Dear Reader--
Welcome to the second issue of U-High’s history and economics Journal, InFlame! This journal will publish history and economics papers written by U-High Students. The Journal will be published semi-annually on the Lab School Website, and annually in print.
Submissions to the Journal will be reviewed by a student and faculty editorial board composed of seven students and two history teachers. The board will have a blind selection process, and will select between four and eight papers to publish for each issue.
If you have a paper you’d like to submit, please send it to inflame.journal@gmail.com.
Happy Reading!

Grace Fioramonti-Gorchow
Co-Editor in Chief

Sophia Weaver
Co-Editor in Chief

Mimi Lipman
Editor

Edward Litwin
Editor

Marissa Page
Editor

Karen Reppy
Editor

Art by Emily Xiao
http://ucls.uchicago.edu
The University of Chicago Laboratory Schools, Chicago 60637

© 2012 by The University of Chicago Laboratory Schools

All rights reserved. Published 2012.

The United States of America

We Reserve the right to publish all work submitted to InFlame (the Journal). No work published may be used by anyone other than the author of that particular work. No part of the Journal may be reproduced for any reason unless permission is granted by the author.
## Table of Contents

Mission Statement.............................................................................................................3

Submission Criteria..........................................................................................................3

Spotlight on a Historian......................................................................................................4

Real-life Tipping Points, ....................................................................................................6
By: Gabe Knight, John Lin, David Tong

From Marx to Lenin: The Translation of Karl Marx’s Views about Religion into Policy under Lenin….18
By: Karen Reppy

The Benefits of Consistency: Why the Chinese Civil Service Examination System Lasted,.............33
By: Madeline Sachs

Eli Whitney: America’s Greatest Trendsetter .....................................................................45
By: Jen Xue

Lab School Honor .............................................................................................................60
Mission Statement

We are a student-run journal dedicated to publications in history and economics. We wish to promote scholarly discussion by providing students a forum on which to publish and share work with their peers. Our editorial staff will work directly with authors at each stage of the publication process. As a Journal, we hold ourselves to a high standard of excellence. We value honest academic research and strong theses. We look for papers of a high quality that demonstrate a clear understanding of the material, draw meaningful conclusions, and present new and interesting ideas. Our goal is to foster a community that encourages thoughtful and creative historical and economic writing.

Criteria for Submission

Must be a double spaced history or economics paper between 4 and 18 pages in length
Bibliography and endnotes in Turabian Style (guidelines here)
Must be submitted in a Word Document
Cover Page should contain title (and subtitle if applicable), author name, name of history class
1 inch margins
Double spaced
12 pt., Times New Roman font
Header: Author last name and page number
Illustrations, maps, and tables welcome
Spotlight on a Historian: Rachel Shelden

InFlame: What drew you to history and your field, and what is your favorite topic to research?

Rachel Shelden: I think I naturally gravitated toward history because of my experiences at Lab. My interest came from great teachers but also the incredibly diverse community of students, the legacy of John Dewey, and the surrounding area of Hyde Park and Chicago. To me, history is all about diversity and interaction and that is a special part of the Lab community. Although we are a diverse country, it is unusual for so many different kinds of people with so many different political and ideological perspectives to really interact on a regular basis. That's something that happens at Lab and at other Hyde Park institutions like the Medici, the Co-op (now Treasure Island), or even Jimmy's. This is the kind of history I like to research as well - the personal relationships and interactions of Americans with different backgrounds. I just happen to look at these relationships and interactions during a formative part of our history: the nineteenth century. Particularly in the period before the Civil War, personal relationships played a critical role in determining how the country would develop and whether it would survive.

IF: Why do you think it’s important to study history and what role do you think history has in shaping the present?

RS: In major political crises like the government shutdown and the situation in Syria that we are dealing with today, you hear people invoke the founding fathers or use the cliché that those who forget the past are doomed to repeat it. The past is a product of personalities, context, and contingencies, so it never really repeats. But, at the same time, we are grappling with many of the same questions today that we were in 1787, 1861, 1945, and on and on. Some of the most prominent questions include how we preserve our democratic experiment, the role of race in society, the place of America in the global community, and problems of economic growth and inequality. Understanding how and why these problems have developed over time and the ways in which past actors have handled them gives us more insight into their current contexts. It also helps us to appreciate the nature of our democracy and the sometimes ugly past that allowed us to preserve it.

