United States would greatly benefit financially from legalizing the sale of organs. Government regulated medical insurances such as Medicaid and Medicare would not have to pay as much money for patients diagnosed with ESRD that are on dialysis. According to the article “Private Insurers Keep Dialysis Clinics Humming” in the Pittsburgh Tribune-Review, “The federal program spends about \$70,000 a year for each patient on dialysis, versus \$17,000 a year on someone who receives a successful kidney transplant, data show. The year in which the person receives the organ is the most expensive, at \$106,000, although the savings are realized in two years” (Conte n.p.).

As seen in the Iranian system of regulating organ donation, the sale of kidneys would not be regulated by the middlemen who currently purchase kidneys from the poor in the

black market, but by governmental non-profit organizations with funding from charitable organizations or the patients themselves who gave the monetary incentive to donate. Donors who sell their kidneys would be compensated the same amount as other donors, whether they are poor or rich. However, the rich would not need to sell their kidneys for they are already financially stable. If a monetary incentive is provided for organ donors around the world, not only would there be more kidneys available for the sick, but the poor would be treated as biological slaves for the rich in the process. The two sides of whether to legalize the sale of kidneys or not are both extremely compelling. Is the idea of social justice more important than the hundreds of thousands of lives that could be saved? Is it more important than the potential elimination of illegitimate medical tourism and the organ black market? According to the World Health Organization and the United Nations, the answer is yes.

A World Health Assembly resolution adopted in 2004 urges Member States to “...take measures to protect the poorest and vulnerable groups from ‘transplant tourism’ and the sale of tissues and organs” (“Resolution on Human...” n.p.). To protect the poor, legalizing the sale of kidneys is not something the United Nations is willing to approve. The United Nations developed a study with the Council of Europe in attempt to decrease the size of the lengthening waiting list without legalizing the sale of organs. This study, the *Joint Council of Europe-United Nations Study on Trafficking in Organs, Tissues, and Cells and Trafficking in Human Beings for the Purpose of the Removal of Organs*, is one in which does not support the legalization in selling human organs for a financial gain. One of their main objectives is to further educate the community about organ donation and transplantations. This study states, “In particular, education and communication are highly relevant activities for creating positive attitudes in society towards donation and transplantation and building trust in the system, both of which are needed to facilitate the involvement of society” (Caplan 26). Some types of education involve the usage of advertisements such as those on highway billboards, infomercials, or on the sides of trucks or other large vehicles.

Currently, the United Nations has only a few laws that ban the sale of human organs. These laws do not cover the impact it has over adults who willingly donate their organs for

financial gain, but bans the forced donation from trafficked humans and from children for profit. The Convention against Transnational Organized Crime in 2002 considers the removal of organs an act of human trafficking and states, "Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organ" ("United Nations Convention Against..." 42). Under the 2002 Optional Protocol to the Convention on the Rights of the Child, the transfer of organs from a child for profit is prohibited by law as stated in Article 3 ("Convention to the Rights..." n.p.). Although there are some international laws that deal with the sale of human organs and the trafficking of humans in the organ black market, these laws do not have specific consequences or sanctions toward those who violate the law.

It is certain that there needs to be a strong policy regarding organ tourism that can be internationally implemented which punishes countries that violate it. This would slow down and diminish the occurrence of the issue with organ tourism, organ trafficking and the organ black market. There is not one country that is exempted from this issue whether it is from an economic, moral, or medical perspective. The Philippines has trouble in keeping foreigners from its borders to purchase organs from its low-income citizens. China has tried a method in which cut down the organ demand which has theoretically been repealed. Iran, although there is no wait list, marginalizes the poor. If there is a law that is implemented by the United Nations and the World Health Organization, there may be a chance to overcome many perils of the organ black market and make the world a safer place. Whatever the solution to this controversial issue may be, the one major step toward the goal of eliminating the organ waiting list and the organ black market in a way that can be accepted economically and morally is certain, which is now in action through the study of the United Nations collaborating with the Council of Europe. The world needs to work together. The lives of thousands of people are at stake; there is no time to waste. The issue of the organ black marketing system is not one which is solvable by one country alone, but by the union of all. Nevertheless, the big question remains: what should be done?

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The Digital Natives are Restless

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I was sitting in my office at about 4:30 PM, when my iPhone chirped. The text read:

ALORAH Cn we plz watch a:tla on ur mac while we do r hw?
=]

My daughter was at home in her room, doing homework with her three best friends; all four girls were avid fans of the animated television series *Avatar: The Last Airbender*. My reply was not what many, certainly not my own parents, might predict:

ME Sure, so long as you promise to work efficiently and do a great job.

Alorah's response to this, however, was indeed predictable:

ALORAH Okee!! ^.^

For the benefit of the uninitiated, “^.^” is an anime-influenced emoticon representing happiness. An emotion not likely shared by those reading this with more traditional parenting sensibilities. Doubtless, such readers are little impressed by my condition that Alorah promise to “work efficiently,” and “do a great job.” They might argue that efficient, quality work ought to be a given, rather than a bargaining point—especially one against behavior that will almost certainly guarantee inefficiency and yield subpar results.

But Alorah was born in 1995, and so is a member of the “Digital Native” Generation—a term coined by educational theorist, Mark Prensky in 2001. Digital natives were born into the modern digital world, and so assimilate to its culture naturally (Prensky 10). As such, Alorah possess a natural ability to

parallel process that members of my, and, older generations altogether lack and typically find difficult to understand. Therefore, counterintuitive though it may be, there exists no reason for me to deny Alorah or her friends the enjoyment of watching television while doing homework (in fact, there are compelling reasons to permit such behavior, which I will later discuss). As to my caveat that she “work efficiently,” and “do a great job,” this was an opportunistic tack aimed at setting set up a situation in which praise was certain to be earned—positive reinforcement being one of the crucial elements in an effective digital native parenting strategy.

To those intimately familiar with digital natives, it should come as no surprise that the office I was sitting in, when I received Alorah’s message, was a home office, and so I was less than 40 feet away when she texted. Because digital natives are born into the modern era of technology, they adapt the use of technology, rather than adapt to it. This is to say, whereas the digital native identifies a basic goal and organically implements the appropriate technology to fulfill that goal, members of older generations—or “Digital Immigrants” (Prensky 11)—identify a piece of technology and modify their behavior to implement the technology to fulfill the goal for which it was designed. In short, while a digital immigrant comprehends the purpose of a landline telephone as a tool for communicating over long distances, and the function of a cell phone as that of a landline without restricted access, the digital native comprehends the simplest way to communicate with someone in the next room is via cell phone—specifically, by means of a text message. This distinction underscores a fundamental difference in thinking between the two generations, and is a consequence of the all-engulfing nature and sensorial overstimulation associated with new media and technology.

As a result of the impact of new media, many digital natives struggle in traditional social and academic environments (Wertzler). They tend to mature more slowly, require instant gratification, nearly continuous praise, and frequently demonstrate a diminished attention span (Greenfield 25). Despite these issues, however, in order to help today’s youth to thrive, it is necessary for parents and educators to comprehend, interpret, and adapt to digitally native thinking.

Owing to the combined impact of media and digital technology, the social landscape of today’s digital natives is wholly unrecognizable from that of previous generations. This presents myriad challenges to the members of these older generations in their endeavors to “reach” their children and students. Returning to the opening scenario, fifteen minutes after granting permission for Alorah and her friends to watch *Avatar: The Last Airbender* on my laptop, I emerged from my office and headed

toward the kitchen, stopping along the way in front of Alorah's bedroom door. Knocking on the door, I heard the drama of the show playing out as a backdrop to the four girls gossiping—ostensibly ignoring the Airbender's plights...and their homework. When Alorah called out in answer to my knock, I asked if she were hungry. Hearing that she was, I slipped into the kitchen and prepared a small bowl of tuna fish. I didn't bother offering anything to the other girls because I knew what I would see when I opened the door to deliver the food: Alorah sitting alone in front of my laptop, featuring the television show; and beside her, her own laptop, displaying a split screen between a nearly-completed homework assignment and the three smiling faces of her friends framed by the video networking site, Skype.

Like many digital natives, Alorah's social experience is divided between in-person socializing, and online socializing. And this division is not an even split. Consider that the online socializing engaged in by this generation is split into socializing with their physical network of friends (i.e., people they know and interact with physically, such as class mates), and their online network. Consider further that these online networks are accessed in real-time through direct-contact platforms (like Skype), or avatar platforms (as in the massively multiplayer online role-playing gaming²⁸, or MMORPG, community), as well as asynchronously through social media networking sites (such as Facebook and Twitter). With such an intricate and demanding social structure, it is no wonder that the current generation of adolescents spends significantly more time in front of their computers than meeting socially in person (Greenfield 89). Even when they do get together in person, it is not uncommon to find them grouped quietly, plugged into the Internet with laptops or smartphones. Is it possible that this has no impact on their social and interpersonal skills? Mike Harris, father of a twelve-year-old girl complains:

When [my daughter] comes home from school, I pretty much don't see her until dinner. She goes into her room, goes online and then tunes out. Even at dinner, she doesn't really talk to [her mother and me] about her day. It's like pulling teeth to get her to go through what happened that day. She acts like she can't even remember what happens at school, and we end up having to go through the day play by play: "What did you do when you got off the bus? And what did you do then? And then what did you do?" But she can probably recite an episode of *iCarly* back to you word-for-word after seeing it just once. (Harris)

²⁸ Interactive games, such as World of Warcraft, and Second Life, involving tens of thousands of members playing simultaneously.

Academically, students growing up immersed in ultra-fast paced television programming, hyper-text infused high-speed internet content, interactive video games, Tweets, short message service (SMS) texting²⁹, YouTube clips, and ubiquitous social networking sites—referred to collectively as “new media” (OED online)—display notoriously short attention spans in the classroom. They demonstrate almost no capacity for delayed gratification and demand a level of constant encouragement that exhausts educators. Moreover, due to the extraordinarily high-rate of sensory input, it is possible that short-term memory loss, such as that exhibited by Mike’s daughter, may be the result of the process of repression (Jung 490). How can parents and teachers not be concerned by these issues?

In addition to the social effects of the massive amounts of new media today’s younger generation is exposed to, certain questions concerning health issues arise. Some parents are concerned that too many hours in front of a computer screen can result in musculoskeletal or vision-related problems. For instance, children using a computer set up for an adult can develop “computer vision syndrome,” which can range in symptoms from dry eyes, to eye spasms, to near-sightedness (Koseis 230). And physical issues related to prolonged daily computer and videogame use by children—issues referred to by pediatricians as “ergonomic problems”—can result in conditions like carpal tunnel syndrome. However, the most disturbing condition associated with the increased new media content currently accessed by children revolves around the issue of childhood obesity.

When most members of the digital immigrant population were children, the majority of time spent out of school was occupied by outdoor play. I am a member of Generation X. Although my friends and I spent plenty of time throughout our childhoods watching the *Dukes of Hazard* and *Knight Rider*, and playing Monopoly and Dungeons & Dragons, we all spent far more non-school hours outside than inside. Even those kids such as I, who were not inclined toward team or X-Gen sports³⁰, considered television-watching and gaming—such as it was—activities for rainy days and late nights. Growing up in my little corner of New York City, we organized epic neighborhood-wide games of tag or hide-and-seek that lasted until we’d been chased by red-faced janitors out of every basement in the neighborhood amid a torrent of Polish or Russian profanity. We climbed walls, trees, and monuments like it was our mission. We rang doorbells, hunted treasure, and captured the flag. And when there was nothing to

²⁹ Text communication from a mobile device that utilizes messaging features similar to a standard instant messenger service, as opposed to constructing text messages alpha-numerically on a phone keypad.

³⁰ Non-team sports seeing a surge in popularity in the late 1970’s to early 1990’s, including BMX bicycling, snowboarding, and skateboarding.

do, we just ran around pointlessly until we were too tired to do anything but trudge home. We were always dirty. Some weekends, my parents drove me to our house in the Catskills and I enjoyed a rural counterpart to my urban childhood experience. These were filled with similar doses of running and climbing, finding our way out of state forestland or vast cornfields, and a long list of recurring challenges to prove I wasn't a "city slicker," but an official "country boy"—though no matter how often earned, the "country boy" designation was always rescinded as soon as my rural friends could conjure up another challenge. In short, my friends and I burned far more calories at fifteen than do my daughter and her friends.

In 1990, the United States Center for Disease Control identified the American child obesity rate at about 23.5%; at which time the average American child engaged in about 4.5 hours per day of new media activity (CDC online; Kaiser online). These figures have risen steadily since then, with last year's American childhood obesity rate jumping to 26%, as child participation in new media activity rose to about 7.6 hours per day, amalgamated—that is, discounting new media multitasking, the total time was actually 10.4 hours per day (CDC online; Kaiser online). If there is indeed a causative relationship between new media activity by children and childhood obesity, then it indicates that a large change in new media participation has a relatively small impact on obesity because the percent change in new media activity (68.9%) was well over six times more than the percent increase in childhood obesity (10.6%). Nevertheless, with both figures on the rise, and less outdoor activity translating to lower daily caloric expenditures, many people conclude that increased new media activity among the younger generation is responsible for childhood obesity in America.

But of course, correlation does not imply causation, and such illogical conclusions ultimately stem from prejudices. In fact, studies have demonstrated that childhood obesity is linked to new media activity only in lower income households, and even then, not because of reduced levels of physical activity. Rather, the link is dietary. Children take dietary cues from commercial programming, and are more inclined to eat snack-type or processed food while watching television (Epstein, et. al., 242). Therefore, children watching more television (the predominant new media mode in low income households) tend to eat greater quantities of lesser quality food. Ultimately, this is less an issue of how much time today's adolescents interact with new media, and more an issue of what foods are made available to them. Today's children, with their affinity for things that require minimal preparation, will gravitate towards food that is most easily transferred from packaging to mouth, and junk food fits these

requirements all too neatly. With this in mind, it is important to keep simple, healthy food readily accessible to the modern child as much as possible, and unhealthy food relatively inaccessible. This demonstrates one way in which understanding a digital native child can help that child thrive physically.

The first step in understanding the digital native child is to understand that he or she is physically different than people of earlier generations. Specifically, the brain of today's media-integrated adolescents differ physiologically from those of their parents and teachers (Prensky 12). Simply by virtue of being inundated with new media from a preverbal age, their brains readily adapt to, cope with, process, and sort the massive amounts of information absorbed by their senses. Given a certain amount of time dedicated to a specific task or set of tasks, the human brain will respond through a biofeedback system, reconfiguring itself to handle those tasks most efficiently (Prensky 13). This "certain amount of time" varies depending on the task or tasks, but typically requires a minimum of several hours a day, five days a week, for ten or more weeks at a minimum (Prensky 12). Whereas the technological shift between the Baby Boomers and Generation X was comparatively minor, and that between any two generations in the Elizabethan Age was virtually indistinguishable, the shift in technology since Generation X has been so rapid and sweeping that it has stimulated something of a phenotypic evolutionary movement in our species; so while we older generations forced our brains to physically configure for the methodical, literacy-based, linear thinking best suited to our era, the multiple intelligences of digital natives are conditioned for nonlinear thought, multidimensional spatial cognizance, mind mapping, multidirectional attention deployment, and lightening-fast response to stimuli since they were old enough to be plopped down in front of a Baby Mozart DVD (Gardner 509; Greenfield 202). More importantly, they continue to self-condition for hours each day, deepening the differences in brain physiology and thought processes from their parents and educators.

On the one hand, such neurological alterations may lead to an entire generation of future graduate students capable of abstractly visualizing the supersymmetric "spin" of "sparticles"³¹ and opening the way for advances in science that exceed the known limits of possibility (Kaku 654). On the other hand, only the most highly adaptive parents and educators can "reach" these adolescents and nurture them. What prevents this is the natural inclination (if not determined resolution) to interpret circumstances such as a classroom setting, a lesson plan, or a domestic interaction, using what will ultimately become culturally obsolete semantics (Wertzer). It often "feels right" to require the

³¹ Theoretic elementary particles comprising quarks, bosons, and leptons.

adolescent to adapt to “the way things are,” as established by our own experience. And while this might have held true through various generational transitions throughout history, especially where technology was more static, in the case of the current adolescent generation the reverse is true: it is we who must to adapt to the way things are *becoming*, as established by our students and children. The paradox, then, is how do parents, mentors, and educators use the semantics of their students to teach their students, while learning the semantics *from* their students?

