The Best of the Whitesell Prize Competition 2011–2012

The Writing Center’s Phyllis C. Whitesell Prizes for Expository Writing in General Education

9th Edition, Fall 2012
The Writing Center at Franklin and Marshall College
Lancaster, PA 17604-3003
717.291.3866
Preface

The Writing Center’s Phyllis C. Whitesell Prizes honor excellent student writing in Franklin and Marshall’s General Education curriculum. Each year the Writing Center invites submissions and awards a prize for the best essay, one research and one non-research, written in a course that fulfills the First-Year Writing Requirement and for the best essay from a Foundations course. This booklet contains the prize-winning and honorable mention essays from this year’s competition.

Named for the emerita Director of F&M’s Writing Center, the Whitesell Prizes serve several goals. In addition to honoring both Phyllis’s dedication to teaching writing and the achievements of the College’s students writers themselves, the Whitesell Prizes seek to add to the vitality of the College’s General Education curriculum by getting students to think of their intellectual efforts as ongoing enterprises (revision, often after the essay has been graded and the class is completed, is a requirement of the competition). Also, by involving faculty and Writing Center tutors in the judging of the essays—and by making this booklet available to the College community—the Whitesell competition hopes to foster a fuller awareness of the interesting work being done in our Foundations and First-Year Writing Requirement courses.

My great appreciation goes to this year’s Whitesell Prize judges. Professor Christie Larochelle, Professor Pamela Vail, and tutors Nathan Gill (’14) and Alexis Teevens (’13) awarded the prize in Foundations. Professors Jon Stone and Karen Lesitra-Jones along with tutors Taylor Dunbar (’12) and James Jolles (’12) were the judges for the First-Year Writing Requirement competition.

Many thanks go to Judith Stapleton for compiling this booklet.

Daniel Frick
Director, Writing Center
September 2012
# Table of Contents

## First-Year Writing

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Whitesell Prize Winner – Research Category</strong></td>
<td>1</td>
</tr>
<tr>
<td>(Untitled)</td>
<td></td>
</tr>
<tr>
<td>By Patrick Hughes for Professor Eiman Zein-Elabdin</td>
<td></td>
</tr>
<tr>
<td>ECO103: Introduction to Economic Perspectives</td>
<td></td>
</tr>
<tr>
<td><strong>Honorable Mention – Research Category</strong></td>
<td>11</td>
</tr>
<tr>
<td>“Curing Leukemia with Gene Therapy”</td>
<td></td>
</tr>
<tr>
<td>By Oluwakemi Adesina for Professor Robert Jinks</td>
<td></td>
</tr>
<tr>
<td>BIO170: Genes &amp; Medicine</td>
<td></td>
</tr>
<tr>
<td><strong>Whitesell Prize Winner – Non-Research Category</strong></td>
<td>24</td>
</tr>
<tr>
<td>“An Imperfect Paradise”</td>
<td></td>
</tr>
<tr>
<td>By Natasha Sweitzer for Professor K. Bossert</td>
<td></td>
</tr>
<tr>
<td>ENG171: Doomsday</td>
<td></td>
</tr>
<tr>
<td><strong>Honorable Mention – Non-Research Category</strong></td>
<td>34</td>
</tr>
<tr>
<td>“A Letter from Linda Lee”</td>
<td></td>
</tr>
<tr>
<td>By Sarah Rothman for Professor Judith Mueller</td>
<td></td>
</tr>
<tr>
<td>ENG161: Science Fiction</td>
<td></td>
</tr>
</tbody>
</table>

## Foundations

<table>
<thead>
<tr>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Whitesell Prize Winner</strong></td>
<td>39</td>
</tr>
<tr>
<td>“The Long-Term Threat of a Nuclear Iran”</td>
<td></td>
</tr>
<tr>
<td>By Nicole Venezia for Professor Christie L. Larochelle</td>
<td></td>
</tr>
<tr>
<td>FND140: Informed Opinions</td>
<td></td>
</tr>
<tr>
<td><strong>Honorable Mention</strong></td>
<td>45</td>
</tr>
<tr>
<td>“What is Race, Really?”</td>
<td></td>
</tr>
<tr>
<td>By Markera Jones for Professor Douglas Anthony</td>
<td></td>
</tr>
<tr>
<td>FND144: America in Black and White</td>
<td></td>
</tr>
<tr>
<td><strong>Honorable Mention</strong></td>
<td>50</td>
</tr>
<tr>
<td>“The Threat of Iran”</td>
<td></td>
</tr>
<tr>
<td>By Kim Trageser for Professor Christie L. Larochelle</td>
<td></td>
</tr>
<tr>
<td>FND140: Informed Opinions</td>
<td></td>
</tr>
</tbody>
</table>
Assignment:

Franklin & Marshall College
ECO103: Introduction to Economic Perspectives
Professor Eiman Zein-Elabdin

On the basis of what you have learned in this course so far, and using two outside scholarly sources in addition, develop and write a critical essay commenting on the article “Who Are These Economists, Anyway?” by James K. Galbraith. Start with a general overview of the article, then give your own assessment of its argument, value, and validity. In your essay address the following questions:

1. What is the central point of the article? In other words, what is Galbraith’s main argument?

2. What are some of the interesting and important issues he raises in the article?

3. To what extent do you agree or disagree with his analysis and characterization of economics and economists? I expect you to use the course readings for answering this question in particular.
The recent financial crisis was not unprecedented, nor was it wholly unexpected. In his New York Times article, “How Did Economists Get It So Wrong?” Paul Krugman mentions that some economists foresaw crisis and unsuccessfully attempted to confront an orthodoxy characterized by its “pervasive and… foolish complacency” (Krugman, 2). In response to Krugman’s article, James Galbraith wrote “Who are these Economists, Anyway?” In this paper he specifies those heterodox scholars and argues that mainstream economics’ hold on academia must be broken and replaced with a compilation of all the competing and valuable theories available (Galbraith, 9). While I agree with his sentiment, I will argue that, by dismissing both classical and contemporary Marxism as unequipped to analyze financial crisis, Galbraith limits the theoretical scope of his article and acts in opposition to his ideal of an inclusive economic academe.

Galbraith begins his work by explaining why the prevailing economic paradigms, newclassical and newkeynesian, fail to provide accurate predictions. He states that their theories are built on seemingly impressive mathematics, which intimidate and obfuscate, but fail to provide useful scientific information. Those who challenge this status quo are excommunicated from mainstream academia. His paper inspects the resident theories of these “nether wastes” (ibid., 3) for their practicality and validity.

---

1 Paul Krugman received the Nobel Prize for Economics in 2008. Galbraith expands upon an editorial he wrote in the New York Times in September 2009 in which Krugman discerns why economists failed to properly address recent financial crisis.
Galbraith discusses Marxist economics first. He grants that Marxists have predicted crisis, but states that Marxism does not provide a specific theory for financial crisis and considers policy temporary and ineffectual. He then examines other perspectives he believes have more useful approaches. Dean Baker practices bubble-detection. Bubbles are detected by observing the appreciable divergence of economic indicators from their historic norm, with the particular indicator reflecting the type of bubble. This method predicted the mortgage crisis years in advance, but functions on the assumption that the norms to which these variables return stay constant. If a norm changed it would cause a “false-bubble” which could lead to improper policy prescriptions that damage the system (ibid., 4). Another technique Galbraith inspects analysis of National Income and Product Accounts. Practitioners use the national income identity to derive an inverse relationship between public deficit and private savings. Using this analysis Wynne Godley, along with a team of economists at Cambridge, has successfully identified unsustainable trends in the U.S. current account. National Income and Product Accounts analysis differs from the bubble-detection in that it relies on a theoretical framework that defines what constitutes a problematic deviation from the norm which must remain constant (ibid., 5).²

Hyman Minsky, a post-Keynesian economist, uses yet another technique to augur crisis. He believes that “stability breeds instability” (ibid., 5) by incentivizing risk. As investors become accustomed to normal returns they pursue greater profits by taking larger risks. This leads to a progression that eventually collapses into crisis³. Minsky’s work has evolved into non-linear dynamics—an approach that believes economic crisis is resultant from an over-arching economic

² See Appendix I, A
³ Minsky believed that, in times of stability, financiers would move from hedge positions, to speculative positions and finally to a Ponzi scheme which would collapse upon its discovery. The importance of this is that it presents crisis as inherent in the capitalist system (Galbraith, 8).
cycle\textsuperscript{4}. In both Minsky’s work and non-linear dynamics the government is responsible for regulating risky and predatory financial behavior (ibid., 6). Despite success at predicting crisis, these theories do not offer a specific recommendation as to which policies must be enacted to prevent crisis. Even so they both see the orthodox economic approach of breaking down regulation as counter-intuitive and counter-productive (ibid., 6).