Rachel Shelden’s second book will be published this fall. Titled “Washington Brotherhood: Politics, Social Life, and the Coming of the Civil War” the book focuses on Antebellum culture in Washington DC. More information can be found here. Shelden, who completed her BA at Stanford University, and her PhD and MA at University of Virginia is now an assistant professor at Georgia College, where she teaches classes on the Civil War and slavery in the United States.
Real-Life Tipping Points
Gabe Knight, John Lin, David Tong

For every social change, there is a tipping point: a moment of critical mass, the threshold. In *The Tipping Point: How Little Things Can Make a Big Difference*, bestselling author Malcolm Gladwell describes the three basic laws of epidemics: the Law of the Few, the Stickiness Factor, and the Power of Context. Simply put, the Law of the Few suggests that a few highly infectious individuals are capable of spreading an idea or product to the rest of the population. Gladwell goes on to cite three types of “infectious individuals” – Mavens, Connectors, and Salesmen – as those powerful enough to be the few who help spread an idea. The second basic law of epidemics – the Stickiness Factor – helps to explain why a message sticks. Finally, the Power of Context says that ideas and products that fit the context into which they are launched spread fast and wide. Using the concepts that Gladwell puts forward, we have tried to make sense of some contemporary social movements and tipping points.

Evolution of Executive Compensation

Dough, moolah, bucks, cash, capital, green, liquid; the abundance of words one can use to express currency shows its importance in this world. In fact, people like money so much, that simply touching it has been shown to reduce pain. So, what job to people pursue in order to make lots of it? They become CEOs (Chief Executive Officer). It’s only logical that the boss, head, or manager of a company gets the highest salary. However, the recent financial crisis has caused many people to reevaluate their opinions on the compensation of CEOs and executive officers. Today, S&P 500 CEOs earn up to 343 times that of the typical American worker. One might argue that CEOs are put under a lot of stress and work extremely hard (thus deserving such high compensation), but other jobs, those in the navy or army, for instance, demand hard work and put participants under a lot of stress, but pay considerably lower. This has not always been the case. In the 1970s, executive compensation was only
twenty-eight times that of the typical worker. The ultimate question, then, is what tipped the scale and created the exponential growth in executive compensation?

Following the end of World War II, the United States of America affirmed its position as the most powerful nation in the world. Because the war was fought over European grounds, America did not need to rebuild infrastructures when it ended. The war seemed to have rejuvenated the American economy and brought America out of a deep depression. By the 1950s and 1960s, American firms significantly increased in size, yet executive compensation remained relatively stable. The increase in size of American firms marked the beginning of the corporate culture, which places a heavy emphasis on executive payouts. Larger companies meant larger market share, larger leveraging power, larger revenues and ultimately, larger profits. Companies that grew in size began to adopt the corporate culture, where profits were maximized and moral sacrifices were made to appease shareholders. Firms that adopted the cold and vicious corporate culture became more successful even as competition in the 1960s grew. In an effort to stay competitive by spurring executive and managerial talent, firms began to give greater incentives.

Prior to the 1970s, there were low levels of pay, little dispersion across top managers, and moderate pay performance sensitivities. This meant CEOs, CAOs, CFOs and upper management were distributed relatively even pay; in addition, performance had little effect on salaries. Because of this, CEOs generally maintained their position until retirement. Nowadays, the average lifespan of a S&P 500 CEO is 6.6 years. Unless a CEO is a founder, 15 years as the commander of a S&P 500 company is considered to be miraculous. Interestingly enough, the longer a CEO has had his position, the more likely he is to retain that position. However, there are very few people today that can boast having held the same CEO occupation for more than a decade. Today, upper management has become an occupation as opposed to just a title. A fired CEO can easily find managerial positions at other companies as there
is a constant supply and demand for CEOs. The longevity of CEOs in the 1960s implied the lack of attention firms paid to their managerial talent. By the 1970s, however, firms realized the potential that developed from hiring CEOs of talent and skill.

To acquire the best CEOs, firms began to give greater incentives for ambitious CEOs who were willing to work hard. Firms started to give executives stock options in order to spur smart decisions and more aspiring projects. Stock options were introduced in the 1950s, but during the 1970s, the first increases in managerial wage appeared and performance was correlated with stock options. The 1970s was the major tipping point in executive compensation.

During the 1970s, employee stock options accounted for 16% of their total pay. By the next decade, it was 26%. During the 1990s, employee stock options totaled 47% of a CEOs yearly pay. And from 2000-2005, on average, what an S&P 500 CEO brought home him each year was 60% stock options. Even more shocking is that when inflation and interest rates are accounted for, CEO salary has stayed fairly constant. Earnings from stock options have exponentially increased, not the guaranteed salary.