There is no simple answer. But the first step involves humility, and what to many will feel like unnatural open-mindedness. We must be willing to rethink what we think we understand, and tear down our presumptions on a fundamental level. This is a tall order for traditional parents and multi-decade pedagogues, but nevertheless crucial for our overarching cultural advancement, because the alternative forces today’s children into domestic and academic environments in which they aren’t suited to thrive. Interestingly, the failure to nurture digital natives produces the very behavioral manifestations upon which some groups base their anti-new media platforms.

In the world of the digital native, proper socialization involves not merely the development of general interpersonal skills, but the development of systems of social skills specific to each of the many different avenues to social contact. SMS texting, MMORPGs, online social networking, YouTube vlogs³², Tumblr³³ posts, and Twitter roll plays³⁴ each have an entirely unique culture that must be mastered by digital natives (Greenfield 112, Saffran). As with children raised bilingually, who tend to develop language skills slightly later than monolingual children (Wertzler), a child raised in a world heavily dominated by new media can exhibit certain delays in social development. Their interpersonal skills may be a little rough around the edges while they’re still young, but, like bilingual children, they outgrow their issues and emerge with a broader range of skills.

What is perceived as a short attention span, however, will not likely be outgrown. This is because the “short attention span” of many students identified by their teachers and parents is a complete illusion. Digital natives have an incredible ability to focus, and even hyperfocus. But their brains are specifically configured for informational input of a certain character and at a certain rate. The failure of many classroom environments to present their materials in a format conducive to rapid

³² Portmanteau of “video” and “log” meaning a video journal.

³³ A blog service that, like Twitter, permits you to broadcast your entries to a specific, elective audience.

³⁴ An series of posts that constitute a single cohesive storyline with predetermined parameters, contributed to by a group of players who write from the point of view of specific characters

absorption causes such children to become distracted as their brains cast about for properly formatted input. Ozzie Alfonso, a former producer of Sesame Street, recalls the production team's response to the discovery that their toddler audience had developed the use of parallel thought as a more efficient means of deploying their attention:

We had a bunch of kids, little kids, babies basically, in a room, watching some of our more educational-type segments. It was all educational, but I mean something where you would have learned a new skill by the end of the segment. We did this twice, once with nothing in the room but the kids and the TV, and again with the kids, the TV, and a bunch of toys. Dozens of brightly colored...as distracting as possible. We noticed that the kids in the first group spent about twice as much time watching the video as the second group, who divided their attention between the segments and the toys while they played with them. But when we tested them on what they learned, all the kids, both groups, retained the same amount of information from the video segments.

(Alfonso)

Ozzie and his team concluded that the children were watching strategically: paying attention to the important portions of the videos, redeploying their attention during the less important sequences. Extrapolating this data to their target viewing audience, they realized they could pare down the show's video segments to the bare minimum, thus allowing more educational content to be fitted into the program. In this way, Ozzie and his team demonstrated the criticality of properly interpreting the behavior of digital native children, if an understanding of their thinking is to be achieved.

Interpreting the significance of digital native behavior is the next step toward preserving a healthy, nurturing environment for today's adolescents. But for those used to viewing the world through their own eyes and mindset, it is nearly impossible to relearn everything they thought they knew about new media technology; and so parents and children, educators and students, can grow frustrated with one another. For instance, Patricia Mullen, a New York mother of two children in private school, Ryan, 14, and Mckayla, 13, points out that,

Ryan refuses to talk to anyone on the phone...not even when we order pizza, his sister or I always have to call. He won't even call his friends. Not even if he forgets his homework, he won't call his friends. He just sends texts, but I tell him, 'What if they

don't check their text? You're gonna end up with no homework, you should call.' But he won't... listen. (Mullen)

Patricia's frustration is not uncommon. To someone to whom the modern technology of her day was the telephone, it might seem perfectly reasonable that telephone calls are for the communication of information of great importance and time-sensitivity, whereas texting is for that of lesser importance and time sensitivity—after all, when you send a text, the person you're contacting may not get back to you for hours or until the next day. And in Patricia's digital immigrant environment, this may hold up. But in the world occupied by Ryan and his peers, the logic is completely flawed. Among properly socialized digital natives, who absolutely without fail have their cell- or smartphones on them, and among whom it is well understood that SMS texting is far more dynamic and efficient than person-to-person phone calls, texts are for all levels of communication—especially important and time-sensitive information. Hence, texts are read and responded to immediately. Furthermore, texting can be used to have simultaneous conversations with multiple participants, and/or multiple simultaneous conversation threads between two or more interlocutors. Owing to their proclivity for parallel thought, digital natives practice multiple-thread conversations regularly—they are, after all, more efficient than single-thread conversations. Because of its pared-down nature, the language of texting is one not only of an economy of words, but an economy of characters. Proper, new media etiquette calls for the quickest, most efficient language, spelling, and abbreviations in text communicating.

To this end, a complex vocabulary of acronyms, abbreviations and emoticons, called "txtese," has been developed to refine the efficiency of this mode of communication, without sacrificing nuance. Certainly, the small-talk involved in person to person ("P2P" in txtese) telephone conversations has no place in an SMS text conversation. And where the proverbial "thousand words" can be replaced by a picture, texting permits you to seamlessly integrate images, video, and sound files into any conversation. What's more, text conversations generate an instant record of what is said—particularly useful when asking for directions...or for a missed homework assignment. When confronted with the choice of individually calling friends one at a time to request the homework, each time engaging in the small-talk demanded by social convention (much of which is bound to be awkward in the case of reaching out to individuals with whom there is no precedent conversation), or sending out a single SMS text-blast to everyone in his class requesting the assignment, can we really fault Ryan's reluctance to pick up the phone?

Of course, the principal issue that should concern Patricia with respect to her own scenario is the apparent fact that her son's teacher doesn't maintain a web page. It seems contradictory that a society so apparently concerned with conservation, economy, and graduating competitive students into the workforce has so stubbornly resisted instituting a paperless educational system as the national norm. Even so, it is inexcusable at this stage in our society's technological advancement for any private school teacher not to maintain a webpage where students can go to find assignments, study materials, and class announcements. The ability to provide such a resource is currently accessible to all teachers, so why deny students such a valuable tool? Such nonfeasance hints at the schism between the needs of the modern adolescent learner, and the willingness of certain existing educators to reevaluate their methods of meeting those needs. Jacqueline Wertzler, Director of Curriculum and Staff Development at Columbia Grammar and Preparatory School, describes this disconnect, "All the time, teachers continue implementing these teaching techniques they developed decades ago. And every September, we see increasing evidence that these curricula are failing to meet student needs"(Wertzler).

According to Marc Prensky, today's generation of students, with their radically different thought processes, require an educational environment founded on interactive, game-based learning (15). In consideration of the fact that the majority of the 7.6 hours of new media activity participated in by adolescents every day involves some form of interactivity and/or gaming, it seems foolish on the verge of being malicious to resist implementing interactive, game-based teaching strategies. Obviously such changes in pedagogy on a universal scale would constitute a paradigm shift measured in years, if not decades, and so today's digital native learners will have to learn to effectively code-shift³⁵ in order to navigate much of their academic and professional careers. Nevertheless, such a paradigm shift needs to occur. Perhaps if Mike Harris's daughter enjoyed a classroom situation that was designed to stimulate and maximize her learning potential and enjoyment, her recall of the day's events might rival her recall of her favorite television show.

At home, parents must learn to reevaluate certain long held precepts. Common among these are that social networking sites are "bad." With horrific stories in the news detailing examples of cyber bullying leading to suicide, or online chatting resulting in kidnapping and rape, it is no wonder that some parents resolve to protect their children from such things by firm, decisive action. "Who knows what's

³⁵ Ronald Wardhaugh's theory of code-switching concerns the codification of communication and behavior, and matching the expression of such codes in response to situational stimuli (Ou 73).

going on at those sites,” says Patricia Morgan, speaking about Facebook and MySpace. “When Mckayla asked me if she could have a Facebook I said ‘No way!’”

But of course, Mckayla does have a Facebook account. And unfortunately, because Patricia has forbidden Mckayla to use Facebook, and more significantly, because she has refused to acknowledge Facebook, she has rendered herself unable to monitor Mckayla’s activity on the site. Had Patricia instead set up her own Facebook account, and made it a condition of Mckayla getting an account that she add her Patricia to her friends list, she would have at least had the ability to track Mckayla’s Facebook activity. But Patricia’s mistake is a common pitfall among parents who are themselves unwilling to familiarize themselves with a new technology or media form: they simply reject it. And they do so without intelligent reflection on what possible outcomes might result. But if we ever lived in a world where such methodologies were tenable, we do not now. Parents need to come to terms with the fact that they cannot control what media their children are exposed to. There are simply too many new media inroads to block them all. Current “R” rated movies, television shows, and social networking sites can be accessed online at a friend’s house, the library, even the local Mac Store. And that’s for children who don’t have their own computer or smartphone. The idea that one can effectively monitor what a child watches, or what sites he or she visits, is laughable.

When children today criticize their elders, saying, “You just don’t understand me!” it has a wholly different meaning than it did when I said that to my folks, or they to theirs. There are varying degrees of truth to the statement in all three cases. But in the special case of digital natives criticizing digital immigrants, the comprehension disconnect is so inherently extreme, that those being criticized must respond by completely reevaluating their approach to teaching on both the micro and macro scales. This is by no means easy. I confront the challenge every day with Alorah, as I continually seek to create an environment in which she can learn freely, and so my parenting style has become rather fluid. Initially, it did not come naturally for me to indulge her need for constant praise and instant gratification, but I adapted. I have learned to be transparent about my parenting, probing Alorah to find out what I need to learn about her and her world so I can properly format how I go about giving her the benefit of whatever transferable knowledge I possess about the rest of the world. As teachers, and one of a parent’s many rolls is that of teacher, we must understand that not all of our hard won knowledge is currently relevant. Many parents struggle with this idea—I was half-way through teaching Alorah the “*Bronx Tale* rule” (which states that when you let your date into the passenger seat of your car, the next

date is entirely contingent upon his or her reaching over and unlocking the driver's side door before you get to it), when I realized this excellent social tool was absolutely irrelevant: these days, when you unlock a car's passenger door, the driver's door unlocks automatically. This was hard to swallow. I, as I am sure many of my fellow parents do, find it difficult to accept that many of my life experiences may be of no consequence whatsoever in the life of my child. Also hard to accept is the fact that educating a digital native sometimes involves embracing certain practices that are antithetical to traditional conceptions of parenting—i.e., letting your daughter watch television while she does her homework. At times, this involves embracing certain things over which we as parents cannot exert absolute control—such as whether your child has a Facebook account. Along these lines, I adopted the practice of identifying R-rated movies that are marketed to Alorah's demographic, and that she or her friends may have an interest in seeing, but deal with strong adult themes that would normally preclude my permission to view them. Whenever one of these comes along, I tell Alorah make some popcorn and cue the flick up, adding, "If you're gonna watch this, I'd rather you watch it with me than with your friends." Usually, the dreaded "adult theme" element of the film is overhyped. Usually. But sometimes, as we sit in the dark with the end credits scrolling upward, I'm in shock at what I just watched. More to the point, I'm in shock at what Alorah just watched. Alorah, whom I have devoted my life to protect. Alorah, who, no matter how old or mature she becomes, will always be the little toddler who viewed the world from on top of my shoulders. Alorah, the enigma of quiet contemplation seated next to me. But after the terminal credit, in the safe anonymity of the enveloping darkness, she sometimes asks a single, timid question. Something related to an act of Hitlerian depravity, or about a sexual theme, or about God. It might concern a scene in the movie, or be the result of a long chain of thoughts catalyzed by a scene. Or it may have nothing to do with the film whatsoever. But when I answer openly, honestly, and without judgment, she asks another. And then, despite the impossibly vast divide separating our two generations, I know I'm reaching her.

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Addressing the Needs of Generation 1.5 in the Community College

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As the number of immigrants is increasing rapidly in the US, the number of non-native speakers is also rising in its educational institutions. The statistics show: “In 2000, 11 million out of the 58 million children enrolled in pre-kindergarten through 12th grade in the United States, or 1 in 5, were children of immigrants” (Wright 5). Not only the American public schools but also the higher education institutions of the U.S are filled with immigrants. Nowadays, community colleges are teeming with ELLs (ELLs). Some of them enter college after they graduate from American high schools, while others, such as international students, enroll after they graduate from their home high schools or colleges. The diversity among ELLs makes their needs different from those of US-born, native speakers of English and different from the needs of one another. ELLs vary by race, native language, ethnicity, level of literacy in the first language, amount of English spoken at home, socioeconomic status, native country’s education system, reason for coming to the U.S, and length of time spent in the U.S (Wright 2). Some of the ELLs have had continuous education, while others have had their education disrupted. Some of them came to the U.S voluntarily to pursue the “American dream”, whereas others came against their will. While international students usually walk smoothly on their college path, transfer to four-year universities, and earn bachelor’s degrees, a good number of students who graduate from American high schools drop out of college. Many of these students are those studying at community colleges since it is often the only option for students with limited English proficiency, poor academic achievement, or low scores on standardized tests. Despite the good grades and the high school diplomas that some of these students arrived with, the dropout rate among them, especially the Latino students, tends to rise every year (Wright 11). Research has shown that the diversity mentioned above plays a big role in determining the reason for their academic success or failure. Therefore, administrators, counselors, mainstream content

teachers, and ESL teachers should understand the diverse needs among the ELLs in order to help them to succeed. This paper will focus on a sub-group of these immigrants called Generation 1.5. Generation 1.5 makes up a high percentage of the students who drop out of college. We will discuss some of their academic problems, particularly their writing issues as well as their socio-cultural and self-identity issues.

Generation 1.5 students are given this label because they fit into neither 1st nor 2nd generation immigrants. In his research, Mark Roberge shows the differences among three groups of immigrants most teachers have in their classrooms: the 1st generation, the 2nd generation, and generation 1.5. Mark explains that the 1st generation students are predominantly adult students who moved to the U.S after having achieved adequate academic literacy in their country. They were born in a foreign country where they learned how to read and write their first language. The 2nd generation students are U.S- born students but children of immigrants. They enroll in the U.S schools, where they learn English, and English becomes their dominant language. Generation 1.5 falls in the middle (2-3). Generation 1.5 students are those who move to the U.S in their early teens or even at younger ages. Some of them had the chance to be partially educated in their countries while other did not. Many of those who were partially educated did not have the chance to develop the cognitive skills or learn the content knowledge needed for academic success. Although some of them were born in the U.S, they are not considered American native speakers because they grow up speaking their parents' native language at home and in the community. The majority of generation 1.5 students are bicultural but not always bilingual. They may speak another language in addition to English but many do not know how to read or to write it. Most generation 1.5 students lack the literacy in their first language since they did not have the chance to develop the formal oral and written system of that language. Although English may be the only language in which they have academic preparation, some do not feel that English is their dominant language because they grew up talking another language at home and in their community. Being raised in the U.S, most Generation 1.5 students are familiar with the American pop-culture. They dress, act, and speak like Americans. They spend most of their school time with Americans and hate to be labeled

“ESL students” even though many of them have gone through ESL classes to improve their writing (Harklau 1).

Generation 1.5 ELLs enter college while they are still in the process of learning English. Although these students may speak as fluently as native speakers, their writing and reading skills are noticeably weaker. The majority of them are placed in mainstream college composition courses, even though their writing exhibits features compatible with English as Second Language writing. The reason why these students are put in the mainstream classes is that they have graduated from high schools with adequate grades, they have passed the placement standardized tests such as SAT or ACT, and they exhibit American characteristics in the way they dress and speak (Schwartz 40). The research has shown that most of the U.S institutions of higher education, especially community colleges have a significant number of these students:

“In 2006, the total ELL student enrollment was 5,074,572 out of a total student population of 49,324,849; thus nationally, a little over 10% of students in that year were ELL’s. However, the growth rate of ELL students far surpasses the growth rate of the total student population” (Wright 6).

Out of these immigrants, generation 1.5 students stand out. They, as any other ELLs, finish their American elementary, middle, and high school with passing grades and diplomas; they feel good about their academic achievement, yet when it comes to college, generation 1.5 students struggle; they often fail or drop their classes; some of them lose the courage to finish their academic journey once they realize their deficiencies in academic language.