Galbraith considers institutional economics last. These economists—without whom he associates—posit that crisis is the result of institutional weaknesses that weaken borrowers. This leads to a downward spiral of indebtedness. At some point this indebtedness becomes so great that it is all consuming and inescapable—almost undistinguishable from the normal mode of life. Galbraith’s brand of economics focuses on economic law and how it can be used to stop predatory practices and reduce corruption, which in turn would reduce economic fragility and crisis (ibid., 7).

Beginning his conclusion Galbraith restates his earlier proposition, that mainstream economics is becoming increasingly incapable of explaining real world events. Galbraith continues, stating “there is a considerable, rich, promising body of economics, theory and evidence, entirely suited to the study of the real economy and its enormous problems.” (ibid., 8) He believes academic economics must include this body—that it must “move past [mainstream economics] toward the garden that must be out there, that in fact is out there, somewhere” (ibid., 8).

As a whole Galbraith’s article is commendable, but incomplete. Galbraith states that Marxists, “do not believe the existing system can be made to work” (ibid., 3). This is true (Marx, 21), but he himself states that economists should not be concerned with which paradigms agree

\textsuperscript{4} The phases of linear-dynamics, which are distinct and stable, are single equilibria, repeating cycles of two, four and eight years, and finally deterministic chaos. (ibid., 8)
with capitalism. If his intent is to form a more eclectic economic academe, then dismal of Marxism on this basis is inexcusable. While Marxists may not believe capitalism can be fixed they do have theories of how and why crises arise.

Classical Marxist economic theory states the tendency of profits to fall and a subsequent drive to increase the rate of surplus value.\(^5\) (Tabb, 2; Stilwell, 139) Because of the bargaining power of labor the bourgeois generally increase the organic composition of capital to increase surplus value. Mechanization allows production and surplus value to be increased without an increase in the wage rate and thus leads to the overproduction of goods, as the proletariat cannot increase consumption in corresponding quantities. The proletariat, however, are not the only consumers. The bourgeoisie could also increase their consumption, and they do. But, because of incomplete information and the complexity of the system, the bourgeoisie tend to consume less than the amount needed to balance the system (Lebowitz, 175; Marx and Engels, 36).

Eventually overproduction becomes so exacerbated that crisis occurs. Classical Marxism views these crises as a vehicle for revealing the imbalances in the current system and establishing the new and proper rate of surplus value and production (Lebowitz, 170). In this way, as Galbraith states, they view crisis as inherent and unavoidable in the capitalist system. (ibid., 44; Stilwell, 142). However, contemporary Marxists extend and modify this theory to explain modern forms of crisis. Modern capitalism extends the classical Marxist scenario one step further. Since the bourgeois under-consume they are left with excess wealth that they then invest. The proletariat, to subsist, borrow this wealth as debt. As profits continue to fall the bourgeois must seek out riskier enterprises and greater exploitation, offering loans to those who

\(^5\) See Appendix I, B
are unlikely or unable to repay them. Eventually the excessive levels of debt become unsustainable, there is widespread default, and crisis occurs (Mah-Hui and Ee, 8).

Galbraith states that all Marxists take a dichromatic approach—either abandon capitalism or suffer the uninhibited pains of the system—while classical Marxist theory does see crisis as the only manner of resolving deficiencies in the system, various contemporary Marxists such as Michael Lim Mah-Hui, Khor Hoe Ee, and William Tabb disagree. They believe that reducing inequality through policy can manage the rate of surplus value and overproduction and maintain stability. They propone the regulation of predatory and other risky financial practices and better wealth redistribution through policies such as taxation, worker protection via wage floors and the assurance of acceptable working conditions. (Tabb, 12; Mah-Hui and Ee, 9). While policy may be insufficient to eliminate crisis, some contemporary Marxists see usefulness in maintaining a more egalitarian and productive version of capitalism as a necessary step in the teleological progression toward socialism. This would allow for the maturation of the forces of production and class consciousness of the proletariat and thus increase the eventual likelihood of a successful revolution (Tabb, 4; Mah-Hui and Ee, 10).

Including Marxism in his analysis would have enabled Gailbraith to relate it to the other theoretical perspectives he discusses. For instance, Marxist theory could have added to Galbraith’s analysis of Minksy’s work as Marxism provides specific policy recommendations for preventing crisis. Marxist theory would also augment Galbraith’s analysis of bubble detection, as he could have examined the historical correlation between income inequality and recession.

---

6 Marxist economics is unique in that it analyzes economic decisions through the lens of historical materialism. Analysis of financial crisis from this view would also broaden the theoretical scope of Galbraith’s article. Marxist economic analysis also employs dialectics. When analyzing crises a focus on conflict is certainly appropriate to the discussion. (Stilwell, 101; Marx, 20)
(Mah-Hui and Ee, 1). Furthermore, Galbraith’s disqualification of Marxism prevents him from exploring the heterogeneity of contemporary Marxism with the other theories. Such a juxtaposition could have shed more light on the financial crisis and what can be done about preventing future reoccurrences of similar processes. This holism is exactly what Galbraith champions in his work and yet in his own piece he neglects a theory he considers inappropriate. By dismissing Marxism Galbraith inadvertently falls prey to the same tendencies he condemns in economic academia.
Works Cited


Appendix

A:

GNP is the value of all the products (goods and services) produced by the factors of production of a nation in one year. GNP can be described by the addition of its component parts: household consumption expenditures on domestically produced goods (C\text{d}), investment expenditures of firms on domestically produced goods (I\text{d}), government expenditures on domestically produced goods (G\text{d}), net exports or foreign expenditures on domestically produced goods (X) minus domestic expenditures on foreign goods (M) (X - M = NX). Thus:

\[ Y = GNP = C^d + I^d + G^d + NX \]

Since \( C^d, I^d, G^d, \) and \( NX \) are the only components of \( GNP \) this equality must be true. Since it is an equality it must be true that if \( G^d \) increases either \( Y \) must increase or \( C^d, I^d, \) or \( NX \) must decrease. Wynne Godley’s analysis assumes that \( NX \) and \( I^d \) are unaffected by either \( C^d \) or \( G^d \) and that \( GNP \) is constant. Thus, we derive the inverse relationship: if government expenditures increase (\( G^D \)) household consumption must decrease (\( C^D \)) and vice-versa.

This is called the national income identity, and not the GNP identity because GNP, being a summation of all the transactions—which have both a buyer and a seller—in a nation, is equal to the National Income. (Tabarrok and Cowen, 414)

B:

Marxist theory states that the rate of surplus value (ROs) is equal to surplus value divided by variable capital (\( s/v \)), that the organic composition of capital (OCC) is equal to constant capital divided by variable capital (\( c/v \)) and that the rate of profit (\( r \)) is equal to surplus value divided by the sum of constant and variable capital (\( s/(c + v) \)). Thus we have:
From these we can derive an equation for the rate of profit as a function of the rate of surplus and the organic composition of capital:

\[
R_{Os} = \frac{s}{v}\\
OCC = \frac{c}{v}\\
\]

\[
r = \frac{s}{(c + v)}
\]

From this equality we can see that, *caeteris paribus*, there is an inverse relationship between the organic composition of capital and rate of profit. Marxism states that as capital is accumulated there is a tendency to use more constant capital (\(c\)) and less variable capital (\(v\)), which increases the rate of organic capital (\(c/v\)), and decrease the rate of profit (\(r\)).

That his failure to adequately expand upon contemporary Marxist theory ultimately leaves his work incomplete, as it neglects a valuable and prominent analytical perspective (Stilwell, 156).
First-Year Writing, Research Category

Honorable Mention

Oluwakemi Adesina

“Curing Leukemia with Gene Therapy”

Assignment:

Franklin and Marshall College
BIO170: Genes & Medicine
Professor Jinks

Write a paper on current advances in human gene therapy using the New York Times’ Tuesday Science Times article format as a model.
Curing Leukemia with Gene Therapy

Breakthroughs at the University of Pennsylvania's Abramson Cancer Center, involving the treatment of patients who were cured of Chronic Lymphocytic Leukemia (CLL), mark an era of successfully treating patients with gene therapy. Scientists configured a method, adoptive T-cell therapy, to “train” the human body to detect and destroy antigens, thus reducing relapse of cancer. Genetically engineered T-cells are introduced to the body to detect and kill leukemic cells by targeting all CD-19 expressing B-cells, normal and malignant. This is a major achievement in immunology and a stepping stone for treatments involving immunogenic therapy. The success of configuring a method to stimulate an immune response to leukemic cells without the use of pharmaceutical concoctions has prompted further research in curing other forms of leukemia and cancers via immunogenic therapy.