Exponential growth in executive compensation was caused by the introduction of stock options. The introduction of stock options follows an epidemic pattern (The Law of the Few). Like an epidemic, the initial response to change is minimal, but progress ultimately spurs more progress. The exponential effect eventually kicked in, and within a generation, people had not only developed a new method of compensation, but had taken it to new heights. Following the Law of the Few, the first companies that adopted this method were likely to have been influenced by connectors. Mavens would later learn of this method and eagerly inform firm personnel of this new and exciting idea. The firms then acted as salesmen to persuade executives to opt for the new system. The scale tipped and created a revolution in corporate culture, and changed the possibilities of executive earnings.
The introduction of stock options also resulted in riskier behavior among CEOs. In an effort to increase stock prices during their time of service, CEOs embarked on more ambitious and uncertain projects. They invested more money on projects that capitalized on high risk and large returns. Stock prices became the main concern and goal of executives. CEOs pushed for more competitive marketing strategies and stressed the importance of keeping shareholders content.

After stock options were introduced, more and more CEOs jumped at the opportunity to incorporate stock options in their yearly pay. CEOs generally sought higher compensation and believed that their efforts could positively affect the company more frequently if they opted for stock options, and by 2000 they were granted to more than 90% of CEOs. However, in many cases, CEOs did not exercise their stock options because the year-end difference in stock price either decreased or remained the same, signifying lackluster performance. In the 1960s through 1990s, there was extreme volatility in terms of the percentage of CEOs exercising stock options. However, the percentage of CEOs that exercise stock options has steadily increased to around 50-60%, indicating that performance (in terms of raising stock prices) has a direct correlation with the prevalence of stock options. In short, stock options increased performance among CEOs.5

Stock options have transformed executive compensation in numerous ways. Their development acted as the agent that tipped the scale, which dramatically increased executive compensation and changed corporate culture. Being a CEO is no longer a relaxing job with a fixed salary. Instead, a new wave of CEOs has assumed power and implemented a new regime— one that is more intense, stressful, efficient and mind-bogglingly lucrative through the use of stock options.
The Arab Spring

All of a sudden, the Middle East was up in arms. Governments switched hands, a new age began to develop, and a revolution was underway.

Nothing seemed to have changed in the Middle East, at least on the surface. But, as is true with all social movements, there was a catalyst; something set it all off; something tipped.

Without a doubt, the image of Mohamed Bouazizi burning to death is one of the most powerful and disturbing imaginable. After the Tunisian governor refused to speak with Bouazizi concerning his inability to sell goods on the streets of Tunisia (Bouazizi was a street vendor), Bouazizi obtained a can of gasoline from a nearby gas station and ran back to the governor's office. While standing in the middle of traffic, Bouazizi shouted, "How do you expect me to make a living?" and doused himself in gasoline. With a single match, he lit himself on fire and slowly burned to death.⁶

Many cite the self-immolation of Mohamed Bouazizi on December 17, 2010 as the spark that set off the Arab Spring. His extreme act after he being banned from selling fruit elicited the first open protests against the Tunisian government which in turn set off demonstrations around the Arab world. Surely, it did not have to be this way; the death of one unfamiliar man is seldom the grounds for revolution, let alone one of this magnitude. Yet Bouazizi’s did exactly this; it set the stage for revolution. What made this the tipping point for the Arab Spring? In order to fully understand the Arab Spring, it is important to look at the three basic laws of epidemics – the Law of the Few, the Stickiness Factor, and the Power of Context – that Gladwell sets out in The Tipping Point.

Bouazizi and the Tunisian protesters he inspired helped illustrate the power a few people can have over a greater population. One man (Bouazizi) was able to spread his message to his countrymen, who, in turn, created a wave of revolutionary sentiments that ultimately changed the lives of millions by paving the way for the movement. It only took a small group of people to light the fire of opposition. In
Gladwell-language, Bouazizi was an Innovator, and the Tunisian protesters were the Early Adopters. They were those who, as Gladwell describes, “…want revolutionary change, something that sets them apart qualitatively from their competitors.” Thus, Bouazizi and the Tunisian protesters exemplified Gladwell’s Law of the Few.

In *The Tipping Point*, Gladwell separates these “few” people who cause social epidemics to escalate into “Connectors” – people who bring people together because they have established a large network of acquaintances from wide-ranging social groups, “Mavens” – those who start social epidemics due to the large amount of knowledge they have accumulated and are eager to share, and “Salesmen” – those charismatic people who spark social movements with their ability to persuade. Yet the Arab Spring was different in that its success in spreading can also be attributed to social networks. The Arab Spring has been, in fact, one of the first social movements fueled by social networking. These social networks, such as Facebook and Twitter, derive their power from the fact that they essentially eliminate the need for these “few”; with social networking, everyone is linked through a vast network of mutual friends and acquaintances. Essentially, these social networks make news more accessible and effectively eliminate the need for personal interaction and communication. Thus, when Bouazizi’s message hit Facebook, it also hit a friend’s Facebook, which hit a different friend’s, and so on.