Determining where to place these students based on their writing is a major challenge in American community colleges today. In spite of the fact that many of these students had taken mainstream courses in their high schools, finished ESL classes there, and speak English fluently, they need significant help in their writing. In many cases, neither English as a Second Language composition classes nor the regular freshmen developmental composition writing courses are a good fit for generation 1.5 students because they are simply a new generation with unique needs (Harklau 2). In the book *Generation 1.5 in College Composition*, Holten admitted the

confusion she and her colleague faced when they had to determine where to place freshmen generation 1.5's:

“The grammar and mechanical errors in their writing suggested the need for ESL instruction, which focuses on both academic writing and grammar issues such as verb form and tense, articles, and relative clauses. Their bilingualism and their cultural and educational backgrounds argued for placement in college composition, which tend to limit grammar instruction to stylistic issues and a small set of grammatical errors such as comma splices and fragments. For these reasons neither choice was satisfactory”(171).

ESL course curricula are primarily designed to meet the needs of traditional ESL students who had little or no exposure to English, or for international students who are literate in their L1 and have had a good amount of exposure to English language composition in their home country. On the other hand, placing generation 1.5 students in regular freshmen composition writing classes presents a big challenge for both the teachers and the students. Mainstream teachers do not expect to have any students other than native speaking students in their classes. They take for granted that if students are still in the process of learning English, they should be placed into ESL classes not into the mainstream writing composition classes. Most of these teachers cannot recognize the differences among traditional ESL students, international students, and generation 1.5. When generation 1.5 students take a regular freshmen composition writing class, the teacher cannot distinguish them from other native speaking students since they speak as clearly and fluently as native speakers do; the teacher does not see any problem with these students until they hand in the first writing assignment. At that time, the teacher, who has little or no training in identifying these students, feels handicapped. Reid, in the book *Grammar in the Composition Classroom*, provided a writing sample written by a freshman Vietnamese student in response to an article about students having jobs while in college. The student wrote:

“The main ideas of the article is saying that because of working while going to school reduces the G.P.A of students. Some of the reason while students gettings jobs is because of advertisement and personal luxuries that the students needed during School” (4).

Teachers of the regular freshmen composition writing classes lack the experience for working with students like generation 1.5’s since, as seen in the sample, their writing exhibits characteristics of both “second language and developmental writers”. This piece of writing presented above has incorrect verb endings and plurals as well as run-on sentences. Teachers may not be trained to work with these kinds of errors; therefore, they grade the student low and return the papers to the students for revision. Even though the teachers mark and correct the grammatical mistakes on the paper, all the corrections are useless since the grammatical rules for these errors are not provided. Generation 1.5 students become lost. They have just entered college and are extremely challenged in their writing class. Moreover, they have nowhere to go to seek help, which drains all the motivation students usually feel when stepping out of high school and entering college.

Valdes emphasizes the importance of distinguishing between two nonnative groups: the “incipient bilinguals” and the “functional bilinguals”. Both of the groups have been exposed to English, but the functional bilinguals learned the nonstandard forms. In spite of their oral fluency, the functional group’s writing exhibits “fossilized” forms, for instance, missing -ed- endings in past participles or the -s- endings in the third person agreement. These forms are different from the grammatical mistakes incipient bilinguals have, such as, verb tenses. Therefore, the functional group does not need ESL classes like the incipient group, but rather they need classes where they can receive instruction to discard these fossilized forms (Harklau, 2).

This lack of understanding of this issue starts with the fact that most teachers, administrators, and counselors do not know what the difference is between social and academic language. They think that students who exhibit fluent social English are proficient in the language, which creates a challenge in placing these students in the proper courses. In his research, Jim

Cummins introduces two significant terms, Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP), to differentiate between social language and academic language. The distinction was intended to draw awareness to extremely different time periods required by immigrant students to acquire conversational fluency in their second language as compared to grade-appropriate academic proficiency in that language. Cummins explains that the BICS refers to “the ‘surface’ skills of listening and speaking” that most immigrants acquire quickly by interacting with native speakers. Even though students have developed conversational fluency needed for everyday life, this does not mean that they are ready to cope with the academic language used in school textbooks and classrooms. Cummins explains that to be successful in school, immigrant students need to develop more complex, conceptual language proficiency; they need to develop what Cummins called Cognitive Academic Language Proficiency. CALP is the students’ ability to handle the oral and the written language used in school textbooks (Hartman, 100). Cummins also explains that it takes two years to develop BICS, whereas it takes five to seven years to develop CALP (Schwartz 47). The majority of Generation 1.5 students master the basic interpersonal communication skills, yet lack the cognitive academic language proficiency. These immigrants are ear learners who have learned English mostly by listening to it, not by reading and understanding its rules. As emphasized in the book *Generation 1.5 meets college composition*, “They have learned most of their English intuitively through exposure rather than through explicit instruction” (Harklau 8). Generation 1.5 students have “picked up” or acquired the language through informal oral interaction with friends and siblings, by watching T.V., by talking to classmates, or by listening to American music or American radio. “As oral/aural dominant, they may not notice non-salient grammatical features, and thus these features never become part of their language repertoire. (They may use incorrect verb forms, word forms, confuse count/non count noun, plurals, articles, prepositions)” (“Notes on Generation 1.5”). Generation 1.5 students do not understand the levels of formality in English writing. Therefore, they write as they speak and mix informal idioms into their writing. For example, “Young **folks** usually get a better **kick out of** trips than older people” (Reid 5).

Generation 1.5 students feel comfortable speaking and listening to English; they seem to be fluent but not accurate; they have excellent oral communication skills, which unfortunately does not make the process of reading and writing any easier for them. In the article *Generation 1.5 students and college writing* Harklau explains: “Academic writing requires familiarity with complex linguistic structures and rhetorical styles that are not typically used in everyday social interactions” (Harklau 1). Generation 1.5 ELLs have not developed the skills needed for academic reading and writing; therefore, they have a difficult time approaching school textbooks. In the book “Grammar in the Composition Classroom”, Reid touched on generation 1.5 reading and writing problems: “Their reading skills may be hampered by limited understanding of the structures of the English language, and or a lack of literacy, and or the lack of reading experience; their writing displays the conversational, phonic qualities of their “ear – based” language learning” (Reid 5).

Generation 1.5 students did not learn English through their eyes; in other words, they do not know the language rules. Astonishingly, most of their grammar errors do not occur from their first language transference but from the way they learned English “by ear” (Reid 5). They have learned a non–standard form of English which they constantly use when writing assignments. Their writing problems are not only visible in their incorrect use of grammar or their faulty sentence structure but also in their weak vocabulary. They sometimes write one word instead of the other because both of the words sound the same. For example, they may confuse the word “there” with “their”. Some of them think that two words have the same meaning because these two words for them sound the same “During a conference, this student indicated that she had never noticed the word *why*. Instead, she thought that *why* and *while* were the same word (while) with different meanings–because the / in while not pronounced” (Reid 5).

There are all kinds of issues that have little to do with their intellectual skills; however, they have a significant effect on generation 1.5’s success. Many researchers have shown that language is very closely connected to self identity (Goldschmidt 13). Generation 1.5 students speak two languages, but they may be proficient in neither one. Since they use English

everywhere but home, they may become English dominant. However, not having a complete acquisition of the written forms of English, they may not identify themselves completely with English. Some students use only English outside their homes which often causes them to gradually lose their home language; some may not even be able to communicate fully with their family members, which creates a breakdown in relationships in the family (Singhal 2). Their self identities and their cultural affiliation are largely influenced by the length of time spent in their native country and the academic proficiency they developed in their first language. In most cases, this generation feels part of neither culture; therefore, they are confused about their self identities. At home they are immersed in their first language, “the conversational language not the academic one”. They are made to feel that they should belong to their parents’ culture and made to feel uncomfortable if they try to be Americanized. On the other hand, in school, they feel that it is hard to fit completely into the culture of the school without being Americanized. In addition, “They do not feel connected in any way to the campus community nor do they appear to feel confident in navigating their way through the system of higher education –asking questions, looking for help or being advocates for themselves within the system” (Goldschmidt 11). As a result, many of them feel that they are not accepted by either group completely, which in turn, makes it difficult for them to develop a high level of academic proficiency in either language. Generation 1.5 students are not fully proficient in either their L1 or their L2-English. Consequently, they may become “bi-illiterate” or dual non-native speakers (Singhal 2). More importantly, many of them lose their self identity, which has a great effect on their success in school.

Due the numerous challenges that face generation 1.5 and the increasing numbers of these students in colleges and universities across the country, the need for identifying them and addressing their needs can no longer be ignored. ELL’s, including Generation 1.5, are fast becoming the majority of U.S students; “Between 1995 and 2006, the total pre K-12 student growth rate was less than 4%, whereas the ELL student growth exceeded 57 %”(Wright 6). As our K to 12 population increases, so does the number of ELL’s entering college. While international students finish their education and return to their countries, generation 1.5

students are staying in this country. They are the generation of our future; therefore, educators must be made aware of the existence of this fast growing group and the implications for instruction so they can address more effectively students' academic as well as socio-cultural needs.

The counselors, ESL staff, and others responsible for testing and placement should be especially cognizant of the Generation 1.5 group and give special attention to accurate placement not only in writing classes but in content courses as well. This is especially important in the students' first semester. In addition to the standardized reading, listening, and writing computer test, each student should also be required to do a writing sample. A trained ESOL teacher and college writing faculty member should read this sample to determine which class would best help the students. The American colleges and universities no longer have only two distinctions between writing students, mainstream and ESL, which increases the need for designing writing courses that address the needs of the generation 1.5 population. These courses might be ESL classes, developmental classes, or something in between, depending on the resources available. What is most important is the training of the instructors about these students and their needs. Administrators, mentors, and teachers should have a full understanding of the students' background and prior academic literacy experience. Many students of the generation 1.5 had limited exposure to academic writing because most of them go to lower track classes in high schools after being exited from the ESL program. Harklau explains: "In low-track writing, instruction focuses almost exclusively on substitution drills, dictation, short answer, or writing form models" (1-2). Most of the writing assignments these students do in the high schools are cognitively undemanding. They spend their high school writing about life experiences, personal opinions, or describing activities; most teachers have never showed them how to write from a source; these students have never written a research paper, which explains the big challenge they face as they struggle to meet the requirements of college courses.

All teachers should understand that every teacher is a language teacher; therefore, they should make students aware of the fact that oral language is different from written language. Teachers

should provide models for assignments. They should model reading texts for comprehension when they discover their students are having difficulties approaching the text.

The socio-cultural issue related to the adjustment to the new country is another factor teachers should consider when working with generation 1.5 students. The success of these students is largely influenced by the way schools and teachers respect and treat their home culture and their home language. Many studies have proved that cultural differences between the home culture and the school culture affect the academic success of these students. It is imperative for teachers to have a complete picture of the background of their ELL's so that they can help them "to resolve the conflicts between what they encounter at home, in school, and in the dominant culture" while forming their identities (Wright 15). We should provide an atmosphere that praises their bilingualism; generation 1.5 students should be proud of their ability to speak two languages. "Spanish for Spanish Speakers" or "Arabic or Arabic Speakers" courses should be offered in community colleges; placing generation 1.5 students in this kind of courses helps them to learn the written system of their languages and helps them to feel more connected to their home culture. Being academically proficient in their first language also helps students to improve their English language; Cummins states in his theory about second language acquisition that cognitive and literacy skills established in the first language will transfer across languages (Schwartz 46).

To conclude, the number of 1.5 students is increasing rapidly especially in community colleges; no matter how small a college is, it definitely has or will have a good number of generation 1.5 students.; nowadays, researchers are working on dividing the generation 1.5 group into sub-groups so that they can address them more effectively . Generation 1.5 students are diverse in their needs, their backgrounds, and their literacy skills in the first and the second language; therefore, they no longer can fit under one umbrella, called generation 1.5.

Not only do we need to start looking carefully at their problems once they enter college, but also we should start searching for the reason why they were allowed to get to college when they are clearly not ready for it. Professional development sessions should be held in schools

and colleges to raise the awareness for teachers, counselors, and administrators about this group. As mentioned before and according to Cummins, it takes five to seven years for students to develop the Cognitive Academic language proficiency needed to cope with the academic text books; the majority of the ESL programs in the American high schools are two -year programs, which is enough only to develop what we call (BICS), but not enough to develop (CALP). The American high schools should make their ESL program longer so that generation 1.5 and other ESL students can be well prepared to enter colleges and universities. More importantly, they should make sure the ESL classes are cognitively and academically demanding and taught by highly qualified and experienced ESL professionals. In addition, when these students are exited from the ESL program they should be placed in classes with instructors who are trained to continue their cognitive and academic language development. If the students after leaving high school still have not reached the high levels of language proficiency, they should be advised to attend colleges or community colleges that offer ESL classes where their academic language development continues. Community colleges are the ones who are equipped to provide such a service. This population needs to be effectively placed in ESL programs along with regular classes that they are capable of handling.

It is hard enough to develop literacy in one's first language, so it is easy to understand how difficult it is for generation 1.5 students to develop this literacy fully when they were immersed most of their lives with the non standard forms of English. By providing appropriate research-based instruction and by understanding generation 1.5 students' strengths and their diverse backgrounds, college instructors can teach these generation1.5 students so that they can approach the language differently and become involved in the college community.

Undoubtedly, more research is needed to address the needs of this fast growing group. In the meantime, ESL professionals should begin to work closely with the composition teachers, counselors, and administrators in their institutions and in the high schools to ensure the academic success of Generation 1.5 students..

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The Hurrian Myth of Kumarbi and Its Influences in Hesiod's Theogony

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The Myth of Kumarbi is a Hurrian story that narrates the fighting among the first generation of gods to succeed in power. It has been considered a theogony as it explains the creation of certain divinities from the blood of an emasculated god and the birth of a deity from a skull. The myth has come to us written in Hurrian language in cuneiform characters on clay tablets found in Turkey. Kumarbi was one of the main gods in the Hurrian theological system, and its myth spread all over Mesopotamia and reached ancient Greece. The great poet Hesiod learned about *The Myth of Kumarbi* and took it as a blueprint for his celebrated work *Theogony*, where he also describes the origin of primordial Greek gods mirroring the events in the Near Eastern myth. The Hurrians, though somehow lost in oblivion, stand out with a magnificent opus that attests to their literary accomplishments.

At the banks of the Euphrates and Tigris Rivers, the earliest civilizations in the world flourished, Sumerian, Assyrian, Hittite, and Babylonian are well known and have been extensively studied. The Hurrian culture, however, has somehow been ignored in spite of its accomplishments in literature and music, its proficiency in warfare, and its profuse religious manifestations. The Hurrians, a non-Semitic, non Indo-European ethnic group whose original homeland has not been identified, entered Mesopotamia from the Armenian plateau by the third millennium BCE and gradually spread between the Eastern Taurus and the Zagros Mountains (Bromiley 784). As early as the end of the third century, the Hurrians had built the city of Urkesh, Syria, which became the major religious and political center where the temple of the god Kumarbi was built (Buccellati and Buccellati 93). Though never numerous, the Hurrians would eventually become the largest percentage in the populations of Chagar Bazar and Ugarit in Syria, and Alalakh in Turkey. By 1500 BCE, the Hurrians and the Indo Aryans created and ruled the powerful Kingdom of Mitanni. Hurrian culture and religion blended with those of the

peoples who inhabited Central Anatolia, Upper Mesopotamia, and Syria, all of them areas of Hurrian influence and scattered settlement (Bromiley 785).

The Hurrian language is unique and distinct from any language living or extinct of the Mesopotamian or Anatolian regions (Barnett 100). When the Hurrians reached Sumer, a process of acculturation took place. The Hurrians largely immersed themselves in the Sumerian culture and adopted the cuneiform writing system already in use by the latter. The first texts believed to be Hurrian went back to the Akkadian period, 2230-2090 BCE (Wegner 1999). The adoption of the writing system was also accompanied by the embracement of Sumerian deities that would mingle with Hurrian gods and populate Hurrian's oral and written traditions.