After years of research to incorporate gene therapy as a clinical treatment option for genetic and biological disorders, doctors have successfully used gene therapy to cure leukemia in three patients. Within the last decades, scientists have made great efforts to successfully produce a cure for cancer. Explorations of biological processes at the molecular level have allowed scientists to learn more about the inner workings of human cells. Scientists have cracked the genetic code to one of mankind’s stealthiest diseases. Oncologists have begun to understand the complexity of cancer. Due to the progression in microbiology and the advances of technology, scientists are able to enhance patients’ immune capability against cancerous cells.
Cancer is the result of a chain of biological changes, usually from genetic mutations that occur in a cell (Hollstein et al., 1991). Leukemia is a type of cancer that specifically attacks the blood and bone marrow. According to the SEER Cancer Statistics Review of 2010, leukemia is ranked 10th of the fifteen most prevalent cancers that are diagnosed across the population – over 250,000 people have been diagnosed with leukemia (Edwards et al., 2005; Howlander et al., 2010). Chronic Lymphocytic Leukemia (CLL) is cancer of the lymphocytes. Affected lymphocytes- white blood cells including B-cells and T-cells – accumulate and form tumors in the blood and bone marrow.

The human genome is a complete set of genetic information that determines a person’s physiology – biological processes and physical characteristics. Many questions about human biology have been answered by new findings in genetics, specifically the deciphering of deoxyribonucleic acid, (DNA) which has prompted better understanding of genes. DNA carries genetic information, genes, which are essential for life. The building blocks of DNA are nucleotide base sequences, A, T, C, G, which encode for protein. Proteins are fundamental because they determine physical traits, catalyze chemical reactions and control gene activity in an organism. Proteins are synthesized from the process known as gene expression in the nucleus of cells- DNA is transcribed into messenger ribonucleic acid, (mRNA) a single stranded copy of DNA that travels out of the cell’s nucleus, after which mRNA is translated to protein. Mutations in this process can cause adverse problems in the human body, such as cancer- mutations of a specific gene can cause deficiencies and abnormalities of specific proteins. A mutation is a change in nucleotide base sequences as a result of chemical mistakes during the processing of DNA in a cell. They may include changes from one nucleotide to another or a deletion or addition of a nucleotide(s) (Alberts et al., 2009). Mutations in the expression of the p53 gene, a
gene that encodes for the p53 protein, which controls cell proliferation and suppresses tumors, are one of the causes of cell malignancy. The deciphering of the p53 gene has revealed that changes in the nucleotide base sequences on a strand of DNA results in the abnormality of the p53 protein (Hollstein et al., 1991). A mutation of this gene allows for abnormal cells, which carry damaged DNA, to proliferate and form tumors. In patients with CLL, high concentrations of abnormal B-cells proliferate in the blood and bone marrow.

The normal allele of the p53 gene encodes for a protein that aids cell proliferation. The p53 monitors the cell cycle by checking for damaged DNA, “broken” genes or mutations during a cell’s initial growth phases. A cell is not able to perform mitosis, the phase of cell division, where a cell divides into two identical cells, without going through a “checkpoint” performed by the p53 protein. The p53 protein kills mutated cells before they reach the stage of mitosis by initiating cell lysis, which causes the cell to burst. This regulatory feature of p53 is crucial because it prevents abnormal cells from continually being replicated, which can have disastrous effects on biological processes and tissues. Mutated p53 genes allow abnormal cells to proliferate, hence the growth of tumors. A range of mutations in the p53 gene can cause cancer - this is referred to as the mutational spectrum. The location and type of mutations in a specific codon region define the mutational spectrum of the p53 gene. When cancers are examined individually, there is a clear difference in the mutational spectra of p53 mutations - each cancer is unique in terms of the location and type of p53 mutations. In leukemia, mutations of the p53 gene result in substitutions at the CpG dinucleotide bases, where G:C base pairs substitute for A:T base pairs, on chromosome 17. Studies on the spectrum of p53 mutations have provided information on the role of gene mutation in leukemia and treatments. Scientists sought to treat problems caused by mutations of the p53 gene with gene therapy (Hollstein et al., 1991).
Monitoring of the p53 gene prompted understanding of biological changes that occur during cancer development. Scientists sought to treat leukemia by “fixing” p53 mutations, replacing damaged genes with a normal copy. It is difficult to insert a healthy gene into a cell, let alone multiple ones, without the risk of destroying the cell’s membrane and triggering an immune response. Bacteria and viruses can transfer their genetic material into cells of other organisms, thus infecting the organism. Scientists used vectors, viruses that are transformed with specific genes, to synthesize specific proteins in the human body (Alberts et al., 2009; Dunbar, 2007).

The success of extracting specific genes from DNA prompted progression in gene therapy. In the dawn of immunogenic therapy, scientists used retrovirus vectors to modify hematopoietic stem cells, stem cells that replenish all types of blood cells, including B-cells and T-cells, establishing a foundation for treating leukemia via gene therapy (Dunbar, 2007). Although the vectors at that time were ineffectual, scientists had a better understanding of how to target diseases and improved vectors. Scientists successfully replicated segments of DNA via plasmids, a certain type of vector. This success allowed scientists to transfer recombinant DNA, (genetically synthesized DNA) into organisms by “mixing” the synthesized DNA with the DNA of the bacteria (Alberts et al., 2009). DNA was effectively replicated and transferred into human cells via vectors because of viruses’ abilities to replicate and infect its host’s cells. As a result, specific proteins were synthesized. Scientists were then able to treat leukemic patients who had a deficiency of p53 protein. Vectors were transformed with the p53 gene and inserted into patients in order to repair the deficiency, but complications arose. Vectors triggered the growth of cancer cells (Dunbar, 2007). Rather than correcting a mutation, vectors caused havoc in the body. In addition, an immune response was triggered by the presence of foreign DNA. This prohibited the
expression of the engineered genes that were intentionally transferred into a patient. Scientists continued to monitor these effects. As a result, insertion methods were modified and different approaches to treat leukemia were introduced.

Scientists aimed to treat CLL by aiding the immune system to target and kill leukemic cells without causing cell toxicity in patients. Scientists have developed procedures that are less toxic, but have efficiency greater than that of previous therapeutic options to fight against leukemia (Ochi et al., 2010). The human body has its own defense mechanism, B-cells and T-cells, to ward off antigens—foreign matter in the body, like bacteria. B-cells, located in the bone marrow and T-cells, initially located in the thymus, bind and kill cells where foreign DNA localize. Unfortunately, B-cells and T-cells don’t recognize tumors because cancerous cells don’t have foreign DNA—the are mutated human cells. As a result, cancerous cells are able to proliferate. And in the case of CLL, leukemic cells are able to proliferate without being destroyed by B-cells or T-cells.

Now, scientists have successfully identified and engineered tumor specific antigens (TSAs), also known as antitumor genes that can discriminate and kill leukemic cells (Ochi et al., 2010). Genetically engineered T-cells were introduced into the bone marrow to combat and compensate for malignant B-cells. Until recently, this method has been used sparingly. Currently, the main protocols for treating leukemia are peptide vaccinations, chemotherapy and bone marrow transplants. Triggering an immune response to leukemic cells was a difficult task. In order to distinguish B-cells from other cells, scientists conducted a BLAST search (Basic Local Alignment Search Tool) to identify proteins that are unique to B-cells. Cancers like leukemia, which are a result of B-cell abnormalities, have defined tumor specific antigens. Scientists identified protein complexes, CD-19 receptor proteins, on the surface of B-cells that
are only expressed on the surface of B-cells. They then synthesized peptides, chains of amino acids, that would bind to the CD-19 receptors, thus marking the B-cells in order for T-cells to locate and execute them. The injection of foreign protein or DNA into the body triggers an immune response – antibodies bind to the region where the foreign DNA is inserted and initiate cell lysis. Hence, T-cells are able to distinguish antigens and attack them. Proteins that contained specific amino acids along the DNA of Wilms’ tumor gene product 1, (WT1), a Human Leukocyte Antigen (HLA), which is important for immune functioning, were used as markers for T-cells to detect on the surface of leukemic cells, specifically peptides WT1\textsubscript{126-134} and WT1\textsubscript{235-243}. Theoretically, the peptides are a stain. The peptides “stain” B-cells in order to make them different from normal cells. This method was successful because not only were leukemic cells detected; scientists were able to trigger an immune response without causing toxicity to normal cells. For the first time, treatments were effective and produced positive results, specifically in patients with critical stages of leukemia (Dunbar, 2007). Scientists took the method a step further. Rather than injecting proteins that aid T-cells to detect tumors, T-cells were engineered with the WT1 gene in order to independently detect and kill leukemic cells. The procedure was successful. T-cells were able to detect tumorous cells without the aid of external material. However, the overall degree of clinical responses to the method was low – the treatment was partially successful. T-cells didn’t always respond and inconsistently detected tumor cells (Ochi et al., 2010). Until recently, the success and further application of this method was tempered by the inability to extract and culture sufficient amounts of human leukocyte antigens (HLAs), a major cell surface molecule that mediates interactions between white blood cells; crucial to immune system functioning because it aids the immune system in distinguishing body proteins.
from foreign protein (Genetics Home Reference). Further research was conducted to engineer efficient antitumor T-cells.