Certainly, the mental image of the Tunisian martyr burning to death is unlikely to fade quickly. It’s powerful, memorable, and it *sticks*. Within a month, Bouazizi’s message had become global, and old regimes began to crumble. Additionally, the internet and social networks by which Bouazizi’s message was communicated facilitated sensationalism. The media is rife with sensationalism; especially with the rise of online media, news is presented in a way that maximizes both conflict and entertainment value. Moreover, many Facebook users overly-sensationalize news in order to create a buzz among their Facebook friends. Thus, the nature of social networks and online media helps to explain what made
Bouazizi’s message stick. Unfortunately, many of the other aspects that made his message truly sticky are unknowable without conducting a controlled experiment. Finally, the Law of Context helps to explain the success of the social movement in the Arab World. Even today, people in the Middle East and North Africa are suffering from the effects of colonialism; the Arab World is, first and foremost, a post-colonial society. Thus, Bouazizi’s audience was receptive to his message as it faced subjugation by corrupt leaders who were given power during the times of colonialism. Furthermore, the religious makeup of the region – the Middle East is primarily made up of believers of Islam – has played an important role in the spread of Bouazizi’s message, as Islam, like any religion, can be used as a strong rallying tool. Understanding context is crucial when analyzing a tipping point in history.

Albeit more complex than many of the social movements depicted in Malcolm Gladwell’s The Tipping Point, the recent Arab Spring movement can be explained in large part by the principles Gladwell sets forth. The advent of social networks, as well as increased pervasiveness of online media, has caused social movements to be revolutionized. No longer are people dealing with word-of-mouth epidemics, but instead face word-of-Facebook-posts or word-of-Tweet outbreaks.

**K-pop and “Gangnam Style”**

In the summer of 2012, the world experienced the greatest tip ever to hit pop culture since Elvis or the Beatles in the form of a single, four-minute YouTube video. This song, known as “Gangnam Style,” is performed by an average-looking man from South Korea with few special features or traits. In fact, his simple appearance easily makes him the most unlikely candidate to ever cause such a revolutionary sweep. The dynamic at which this phenomenon occurred cannot be fully explained, nor to an extent, comprehended.

In order to talk about the song itself, it is important to understand a brief history of this pop-culture as it is known today. “Kpop,” also known as Korean Pop, essentially began in the 90’s when
artists started to incorporate techno and hip-hop into their singing performances. By the mid-90’s, a new breed of artists was born. Entertainment agencies began forming “K-pop groups” which consisted of at least four stars who sang, danced, and rapped in their performances. This new generation of performers was crafted to have the best dancers, singers, entertainers, and feature the most attractive individuals. Thus, the transformation of Korean music, coupled with the beginning of the Korean drama industry caused what is known as “Hallyu” movement, or the “Korean Wave” throughout Asia. By the turn of the century, Korean TV, music, and culture were followed closely by countries such as Japan, China, Vietnam, and the Philippines whose own cultures were unable to please their citizens as much as the “Hallyu” movement did. In the past decade, Korean culture has spread to the United States, Canada, Mexico, Europe, and South America as individuals all over the world now follow their favorite Kpop performers on Twitter, Facebook, and similar social networking sites. Kpop groups continue to tour around the world.

How does Psy and his “Gangnam Style” song fit into the Kpop scene? Psy (Park Jae-sang by birth) was born into a family of considerable wealth in the Gangnam District of Seoul, South Korea on December 31, 1977. He lived a relatively normal life growing up, attending school and focusing on his studies as his parents instructed. As a young student, he often misbehaved, made his classmates laugh with his miscreant behavior, and enjoyed telling sexual jokes to girls in his class. In 1996, Psy planned to study business administration at Boston University, but decided that it was not the field that he truly wanted to explore. Instead, he dropped out and attended Berklee College of Music in Boston, Massachusetts, where he studied contemporary musical writing, and music synthesis. Before dropping out, again prematurely, Psy took English classes in the States and became fluent in the English language. By the year 2000, Psy had returned to Korea to further his career as a singer. From 2000-2012, Psy served his military duty, married, and signed on with YG Entertainment, one of the top
three most well known entertainment agencies in Korea. YG Entertainment was impressed with his unique dancing ability. However, until five months ago, Psy was one of the many hundreds of Kpop stars in Korea and not exceedingly popular anywhere else. On July 12, 2012, “Gangnam Style” was released on iTunes and uploaded to YouTube. Within the first month, the video hit 100 million views on YouTube, entered the iTunes’ “Top10” songs list, and set a record in Kpop history for international popularity. 100 million views is a mind-blowing number, however, neither the video nor Psy’s popularity stopped there. It was only the beginning.