Written in Hurrian with cuneiform characters, *The Myth of Kumarbi* was found in the Royal Library of Hittite Emperors at Hattuša, the modern Turkish village of Boğazköy. The myth, recorded between 1400 and 1200 BCE, was found with a Hittite translation, but the names of the main characters reveal that the story is Hurrian (H. G. Guterbock 123). The translation of the tablets has represented a challenge for scholars as the texts present irremediable lacunas due to their fragmented state. According to Guterbock, pioneering Hittitologist who has extensively studied this myth, *The Kumarbi Cycle* is divided in three parts: *Theogony* or *The Struggle for the Kingship in Heaven* (its original name is lost in the damaged correspondent tablet), *The Song of Ullikummi*, and *The Song of Lamma* (H.G. Guterbock 124). Other scholars, though, supported on new findings, would add later *The Song of Hedammu* and *The Song of Silver* (Hoffner 40). Yet other academics have suggested that there is no evidence that this myth can actually be considered as a cycle as each of the songs stands on its own (West 104). Even though each of the myths can be independently read and understood from the others, the pieces correlate to each other.

The present research is based on the first piece of this saga, *Theogony* or *The Struggle for the Kingship in Heaven*, which Hesiod mirrored in *Theogony*. A summary of the story made from the translations of *The Kumarbi Myth* by Guterbock and Hoffner, opens with the depiction of the primeval god Alalu as the king in heaven who is overthrown by his cupbearer Anu. Anu,

in turn, was deposed by his cupbearer, the god Kumarbi. In the fight, Kumarbi castrates Anu by biting him. Anu announces that Kumarbi has just become impregnated with Anu's offspring. After hearing the threat, Kumarbi spits Anu's 'manhood' and in distress, retreats to the city of Nippur (Güterbock 124, 125, Hoffner 42-46).

The first events described in *The Myth of Kumarbi* have obvious parallels in Hesiod's *Theogony*. One of the main themes in both myths is the fight for kingship between primeval gods deposed by new powerful divinities. *Theogony* portrays the creation of three generations of gods who descend from Gaia or Earth. Gaia bore Heaven or Ouranos, who would become his partner, and from their union the Titans and other gods were born. Ouranos hated his own children and hid them inside Gaia's body. Gaia, full of anger, plans revenge and asks her children to avenge Ouranos' evilness. From all her children, only Kronos undertakes the mission and following her mother's plot, cuts off his father's genitals with a jagged sickle and throws them away (Davis, Harrison and David 263, 264, 265).

In the Hurrian myth, after Kumarbi castrated Anu, the earth is impregnated with Anu's genitals from which the Tigris River and the god [Tašmišu](#) were born (Barnett 100, Güterbock 125). Even though Kumarbi spat Anu's genitals, he still bore the Weather-god Tešub. Kumarbi wanted to eat the newborn, but a basalt stone is given to him instead. Ready to eat the stone, Kumarbi injures his teeth and mouth and throws the stone away (Barnett 100). In Hesiod's *Theogony*, after the emasculation of Ouranos, the drops of his blood fecundated the earth and the Furies, the Giants, and the ash-tree Nymphs were born while Aphrodite emerged from the sea, formed by the genitals of his father. Having overthrown Ouranos, Kronos marries his sister Rhea with whom he creates the first generation of Olympian gods. Kronos anticipates to be removed from power and in order to avoid it, eats all his offspring. When Zeus is born, Rhea gives Kronos a stone instead of her son, which Kronos readily swallows (Davis, Harrison and David 265, 267). In both myths, the blood and the sex organs of the emasculated reach the earth who is the powerful entity able to generate life once the seed has been sown. *Theogony* follows the *Myth of Kumarbi's* pattern: a god overthrown, emasculation, the birth of other

deities from the blood or remains of the genitals of the ousted, and a stone given in place of the newborn god in order to protect him from his father's greed of power.

The next part of *The Myth of Kumarbi* contains one of the most striking accounts reflected later in the Greek mythology. To reconstruct this part of the Hurrian text has been extremely challenging for scholars due to the eroded state of the clay tablets. However, it is mentioned that a skull is split and the god KA.ZAL is released. The translation reads “...He split him like as stone. He left him, namely, Kumarbi. The divine KA.ZAL, the valiant king, came up out of his skull.” These lines might indicate that the god KA.ZAL was born from Kumarbi's skull, which someone cracked in order to release KA.ZAL and later, the skull was mended “...They closed up (?) his skull like/as (they would mend a torn) garment...” (Hoffner 43, 44).

In *Theogony*, Zeus swallows his wife Metis in order to prevent the birth of a child who would remove him from power. However, Metis was already pregnant with Athena, who grew up inside her mother and Zeus “gave her birth by the way of his head on the banks of the river Triton...” (Hesiod, *Theogony*, 939-941). It is not in Hesiod's *Theogony* that Zeus' skull is opened to release Athena. Pindar would later add that Hephaestus split the head of Zeus with his axe freeing Athena. “...By the skills of Hephaestus/ with the stroke of a bronze-forged axe/ Athena sprang forth on the top of her father's head/ and shouted a prodigious battle cry...” (Pindar, *Olympian Ode 7*, 35-38). Even though Hesiod did not mention the breaking of Zeus' skull to release Athena, it is apparent that the Hurrian myth inspired one of the best-known accounts in Greek mythology whose origin is from the Near East.

The Myth of Kumarbi reaches its end soon after the episode of the birth of the god KA.ZAL. A provisional king, whose name is Lamma, is appointed by Kumarbi and Ea, the Mesopotamian god of wisdom. *The Song of Ullikummi* contains the next part of *The Kumarbi Cycle* and it deals with the fight of Kumarbi against the weather god Tešub to regain his kingship (Güterbock 125). As legends and myths often reflect the social practices of a particular culture, the myth of Kumarbi might be mirroring an account that could contain more facts than the ones that have been ascribed to it.

The legend of Sargon, King of Akkad, tells us that in his younger years, Sargon served as a cupbearer of the King of Kish. Later, though, the King of Kish was deposed by Sargon, who became the new king. Because of his ambition and military prowess, Sargon became Lord of Summer, after successfully conquering the cities of Uruk, Ur, Lagash, and Umma and had also the title of King of Akkad, as he established the capital there (Kinshlansky, Geary and O'Brien 17). Hittitologist and director of the Oriental Institute of the University of Chicago Theo van den Hout, in an e mail to the author, states the importance of the title of cupbearer, "Eventhough the term cupbearer might, at a first glance, seem irrelevant, in real life cupbearers were part of the most intimate circle of a king, and the position entailed much more than being just literally a cupbearer" (Van Den Hout). It is relevant to remark that the main theme of the myth of Kumarbi, the fight for the throne between a cupbearer and his master, might be reflecting the legend of Sargon, King of Akkad.

Regarding the literary style of *The Kumarbi Myth*, it already contains early examples of epithets. The translation of the myth done by Guterbok and Hoffner slightly differs in the choice of the adjectives that qualifies the gods. However, in both translations the scholars agreed on the use of adjectives to describe characteristics of the gods. Therefore, it is possible to identify attempts of the use of epithets. Anu is called "the foremost of the gods," Kumarbi is described as "the wise king," or "mighty Kumarbi," Tešub is called "the noble Storm God," the Tigris River is "the irresistible Aranzah." Likewise, in *Theogony*, Hesiod made up the celebrated epithets for which the Greek Gods are identified: "croked-scheming Kronos," "proud-soul Arges," "golden-slippered Hera," "strong-willed Strife," "Klymene, the lovely-ankled nymph" (Guterbok 124, Hoffner 42, 43, Davis, Harrison and David, 263-268)

In the translations of *The Myth of Kumarbi* mentioned above, it is possible to recognize the use of similes. When Kumarbi rebelled against Anu, Anu "as a bird, flew toward heaven." When Kumarbi ate Anu's genitals, "his (Anu's) manhood united with Kumarbi's insides like bronze." Kumarbi threatens to destroy Tešub by saying "I will smash him like a brittle reed." The cracked skull (probably Kumarbi's) is put back together "they closed up (?) his skull like/as

they would mend a torn garment" (Guterbok 124, Hoffner 42, 43). As early as the Kumarbi myth is, it already shows examples of literary devices.

The way in which *The Myth of Kumarbi* reached Greece has been traced in different ways. The poet was born in Ascra, a small village of Boeotia, but Hesiod's father was from the city of Cuma or Cyma, in Aeolia, Asia Minor (Smith 440). Because of his birthplace, Hesiod's father might have been acquainted with the myth and told it to his son. Alternatively, the Kumarbi saga might have reached Phoenicia in the time of the Hittite Empire. The Hittites arrived as far as Syria; therefore, the myth of Kumarbi (now adopted by the Hittites) was taken with the Hittites when they settled in Syria. The Phoenicians, in turn, assimilated this myth and transferred it to the Greeks (Guterbock 133). It is widely accepted that the Phoenicians acted like a bridge transmitting Near Eastern traditions into Greece, but the Greeks also borrowed from Luwian and Hurrian speakers that had settled in Cyprus, Cilicia, and North Syria, all coastal areas where the Greeks had many opportunities of cultural exchange (West 589).

The Myth of Kumarbi combines Sumerian, Hurrian, and Hittite mythologies, which is seen in the blending of Mesopotamian and Hurrian deities (Barnett 100). While the main character of the myth, Kumarbi, is a pure Hurrian god, Alalu and Anu are Mesopotamian divinities. Tešub is the supreme Storm God in the Hurrian theological system to which his brother, [Tašmišu](#), also belongs. Lamma is a male Hurrian divinity and Ea is the Mesopotamian goddess of wisdom (Speiser 99).

It is essential to acknowledge the impact of the first civilizations of the Near East in the Hellenic world in order to understand how the Near Eastern religious beliefs shaped Greek mythology and literature, which in turn, would also influence the Romans and eventually, the entire world. As Franz Dornseiff stated, "The days of an exclusive 'classical' scholarship are over. To write about Greek Literature without knowing of the West Asiatic has become as impossible as studying Roman Literature without knowledge of the Greek" (qtd. by West xi).

The Myth of Kumarbi is one of the many examples that attest to the influence of the Near East in Ancient Greece. The correspondences between *The Myth of Kumarbi* with

Theogony, question the essence of the origin of myths for centuries attributed exclusively to the Greeks. It becomes evident now that *The Kumarbi Cycle* made its way to the shores of the Aegean Sea and inspired one of the most celebrated writers of Ancient Greece, who did not copy the myth but adapted it to the Greek theological beliefs. The complexity and originality of the *Kumarbi Cycle* and its written records, testify of the literary accomplishments of one of the first civilizations in the world, the Hurrian.

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The Laplace Transform

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The topic of Differential Equations is an all-encompassing study of equations involving some unknown function $y(t)$ and one or more of its derivatives. Within this field of study, there is one method, the Laplace Transform, which employs an algebraic approach to solving a differential equation. Hence, it is not necessary to implement calculus techniques. This method allows for the simplification of complex equations along with many other advantages. Laplace Transforms will be discussed in further detail together with an analysis of their applications, derivations and domain restrictions.

The idea behind a Laplace Transform is to take a function in terms of one variable, often t , and take an integral approach to transform it into a new function in terms of s . The equation is rearranged and resolved in terms of the initial variable. The Laplace Transform of the function $f(t)$ is, in a sense, comparable to the exponential function e^{st} , assuming that $f(t)$ has at most, exponential growth. The integral $\int_0^{\infty} f(t)e^{-st} dt$ will converge and the solution will represent the difference between $f(t)$ and e^{st} . This is apparent when considering the function resulting from the product of the two functions $f(t)$ and e^{-st} . If $f(t)$ is a very small function, then it has numerical values which are much smaller at each t value. Consequently, the product of the two functions will approach zero much faster, and the integral will converge to a much smaller number. If $f(t)$ is close to e^{st} , the product will approach zero much slower and therefore, the integral will converge much slower. The result is a larger integral. If $f(t) = e^{st}$, the result will be an integral of one, and will therefore diverge. Hence, $\mathcal{L}[e^{st}]$ is an undefined transform. (Blanchard 559-626)

As the integral definition of the transform illustrates, there is a domain restriction built into the definition that extends beyond the restrictions that we will analyze later in this paper.

The limits of integration are from zero to infinity, which restricts the Laplace Transform to only accommodate positive t-values. Since most differential equations are used to model electric circuits and population growths, only future time values are pertinent. Hence, the domain restriction does not cause a problem in most situations. In the situations where the domain restrictions do create problems, the Bilateral Laplace transform is used. By definition, the Bilateral Laplace Transform $\int_{-\infty}^{\infty} e^{-st} da(t)$ where $a(t) = \int f(t)$ yields the definition $\int_{-\infty}^{\infty} f(t)e^{-st} dt$. We can obtain the Laplace transform of functions without domain restrictions, but the complexity of the transform can greatly increase. For this reason, most applications use the more restricted transform (Vernon 237-238). Bilateral Laplace Transforms require a very in-depth analysis that will not be covered in this paper due to size limitations. However, we will briefly refer to these Bilateral Transforms to explain the approach taken for a more thorough analysis.

To show the basics of the method, we can start by using an equation that can be solved using the separation of variables method.

$$\frac{dy}{dt} - e^{2t} = 0, \quad y(0) = 0$$

Using separation of variables we can solve for y in terms of t:

$$\frac{dy}{dt} = e^{2t} \rightarrow dy = e^{2t} dt \rightarrow \int dy = \int e^{2t} dt \rightarrow y = \frac{1}{2} e^{2t} + c$$

Using the initial condition we find:

$$0 = \frac{1}{2} e^{2(0)} + c \rightarrow 0 = \frac{1}{2} + c \rightarrow c = -\frac{1}{2}$$

$$y = \frac{1}{2} e^{2t} - \frac{1}{2} \quad (\text{Blanchard 568-574})$$

Using separation of variables, we have found the solution of the differential equation. If we now use the Laplace Transform method, we should end up with the same result. Before we

can solve this equation, we need to determine the Laplace transform of the equation. To accomplish this task, there will be many ideas that we need to develop.

Since, by definition, we use the exponential function e^{st} to obtain the transform, we will begin with the function $f(t) = e^{at}$, $a \in \mathfrak{R}$

$$\int_0^{\infty} e^{at} e^{-st} dt \rightarrow \int_0^{\infty} e^{-(s-a)t} dt \rightarrow \lim_{b \rightarrow \infty} \left. \frac{e^{-(s-a)t}}{-(s-a)} \right|_0^b \rightarrow \lim_{b \rightarrow \infty} \frac{e^{-(s-a)b}}{-(s-a)} - \left[\frac{e^0}{-(s-a)} \right]$$

As long as $(s > a)$, $\lim_{b \rightarrow \infty} \frac{e^{-(s-a)b}}{-(s-a)}$ will converge to zero and the integral will converge to $\frac{1}{s-a}$. If $s = a$, the limit of the numerator will converge to one but the denominator will be zero resulting in an undefined function.

Therefore, the Laplace Transform $Y(s)$ of $y(t) = e^{at}$ is $\frac{1}{s-a}$ for all values of s greater than a , normally denoted by $\mathcal{L}[e^{at}] = \frac{1}{s-a}$, $s > a$.

The transform of $\frac{dy}{dt}$ is more complex than the transform of e^{at} and requires an integration method beyond that of basic power rules and the u-substitution. The best approach is to use a method called integration by parts. This method is derived from the product rule. Once the terms are re-arranged appropriately, we are able to solve the integral: $\int f(x)g(x)dx$

We will begin by letting $G(x)$ be any anti-derivative of $g(x)$ i.e. $G'(x) = g(x)$. Thus,

$$\frac{d}{dx}[f(x)G(x)] = f(x)G'(x) + f'(x)G(x) = f(x)g(x) + f'(x)G(x)$$

This implies that $f(x)G(x)$ is an anti derivative of the right side. Namely,

$$\int [f(x)g(x) + f'(x)G(x)] dx = f(x)G(x)$$

Using the linear properties of integration, which originate from the linear properties of limits, we find that:

$$\int f(x)g(x)dx + \int f'(x)G(x)dx = f(x)G(x)$$

We can now move $\int f'(x)G(x)dx$ to the other side of the equation which yields:

$$\int f(x)g(x) = f(x)G(x) - \int f'(x)G(x)dx$$

We can use a substitution which makes this formula easier to work with.

$$u = f(x) \quad du = f'(x) \quad v = G(x) \quad dv = g(x)$$

$$\therefore \int u dv = uv - \int v du \text{ (Anton 491-492)}$$

Now that we have a method for solving a more complicated integral we can set up the Laplace Transform for $\frac{dy}{dt}$.

$$\int_0^{\infty} \frac{dy}{dt} e^{-st} dt, \text{ let } u = e^{-st} \text{ and } dv = \frac{dy}{dt} dt \quad \therefore du = -se^{-st} dt \text{ and } v = y(t)$$

We now find:

$$\mathcal{L} \left[\frac{dy}{dt} \right] = \int_0^{\infty} \frac{dy}{dt} e^{-st} dt = \lim_{b \rightarrow \infty} \left[y(t)e^{-st} \Big|_0^b \right] + s \int y(t)e^{-st} dt$$

Using the restriction that $y(t)$ can have at most exponential growth, we find that the limit will converge to zero and the remaining term will be the initial condition $y(0)$. The remaining integral is then recognized as the definition of the Laplace Transform of a function. Therefore, the final transform is:

$$\mathcal{L} \left[\frac{dy}{dt} \right] = -y(0) + s\mathcal{L}[y] \quad \text{where } s > 0$$

Note that there is a limitation to this transform. Namely, for all transforms of $\frac{dy}{dt}$, the initial condition must be $y(0)$ and no other initial condition will work. Therefore, the function at t -values other than 0 do not provide any information when applying the Laplace Transform method.