Immunotherapy has successfully prolonged the lives of patients with leukemia. Since the introduction of gene therapy to treat genetic diseases, there has been a steady decline in death rates among people with leukemia. Although chemotherapy, bone marrow and stem cell transplants, and radiation are used to treat people with leukemia, they aren’t cures; remission of cancer is not guaranteed. These methods result in the killing of cancerous cells, but at the patient’s expense – the treatments negatively affect the immune system, thus triggering other health issues. Both chemotherapy and radiation can result in the killing of healthy cells in addition to cancerous cells. Bone marrow and stem cell transplants replenish B-cells in the bone marrow, but the procedure involves weakening the immune system, thus making the patient vulnerable to infections and other diseases. Further research was conducted to produce a cure, one that entailed aiding the immune system to regulate T-cells that can effectively detect, differentiate and kill cancerous cells (Ochi et al., 2010).

The recent success in curing patients with CLL can be attributed to years of hard work. Continued research in immunogenic therapy has allowed scientists to gain a better understanding of leukemia and how to treat it. Chronic lymphocytic leukemia (CLL) causes a slow increase of malignant B-cells that spread from the bone marrow to the blood. When CLL is ineffectively treated, cancerous cells migrate and affect other organs, like the liver and lymph nodes (Dugdale and Chen, 2011; Leukemia & Lymphoma Society 2011). In advanced cases of CLL, there is an overabundance of malignant B-cells, causing the bone marrow to fail. All three patients put into the clinical trial had advanced CLL. Tumor cells failed to respond to treatments and their conditions worsened. Adoptive T-cell therapy was a last alternative. Scientists doubted the
effectiveness of the treatment because previous trials involving adoptive T-cell therapy resulted in low response rates of engineered T-cells (Ochi et al., 2010). T-cells were enhanced by the inclusion of other genes that stimulated and signaled transduction of T-cell receptors in order for T-cells to bind to specific cell surface antigens. T-cells were infected, using lentiviral vectors, with Chimeric Antigen Receptors (CAR’s), an antibody-like protein, that enables T-cells to bind to the CD-19 receptors on B-cells, thus making them CD-19 specific (Penn Medicine). T-cells were extracted and engineered with CAR’s before being injected into tumorous regions of the patients’ bone marrow.

After the insertion of modified T-cells into the bone marrow of the patients, a phenomenon occurred. Almost all of the patients’ tumor cells were killed immediately after being injected with CART-cells and the patients remained in remission for about a year. An equivalence of two pounds of cancer cells was simultaneously killed. Most importantly, T-cells remained active and functioned at high levels in the bone marrow. This was a major achievement because not only were leukemic cells absent in the bone marrow, T-cells also had “memory”- they remained active, patrolling for any future presence of cancer cells (Kalos et al., 2011). The patients developed immunity to leukemia. Scientists did not expect the magnitude of their success because the first trials involving the use of CART-cells had not been successful – T-cells did not proliferate nor did they effectively bind to the CD-19 receptors. Scientists then modified T-cells to not only detect the tumors, but to ensure continued proliferation and functioning of the T-cells after they are released into the body. The CAR gene along with other proteins enabled T-cells to continuously detect CD-19 by initiating, controlling and stabilizing T-cell functioning in the body. The efficiency of gene expression of the CAR gene in T-cells allows T-cells to remember their function without affecting other cells (Porter et al., 2011). The patients’ immune
systems were able to regulate T-cell production independently. Scientists are eager to believe that this may be a cure for leukemia.

Although the procedure was successful, scientists question the effectiveness and stability of engineered T-cells—it is too early to determine the long-term effects of the operation because there are only primitive trials that were unexpectedly successful. Aspects of the procedure are currently being revised and improved to ensure success in future cases. For starters, additional clinical trials need to be administered. Further trials will prove whether the T-cells were able to efficiently kill all of the leukemic cells. After receiving high doses of chemotherapy, the patients were administered adoptive T-cell therapy in order to kill lingering cancer cells that remained. What would have the outcomes been if Adoptive T-cell therapy was initially administered? Would the procedure have been as effective? In addition, T-cell generation must be controlled—continual proliferation of CART-cells can cause B-cell deficiencies (Porter et al., 2011). All B-cells, both normal and malignant, have CD-19 receptor proteins on their surfaces. CART-cells only discriminate cells that have CD-19 and are unable to differentiate between normal and malignant B-cells. Once CART-cells bind to CD-19, they initiate cell lysis. The deficiency of normal B-cells can lead to a plethora of health issues. In the absence of B-cells, the body is vulnerable to infections and diseases because of the inability to initiate an antibody response to invading antigens. Scientists are currently trying to identify DNA that is unique to malignant B-cells in order to engineer T-cells that are specific to abnormal B-cells, thus saving normal B-cells from being executed. Overall, doctors saw remarkable recovery in all patients. Adoptive T-cell therapy is a turning point in the long struggle to develop effective gene therapies against cancer. Further studies of adoptive T-cell therapy are being incorporated into clinical trials to treat other
forms of leukemia and cancers like breast and ovarian cancer. Other cancers may be vulnerable to this novel approach (Porter et al., 2011).

Progressions in scientific innovations and technological advances are responsible for many phenomena that occur in present day society. The recent success of curing chronic lymphocytic leukemia has prompted research of adoptive T-cell therapy to treat other forms of cancer. Scientists are at the brink of understanding and effectively treating biological disorders. Medical institutions have progressed from relying on the pharmaceutical industry to produce medicines, which can be toxic to the body, to aiding biological processes. Humans have the capability to continue the progression of understanding the complexity of the human body.
Works Cited


Medicine Bethesda, MD: Retrieved from 

Featuring Population-Based Trends in Cancer Treatment*. Journal of the National Cancer 
Institute. 97.19: 1407-1427.


Howlader, N., Noone A. M., Krapcho, M., Neyman, N., Aminou, R., Waldron, W., Altekruse, S. 


First-Year Writing, Non-Research Category

Whitesell Prize Winner

Natasha Sweitzer

“An Imperfect Paradise”

Assignment:

Franklin and Marshall College
ENG171: Doomsday
Professor K. Bossert

Your capstone seminar paper (“Essay 4”) is a documented, analytical essay on a topic related to our course material, our conversations, and/or your own interests. I anticipate that many of you (if not all) will use one or more of your properties as the basis for this project. That being said, you may have identified other areas of interest that could serve as viable avenues for your research and your writing—areas related to your properties or otherwise related to specific discoveries you have made in the readings so far. Bottom line: you should pursue a topic that is interesting and exciting to you.

Your Task: In this essay, you will use your property to make connections between texts. First, identify and define a specific aspect of your chosen property. Then, in a 5-7 page paper, argue for the way this property functions in at least two of the literary texts on our syllabus.
An Imperfect Paradise

Perhaps one of the most important religious stories in western culture is Genesis’s account of the Garden of Eden and the fall of man. Allusions to this particular creation myth have resurfaced in art and literature for centuries, and it is worth understanding why it continues to resonate so strongly with us. There are two aspects of this subject that are particularly intriguing: first, this story represents the widely held belief, or at least recurring suggestion, that humanity has been broken, and there is a strong desire to return to “paradise” wherein humanity is purged of corruption and restored to an innocent state. The second, more interesting aspect of this theme can be seen when we consider what this “paradise” has traditionally been held to entail, specifically the appearance of ignorance as an ideal. After all, Adam and Eve’s idyllic condition was marked by a lack of knowledge of good and evil, and it was the acquisition of this knowledge that resulted in their banishment from Eden. This idea that knowledge can work as a destructive force has fascinated writers and philosophers alike; Nietzsche in particular had quite a bit to say about what he called our “will to ignorance,” and the fact that ignorance is necessary to be truly happy. Three works of literature that demonstrate this association between ignorance and paradise are *Oryx and Crake*, by Margaret Atwood, “The Call of Cthulhu” by H. P. Lovecraft, and “When We Went To See the End of the World, by Dawnie Morningside Age 11 ¼” by Neil Gaiman. By portraying characters obsessed with reclaiming paradise through a “will to ignorance,” each of these authors reveal to the reader exactly how ignorance plays into our
idea of perfection, and how this idea is ultimately incompatible with the definition of the human as a creative being.