Upon first examination, the video has a few noticeable traits. A catchy, repeated beat accompanies the entire song, while a slightly overweight Asian man dances as if he is riding a horse. There are a few English phrases dispersed throughout the song such as “Hey, sexy lady,” but the majority of the lyrics are in Korean.

In terms of tipping, the dance accounts for about 90% of the video’s stickiness. When people see the video, they immediately want to learn the horse dance. It is unique, enjoyable to watch, and easy to learn, and everyone seems to be talking about it. In this tipping point, American celebrities, the Mavens, carried a lot of weight in the spread of the Gangnam Style epidemic. Britney Spears said in one of her tweets,

“I am LOVING this video – so fun! Thinking that I should possibly learn the choreography. Anybody wanna teach me?! haha.”

Soon after, Psy appeared on the Ellen Degeneres show with Britney Spears and taught her the dance.

Or, take, for example, a tweet from American pop star Justin Bieber

“I am not worthy to collaborate with PSY. He is superior to me in every way.”
These messages from the Mavens give a slight glimpse of the effect that Gangnam Style had on American celebrities. Another significant factor in the spread of the video over seas was the fact that Psy could speak English. The language barrier that separates Korea from the rest of the world is enormous, and the few Kpop performers that are fluent in English tend to shine above their competitors. Before he knew it, Psy was being featured on nearly every American talk show from the Daily Show to Saturday Night Live. Large corporations such as Samsung attempted to sponsor Psy, and his face began appearing on television commercials advertising refrigerators, and other products. Since the video hit iTunes and YouTube in July, Psy has made over $8 million from the song alone, and the views on his YouTube video continue to approach 1 billion, leagues ahead of any other video on the site.\textsuperscript{17}

Using the concepts from Malcolm Gladwell’s \textit{The Tipping Point}, we have attempted to explain why recent social movements and tipping points took the path that they did. Granted, theory seldom fully characterizes real-life scenarios. Nevertheless, the ideas behind Gladwell’s book can be applied to a wide range of social epidemics with impressive results.
End Notes

5 CEO Compensation, Carola Frydman, Dirk Jenter (2010)
8 Ibid.
11 Ibid.
14 Ironically, what most viewers do not realize is that the video is a satire on the life of the affluent upper class in the Gangnam District where Psy grew up. The scenes where Psy rides horses, sails boats, and chases after women convey the utterly vain lifestyle of the nobility.
Bibliography


CEO Compensation, Carola Frydman, Dirk Jenter (2010)


From Marx to Lenin: The Translation of Karl Marx’s Views about Religion into Policy under Lenin

Karen Reppy

“That’s all well and good in theory, but how does it work in practice?” The implementation of Marx’s thoughts about religion on Russian society under Lenin from 1917 to 1924 is one situation where that question applies. Marx is well known for his dislike of religion. The USSR is also well known for its all out rejection of religion and persecution of all religion in favor of scientific atheism. Thus begs the question, what influence did Marx’s views have on the implementation of anti-religious policy following the Bolshevik revolution in 1917. Marxism certainly seems to have been the foundation for many communist anti-religious beliefs. However, despite being a firm supporter of Marx, Lenin clearly deviated from Marx’s beliefs about the implementation of atheism and anti-religious ideas.

Karl Marx is best known for his work with Frederick Engels, which was highly instrumental in the development of Communism and the accompanying economic policies implemented in the USSR. None-the-less important, however, were Marx’s idea about religion and atheism. These ideas profoundly influenced those faced with the task of developing a Communist regime in Russia following the Russian Revolution. Marx was himself influenced by external factors, one of which being the environment in which he grew up. As a child, he was mostly surrounded by people who saw religion only as it functioned within society, as an act of propriety.¹ His father believed in eighteenth century French ideas about science and art and his belief in God was limited to an acknowledgement of God’s existence.² This lack of personal experience with religion as a child contributed to Marx’s lifelong view of religion as a purely historical phenomenon.³

Marx was influenced by external sources in addition to personal ones. Marx grew up in a time of social unrest and rampant nationalism.⁴ The Enlightenment and simultaneously occurring changes -- technical advancements in the Industrial Revolution, development of global empires and trade, and the
post revolutionary struggles in the United States and France --were also influential to Marx as he developed his ideas. Marx’s ideas about religion were also influenced by his predecessors including Georg Wilhelm Friedrich Hegel and Ludwig Feuerbach. Marx, however, by no means took their ideas for truth without extensive consideration. Marx wrote a critique of Hegel’s work entitled, “Critique of Hegel’s Philosophy of the Right.” He generally criticized Hegel for his abstract ideas about materialism, believing instead that materialism existed only on a practical level. Hegel’s belief that progress came from man’s consciousness and his struggle with ideas, was also a point of contention. Marx thought instead that progress came from social and material factors. Marx disagreed with both Hegel and Feuerbach about the source of alienation which they believed came from false consciousness, not social and economic factors. Marx’s interaction with their work was not, however, all in the form of criticism; Marx agreed with Hegel on at least this: history thus far had been in Marx’s words “the story of man’s coming to be”