For the final step, we must look at the transform of zero. Although it might seem redundant to show the transform of zero is zero, all possibilities must be considered. We can set up the integral transform with the function $y(t) = 0$.

$$\mathcal{L}[0] = \int_0^{\infty} 0e^{-st} dt = \int_0^{\infty} 0 = 0$$

Clearly this integral converges and is zero because there is no area beneath the line $y = 0$. It is now possible to state that the Laplace Transform of zero is zero.

Now that all of the transforms required to solve our problem have been derived, we can study some of the characteristics of the Laplace Transform method that make it easy to work with. We would like to determine if the Laplace operator is a linear operator. This can be shown by referring to the definition of the transform.

$$\mathcal{L}[f + g] = \int_0^{\infty} [f(t) + g(t)]e^{-st} dt = \int_0^{\infty} f(t)e^{-st} dt + \int_0^{\infty} g(t)e^{-st} dt$$

$$\mathcal{L}[f + g] = \mathcal{L}[f] + \mathcal{L}[g]$$

(Blanchard 560-620)

The linear properties of integration make it possible to show that the Laplace operator is also linear, since it represents the solution of a general integral. This also allows for the property:

$$\mathcal{L}[cf] = \int_0^{\infty} cf(t)e^{-st} dt = c \int_0^{\infty} f(t)e^{-st} dt = c\mathcal{L}[f]$$

(Blanchard 560-620)

Using all of these properties and formulas, it is now possible to find the transform of the equation we started with.

$$\frac{dy}{dt} - e^{2t} = 0, \quad y(0) = 0$$

$$\mathcal{L}\left[\frac{dy}{dt} - e^{2t}\right] = \mathcal{L}[0]$$

Using the linear properties we find that:

$$\mathcal{L}\left[\frac{dy}{dt}\right] - [\mathcal{L} e^{2t}] = \mathcal{L}[0]$$

Applying what was found for the Transforms and using $a = 2$:

$$s \mathcal{L}[y] - y(0) - \frac{1}{s-2} = 0$$

$$s \mathcal{L}[y] = \frac{1}{s-2}$$

$$\mathcal{L}[y] = \frac{1}{s(s-2)}$$

With the Laplace Transform determined and solved in terms of $\mathcal{L}[y]$, the equation now needs to be solved in terms of t . We need an inverse operator to accomplish this task. Due to the uniqueness of the Laplace Transform, each function has one unique transform and therefore, the existence of an inverse operator is evident. The inverse is found by matching what we find for a transform with the function that was used to derive that transform and working backwards.

$$\text{If: } \mathcal{L}[e^{at}] = \frac{1}{s-a}$$

$$\text{Then: } \mathcal{L}^{-1}\left[\frac{1}{s-a}\right] = e^{at}$$

Using this, the original equation can now be solved in terms of t :

$$\mathcal{L}^{-1}\mathcal{L}[y] = \mathcal{L}^{-1}\left[\frac{1}{s(s-2)}\right]$$

$$y = \mathcal{L}^{-1}\left[\frac{1}{s(s-2)}\right]$$

$\frac{1}{s(s-2)}$ can be broken down using partial fraction decomposition into: $\frac{1/2}{s-2} - \frac{1/2}{s}$

$$y = \mathcal{L}^{-1} \left[\frac{1/2}{s-2} - \frac{1/2}{s} \right]$$

Since The Laplace Transform is a linear operator, it is reasonable to treat the inverse operator with the same linear properties. Thus, the equation can be rewritten as:

$$y = \frac{1}{2} \mathcal{L}^{-1} \left[\frac{1}{s-2} \right] - \frac{1}{2} \mathcal{L}^{-1} \left[\frac{1}{s} \right]$$

$$y = \frac{1}{2} e^{2t} - \frac{1}{2} e^{0t} \rightarrow y = \frac{1}{2} e^{2t} - \frac{1}{2}, \text{ for } \{ t \mid t \geq 0 \}$$

(Blanchard 560-620)

Hence, we obtained the same solution using the Laplace Transform and using the separation of variables method. Since this was a very simple equation, separation of variables would prove to be a much more efficient approach but the comparison allows us to see that both methods will arrive at the same result. For more complex equations, where it may not be possible to use separation of variables, the Laplace Transform will be a much more efficient method.

Since this method will be used to solve a multitude of problems, it is impractical to derive a transform for each element of the equations. For this reason, we use a Laplace Transform table to obtain the Laplace Transform of a wide variety of functions and equations. For a better understanding of the table below, we will study the origin of some of these general transforms and then examine the table for rules pertaining to the Laplace Transform. With these tools, we will proceed to solve equations which would be much more difficult, if not impossible, to solve with any other method.

$y(t) = \mathcal{L}^{-1}[Y]$	$Y(s) = \mathcal{L}[y]$	$y(t) = \mathcal{L}^{-1}[Y]$	$Y(s) = \mathcal{L}[y]$
$y(t) = e^{at}$	$Y(s) = \frac{1}{s-a} \quad (s > a)$	$y(t) = t^n$	$Y(s) = \frac{n!}{s^{n+1}} \quad (s > 0)$
$y(t) = \sin \omega t$	$Y(s) = \frac{\omega}{s^2 + \omega^2}$	$y(t) = \cos \omega t$	$Y(s) = \frac{s}{s^2 + \omega^2}$
$y(t) = e^{at} \sin \omega t$	$Y(s) = \frac{\omega}{(s-a)^2 + \omega^2}$	$y(t) = e^{at} \cos \omega t$	$Y(s) = \frac{s-a}{(s-a)^2 + \omega^2}$
$y(t) = t \sin \omega t$	$Y(s) = \frac{2\omega s}{(s^2 + \omega^2)^2}$	$y(t) = t \cos \omega t$	$Y(s) = \frac{s^2 - \omega^2}{(s^2 + \omega^2)^2}$
$y(t) = u_a(t)$	$Y(s) = \frac{e^{-as}}{s} \quad (s > 0)$	$y(t) = \delta_a(t)$	$Y(s) = e^{-as}$

(Blanchard 560-620)

Note that we have already found $\mathcal{L}[e^{at}]$. Therefore, it is omitted in this section.

Let us consider $\mathcal{L}[t^n]$:

We first set up the integral:

$$\int_0^{\infty} t^n e^{-st} dt$$

This integral will require the use of integration by parts used n times which would be too tedious to illustrate. Therefore, we will look for a pattern in the solution that will enable us to create a general solution.

$$\text{Let: } u = t^n, du = nt^{n-1}, dv = e^{-st}, v = \frac{e^{-st}}{-s}$$

$$\int_0^{\infty} t^n e^{-st} dt = \left. \frac{t^n e^{-st}}{-s} \right|_0^{\infty} - \frac{n}{-s} \int_0^{\infty} t^{n-1} e^{-st} dt$$

Using integration by parts two more times we find:

$$\int_0^{\infty} t^n e^{-st} dt = \left[\left. \frac{t^n e^{-st}}{-s} \right|_0^{\infty} - \frac{n}{-s} \left[\left. \frac{t^{n-1} e^{-st}}{-s} \right|_0^{\infty} - \frac{n-1}{-s} \left[\left. \frac{t^{n-2} e^{-st}}{-s} \right|_0^{\infty} - \frac{n-2}{-s} \int_0^{\infty} t^{n-3} e^{-st} dt \right] \right] \right]$$

Observing the pattern produced, it is possible to simplify even further:

$$\int_0^{\infty} t^n e^{-st} dt = \frac{t^n e^{-st}}{-s} + \frac{n}{s} \left[\frac{t^{n-1} e^{-st}}{-s} + \frac{n-1}{s} \left[\frac{t^{n-2} e^{-st}}{-s} + \frac{n-2}{s} [\dots] \right] \right] \Big|_0^{\infty}$$

Evaluating this expression at the limits of integration:

$$0 - \left[\frac{0 \cdot 1}{-s} + \frac{n}{s} \left[\frac{0 \cdot 1}{-s} + \frac{n-1}{s} \left[\frac{0 \cdot 1}{-s} + \frac{n-2}{s} \left[\frac{0 \cdot 1}{-s} \dots \frac{1}{-s} \dots \right] \right] \right] \right] \Big|_0^{\infty} \rightarrow - \frac{n(n-1)(n-2)(n-3)\dots 1}{s \cdot s \cdot \dots \cdot (-s)}$$

$$= \frac{n!}{s^{n+1}}, \text{ for } s > 0, n \in \mathfrak{R}$$

Therefore $\mathcal{L}[t^n] = \frac{n!}{s^{n+1}}, s > 0$

Let us consider $\mathcal{L}[\sin \omega t]$:

To find this transform, it is useful to begin with a differential equation whose solution is the function that we are trying to transform.

$$\frac{d^2 y}{dt^2} + \omega^2 y = 0, \quad y(0) = 0, \quad y'(0) = \omega$$

Although we have not yet explored the solution of second order differential equations, the solution of this differential equation is $y(t) = \sin(\omega t)$. We will explore the Laplace Transform of second order (and higher) differential equations below.

Let us examine $\mathcal{L}\left[\frac{d^2 y}{dt^2}\right]$. If we start by thinking of the transform $\mathcal{L}\left[\frac{dy}{dt}\right] = s\mathcal{L}[y] - y(0)$, we could say that $y(t)$ originally represented a derivative. Therefore, the derivative of $y(t)$ would actually be a second derivative.

$$s\mathcal{L}\left[\frac{dz}{dt}\right] - y(0) \text{ where } y = \frac{dz}{dt}$$

This equation becomes:

$s[s\mathcal{L}[z] - z(0)] - y(0)$ using $y = z'$ we get

$$s^2\mathcal{L}[z] - sz(0) - z'(0) = \mathcal{L}\left[\frac{d^2z}{dt^2}\right]$$

This argument can be made for any number of derivatives and will yield the general form.

$$\mathcal{L}\left[\frac{d^ny}{dt^n}\right] = s^n\mathcal{L}[y] - s^{n-1}y(0) - s^{n-2}y'(0) \dots - sy^{n-2}(0) - y^{n-1}(0)$$

Now that we have developed the Laplace Transform for a second order derivative we can now solve for the transform of $\sin \omega t$.

$$\mathcal{L}\left[\frac{d^2y}{dt^2}\right] + \omega^2\mathcal{L}[y] = \mathcal{L}[0] \rightarrow s^2\mathcal{L}[y] - sy(0) - y'(0) + \omega^2\mathcal{L}[y] = 0$$

$$s^2\mathcal{L}[y] + \omega^2\mathcal{L}[y] = \omega \rightarrow \mathcal{L}[y](s^2 + \omega^2) = \omega \rightarrow \mathcal{L}[y] = \frac{\omega}{s^2 + \omega^2}$$

Using the fact that we already know that the solution is $y(t) = \sin(\omega t)$, we can say that;

$$\mathcal{L}[\sin(\omega t)] = \frac{\omega}{s^2 + \omega^2}, \text{ for } s > 0, \omega \in \mathfrak{R}$$

(Blanchard 560-620)

We recognize the domain restriction because of the definition of the transform where $s > 0$. We also know that ω must be a real number in order to pull it out of an integral as a constant. Therefore we could not treat it as a constant in the Laplace Transform either.

Let us consider $\mathcal{L}[\cos \omega t]$:

There are two different ways to approach the transform of cosine. We could start with another differential equation whose solution is cosine or we could recognize that cosine is the derivative of sine and set up an equation using this identity.

$$\cos(\omega t) = \frac{1}{\omega} \frac{d}{dt} [\sin \omega t] \rightarrow \mathcal{L}[\cos \omega t] = \frac{1}{\omega} \mathcal{L}\left[\frac{d}{dt} [\sin \omega t]\right]$$

Using the formula we found from the derivative of y :

$$\mathcal{L}[\cos \omega t] = \frac{1}{\omega} s \mathcal{L}[\sin \omega t] - \frac{1}{\omega} \sin(0) \rightarrow \mathcal{L}[\cos \omega t] = \frac{s}{\omega} \mathcal{L}[\sin \omega t]$$

$$\mathcal{L}[\cos \omega t] = \frac{s}{\omega} \cdot \frac{\omega}{s^2 + \omega^2} = \frac{s}{s^2 + \omega^2}$$

$$\mathcal{L}[\cos \omega t] = \frac{s}{s^2 + \omega^2}, \text{ for } s > 0, \omega \in \mathfrak{R} \text{ where } \omega \neq 0$$

In this transform, ω can't be zero because we would end up with a zero in the denominator in the final step before ultimately simplifying the equation.

(Blanchard 560-620)

Let us consider $\mathcal{L}[e^{at} \cos \omega t]$ & $\mathcal{L}[e^{at} \sin \omega t]$:

To find the general form of this transform, we must refer to the definition of the transform and make an observation. There is no computation required.

$$\mathcal{L}[e^{at} f(t)] = \int_0^{\infty} e^{at} f(t) e^{-st} dt \rightarrow \int_0^{\infty} f(t) e^{-(s-a)t} dt$$

Going back to the idea that $\mathcal{L}[f] = F(s)$ where $F(s) = \int_0^{\infty} f(t) e^{-st} dt$ we can now make the observation that $\mathcal{L}[e^{at} f(t)] = \int_0^{\infty} f(t) e^{-(s-a)t} dt = F(s-a)$. Using this equation, we observe that multiplying the function by a factor of e^{at} yields a shift in $F(s)$ by a factor of a .

This shift results in a shift of the domain to $s > a$. This information, together with the Laplace Transform of sine we find that:

$$\mathcal{L}[e^{at} \sin \omega t] = \frac{\omega}{(s-a)^2 + \omega^2}, s > a, \omega \in \mathfrak{R}$$

We can also use the same argument to determine:

$$\mathcal{L}[e^{at} \cos \omega t] = \frac{s-a}{(s-a)^2 + \omega^2}, s > a, \omega \in \mathfrak{R} \text{ where } \omega \neq 0$$

(Blanchard 560-620)

Now that the method for deriving these general forms has been explained, it is easy to find any number of formulas to suit the need of the application. As one can see, the same approach is used to solve each equation. However, a thorough understanding of calculus and polished algebra skills are needed to fully comprehend these techniques. Furthermore, one needs to utilize the properties of the Laplace Transform to expedite the solution process. We have already discussed the linear properties of the transform that are a natural consequence of the linear properties of integration. The table below contains several of the rules for Laplace Transforms, most of which have already been discussed.