In his essay, “Nietzsche, Proust, and Will-To-Ignorance,” Joshua Landy examines Nietzsche’s ideas on mankind’s apparent tendency towards self-deception and how it relates to our search for knowledge. He explains that not only are we “driven by a will to truth and knowledge on the one hand and a will to illusion and ignorance on the other,” but that both tendencies are “indispensable components of a happy and worthy existence” (2). In other words, the instinct to protect oneself from unpleasant truths is necessary in order to enjoy life, and should be embraced rather than opposed or vilified. Though Nietzsche opposed the Judeo-Christian mentality that humanity has been damaged since the fall of man, he would nevertheless agree with the association between ignorance and a higher quality of living. Landy writes of Nietzsche’s belief that “truth can be inimical to vitality—that illusion is, under certain conditions, to be positively preferred” (1). Thus, it is no wonder that we associate perfection with a certain level of ignorance.

Neil Gaiman’s character Dawnie Morningside provides a particularly good insight into Nietzsche’s will to ignorance, as she is faced with the harsh reality of growing up but refuses to leave the comfort of childhood. In his story, “When We Went To See the End of the World,” Gaiman writes about the metaphorical apocalypse of growing up, equating the innocence of childhood with the Garden of Eden, and the resignation of adulthood with the harsh, post-lapsarian world. Dawnie is on the brink of this “fall” from paradise, but sensing the imminent change, she blocks out compromising knowledge by clinging to childish antics. For instance, when her account of a friend’s prophecy becomes pessimistic, she quickly changes the subject to her father’s potato salad (198), showing that she is uncomfortable talking about anything sinister.
She later witnesses a group of people chasing a white deer amid a stream of other confusing and increasingly ominous images; her first instinct is to ask her parents about what is happening, but again she switches tracks and sings to herself instead (200). Similarly, she tells an old lady that at her last birthday she was going to wish that her mother and father wouldn’t fight anymore, but changed her mind at the last moment and wished for a Shetland pony instead (202), thus choosing the less responsible, more carefree of the two options. In each of these instances, Dawnie chooses to pretend that the problems or questions she faces don’t exist, rather than acknowledging them. The most important instance of her escapist tendencies comes at the end of the story after she has left the “End of the World,” having witnessed the culmination of abuse in her parents’ relationship. Her father tells her in the car that wishes do not come true and shouldn’t be trusted, yet at the very end of the story Dawnie says, “I wished and I wished and I wished and I wished. I wished wed gone to Ponydale. I wished wed never gone anywhere at all. I wished I was somebody else. And I wished” (203). She knows on some level that she is too old for wishing and that she cannot forget the experience she has had, but she refuses to accept that her perception has changed. Instead, she fights against this knowledge until the very end, desperately pretending that by continuing to wish she will remain a child, and thus innocent, forever.

A similar instance of a protagonist consciously valuing ignorance over knowledge can be seen in Lovecraft’s “The Call of Cthulhu.” Unlike Dawnie, Lovecraft’s narrator has already “fallen” by the time we meet him, as he has discovered the existence of Cthulhu, the quintessence of evil, and in doing so lost his innocence and peace of mind. Rather than try to prevent the loss of innocence, he can only grapple with his yearning to return to an unachievable state of ignorance. He starts the story by writing that it is “merciful” that “we live on a placid
island of ignorance in the midst of black seas of infinity, and it was not meant that we should voyage far” (139). In this way he begins by introducing us to the concept that ignorance is not only the natural state of humanity, but also the best state for humanity. He indicates that the sciences are only valuable so long as they don’t harm us by uncovering “terrifying vistas of reality” that would cause us to “either go mad from the revelation or flee from the deadly light into the peace and safety of a new dark age” (139). Our traditional connotations regarding “light” and “dark” have here been reversed, as the light of knowledge is now “deadly,” and the “dark age,” which we would logically want to surpass, is here described as peaceful and safe. At the end of his narrative, he writes that since discovering this force of evil, his entire perspective on life has been tainted, as “even the skies of spring and the flowers of summer must ever afterward be poison to me” (169). In this way, he indirectly associates ignorance with the biblical vision of paradise, in that it is comforting and safe, and it is the knowledge of evil that permanently ruins the quality of his life. He makes it clear that given the chance, he would erase all memory of his enlightenment in order to return to a simple enjoyment of life.

Atwood’s character, Crake, is in a similar situation to Lovecraft’s narrator in that he can clearly see the corruption and brutality of the world, and recognizes the value of innocence that has been lost. However, while the other characters seek ignorance on a personal level, Crake seeks the rebirth of the entire human race. He achieves his goal by destroying all current humans and replacing them with genetically engineered super-humans, specifically designed to be incapable of corruption. Crake’s appropriately named “Paradice Project” is apparently a successful attempt to reconstruct the Garden of Eden. The Crakers are naked, but with “no self-consciousness, none at all” (302), similar to the biblical description, “And they were both naked, the man and his wife, and were not ashamed” (2:25 KJV). Their sexual rituals and survival
tactics are designed to promote complete contentment with their environment and each other, eliminating the need for conflict, crime, social hierarchies, or sexual tensions. They can neither read nor understand the concept of pictures, as the book’s protagonist, Jimmy, explains, “Symbolic thinking of any kind would signal downfall, in Crake’s view. Next they’d be inventing idols, and funerals, and grave goods, and the afterlife, and sin, and Linear B, and kings, and then slavery and war” (361). Perhaps one of Crake’s most important ideas is his claim that he has made the Crakers immortal. As he explains to Jimmy, “Immortality… Is a concept. If you take ‘mortality’ as being, not death, but the foreknowledge of it and the fear of it, then ‘immortality’ is the absence of such fear. Babies are immortal” (303). Here he presents the key idea that it is not eternal life itself but the illusion of eternal life that is most important. By defining immortality as a lack of knowledge, Crake draws an inseparable connection between ignorance and paradise. The existence of death and evil is irrelevant so long as we are not aware of it; it is our ignorance that creates the paradise.

If Gaiman, Lovecraft, and Atwood all agree that ignorance is necessary for a happy and carefree life, then they also agree that such a state is impossible to sustain. Each of them portray their characters’ will to ignorance only insofar as their efforts fail to save them from inevitable knowledge. Lovecraft’s narrator has already been exposed to the knowledge of evil, and cannot undo his discovery. He professes to hope that no one else will uncover Cthulhu’s existence, but he writes that “The sciences…have hitherto harmed us little,” suggesting that this safety is only a lucky temporary condition, and that “some day the piecing together of dissociated knowledge” will expose us to unbearable truths (139). Thus, he considers it only a matter of time before our curious nature leads us to our downfall. Dawnie fares little better, as even though she continues to defy her father’s pessimism and pragmatism by wishing, it is clear that she has been severely
affected by all she has seen at the End of the World. After seeing her father hit her mother, she says, “I’m too old to cry” (202), which is both the first time she indicates her true feelings and professes her awareness that she must grow up. Judging by how upset she is by the end of the story, it is clear that Dawnie has gained an understanding of the world that she does not want, and thus her inevitable fall has already started. Crake’s genetic purging of human nature seems to be the most likely of the three attempts to win back paradise, since he can eradicate the curiosity that brought down the others, but even this attempt fails. The Crakers are fascinated by stories, and Jimmy not only satisfies this thirst but teaches them to understand pictures and the idea of metaphor as well. The Crakers latch on to his tales, turning them into a rudimentary religion, and by the end of the story they have already developed far enough to make a crude effigy of Jimmy, which they believe will help them communicate with him in his absence. The early signs of symbolic thinking, which Crake associated with the seeds of error, are already beginning to emerge at the end of the book, suggesting that it is impossible to escape our flawed nature.

The conclusion of all this, then, is that since curiosity is incompatible with ignorance, ‘the human’ is fundamentally incompatible with ‘the innocent’ and thus ‘the perfect,’ and we are left striving for an ideal that it is impossible for us to achieve. However, by studying Atwood in particular, it becomes clear that the point of these works of literature is not to lament our own failings, but to show us that our idea of paradise is not as perfect as we thought. In order to maintain innocence indefinitely we would have to give up not only our curiosity, but our creative instincts as well. In his essay, “The Apocalyptic Imagination in Oryx and Crake,” Mark Bosco, S.J. writes,

The novel suggests that rather than the philosopher’s definition of the human being as *animal rationale*, it is more accurate to say *animal symbolicum*—that is, symbol-making
being—to convey the centrality of the creation of symbols and metaphors to our humanity, which first find expression in questions about our origins and our end. (163-4)

The connection between questions of meaning and the creation of symbols cannot be understated here. The Crakers are accurate reflections of us in that we both share a love of stories and an urge to understand how we came to be, and where we are going. It is this investigative spirit that feeds the creation of art and literature, and our use of metaphor to make sense of the world around us. Without this drive to discover, we would certainly be able to remain safe in a utopia of ignorance, content to live our lives without change. Yet without curiosity or change, we would have no creation. Thus, the human “flaw” is no more than our inquisitive and creative energies, which go hand in hand. In designing the Crakers as the physical embodiment of our perception of innocence, Atwood shows us that the complexities of art and culture are too valuable to sacrifice for an ideal. Though we would be far happier without the knowledge of death and evil, the price, according to Atwood, is higher than we can afford to pay.