Fundamental to Marxist thought is the concept of materialism. Materialism suggests that every part of life has its roots in social and economic factors. Marx’s materialist beliefs defined much of his understanding of religion and its source. He stated that “[t]he idea of God is a human attempt to cope with the harshness of material life and the pain resulting from social and economic deprivation.” Marx famously stated that religion was the opium of the people when discussing its origin: “Religion is the sign of the oppressed creature, the heart of a heartless world, just as it is the spirit of a spiritless situation. It is the opium of the people.” N. Lobkowicz suggests that Marx’s root beliefs in materialism caused him to believe that the root of religion lay only in economic, social and political concerns. He did not believe religion arose in response to existential woes.

Marx clearly recognized the source of religion and the evil he perceived within it. He saw atheism as the solution. Marx believed that religion had the affect of obscuring man with illusions.
Atheism, Marx believed, would force man to give up these illusions.\textsuperscript{11} Marx explained this: “The criticism of religion disillusions man, to make him think and act and shape his reality like a man who has lost his hope and come to reason.”\textsuperscript{12} Additionally Marx saw atheism as “necessary for the re-appropriation of human consciousness.”\textsuperscript{13} Russel Moroziuk believes that Marx adamantly thought religion was evil because it clouded man’s vision, preventing him from reaching what Marx considered true happiness. Atheism and Communism were steps down the road towards de-alienating man and making him into “something real.”\textsuperscript{14} Lobkowicz found that Marx did not see the emancipation of man and his following of religion as compatible, leading him to believe atheism was the solution. Man must give up his illusions, accept the fact that divine intervention is impossible, and then recognize that the factors causing his unhappiness are treatable. Marx believed that man must become resolved to address these issues and do so through communist revolution.\textsuperscript{15} Marx intended for people to reach atheism through this process of realization. His atheism was never intended to be militant.\textsuperscript{16}

Marx strongly considered religion’s source as he thought about addressing its existence. In addition to seeing the source of religion in social and economic struggles, Marx also found the source of religion in man’s alienation. He believed this alienation stemmed, in part, from the lack of creative labor for man. In fact, he believed that the road to a more conscious man was through creative labor.\textsuperscript{17} The essential features of creative labor are as follows: man being able to create free from need, man’s labor being a conscious activity stemming from his own creativity, and man’s labor not being repetitive (such as assembly line style labor).\textsuperscript{18} Marx saw anything that prevented creative labor as defined above, as alienation. He believed the alienated state was one in which man had lost the power of self realization. To Marx, alienation prevented man from creating his own destiny, from being a “freeman.”\textsuperscript{19} Marx described the state of alienation: “alienation is apparent ....[in] that an inhuman power rules over everything.”\textsuperscript{20} One of these inhuman powers was religion, alienation allowed man to accept religion.\textsuperscript{21}
With this understanding, Marx reached the following conclusion: the fight against religion was not an immediate one or one against the church, rather “[t]he struggle against religion, is...indirectly a struggle against that world whose spiritual aroma is religion.” Paul Gabel believes this view would suggest a revolution first approach to dealing with religion. Marx believed Communism would address the causes of man’s alienation and thus religion would die out, because the social and economic woes causing the existence of religion would no longer be present. This is summed up in the following statement from Marx: “Those who understand the cause of religion can wait.” In early writings Marx did express concern that religion would prevent man from seeing clearly enough to revolt, however, this concern disappeared as Marx’s work matured. Despite this initial concern, Marx was strong in his belief that religion should be addressed at its roots by a Communist system and not through direct action against the church.