Rule for Laplace Transform	Rule for Inverse Laplace Transform
$\mathcal{L}\left[\frac{dy}{dt}\right] = s\mathcal{L}[y] - y(0) = sY(s) - y(0)$	
$\mathcal{L}[y + w] = \mathcal{L}[y] + \mathcal{L}[w] = Y(s) + W(s)$	$\mathcal{L}^{-1}[Y + W] = \mathcal{L}^{-1}[Y] + \mathcal{L}^{-1}[W] = y(t) + w(t)$
$\mathcal{L}[\alpha y] = \alpha\mathcal{L}[y] = \alpha Y(s)$	$\mathcal{L}^{-1}[\alpha Y] = \alpha\mathcal{L}^{-1}[Y] = \alpha y(t)$
$\mathcal{L}[u_a(t)y(t - a)] = e^{-as}\mathcal{L}[y] = e^{-as}Y(s)$	$\mathcal{L}^{-1}[e^{-as}Y] = u_a(t)y(t - a)$
$\mathcal{L}[e^{at}y(t)] = Y(s - a)$	$\mathcal{L}^{-1}[Y(s - a)] = e^{at}\mathcal{L}^{-1}[Y] = e^{at}y(t)$

(Blanchard 560-620)

Specifically, we have discussed all but the second from the bottom i.e.

$$\mathcal{L}[u_a(t)y(t - a)] = e^{-as}\mathcal{L}[f(t)] = e^{-as}Y(s) \therefore \mathcal{L}^{-1}[e^{-as}Y] = u_a(t)y(t - a)$$

Before we take a look at this result, it will be useful to examine a situation where we would use it. Since we have seen that differential equations play a key role in the modeling of circuits it is beneficial to see a basic circuit solved using this method. We will begin with a circuit in which it is known that the voltage in the circuit is changing based upon the sum of the current voltage

and the sine function applied to the elapsed time. The initial voltage is zero. Using t to represent the time which has passed and $y(t)$ to represent the voltage we find:

$$\frac{dy}{dt} = y + \sin t, \quad y(0) = 0$$

It is now possible to use a Laplace Transform to solve for a function which will represent the voltage at anytime.

$$\mathcal{L}\left[\frac{dy}{dt}\right] = \mathcal{L}[y] + \mathcal{L}[\sin t] \rightarrow s\mathcal{L}[y] - y(0) = \mathcal{L}[y] + \mathcal{L}[\sin t]$$

$$s\mathcal{L}[y] - y(0) - \mathcal{L}[y] = \frac{1}{s^2+1} \rightarrow \mathcal{L}[y](s-1) = \frac{1}{s^2+1} \rightarrow \mathcal{L}[y] = \frac{1}{(s^2+1)(s-1)}$$

Using a partial fraction decomposition we find that the right side of the equation becomes:

$$\mathcal{L}[y] = -\frac{1}{2} \frac{s}{s^2+1} - \frac{1}{2} \frac{1}{s^2+1} + \frac{1}{2} \frac{1}{s-1}$$

Taking the inverse Laplace Transform of each side of the equation we find:

$$y = -\frac{1}{2} \mathcal{L}^{-1}\left[\frac{s}{s^2+1}\right] - \frac{1}{2} \mathcal{L}^{-1}\left[\frac{1}{s^2+1}\right] + \frac{1}{2} \mathcal{L}^{-1}\left[\frac{1}{s-1}\right] \rightarrow y = -\frac{1}{2} \cos t - \frac{1}{2} \sin t + \frac{1}{2} e^t$$

$$y = -\frac{1}{2}(\cos t + \sin t - e^t)$$

We determine that the voltage as a function of time is a function which will continue to grow exponentially. Although this is the correct answer, it would have been possible to arrive at this answer using an integration factor in lieu of the Laplace Transform technique. However, the integration factor method would not have been as efficient. The results that we have established thus far enable us to consider a very important component of the analysis of the Laplace Transform. Namely, we are interested in the application of the Laplace Transform to models involving discontinuous functions. These models have become popular venues for application of the Laplace Transform. The heavy-side function denoted $u_a(t)$ is an example of the aforementioned discontinuous functions. The heavy-side function is used to model a

situation where at some time $t = a$ the function is changed, such as a light switch being turned on. This is very useful in modeling a circuit because it can account for the action of a switch or relay. We define the heavy-side function as follows:

$$u_a(t) = \begin{cases} 0, & t < a \\ 1, & t \geq a \end{cases}$$

This function clearly has a discontinuity at $t = a$. Therefore, there would be no way to solve an equation containing the heavy-side function without breaking it up into two different functions representing different times. To see how the Laplace Transform will alleviate this problem, let $f(t) = u_a(t)$ and set up the integral:

$$\int_0^{\infty} u_a(t)e^{-st} dt$$

We then split this function up as follows:

$$\int_0^a u_a(t)e^{-st} dt + \int_a^{\infty} u_a(t)e^{-st} dt$$

However, for all values less than a we know that $u_a(t)$ is zero and for all values greater than or equal to a we know that $u_a(t)$ is one. Hence, the first integral is zero and we are left with:

$$\int_a^{\infty} e^{-st} dt \rightarrow \lim_{b \rightarrow \infty} \left. \frac{e^{-st}}{-s} \right|_a^b \rightarrow 0 + \frac{e^{-as}}{s} \quad \therefore$$

$$\mathcal{L}[u_a(t)] = \frac{e^{-as}}{s}, \text{ for } s > 0$$

(Blanchard 560-620)

Even though we started with a discontinuous function, we find that the transform is continuous for all values of $s > 0$. The property of the Laplace Transform to smooth out a function, sometimes called the smooth property, becomes very useful for modeling with discontinuous functions

Using the Laplace Transform, let us consider a problem which employs this smoothing property. To do this, we will begin with a circuit similar to the one utilized in our earlier example. Namely, the rate of change is equivalent to the sum of the current amount $y(t)$ and some other function. In this case, the other function is the heavy-side function.

$$\frac{dy}{dt} = -9y + u_a(t) , y(0) = -2$$

In our example, a switch is turned at time $t = 5$ which increases the rate of change by one. To solve the equation, we apply the Laplace Transform to both sides of the equation.

$$\mathcal{L}\left[\frac{dy}{dt}\right] = -9\mathcal{L}[y] + \mathcal{L}[u_a(t)] \rightarrow s\mathcal{L}[y] - y(0) = -9\mathcal{L}[y] + \frac{e^{-5s}}{s}$$

$$s\mathcal{L}[y] + 9\mathcal{L}[y] = \frac{e^{-5s}}{s} - 2 \rightarrow \mathcal{L}[y](s + 9) = \frac{e^{-5s}}{s} - 2 \rightarrow \mathcal{L}[y] = \frac{e^{-5s}}{s(s+9)} - \frac{2}{s+9}$$

We can now use partial fraction decomposition to obtain:

$$\mathcal{L}[y] = -\frac{2}{s+9} + \frac{1}{9} \frac{e^{-5s}}{s} - \frac{1}{9} \frac{e^{-5s}}{s+9}$$

We now take the inverse Laplace Transform of both sides of the equation:

$$y = -2\mathcal{L}^{-1}\left[\frac{1}{s+9}\right] + \frac{1}{9}\mathcal{L}^{-1}\left[\frac{e^{-5s}}{s}\right] - \frac{1}{9}\mathcal{L}^{-1}\left[\frac{e^{-5s}}{s+9}\right]$$

One can observe that the first two terms can be solved using Laplace Transforms that we have previously discussed. However, the last term does not coincide with any Laplace Transforms that we have derived thus far. Consequently, we will need to establish a different rule. To this end, we will begin with a function substitution:

$$g(t) = u_a(t)f(t - a)$$

This new function has been shifted by a factor of a as can be seen when evaluated at a .

$$g(a) = u_a(a)f(a - a) = f(0)$$

Also, note that:

$$g(a + b) = u_a(a + b)f(a + b - a) = f(b) \quad , \quad \text{for } b > a$$

$$g(k) = u_a(k)f(k - a) = 0 \quad , \quad \text{for } k < a \quad \text{because } u_a(k) = 0$$

To find the Laplace Transform of this equation we begin with the definition of the Laplace Transform.

$$\mathcal{L}[g] = \int_0^{\infty} g(t)e^{-st} dt$$

Using the property $g(t) = 0$ for $t < a$, we can use a as the lower limit of integration.

$$\mathcal{L}[g] = \int_a^{\infty} g(t)e^{-st} dt \rightarrow \int_a^{\infty} u_a(t)f(t - a)e^{-st} dt \rightarrow \int_a^{\infty} f(t - a)e^{-st} dt$$

Using a u -substitution and letting $u = t - a$ we get $du = dt$. We also evaluate the new limits of integration.

$$\text{if } t = a \text{ then } u = a - a = 0 \text{ and } \lim_{t \rightarrow \infty} t - a \rightarrow \infty \therefore u \rightarrow \infty$$

Then solving for t in terms of u yields:

$$\mathcal{L}[g] = \int_0^{\infty} f(u)e^{-s(u+a)} du \rightarrow \int_0^{\infty} f(u)e^{-su}e^{-sa} du \rightarrow e^{-as} \int_0^{\infty} f(u)e^{-su} du$$

$$\mathcal{L}[g] = \mathcal{L}[u_a(t)f(t - a)] = e^{-as}\mathcal{L}[f(t)] \therefore \mathcal{L}^{-1}[e^{-as}F(s)] = u_a(t)f(t - a)$$

Note that the transform only has the domain restriction from the definition and therefore, we can use it without affecting the domain of $f(t)$.

This result will enable us to solve the previous equation.

$$y = -2\mathcal{L}^{-1}\left[\frac{1}{s+9}\right] + \frac{1}{9}\mathcal{L}^{-1}\left[\frac{e^{-5s}}{s}\right] - \frac{1}{9}\mathcal{L}^{-1}\left[\frac{e^{-5s}}{s+9}\right]$$

The first two terms can be evaluated with our previous methods and the last can be viewed as:

$$y = -2e^{-9t} + \frac{1}{9}u_5(t) - \frac{1}{9}\mathcal{L}^{-1}\left[e^{-5s}\frac{1}{s+9}\right]$$

This can now be put into our new formula where $F(s) = \frac{1}{s+9}$ and thus:

$$y = -2e^{-9t} + \frac{1}{9}u_5(t) - \frac{1}{9}u_5(t)e^{-9(t-5)}$$

$$y = -2e^{-9t} + \frac{1}{9}u_5(t)[1 - e^{-9(t-5)}]$$

With the function now back in terms of t , we find that it becomes a discontinuous function at $t = 5$. This is a nice demonstration of the smoothing property of the Laplace Transform applied to a function in terms of s that was continuous everywhere $s > 0$.

Clearly, the use of the heavy-side function is very applicable for complex problems where basic equations will not work. This example, together with the other examples that we have considered in this paper, displays the widespread utility of differential equations in modeling real-world applications. From very complex circuits, such as the ones that run the motherboard in a computer, to the impact forces from the blow of a hammer, differential equations can model and explain the world around us. Even population change in civilizations can be modeled with differential equations. The Laplace Transform is a tool that helps these abstract equations come to life in a very concrete way.

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Vaccine Accessibility for Developing Countries: The Promise of AMCs

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Diseases like malaria or tuberculosis may seem like a distant memory to the inhabitants of the developed world, but they continue to be serious problems in other parts of the world. In 2006, Malaria had a mortality rate of 229 per 100,000 population in the country of Niger (WHO, 2010, p. 66). In the same year, there were 172,997,420 reported cases of malaria worldwide (WHO, 2010, p. 68). In 2008, there were 2,654,410 reported cases of TB around the world (WHO, 2010, p. 83). Pneumococcal disease kills 1.6 million people every year, the majority of these deaths occurring in children under five years of age (GAVI Alliance Secretariat, 2010, p. 6). All of these examples are curable diseases that continue to take and shorten lives in many parts of the world. Despite the persistent existence of these diseases that have been virtually eliminated in the developed world, there continues to be a great deal of inequity in the research and development (R&D) of new pharmaceuticals to fight these old diseases. In the World Health Organization's 2004 report, "The World Medicines Situation", it was found that only 10% of global pharmaceutical R&D goes towards health problems that account for 90% of the global disease burden (WHO, 2004, p. 11).

This inequity in research is only one part of a two pronged problem. Klaus M. Leisinger (2009) described this issue as the difference between short term and long term interests (p. 5). If monopoly powers are protected and extended for innovators, market conditions will be great for innovation and a lot of research and development will occur. This meets long term interests, because humanity is gaining many useful advances that will eventually be available at market prices. On the other hand, if monopoly powers are cut back and minimized, market conditions will be poor for innovation and less research will occur. Short term interests, however, will be met because all innovations will be available for purchase at market prices. While this issue is not major for general innovation, it is particularly important when the short term interests

involved are people's lives. For this reason, all options must aim to balance long term and short term interests as effectively as possible. An optimal solution would not sacrifice the health and lives of people living today in order to incentivize further health advances, but would also provide a powerful incentive for future innovation.

Much of this inequity results from the current system in place to incentivize pharmaceutical research, which is the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). However, there are several very promising initiatives being discussed which could dramatically improve the current health situation. One of these suggestions is the Health Impact Fund (HIF) being spearheaded by Thomas Pogge and Aidan Hollis, which would function by rewarding pharmaceutical developments by their effect on the global disease burden. Another interesting new approach to incentivizing the research, development, and dissemination of vaccines is the idea of Advance Market Commitments (AMCs), which is currently expanding and gaining momentum. This paper will examine the shortcomings of the TRIPS agreement, establish criteria that any acceptable solution should meet, and then weigh these two proposals against one another by their ability to successfully meet these criteria.

The TRIPS agreement, drafted during the Uruguay Round creation of the World Trade Organization, establishes an intellectual property rights protocol required in order to join the World Trade Organization (Masterson, 2002). Of particular relevance to this discussion, this agreement requires member countries to issue patents that grant protection for a minimum of 20 years, and to respect these patents (Masterson, 2002). This system aims to strike a balance between providing economic incentives for innovation, in the form of a temporary monopoly to earn back R&D costs, and providing accessibility to these innovations in the form of low cost pharmaceuticals (WTO, 2006). However, this system's shortcomings greatly outweigh its strengths. Unfortunately, this agreement only incentivizes research into markets that can afford to cover the cost of the investment into the research, leaving a large proportion of the global community overlooked. In addition, any solutions that are developed may become inaccessible to certain parts of the world, due to high monopoly prices used to re-earn research

investments. Therefore, not only does the TRIPS agreement fail to strike a balance between incentives and low cost pharmaceuticals, but it completely fails to provide either to the developing world. With such large issues present in the current intellectual property regime, it is necessary to explore alternative answers to the conflict between incentivizing innovation and providing equal access to these innovations. Before evaluating any sort of alternative solutions, however, it is important that criteria be established by which these solutions can be evaluated.

The first criterion for a solution is its ability to incentivize the R&D of new pharmaceuticals that fight neglected diseases. Under our existing TRIPS system of incentivizing innovation, there are only sufficient incentives for pharmaceutical markets that can afford to cover the cost of the research by paying high monopoly prices. When it comes to pharmaceutical research, a large proportion of people do not have the resources to make their health needs a lucrative market. This goal aims to counteract market failures and encourage the creation of pharmaceuticals to fight overlooked diseases that kill millions of people a year. The second criterion any solution should meet is the creation of accessibility to these pharmaceuticals for developing countries. Any pharmaceuticals that are created under the current TRIPS regime of intellectual property rights are sold at monopoly prices in order to return research investments. Typically, decades pass before low-income areas are able to gain access to these much needed life saving drugs. Any acceptable solution to these issues should find a way to offer these pharmaceuticals to developing countries at prices that they can afford. The next criterion by which possible solutions should be judged is the cost of the proposal. The cost is an imperative factor because any proposal must attract sufficient donors to support its operations. Donors must be able to collectively afford the overall cost of the program, and it must prove to be cost-effective enough to justify implementation. The fourth and final criterion for any solution is practicality. A possible solution that completely solves every aspect of the problem is useless if it is too large of a challenge to carry out. The implementation and operations of a qualifying program must prove to be a reasonable undertaking. These are not all of the important factors that affect how appealing a proposal is, but these are the primary conditions that a proposal must meet. It is important to note that both of these proposals are in

very early stages, and no hard data exists on their real world effectiveness. For this reason, all evaluation must take place with theoretical arguments. With criteria in place by which they can be judged, the popular proposals can be introduced.

The Health Impact Fund is a proposal created by Thomas Pogge and Aidan Hollis. The HIF aims to address two problems, incentivizing R&D research to meet long term global health goals while also providing these innovations at reasonable prices so that they are accessible to those that need them the most (Pogge & Hollis, 2008, p. 1). This solution functions by creating a yearly fund that rewards pharmaceuticals that are priced at marginal cost of production based on their effect on the global disease burden (Pogge & Hollis, 2008, p. 1). The most likely unit for measuring this health impact would be Quality-Adjusted Life Years or QALYs (Pogge & Hollis, 2008, p. 4). This path would be optional for pharmaceutical companies, and offers them an opportunity to make a profit while developing pharmaceuticals that would help those who are most in need. This program would be funded by state governments, the argument being that citizens in developed countries are already paying for pharmaceutical R&D through the high monopoly drug prices (Pogge & Hollis, 2008, p. 10). The fund functions as a pool that companies must compete over, trying to create the best drug that will be the most effective in order to gain the highest reward, which means that it is the first system which rewards pharmaceutical companies based on how much they are able to help (Pogge & Hollis, 2008, p. 6). The pool fund nature of this program also results in natural market adjustments. If the fund increases and payouts are getting too big more companies will respond and level it out by joining, but if the fund decreases and the payouts become less alluring fewer companies will register which will level out payment amounts (Pogge & Hollis, 2008, p. 6). This solution proves to be very promising, because it solves some of the major challenges of incentivizing R&D without completely replacing TRIPS. This allows it to become an even more reasonable option, because the current regime needn't be overturned in order to initiate the HIF. The HIF is gaining a lot of attention and support and could prove to be a viable solution, but it is not the only initiative out there.