Lovecraft at first appears to be taking a stance opposite to Atwood, as he clearly and vehemently insists, through his narrator, that some knowledge should be avoided at all costs, as it merely destroys the joy of life. Yet the puzzling fact remains that Lovecraft wrote the story for his readers. The manuscript that the narrator hoped would never reach another pair of eyes has reached our eyes. Regardless of what the narrator says, it was this issue of evil, knowledge, ignorance, and horror that caused Lovecraft to pick up a pen and write, and in that way it was a creative effort. Even within the text of the story itself, Lovecraft’s narrator calls his manuscript a “test of my own sanity” (169), thus showing that Lovecraft has even imbued his mouthpiece with the insatiable instinct to cope with his burden by writing about it. As Nietzsche writes, “Creation—that is the great redemption from suffering, and life’s easement” (qtd. Ansell-
Pearson 13). In essence, creation is what makes suffering bearable, and the lack of creation is what makes paradise unbearable.

The question then remains of where this leaves us. The works of Atwood, Gaiman, and Lovecraft help reveal a side of us that we may not be aware of: our tendency to throw off the problems of the world by ignoring them, to defeat evil by forgetting it exists. Yet in writing these stories, the authors themselves model a different side of humanity—the creative side, continually driven to ask questions about why we are the way we are, to raise issues of value, and make us reexamine what is important. These two aspects, the will to ignorance and the will to truth, seem contradictory, but in fact they are both necessary to the definition of the human being. Regarding the metaphor of the fall of man, Joanne Faulkner writes, “It is in fact this fall that gives us our humanity” (72). In essence, to achieve the ideal of innocence is to give up all art, culture, and drive to change that makes us the way we are. But in the same way, to stop seeking innocence would also undermine our true nature, as our search for innocence is an expression of our search for what is good. Whether ignorance is actually a better state of existence is not an easy question, and the answer may differ for each individual; however, it is imperative to realize that it is not merely our happiness that is at stake, but our identities as curious and creative human beings.
Works Cited


First-Year Writing, Non-Research Category

Honorable Mention

Sarah Rothman

“A Letter from Linda Lee”

Assignment:
Franklin and Marshall College
ENG161: Science Fiction
Professor Mueller

Case needs your help. The text of *Neuromancer* turns out to be archived in the memory of the entity that comprises the recently merged AI’s, Wintermute and Neuromancer, and you’ve hacked into that memory. It’s your task to write a letter to Case, who is still trying to figure it all out, basing your argument about one of the following topics on the evidence you find in *Neuromancer*.

Topic: Through much of *Neuromancer*, Case disparaged emotion and the “meat” with which he associates emotion. Does his perception of feeling and the body change? It’s your task to explain to Case whether and how his perception changes—and whether his perception in the end is a good thing. Tell Case what the text of *Neuromancer* suggests about the value and/or liabilities of feeling & the body and their place, as the text suggest, in defining our humanity.
A Letter From Linda Lee

Case,

It gets lonely here on the beach. And cold. But you know that.

You crushed me that day you left, mostly because I just couldn’t understand why. The Case I knew in Chiba never would have walked away like that. The real world offered nothing that you appreciated; you had no respect for emotions, or the body. You lacked the will to live, “smug in [your] expectation of death” (8). The only reason you had to live was me. It baffled me when you turned down everything I thought you wanted: a chance to live forever in the matrix, the place you loved; a chance to escape the uselessness of the body, and the emotions you sneered at; a chance to be with me forever. I know now that I’m only a construct, but that wouldn’t have mattered to you before. You put so little value on the human body, that this simulation of me would have been enough. I couldn’t understand what had changed in you, that you didn’t take this chance.

Well, I read some old archives the other day, Case. As I froze my ass off on the sand waiting for cigarettes, a whole record of your experience washed up by my feet. And I get it now. I’ll be damned, but somehow you now appreciate what you used to detest. Your perceptions of emotion, the body, and the matrix have all changed, and through this change, you found the will to live, and not just for me, but for yourself. I’m proud of you, Case, I really am.

It’s ironic, because you once “hated the thought of me” (8) precisely because I made a small part of you want to live. Otherwise, you felt “numb…numb a long time, years” (152).
You resented me pricking a hole of feeling through that impassive front you put up. You chose to live in a city with a monotonous grey sky, to put yourself in situations where death could come get you, to take drug after drug. No wonder you had no will to live: you were “proof against fear” (21). You buried your emotions, and it almost killed you; “simple animal fear” (18) acts as a wake up call, Case, to make us run from death. That was sure as shit the only thing I had to keep myself going: fear. I tried to make you scared that one night, you remember? I told you Wage planned to kill you? I thought if I “decided to rip you off…you’d give a shit” (144). I’d hoped maybe I’d saved you, that maybe even after I’d gone and stolen your RAM, you might still have something left. It almost worked. Fear came back to you “like some half-forgotten friend” (18), but it wasn’t enough. Reading through your experience, I see that I didn’t pluck at the right emotion.

You use anger to push you forward now, the way I used fear to pull myself along. The point is the same: emotion can give you motivation, and only with purpose do you have a will to live. You got real depressed, Case, when you couldn’t work anymore. Your downward spiral started because you had no goal. But anger? Anger gives you a goal; it makes you want to do something. At least I inadvertently contributed to that anger. You channeled your fury about my murder into your job, sometimes working “for nine straight hours” (59) after dreaming about me. I’m glad you came to appreciate what emotion can do for you, and relieved that you learned to “[savor] the new thing, the treasure. Rage” (145). You went from rejecting emotion, to prizing it, and this change in perception stopped you from ducking out and joining me here. Stopped you from giving up.

Instead, you “warmed [your]self with [anger]” (156) and continued on to your purpose: getting those toxins out of your head. I figured you’d do anything to get your brain back under
control, but I didn’t expect you to spend “the bulk of [your] Swiss account” (270) on a new pancreas and liver. You didn’t give a shit about your body before - it was riddled with drugs. Once you found Betaphenethylamine to bypass the restrictive organs Wintermute gave you, I didn’t think you’d bother getting new ones. You used to hold a “contempt for the flesh” (6) that led you to abuse your body to the point where you should have died. Now you hold that flesh in high enough regard to pay for it.

Your new will to live comes in part from this new concern for your own well-being, Case. Yeah, maybe you’ll go back to drugs, but new organs show me that you put an increased value on your body. You want to control it, want it to be completely yours. This shows me that you realize the importance of meat, the beauty and meaning it holds. At last you understand this. All those times you looked into my eyes in Chiba, you disregarded how you felt as “all the meat…and all it wants” (9). You couldn’t see anything significant in the way our bodies touched. But together in the construct, you recognized, finally, that the “flesh the cowboys mocked” is actually a “vast thing, beyond knowing…[an] infinite intricacy” (239). A real body is something the world can offer that the matrix can’t. Your new admiration for it sparked in you a desire to live outside the construct.

But you don’t just value things in the real world more than you used to; it seems to me that you also put a lessened importance on the matrix. Considering your old lifestyle, that’s the biggest change in you of all. Previously, jacking in, for you, was more realistic than the actual world. The matrix’s “rainbow pixel maze was the first thing [you] saw when [you] woke” (59). It consumed you, so you had no desire to inhabit a world beyond a construct. The matrix was an addiction: your whole life revolved around it.
Now, it seems to me that being a cowboy, stealing online information, is just a job to you.

In the end of the archives, the only information I got about the presence of the matrix in your life is that you “found work” (270). That’s it. Just a throwaway comment before moving on to say you got a new girl. As though you recognize more important things than the matrix. Jacking in may be what you do, but it doesn’t define you. Hell, your perception of the importance of the matrix has changed so much that you turned down the opportunity to live, permanently, in a computer. I never would have dreamed you’d give that up. It really goes to show the value you place on the real world; visualization doesn’t cut it anymore. This explains why you hated Dixie’s laugh so much: it just wasn’t the real deal. You have the will to live because you realize that the matrix can’t offer you exactly what you want, only a version of it.