Lobkowicz noted Marx’s suggested that religion was “withering away,” dying. (Although he never specifically stated that religion was dying, his words suggested that the death of religion was an eventuality). Both Marx and Engels agreed on this issue, but said little to explain their belief. Engels did suggest that as society evolved and became more scientific, religion would no longer have a place. This particular argument fell more under Engel’s beliefs than Marx’s. Marx wanted a more materialistic answer to this question. It must be noted, however, that Marx developed his ideas about the death of religion before he expressed those about materialism. Whatever the source of Marx’s belief in religion’s impending doom, Marx’s belief that religion had an eventual expiration date only strengthened his conviction that religion should not be destroyed directly. Gabel adds to this that Marx treated religion with little respect and saw little independence in it as an institution. For this reason alone, Marx did not see the church as formidable enough an enemy to afford any work against it. Because of religion’s impending death, Marx believed that it was pointless to persecute religion or to
establish anti-religious education. His desire to not fight religion was actually reinforced by the failure of actions taken against the Catholic Church after the French Revolution.\textsuperscript{31} Marx also opposed so called religious atheism (attacking religion with religious intensity) as well.

Marx actually made a few specific statements about the implementation of atheism, some of which were in regards to the separation of church and state. Marx did not support the separation of church and state because he believed political emancipation was only partial emancipation:

\begin{quote}
The state emancipates itself from religion in its own particular way, in the mode which corresponds to its nature, by emancipating itself from the state religion; that is to say, by giving recognition to no religion and affirming itself purely and simply as a state. To be politically emancipated from religion is not to be finally and completely emancipated because political emancipation is not the final and absolute form of human emancipation.\textsuperscript{32}
\end{quote}

Marx believed that a politically emancipated state had not yet truly moved forward.\textsuperscript{33} Marx also noted the example of the United States, in that religion, despite the separation of church and state, was still prevalent:

\begin{quote}
Therefore, a state which only politically emancipates itself from religion, private property, etc., and does not surge ahead in the establishment of a permanent revolution, which is the only process which guarantees permanent and complete liberation from religion and private property, lapses back into structures from which it originally sought to emancipate itself—religion, private property, etc.\textsuperscript{34}
\end{quote}

Marx believed emancipation of the state did little. Instead he believed, personal emancipation should occur. Additionally, he did not support state sponsored atheism, which was eventually adopted in the USSR, as he saw it as only another form of alienation:

\begin{quote}
Finally, even when he proclaims himself an atheist through the intermediary of the state, that is, when he declares the state to be atheist, he is still engrossed in religion, because he recognizes himself as an atheist in a roundabout way, through the intermediary (the state).\textsuperscript{35}
\end{quote}

Marx’s clear explanation here of his thoughts on an implementation issue is unusual. Marx was not a policy maker, he was a philosopher and for this reason alone, the one time he did specify a policy that must not be implemented by the state should be clearly noted.

Lenin (Ladimir Ilyich Ulyanov), born shortly before Marx’s death, was placed in a role that gave him the unique ability to lead the development of the first communist government. Lenin was a “fervent
Marxist.” He is described as seeing “eye to eye on the religious question” with Marx. Lenin generally relied on Marx’s ideas as the base for his formation of policy and seemed to have shared Marx’s loathing of religion: “Every religious idea, every idea about God, even flirting with the idea of God, is unutterable vileness, vileness of the most dangerous kind, contagion of the most abominable kind.” He added little to Marx’s ideas about religion. In fact, the one difference between the two was in their area of focus. Part of this shift in focus simply came from the role each man played in the formation of a Communist society and the implementation of atheism. The notable exception between the two men is Lenin’s rejection of the idea that workers would reach the necessary state of consciousness to revolt without external help. This could potentially be translated to the religious question. Lenin describes this in *What Is To Be Done?*:

> We have said that there could not have been a Social-Democratic consciousness among the workers. It would have to be brought to them from without. The history of all countries shows that the working class, exclusively by its own effort, is able to develop only trade union consciousness, that is, the conviction that it is necessary to combine in unions to fight employers, and strive to compel the government to pass the necessary labor legislation, and so forth. The theory of socialism, however grew out of the philosophical, historical, and economic theories elaborated by educated representatives of the propertied classes, by intellectuals.

Apart from this difference (which had a fairly significant effect on Lenin’s implementation of their shared ideas) their theoretical views were fairly similar. Marx played the role of thinker and Lenin that of the implementer.

Despite the similarity in Marx’s and Lenin’s ideas about religion, Lenin’s implementation of those ideas differed significantly from Marx’s suggestions. Lenin gained control in November 1917 when the Bolsheviks consolidated their power. Lenin was clear from the beginning about his intentions to eliminate religion from Russia. Directly after the storming of the winter palace, his government declared a new policy under which it would move the people of Russia from a heaven-based belief system to an earth-based one with materialist ideas. Lenin believed religion was doomed under his new regime.
Within just a few days of the Bolsheviks gaining power in Russia, they began to take concrete action against religion. One of the few powers they had at this time to attack the church was through the separation of church and state in Russia. Paul Gabel described this action as: “the first official shot in what would become a full quivered assault on the existence of the church as an institution and the presence of religious faith in the minds of citizenry.”