Another initiative that has been gaining a lot of support is the idea of Advance Market Commitments. An AMC targets a specific disease and utilizes direct donations towards pharmaceutical companies under the binding agreement that the company will sell their vaccines a reduced cost (Gavi Alliance, 2007). The actual mechanism for the direct donation is a commitment by sponsors to pay a minimum price per person immunized, up to a certain number of people immunized (Berndt et al., 2007, p. 2). This commitment would theoretically be used to create a market in which the pharmaceutical company can earn revenues comparable to typical pharmaceutical investment returns (Berndt et al., 2007, p. 2). This initiative is currently underway, with an active pilot pneumococcus AMC being supported by Italy, the United Kingdom, Canada, Russia, Norway, and the Bill & Melinda Gates Foundation (GAVI Alliance, 2007). These AMCs target specific diseases, and the vaccines against this disease must meet very strict conditions decided by a panel of experts (GAVI Alliance, 2007). In this way, these AMCs are able to specifically target diseases that have been particularly problematic for Global Health, and create a competitive market for vaccines that target this disease by having companies compete for this AMC funding. Like the HIF, this proposal functions without overturning any previous framework that is already in place, making it a very favorable option that has gained a lot of support in many political circles.

Both of these proposals have rather straightforward methods of creating incentives for R&D. Under the HIF, firms would be rewarded based on the actual measurable health effect their medication has (Pogge & Hollis, 2008, p. 13). A registered pharmaceutical would be eligible for HIF payments for the first ten years after market approval (Pogge & Hollis, 2008, p. 13). Rewarding firms based on the actual health impact of their drugs promises to be a very positive motivational force, encouraging pharmaceutical companies to develop the most effective drugs possible. This would also make developing countries a very lucrative market, because firms could have a tremendous health impact by creating drugs to prevent the many avoidable deaths that occur in these areas. Unfortunately, the HIF method also has weaknesses. Pogge & Hollis (2008) also pointed out that because firms are rewarded based on their share of the health impact of HIF drugs; their payout relies on the performance of other

companies' drugs (p. 19). They then explained that the only way to minimize this risk for registrants would be to shift the risk to donors, which they viewed as an unfavorable situation (Pogge & Hollis, 2008, p. 19). However, this risk is part of the market created, and would theoretically serve to only attract pharmaceutical companies that are very confident in the effectiveness of their drugs.

The unique reward mechanism of the HIF also gives it another strength in terms of its ability to incentivize R&D. As opposed to AMCs, HIF registrants aim only to make as effective a drug as possible, and they do not have to meet any technical specifications. This allows the HIF to efficiently incentivize even early stage R&D, because no specific characteristics of the drug must be known (Pogge & Hollis, 2008, p. 7). This is a huge factor, because most late-stage products are going to be developed and released already. Early stage incentives offer an opportunity to bring about the creation of entirely new products. This phenomenon gives the HIF a powerful capability that should not be overlooked as these proposals are weighed.

The AMC method of creating incentives for research is fundamentally different in several ways. First the sponsors of the AMC would have to work together with the industry to determine a set of technical requirements that a vaccine would have to meet in order to qualify for AMC funding (Berndt & Hurvitz, 2005, p. 656). Next, sponsors of the AMC would commit to pay a certain minimum price per-person immunized, up to a certain total number of people immunized (Berndt & Hurvitz, 2005, p. 656). This differs from the HIF model in that, rather than a time-window of eligibility approach to product payouts, there is a sum total predetermined to be paid out for vaccines against a certain condition. In this way, one of the primary strengths of an AMC is its ability to motivate firms to work as quickly as possible in competition for the finite fund. The natural R&D market would theoretically be powerfully accelerated. Another fundamental difference between the two methods of creating incentives is the AMCs segmentation of the market. An AMC selects one condition, and creates a market for vaccines preventing this condition (GAVI Alliance, 2007). While the HIF lets the market decide what advances would be most beneficial, because firms are driven to have as large a health impact as possible, AMCs select a specific global health obstacle when they are created (GAVI Alliance,

2007). While it could be seen as a benefit or a weakness, this allows the AMCs to create an isolated target market attempting to meet a certain public health goal (GAVI Alliance, 2007).

There are some questions raised as to the limitations of the AMC incentive mechanism. Pogge & Hollis (2008) pointed out that because AMCs reward mechanism functions by creating a set of specifications vaccines must meet, sufficient information about the new vaccines must already be known to create these criteria (p. 107). They then explained that this somewhat limits AMCs to only incentivize late stage vaccine research (Pogge & Hollis, 2008, p. 107). It is true that this is an issue for AMCs, but there are several ways this can be minimized. First, Berndt & Hurvitz (2005) pointed out that early stage AMC contracts could be more flexible and general, without any specific characteristics required for the product (p. 662). As the research environment shifted from early to mid to late stage, the contract could become more specific and narrow down product requirements. In addition, Berndt & Hurvitz (2005) also argued that if the early-stage contract itself fails to provide enough incentives to encourage early-stage research, a system of interim payments could be utilized to great effect (p. 664). These interim payments would mirror milestone payments currently used in agreements in the biotechnology industry, and would reward particularly promising research during the early to mid R&D stage (Berndt & Hurvitz, 2005, p. 663). In this way, these interim payments would utilize a structure that is already familiar to the industry to further incentivize early-stage R&D, as well as making the AMCs more appealing for these pharmaceutical companies (Berndt & Hurvitz, 2005, p. 664). While there are limitations on the abilities of an AMC to powerfully incentivize early-stage R&D, these limitations could be judged for specific vaccine markets, and supplemented with interim payments if this proves to be the best course of action.

Unfortunately, when it comes to judging the next criterion, the ability to make these pharmaceuticals accessible to developing countries, there is no hard data. The HIF is just a proposal for now, and the pilot Pneumococcal AMC is in its early stages. Therefore, these solutions will have to be judged in theoretical terms. The HIF makes registered pharmaceuticals accessible by requiring all registrants to offer their drugs at a price no higher than the long-run marginal cost of production and distribution (Pogge & Hollis, 2008, p. 14). In addition,

registrants are required to give the HIF the right to sublicense the drug to generic firms after the ten year eligibility period, or wherever the supply is inadequate (Pogge & Hollis, 2008, p. 14). One of the most profound strengths of the HIF is the extra incentive it offers firms to encourage total distribution of their drug, because they are rewarded based on the achieved health impact (Pogge & Hollis, 2008, p. 4). AMCs would operate under a similar method of ensuring total-access to its registered pharmaceuticals. During the payout period of the AMC, registered pharmaceutical companies would be required to sell the vaccine at a price near the marginal cost of production (Berndt & Hurvitz, 2005, p. 656). In addition, upon completion of AMC payments, the firm would continue to be obligated to sell the vaccine at a price near the marginal cost of production (Berndt & Hurvitz, 2005, p. 656). Due to the fact that rewards are distributed by the number of people immunized, registrants have an incentive to carry out widespread distribution of their drug (Berndt & Hurvitz, 2005, p. 656). Despite the fact that no hard data is available at this time, in both of these solutions manufacturers are legally obligated to sell their drugs at an affordable price, and they stand to benefit by ensuring that the drug is efficiently distributed to low-income countries.

The cost is another important factor in any solution. Pogge & Hollis (2008) determined that \$6 billion annually would be a reasonable minimum funding level for supporting the HIF (p. 44). They then explained that while this may seem to be a large number, if countries measuring up to one third of global earnings became HIF partners each country would only have to pay .03 percent of its gross national income (Pogge & Hollis, 2008, p. 44). Pogge & Hollis (2008) then argued that if the program is successful funding could be scaled up, which would allow the HIF to support more drugs and be a larger R&D incentive (p. 45). Unfortunately, because the HIF rewards a fixed amount of money for a varying share of health impact each year, there is uncertainty with regards to the cost efficiency in terms of health impact (Pogge & Hollis, 2008, p. 47). Pogge & Hollis (2008) argued that this risk to sponsors could be limited by using a predetermined dollar-per-QALY ceiling, above which the HIF will not pay out (p. 47).

Ernst Berndt et al. (2007), in their paper “Advance Market Commitments For Vaccines Against Neglected Diseases: Estimating Costs And Effectiveness”, found that an AMC would

require \$3.1 billion in 2004 dollars in order to create a market similar to those found for existing commercial products (p. 21). However, they also mentioned that there are possible situations where it may be beneficial to increase (in order to encourage later, superior entries) or decrease (to account for existing direct financed R&D) this commitment (Berndt et al., 2007, p. 21). These calculations also revealed that AMCs promise to be a very cost efficient means of improving global health, with a commitment to pay \$15 per person immunized against malaria for the first 200 million people immunized costing less than \$15 per Disability Adjusted Life Year (DALY) saved (Berndt et al., 2007, p. 23). Even if \$28 per person immunized for the first 200 million was committed in order to increase competition and quicken responses, the result would still be less than \$21 per DALY saved (Berndt et al., 2007, p. 24). Berndt et al. (2007) went on to do similar models for Tuberculosis and HIV vaccines, and found that they could be expected to cost less than \$31 and \$17 per DALY saved, respectively (p. 24). These models show the AMCs to be a low cost, efficient option.

The final criterion any proposal must meet is practicality. A solution cannot be put into effect if it cannot be reasonably carried out. One of the most difficult obstacles the HIF would have to overcome in order to function properly is health impact measurement (Pogge & Hollis, 2008, p. 34). Pogge & Hollis (2008) estimated \$600 million of the HIF's annual \$6 billion budget would go towards the assessment of registered drugs' health impact (p. 31). Aside from cost alone, it is also highly difficult to ensure that these measurements remain very accurate (Pogge & Hollis, 2008, p. 31). However, Pogge & Hollis (2008) responded that although ideally health impact measurement would be perfect, realistically the measurement must only be accurate enough to make developing the most effective drug possible the most profitable course of action for HIF registrants (p. 34). They also argued that this kind of pharmaceutical assessment is already of great importance to society, and that this data is useful to many actors in the pharmaceutical industry (Pogge & Hollis, 2008, p. 29). It is also worth noting that this requirement for data in order to assess health impact is what gives the HIF so many of its strengths with regards to creating incentives. If these resources were not spent this way, the HIF would lose its powerful early-stage incentives. In addition, it would lose the ability to

directly align a company's need for profit with the global health need for effective pharmaceuticals. While this assessment may seem a grand undertaking, it may be worth the cost due to all of the benefits. Pogge & Hollis (2008) concluded that if assessment methods are properly funded, any and all challenges related to health impact measurement can be overcome and the HIF can be implemented to great success (p. 34).

Critics of AMCs cite its use of a non-market system of allocating rewards as a potential weakness. As opposed to the HIF's self regulating market method of rewarding payouts, the AMC utilizes a panel of experts to determine which vaccines are the most effective and reward them accordingly (GAVI Alliance, 2007). This amount of control over the reward mechanism gives the AMC several unique strengths that allow it to meet specific goals. Berndt et al. (2007) pointed out that increasing the commitment may encourage "subsequent, superior market entrants (p. 21). It was then explained that increasing the payment per dose would increase the speed with which pharmaceutical companies respond (Berndt et al., 2007, p. 23). The ability to make these decisions about the rewards offered to innovators is what allows AMCs to be adjusted for so many situations. This gives AMCs the capacity to respond to an incredible amount of different conditions, and make decisions that will be promote global health. This control over the functioning of the reward mechanism will not cause uncertainty for innovators either, because once these decisions have been made the sponsors are legally bound to them. The benefits gained through this control over the reward mechanism outweigh the costs, and give AMCs an incredible amount of versatility.

There is one important practical strength that both of these proposals share. Both the HIF and AMCs have the ability to supplement the TRIPS regime without overturning or replacing any existing structures. Any solution that replaced the existing TRIPS regime would be looked at unfavorably, and would require a tremendous amount of support to be enacted. Both the HIF and AMCs fit comfortably within the existing TRIPS system in order to supplement some of its flaws. Another powerful practicality enjoyed by both proposals is the ability to function within the existing market system. While corporations do have responsibilities to society, they also must be able to earn a profit and survive. The HIF and AMCs align corporate goals with public

health goals, creating circumstances under which needed pharmaceuticals for low income areas can be a profitable market. This creates a situation in which pharmaceutical firms are able to fulfill their needs, and also protect the health needs of the general public in the process. Both of these factors make the HIF and AMCs politically viable options capable of gaining enough support to be implemented.

Finally, AMCs gain a tremendous amount of practicality based on their focus on vaccines. It can be argued that vaccines are much more promising than drugs in low-income areas at this time. Berndt & Hurvitz (2005) point out that vaccines are generally inexpensive, easy to administer, and they do not require a diagnosis (p. 654). Vaccines are generally a simple, practical approach to preventing diseases and promoting good health in areas with less medical resources. This focus on vaccines makes AMCs less reliant on existing medical infrastructure, allowing them to do as much good as possible under existing circumstances. These vaccines promise to be the most effective way to prevent avoidable deaths within existing infrastructure. This could also be argued as a practical weakness of the HIF. Due to the broad approach of the HIF, it proves to be much more dependent on local medical infrastructure, with success limited by a patient's access to correct diagnosis as well as compliance to administration protocol.

Both of these proposals have strengths and weaknesses that make them better suited for certain tasks. The HIF has a clear advantage at creating incentives for early stage research, and bringing about completely new research projects. However, the AMC enjoys a powerful advantage in the ability to greatly accelerate mid to late-stage research, and quickly bring products to market. Both the HIF and AMCs would bring these products to market at low affordable prices, and would offer firms incentives to ensure total distribution of their pharmaceuticals. While both of the solutions are affordable under the right circumstances, AMCs prove to be a more affordable option. In addition, they gain a small advantage in terms of very predictable, high cost efficiencies. Both systems also make practical sacrifices in order to gain strengths in other areas. The HIF uses a large amount of resources attempting to assess health impact, but gains the abilities to incentivize early-stage research and align

pharmaceutical company goals with global health goals. AMCs require an expert panel in order to evaluate vaccines and determine technical specifications. However, this gives them a large amount of versatility, such as the abilities to further accelerate R&D or encourage superior entries later. Furthermore, AMCs gain a lot of practicality through their focus on vaccines, minimizing reliance on existing health infrastructure.

In the end, it is the practicality that most separates these two proposals. The HIF is an incredible idea looking forward, but I believe it is too large of an undertaking in the current environment. It would require a large amount of funding, and its effect would be limited by local conditions that today may not be able to support it. On the other hand, the AMC is goal-oriented piece-by-piece approach to improving global health. It functions exclusively through the development and dissemination of vaccines, which have proved to be the best way to improve health in low-income areas. It is an extremely versatile structure, which boasts the capacity to completely eliminate the monopoly delay for low-income areas and streamline the research process. In addition, AMCs prove to be not only a very affordable option to improve global health, but also a very cost effective one. While the HIF promises to one day be an excellent method of solving global health problems, I believe that the most effective way to improve global health right now is through the Advance Market Commitment.

The issue of equal access to pharmaceuticals is only one part of a much bigger trend. Pharmaceuticals are one example of the powerful developments fueled by a global economic order. Often, resources in low-income areas are the fuel used to build up the economic empires of more developed areas. These resources allow these societies to grow, and make all sorts of advances. While it is true that low-income areas are also able to benefit from these advances to some extent, this is not the issue. In his article, "How To Judge Globalism", Amartya Sen argues that the main issue is not whether or not all parties benefit from a certain arrangement, but whether the benefits from this arrangement are distributed evenly (Sen, 2002, p. 32). This is an important point. Without a doubt, the advent of new technologies has increased the standard of living across the globe, but more often than not the accessibility to these technologies is limited due to economic status. Even though these technologies have been able to do

extraordinary amounts of good, not everyone has been able to receive the same share of this good. Every day, people continue to die of diseases that we have the technological means to prevent, but fail to get into the right hands.