I’m proud of you for finding the things you want. Really, I’m proud that you even want something now. You treasure emotion, appreciate the body, and you’re not so obsessed with the matrix anymore. These are big changes in perception, and they give you the will to live, even without me. I’m glad you can be happy, Case. I mean that.

Stop by anytime, okay man?

Your honey,

Linda

Foundations

Whitesell Prize Winner

Nicole Venezia

“The Long-Term Threat of Nuclear Iran”

Assignment:

Franklin and Marshall College
FND140: Informed Opinions
Professor Christie L. Larochelle

Regardless of whether or not Iran has the missile technology to pose a direct physical threat to the United States, in what other ways might a nuclear-armed Iran be considered a threat to our country?
The Long-Term Threat of a Nuclear Iran

In his most recent presidential address, Barack Obama asserted, “America is determined to prevent Iran from getting a nuclear weapon...But...if Iran changes course and meets its obligations, it can rejoin the community of nations” (Obama 12). Iran and the west have a tense history, and although many are hopeful for peaceful discourse and a decrease in hostility, Iran cannot be trusted. There is uncertainty surrounding Iran’s current nuclear capabilities, but advancements in Iranian nuclear and missile technology, a trend of noncompliance, and anti-west rhetoric used by Iranian leaders all indicate that Iran poses a long-term threat to the United States. While Iran does not pose an immediate threat to the continental U.S., once it successfully develops the technology to build and deliver a nuclear weapon, prior non-compliance and violent rhetoric suggest that Iran would not hesitate to use nuclear weapons.

Recently, Iran has taken significant steps to improve its capability to build a nuclear weapon that could threaten the continental U.S. in the years to come. For instance, Iran recently asserted that the Fordow Fuel Enrichment Plant (FFEP) would enrich uranium up to 20%, although it was initially designed to enrich uranium up to 5% at the plant (IAEA 4). Uranium enriched to the 20% level is much more refined than is needed for energy and can be used to produce a crude weapon (Forsberg 2-15). Increasing FFEP’s capabilities to yield highly enriched uranium demonstrates Iran’s desire to use uranium for violent purposes, because a lower-enriched uranium would suffice to produce energy. According to the Federation of American Scientists, Iran upgraded six of the Natanz Fuel Enrichment Plant’s cascades from 164
centrifuges to 174 centrifuges, making the plant capable of manufacturing crude weapons material faster than ever before (Barzashka 2-3). The fact that Iran is developing its capability to create large quantities of highly enriched nuclear material rapidly at multiple locations further suggests there may be a military motive to their nuclear program. Overall, Iran’s enhancement of nuclear plant facilities suggests that Iran is improving its ability to create higher-grade materials at a rapid pace for violent purposes.

Even more alarming is Iran’s development of missiles that may be able to deliver nuclear weapons long distances several years from now. An imminent problem is posed by Iran’s development of the Raad, a cruise missile capable of reaching a distance of 150km, threatening the nearby Gulf Coast, Israel, and the Strait of Hormuz, where the U.S. has stationed military personnel (Country Profiles Iran 1). If Iran decides to attack any of these nearby areas, the U.S. could face a devastating loss of military personnel, as well as the threat of continuing violence to defend its ally, Israel. Just a year ago, Iran successfully test-launched its Safir SLV, and if properly modified, this missile would have the capacity to carry “a 1,000 kg warhead,” as far as “2,000km to 2,500km” (Country Profiles: Iran 1). This advancement would still leave Iran incapable of delivering a nuclear weapon to the continental United States, but such progress indicates that Iran could eventually develop long-range missiles. Furthermore, even if Iran doesn’t develop missiles to use these weapons against the U.S., Ayatollah Khomeini has asserted that Iran will, “transfer…technologies of its scientists” to countries with fiercely anti-west regimes like the country of Sudan (Summary Report 3). If Iran gives weapons to violent countries, these countries may decide to use the weapons against the U.S. Although the scientific community does not expect Iran to have a nuclear weapon until 2015, shorter-range missiles
pose a current threat to U.S. troops, and Iran’s plans to continue missile development pose a long-term threat to the U.S.

Iran’s history of non-compliance also makes the international community skeptical of Iran’s nuclear intentions. The increase in centrifuges and enriching of uranium to 20% as mentioned above violates the Non-Proliferation Treaty Iran signed (“2011 Adherence” 1). Iran has also ignored the Security Council’s resolutions mandating a halt of “heavy water related projects” (IAEA 6). These blatant violations to previous agreements indicate that Iran feels no commitment to or respect for the requests of the international community. If Iran cannot comply with these requests, there is no telling what undisclosed activities it is pursuing. For two years, Iran has continually been slow to respond to the U.N.’s Board of Governors’ requests to permit U.N. access to nuclear production and heavy-water sites (IAEA 6-8). Although Iran has occasionally permitted inspections of certain facilities, the nation demonstrates no sense of urgency when granting the U.N. access to sites. Iran has failed to report details about the current construction of ten additional uranium enrichment facilities as requested by the U.N. (IAEA 5). By not providing details about its plans for nuclear facilities, Iran creates suspicion that it is concealing extreme nuclear pursuits. These various instances of non-compliance demonstrate Iran’s defiant attitude towards the west, suggesting that even when Iran does comply, it only exposes certain elements of their nuclear program to international scrutiny, potentially leaving the most dangerous operations hidden.

When technological advancements and non-compliance are coupled with anti-west rhetoric, they transform Iran into a long-term nuclear threat for the U.S. In an address to the U.N. General Assembly this past September, Ahmadinejad stated that he considers the U.S. “sinister,” and among the “slave masters and colonial powers that…have caused widespread misery and
disorder” on Earth (Ahmadinejad 8). He views Iran as a victim of the arrogant and oppressive west, and feels Iran is entitled to pursue nuclear activities (Summary Report 4). Although other evidence only seems to suggest that Iran is developing a nuclear weapon, the fierce anti-American attitude of Iran’s leaders suggests that if Iran does access a nuclear weapon, they could use it against the U.S.

Although Iran does not pose an imminent threat to the U.S., if Iran obtains a nuclear weapon, it will disturb the balance-of-power that favors the more democratic western states. Iran may decide to furnish other violent enemies of the U.S. with nuclear weapons, or if it develops the missile technology, Iran may choose to use a weapon itself. However, in the long-term, a hostile and power-hungry Iran could develop weaponry to deliver a devastating nuclear attack on the United States.
Works Cited


Assignment:

Franklin and Marshall College
FND144: America in Black and White
Professor Douglas Anthony

Drawing on materials from the “Alien Analysts” packet and at least one article or chapter from Critical White Studies, Blum or Smedley, come up with a working definition of what race is.

Present your working definition in the form of an argument that you defend with the source material you have chosen, and with an awareness of possible challenges to your argument based on other readings. The idea here is to capture your best, clearest critical thinking on the question, based on the evidence available to you at this point in the semester. The idea is not to lock you into a particular definition; you will almost certainly want to revise or clarify your definition later in the semester.

Construct your essay as an argument in which you draw on your sources to illuminate your understanding of the term. Make sure your essay begins with an introduction in which you explain your argument, and which contains a clear thesis statement. The best essays will also end with a conclusion that wraps up the argument neatly and reinforces its main thrust. Throughout, they will demonstrate a command of the ideas discussed in the readings you have chosen, and other key ideas discussed in class.
What is Race, Really?

“Race” is one of the most controversial, perplexing concepts of today. Whether consciously or subconsciously, we use race every day to pass judgment on people who look, behave, or speak differently. The truth is, no matter how irrelevant some of us perceive these differences to be, this term “race” affects our thoughts, behaviors, and perhaps our “destinies” in ways most of us are unaware. Race is a concept socially constructed from the historical attempts to divide, define, and subjugate a non-dominant culture from the dominant, and as a result of that history, it links somatic appearance with distorted perceptions of superiority and social hierarchy.

The idea of a race-based hierarchy began to manifest itself in the U.S. during the Atlantic Slave Trade. In fact, use of the term “race” before the slave trade was a popular way to categorize plant and animal sub-groups, and occasionally used in reference to a human population of common origin or history. It did not imply that these races were “biologically distinct from one another, nor…that they possessed a distinct set of personality, temperament, characterological, mental, or aesthetic characteristics…Neither did it imply a distinct hierarchical relation among the groups.”[^7] In other words, “race” referred to groups of people who shared commonalities in culture, appearance, and place of origin, but who also shared the same biology and held the same respect as persons of other races. No one race was regarded as superior to the others. It was not until the “manifest destiny” period in Europe, which eventually led to the slave

trade, that the term began to lose its neutrality and transform into a powerful tool of division and then subjugation.

Chapter 6 of Lawrence Blum’s *I’m Not a Racist But…* critically analyzes how race and slavery became so interrelated in history and so deeply engrained in consciousness that the idea of superiority and inferiority based on “color” or “no-color” eventually took over the American culture. Once Europeans began the conquest and colonization of other countries and made slaves of Africans and the indigenous peoples of the Americas, “race” began to carry more weight than it originally had.\(^8\) Any race (in the neutral term) of people who did not practice Christianity were called “heathens” and any who were not as civilized were called “savages.” These were both apt justifications for keeping these specified races as slaves to the divine, civilized Europeans. The Atlantic Slave Trade almost exclusively traded African peoples to the New World because of the economic benefits they posed for the American white people.\(^9\) As generations passed with all slaves being African and all owners white, with all Africans poor and most white people much better off, and with whites economically, politically, and socially dominating society, the dominant population began subconsciously regarding blacks as inferior. It was not until the fight for abolition of the slave trade that slave owners explicitly used the only justification left for keeping slaves: that the dominant race, white, was superior and that all others were inferior in every way imaginable.

“Race” as we use it today carries all the implications of the dominant, superior population attempting to divide and subjugate the human race. The dominant culture, white in the case of the U.S, uses the dominance to shape a society ideally for *them*. Mahoney points out that “the

---

\(^8\) Blum, “*I’m Not a Racist But…*”. 111.  
\(^9\) Blum, “*I’m Not a Racist But…*”. 115.
official rules that define ‘race’ in America have been the white rules.”¹⁰ She goes on to explain that the term “race”, when used by the dominant culture, is based on definitions of the “other”, or the non-dominant culture.¹¹ One very common illustration of this is when exams or job applications ask for one’s “race”. Most of the time the categories will be labeled as follows: “White”, “Black”, “Hispanic/Latino (specify Mexican, Cuban, etc.)”, “Japanese”, “Korean”, “Vietnamese”, “Chinese”, “Filipino”, “Other Asian (specify)”, “Some other race (specify)”, and so on.¹² There are no sub-groups under “White”, like Irish, Swedish, French, or other European whites. The same goes for “Black”, although there are many other sub-groups one could identify with besides skin color. The lack of sub-groups under “White” or “Black” emphasizes the historical obsession with skin color and creates a divisive contrast between the two. Historical attempts to define the minor cultures implied that white was the norm, and simultaneously subjugated the “other.”

Race is not one’s own identification of himself; it is society’s attempt to define and categorize him. Race is not just a skin color; it also drags along assumptions of social status along with it. The evolution of “race” from a simple, neutral concept to a divisive, however important classification system proves that “race” is entirely socially-constructed. If race were mere biological make-up, the concept would be unchangeable; whereas this concept changes alongside history. Race is not a tool of unity, nor is it used to recognize and understand the individuality of any one categorized person; rather it is an ineffective way of making quick judgments on a person using recycled notions from our horrible past.

---

¹² U.S. Census Bureau, Short Form Questionnaire (2000)
Bibliography


U.S. Census Bureau. Short Form Questionnaire. 2000.
Foundations

Honorable Mention

Kim Trageser

“The Threat of Iran”

Assignment:

Franklin and Marshall College
FND140: Informed Opinions
Professor Christie L. Larochelle

In an essay of no more than 1000 words, respond to the following statement (be sure to use evidence, with proper citations, to support your assertions):

Iran does/do not pose an imminent threat to the United States and/or the international community and immediate action beyond further sanctions is/is not warranted to alleviate that threat.
The Threat of Iran

The possibility of nuclear weapons in Iran has long been a hot-button issue, and has become even more so now in light of the 2012 Presidential election and the illumination of new aspects of Iran’s nuclear program. There is a great deal of debate over the issue and obviously a lot at stake, but it is impossible to say with certainty exactly how advanced Iran’s nuclear program is, and what the country’s purposes are for nuclear technology. As a result of their secrecy and suspicious activity, it is plausible to conclude that Iran does pose a threat to the United States; however, it is not reasonable to take further action beyond the sanctions we currently have in place because of our lack of information, and the effect of said sanctions.

Iran’s dealings with international regulatory agencies have been characterized by a distinct lack of cooperation, leading to the conclusion that Iran is engaging in illicit and potentially threatening nuclear activities. Since the start of Iran’s nuclear program, even before the 1979 Islamic Revolution, Iran’s nuclear goals and endeavors have been called into question, largely in response to a blatant lack of cooperation on the part of Iran towards the International Atomic Energy Agency (IAEA) and the U.N. National Security Council. Sources, including the official IAEA report, agree that Iran has been secretive and suspect in their dealings with the IAEA and other official agencies. Iran has illicitly continued enrichment activities and heavy water-related projects, provided false or misleading information, failed to declare nuclear sites and materials, and refused to grant access to certain nuclear facilities (International Atomic Energy Agency). All of this combined leads to a distinct appearance of guilt on the part of Iran.
The IAEA report declares that because of this lack of cooperation, the Director General cannot absolutely declare that Iran has engaged in the pursuit of nuclear weapons but the Agency has become “increasingly concerned about the possible existence in Iran of undisclosed nuclear related activities involving military related organizations,” especially as a result of the information they have gained (IAEA). The IAEA is particularly concerned about efforts to procure, disguise and develop nuclear supplies, equipment and information (IAEA). Though all of Iran’s actions thus far can be attributed to peaceful purposes, the military possibilities certainly exist, and this, coupled with Iran’s lack of cooperation, leads to the distinct appearance of guilt.

Iran has also engaged in suspicious activity in the use and development of their recognized nuclear materials. Many countries that utilize nuclear power for peaceful purposes purchase their nuclear fuel supplies from other countries. Russia has offered to provide the necessary nuclear product to fuel Iran’s Bushehr reactor. (Iran’s Nuclear Program: Status) If such is the case, many experts question Iran’s need for nuclear enrichment at all, especially enrichment to the degree they are pursuing. Iran has continued to enrich uranium up to 20% as declared in the IAEA report from November 2011, and produced far more than they claimed. Iranian officials estimated a total of 44.7 kg of UF₆ enriched at 20%, but when the agency investigated, they uncovered 73.7 kg (IAEA). Iran claimed to be using this uranium for medical reactors, but the amount discovered was far more than would actually be required. These suspect dealings only contribute to the belief that Iran is pursuing threatening nuclear technology.

However, as a result of the uncertain nature of this conclusion, it does not warrant further action, especially military action. In the American justice system, an individual is innocent until proven guilty, and that must extend even farther on an international scale where not only one
person’s life, but many millions of lives are at risk. Therefore, since it has not been definitively proven that Iran has nuclear weapons or what their path would be if they acquired them, further action is not warranted. The simple fact that Iran is developing nuclear weapons does not mean that they plan to use them against the United States or our allies. For example, acquiring such technology could help ensure the defense of Iran’s own land and country. Iran could never compete with the huge arsenals employed by countries like the United States, and thus, to attack us would be completely illogical (Iran’s Nuclear Program: Status). Additionally, Ayatollah Khamene’i has issued forceful and public statements declaring that the use of a nuclear weapon is contrary to Islamic beliefs (Iran’s Nuclear Program: Status). Because Iran is a theocracy and religion plays such an important part in governmental decisions, it would lessen the regime’s credibility if Khamene’i were to make such a statement and act in direct opposition. Also, if the United States were to interfere and enact military measures, it could cause Iran to end cooperation with the IAEA completely, ending all diplomatic ties, and sense of security (Iran: U.S. Concerns and Policy Responses). Thus, military action should be a last resort in this situation, especially because the sanctions put in place by the United States and other countries seem to be working.

Sanctions in place are creating a negative, and thus desirable, impact on Iran’s economy. The United States has been imposing economic sanctions on Iran since 1996 and today targets Iran’s lucrative energy sector, which accounts for more than 80% of the country’s government revenues (Iran Sanctions). Because so many other nations have joined in the sanctions, they are having a notable effect. After sanctions, the value of Iran’s currency fell by almost 15% in September 2010. Iran’s oil production has fallen from around 4.1 million barrels per day from
the mid-2000s to around 3.8 million barrels per day as of 2010 (Iran Sanctions). These losses are having a significant effect on Iran’s economy, and thus, further action is not necessary.

It can be reasonably concluded from Iran’s lack of cooperation and secrecy, in combination with suspicious and clandestine activities, that Iran is taking steps to create a nuclear weapon, and thereby could pose an imminent threat to the United States. However, because of the uncertain aspect of this conclusion, it is not currently appropriate to take further steps. There are a number of different motives Iran could have for creating the bomb, and already many deterrents to prevent them from using it against the United States, including economic sanctions.
Works Cited