This is not an attempt to demonize the developed world, but rather a claim that the developed world has a responsibility to ensure that the opportunities of the globalized economy are more equitably distributed. If these responsibilities are accepted by all parties involved, progress can be made towards a more equitable global economic order.

Pharmaceuticals are an excellent place to begin attempting to rectify this inequity, because the opportunity eluding certain people is the opportunity to be healthy. More so than any other opportunity offered by the global economy, there are powerful moral obligations with regard to total access to medical resources. For this reason, I believe that progress must be made towards improving low-income areas access to health resources, and I believe the Advance Market Commitments are an excellent starting point for this process.

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Beacon 2011 Panels and Poster Session Presenters

June 3, 2011

9:15-10:45 A.M.

Allied Health and Nursing

Judge: Dr. Laura Waters, East Stroudsburg University

Presenters: **Kim Goldstein:** "Aid-in-Dying; The Right to Choose a Dignified Death"

Mentor: Prof. Joanna Peters, Westchester Community College

Fabian Padron: "Globalization's Grip on Infectious Diseases"

Mentor: Prof. Efstathia Siegel, Montgomery College

Theresa Price: "Kidneys Anyone?"

Mentor: Dr. Aram Hessami, Montgomery College

Readers:

Dale Crispell, Rockland Community College

Stephanie Miller, Lehigh Carbon Community College

Darlene Walsh, Orange County Community College

Education

(Sponsored by Columbia University School of General Studies and by Pearson Higher Education)

Judge: Dr. Michael Carbone, Muhlenberg College

Presenters: **Guadalupe Diaz:** "Two Is Better Than One"

Mentor: Prof. Elizabeth Tarvin/Prof. Elaine Torda, Orange County Community College

Lindsay Panko: "Applied Behavior Analysis and Autism: Adequacy in Education"

Mentor: Dr. Lucia Cherciu, Dutchess Community College

Jusline Sayegh: "Addressing the Needs of Generation 1.5 in the Community College"

Mentor: Prof. Ruth Munilla, Lehigh Carbon Community College

Readers:

John Lawlor, Jr., Reading Area Community College

Ceil Connelly-Weida, Lehigh Carbon Community College

Dr. Rajkumari Wesley, Brookdale Community College

9:15-10:45 A.M.

History

Judge: Dr. Cathy Ouellette, Muhlenberg College

Presenters: Hannah Knowlton: "The Irish Potato Famine: Act of Genocide?"

Mentor: Dr. Alex d'Erizans, Borough of Manhattan Community College

John Simard: "The Crafting of Mengele"

Mentor: Prof. Heidi Weber/Prof. Elaine Torda, Orange County Community College

Readers:

David Beisel, Rockland Community College

Christina Devlin, Montgomery College

David Lucander, Rockland Community College

Interdisciplinary Studies

Judge: Prof. James Petre, Bloomsburg University

Presenters: Nicholas Cinelli: "America's Greatest Scandal"

Mentor: Dr. Lucia Cherciu, Dutchess Community College

Neydyn Gomez: "Medical Tourism for a Mightier Mexico"

Mentor: Prof. Efstathia Siegel, Montgomery College

Siomara Parada: "Containing the Scourge of AIDS: A Case Study on Brazil"

Mentor: Prof. Efstathia Siegel, Montgomery College

Readers:

Randy Boone, Northampton Community College

Elise Martucci, Westchester Community College

Donna Singleton, Reading Area Community College

9:15-10:45 A.M.

Literature (Short Stories)

Judge: Prof. Chris Hoffman, DeSales University

Presenters: Hannah Chon: “Edgar Allan Poe's British and American Gothic”

Mentor: Dr. Dorothy Altman, Bergen Community College

Chase Gobble: “Men at Sea: Existentialism, Naturalism, and the Sisyphean Dilemma in Stephen Crane's ‘The Open Boat’”

Mentor: Prof. Shauna Gobble, Northampton Community College

Joselida Mercado: “Sowing Wild Oates: Sex, Fairy Tales and Rock and Roll”

Mentor: Prof. James Zorn, Bergen Community College

Readers:

Joanne Gabel, Reading Area Community College

James Perry, Ulster County Community College

Ashley Supinski, Lehigh Carbon Community College

Social Justice

CSC 202

(Sponsored by the Student Government Association of Lehigh Carbon Community College)

Judge: Prof. Suzanne Weaver, Cedar Crest College

Presenters: Lucy Bauer: “A Realization of Rights: Autism in the Global Context”

Mentor: Prof. Efstathia Siegel, Montgomery College

Monica French: “Recidivism: A Societal Issue”

Mentor: Prof. Danelle Bower, Reading Area Community College

Judson Williams: “Vaccine Accessibility for Developing Countries: The Promise of AMCs”

Mentor: Dr. Aram Hessami, Montgomery College

Readers:

Jack Gaspar, Lehigh Carbon Community College

Christina Stern, Rockland Community College

Betsy Swope, Lehigh Carbon Community College

11:00 A.M. - 12:30 P.M.

The Arts

Judge: Dr. Beth Marquardt, Lehigh Carbon Community College

Presenters: Adrienne Kirk: “Medical Miracles: The Price of Creativity? Posthumous Diagnoses of Three Great Artists”

Mentor: Prof. Susan Slater-Tanner, Orange County Community College

Andrew Luisi: “Interpreting Othello: From the Source, to the Players, to the Contemporaries”

Mentor: Dr. Nancy Hazelton, Rockland Community College

Katherine O'Neill: “Self Fashioning: Clothing and Deception in Twelfth Night and Measure for Measure”

Mentor: Dr. Nancy Hazelton, Rockland Community College

Readers:

Margaret Craig, Dutchess Community College

Kim de Bourbon, Northampton Community College

Beth Marquardt, Lehigh Carbon Community College

International Studies/Globalization

Judge: Prof. John Riley, Kutztown University

Presenters: Amy Baum: “The Economic Emergence of Africa, Its Global Implications, and the Internal Threats to Its Continued Prosperity”

Mentor: Dr. Richard Rodriguez, Westchester Community College

Erica Espinosa: “The Good, the Bad, and the Hope: Remittances and Globalization”

Mentor: Dr. Aram Hessami, Montgomery College

William Ricucci: “Remedy Worse than the Malady: Has American Military Interventionism Made the World a More Dangerous Place?”

Mentor: Dr. Aram Hessami, Montgomery College

Readers:

Shane Burd, Rockland Community College

Elaine Padilla, Rockland Community College

Rachel Plaksa, Lehigh Carbon Community College

11:00 A.M. - 12:30 P.M.

Literature (Ancient)

Judge: Dr. LuAnn Fletcher, Cedar Crest College

Presenters: Janet Burke: "Miles Away and Centuries Later"

Mentor: Prof. Joan Naake, Montgomery College

Zaheen Fatima: "Women in the Ramayana and the Subcontinent: The Past and the Present"

Mentor: Prof. Joan Naake, Montgomery College

Martina Thorne: "The Hurrian Myth of Kumarbi and Its Influences in Hesiod's Theogony"

Mentor: Prof. Joan Naake, Montgomery College

Readers:

Shauna Gobble, Northampton Community College

Sandra Graff, Orange County Community College

Kathleen Williams, Bergen Community College

Literature (General)

Judge: Dr. Tim Laquintano, Lafayette College

Presenters: Georgia Lathrop: "Homosexuality, Religion and Oranges: An Exploration of Forbidden Fruit in Jeanette Winterson's *Oranges Are Not the Only Fruit*"

Mentor: Prof. Brian Centrone, Westchester Community College

Ryan McGrail: "The DeLacey Family; the True Creators of Frankenstein's Creature"

Mentor: Dr. Kathleen Mayberry, Lehigh Carbon Community College

Readers:

C. L. Costello, Reading Area Community College

Peter Helff, Bergen Community College

Precie Schroyer, Northampton Community College

11:00 A.M. - 12:30 P.M.

Research/Experimental Mathematics and Science

***Judge:* Prof. Brian Exton, Cedar Crest College**

***Presenters:* Kevin Jones:** “Three Sink System Using two Different Surfactants Tested for Efficacy in a Commercial Setting”

Mentor: Dr. Thomas Butler, Rockland Community College

David Trabucco: “The Laplace Transform”

Mentor: Prof. Timothy Cercone, Erie Community College

Readers:

John Loughman, Lehigh Carbon Community College

Holly Morris, Lehigh Carbon Community College

Samantha Rushman, Northampton Community College

Psychology

(Sponsored by the Student Government Association of Lehigh Carbon Community College)

***Judge:* Dr. Kerrie Baker, Cedar Crest College**

***Presenters:* Diane Lameira:** “Creating the Terrorist: The Psychology of Group Dynamics”

Mentor: Prof. Efstathia Siegel, Montgomery College

Michele Reese: “The Power of Ordinary People to Achieve Extraordinary Leadership”

Mentor: Dr. Donna Singleton, Reading Area Community College

Anthony Orr: “Life-Satisfaction and Personality Relationships Between Church Group and College Students”

Mentor: Dr. Elaine Olaoye, Brookdale Community College

Readers:

Jessica Eckstein, Western Connecticut State University

Michael Hall, Dutchess Community College

Cyd Skinner, Northampton Community College

11:00 A.M. - 12:30 P.M.

Social Sciences

***Judge:* Dr. Bruce Whitehouse, Lehigh University**

***Presenters:* Chris Saffran: “The Digital Natives are Restless”**

Mentor: Prof. Ian Blake Newhem, Rockland Community College

Robert Veit: “The Contribution of Political Realists and Political Idealists Upon the Founders When Developing the United States Constitution and the Bill of Rights”

Mentor: Prof. Janette McCoy-McKay/Prof. Elaine Torda, Orange County Community College

Readers:

Alex d'Erizans, Borough of Manhattan Community College

La, Keisha Thorpe, Lehigh Carbon Community College

Jennifer Wentz, Lehigh Carbon Community College

1:30-3:00 P.M.

Business and Economics

(sponsored by Follett Corporation)

***Judge:* Dr. Amy Scott, DeSales University**

***Presenters:* Ahmad Abdallah:** “Microfinance as a Stimulant for Economic Growth: Case Studies from Bangladesh and India”

Mentor: Dr. Satarupa Das, Montgomery College

Antonio Concolino: “So What's the Deal with the Value of the Renminbi Anyway?”

Mentor: Dr. Farhad Ameen, Westchester Community College

Tyler Landis: “Economic Paradoxes”

Mentor: Prof. Ned Schillow, Lehigh Carbon Community College

Readers:

Ann Bieber, Lehigh Carbon Community College

Matt Connell, Northampton Community College

Denise Francois-Seeney, Northampton Community College

Communications

***Judge:* Prof. Elizabeth Petre, Bloomsburg University**

***Presenters:* Kunal Arora:** “Shut Out: Why the National Football League Has Failed to Globalize”

Mentor: Prof. Efstathia Siegel, Montgomery College

Rakesh Chopde: “‘Caste-ing’ Call for the Social Network: Leveling the Playing Field in India”

Mentor: Dr. Aram Hessami, Montgomery College

Katherine Easthope: “Transforming the Lives of the Deaf Community”

Mentor: Prof. Efstathia Siegel, Montgomery College

Readers:

Scott Aquila, Lehigh Carbon Community College

Chris Armstrong, Northampton Community College

Judith Schum, Reading Area Community College

1:30-3:00 P.M.

Gender Studies

Judge: Dr. Colleen Clemens, Kutztown University

Presenters: Burke Barr: "The Differing Ways in which Male and Female Slaves Suffer, Gain Autonomy and Rise Up Against Enslavement as Illustrated in Frederick Douglass's *Narrative of the Life of Frederick Douglass, an American Slave*, Written by Himself, and Harriet Jacobs' *Incidents in the Life of a Slave Girl*"
Mentor: Dr. Dorothy Altman, Bergen Community College

Sarah Chan: "Redefining Beauty Standards: The Negative Influence of the Western Aesthetic of Thinness"
Mentor: Prof. Efstathia Siegel, Montgomery College

Anthony DiMichele: "Mass Media Imposes the Idea of a Unique Image Which Is Consequently Unachievable and Dangerous"
Mentor: Prof. Christine Armstrong, Northampton Community College

Readers:

Beth Kolp, Dutchess Community College
Katie Lever-Mazzuto, Western Connecticut State University
Carrie Myers, Lehigh Carbon Community College

Literature (Drama and Poetry)

Judge: Prof. Rebecca Beardsall, DeSales University

Presenters: Laura Duran: "Shakespeare's Ariel and Caliban: The Others"
Mentor: Dr. Nancy Hazelton, Rockland Community College

Dena Kopolovich, "The Emergence of Madness in Hamlet (1600) and Macbeth (1606): Woman's Disobedience in Shakespearean Tragedy"
Mentor: Dr. Nancy Hazelton, Rockland Community College

David Shapir: "A Comprehensive View of Representative Themes in William Butler Yeats' Poetry"
Mentor: Dr. Geoffrey J. Sadock, Bergen Community College

Readers:

Sonja Fisher, Montgomery College
David Leight, Reading Area Community College
Joan Naake, Montgomery College

1:30-3:00 P.M.

Natural and Physical Science

Judge: Dr. Leah Ann Fetsko, Penn State University—Schuylkill

Presenters: Jon Carlson: “The Balance of Nature and the Hunger of Children: An Ethical Exploration of Genetically Modified Organisms”

Mentor: Prof. Michael Feyers, Reading Area Community College

Miranda Conklin: “Understanding the Autism Epidemic - A Case of Increasing Risk or of More Accurate Diagnosis?”

Mentor: Dr. Michele A. Paradies/Prof. Elaine Torda, Orange County Community College

Clifford Greenfield: “A New Era Without Fossil Fuels”

Mentor: Prof. Randy Boone, Northampton Community College

Readers:

Isabel Cadenas, Rockland Community College

Terry Heisey, Lehigh Carbon Community College

Nelda Latham, Bergen Community College

Philosophy and Religious Studies

CSC 202

Moderator: Prof. Charles Molano

Judge: Dr. Kelly Denton-Borhaug, Moravian College

Presenter: Bethany Ciulla: “Kali and Isis: Power and Wisdom, Fertility and Motherhood”

Mentor: Prof. Alexander Herasimtschuh, Dutchess Community College

Samuel Han: “The End of Religion: An Epistemo-personal Exploration”

Mentor: Prof. Matthew Ally, Borough of Manhattan Community College

Stav Navé: “Death and the Afterlife in India, Egypt and Greece: An Insight to Life”

Mentor: Prof. Joan Naake, Montgomery College

Readers:

Vanda Bozicevic, Bergen Community College

Sarah Detrick, Northampton Community College

Dr. Krista Roehrig, Lehigh Carbon Community College

Poster Presenters

3:00 – 4:00 PM

Fleming Calder, “Zooming In: From Audio to Visual”

Mentor: Dr. Bill Costanzo, Westchester Community College

Rodrigo Castro: “Bolivia: An Insider's reaction to Global Economic Forces”

Mentor: Prof. Efstathia Siegel, Montgomery College

Catherine Cobblah: “What is Google: It's Not What You Think”

Mentor: Dr. Aram Hessami, Montgomery College

Kristin Hoover: “From Matter to Bits: The Metamorphosis of the Digital Mind”

Mentor: Dr. Aram Hessamim, Montgomery College

Aidra Orlando: “ ‘Can I Have Fries with That?’ Exchanging Consumerism for Lasting Peace”

Mentor: Prof. Stephanie Andersen, Reading Area Community College

Leigh Peper: “Wind as Renewable Energy”

Mentor: Prof. Joan Naake, Montgomery College

Twila Ramirez: “Methyl Mercury in Fish: Exposing the Toxic Truth”

Mentor: Dr. Annelle Soponis, Reading Area Community College

Brianna Robinson: “Invisible Children: The Effects of Parental Incarceration on Children’

Mentor: Dr. Beth Cunin, Rockland Community College

Devinie Rukshani Lye: “The Devil's Gateway”

Mentor: Prof. Joan Naake, Montgomery College

Katelyn Sauerwein: “Actions Speak Louder Than Words”

Mentor: Prof. Shauna Gobble, Northampton Community College

Gretchen Winch: “Winners Write the History (Text)book: Changes in Cultural Conquest
through Education of American Indigenous Groups”

Mentor: Prof. Efstathia Siegel, Montgomery College