Lenin himself supported the idea, separating from Marx on this issue:

“Only the complete fulfillment of the [separation] demands can put an end to the shameful and accursed past when the church lived in feudal dependence on the established church....Complete separation of church and state is what the proletariat demands of the modern state and the modern church.”

This was the first clear deviation from Marx’s intentions. In addition to officially separating the church and state, the Bolsheviks, a faction of Marxist Russian Social Democratic Labour Party, led by Lenin, took the following measures to begin to persecute religion: A day after gaining power the government nationalized all land, including church and monastery land until the meeting of the constituent assemble through the “Decree on Land Nationalization.”

A week after gaining power, they issued the “Declaration of the Rights of the People of Russia.” Among other actions, this declaration worked to deny the church the privileged status it had enjoyed previously and equalized religions. On December 24, 1917 Lenin ordered religious schools to be turned over to the Commissariat of Education. A few days later, on December 29th, divorce laws were ordered to be liberalized and secularized. The same day, births out of wedlock also became viewed as legitimate legally. On December 31st, civil registration became required at birth, marriage and death. Soon after the church was also required to turn over its records of these events. On January 16th, 1918 the first seizure of a Church was attempted and it failed due to citizen protests. It was only natural however, that after this onslaught of actions, public discontent would be high.

The government realized on February 2nd, 1918 that the approach it had taken thus far was causing a high level of civilian discontent and decided they needed a more cohesive approach when
disarming religion. This new approach started when the Bolsheviks ended all financial support to church and clergy coming from the government. Then on February 5th they issued the separation decree, officially “Separating the Church from the State and School from the Church.” The decree was designed to appear not as being anti-religious but as working to secularize society. In reality the document was anti-religion. The decree took many actions to undermine religion, the first of which removed all state records with religious affiliation. The separation decree did give individuals the right to practice religion, but only in a way that did not endanger public order (this loophole was later exploited). Religious rituals and religious symbols were also to be removed from government ceremonies and buildings. It became illegal for church bells to be rung to call for help against the government. (Traditionally, these bells had been used to call for help and recently had been employed in the first attempted church seizure against the government.) Religious objections to performing state mandated actions, such as military service, also became invalid. Additionally, the church lost its identity as a “judicial person,” losing any legal bearing it might have had previously. State subsidies for religious groups were cut and national compulsory collection for religious causes were banned. The requirement of civil registration of birth, marriage and death were restated and property again was declared nationalized.\(^\text{47}\) The ideas in this document were eventually incorporated into the constitution of the RSFSR in Article 13 which stated:

In order to ensure genuine freedom of conscience for the working people, the church is separated from the state and the school from the church, freedom of religious and anti-religious propaganda is recognized for all citizens.\(^\text{48}\)

This decree was also used as the legal justification for most of the actions taken later against the church.\(^\text{49}\) Thus, just a few months into Communist governance, the Bolsheviks had already taken a hard-lined approach to dealing with religion violating Marx’s desire for atheism to not be militant.

Although comprehensive and significant action was taken by the government in the separation decree, the government lacked the ability to enforce the decree, especially in rural areas, thus limiting
its ability to truly undermine religion. Implementation of the separation decree was the task of the Commissariat of Justice. On 26 April, 1918, Lenin created a special commission to deal with individual implementation cases for the separation decree. The Commissariat also published materials in *Revolution and the Church* which provided specifics about enforcement and implementation of the decree. On 24 August, 1918 Lenin issued “On the Procedure of the Implementation of the Separation of Church from the State and School from Church.” In addition to explaining the implementation of the separation decree, he tightened restrictions on children attending religious school and removed monuments from communist churches that commemorated Tsarist regimes. These actions were efforts by the government to implement the decree more effectively, but the need for such policies reflected their ultimate failure.

During this early period, the Bolsheviks took other measures to attack religion. On February 10th, 1917 the Bolsheviks nationalized the bank credit of all religious organizations and in March of that year, they rescinded their credit. Trotsky, the Commissioner of War also took anti-religious measures starting in March of that year. He began by removing all funding for religious chaplains in the army. Soldiers could still have access to their services, but only if they were willing to pay for their upkeep. Following this change all chapels attached to hospitals were closed. These measures were all also designed to impede the church.

One of the main forms of prosecution of the church used first by Lenin and continued under later leaders was the practice of church and monastery closures. By 1928 (four years after Lenin’s death) 15,000 churches had been closed by the government. In 1920, the Commissariat of Justice officially called for all monasteries to be closed. This action was a little belated- monastery closings, began within a few weeks of Lenin gaining power. Monasteries were specially targeted because they were centers of religious learning and signs of unproductive labor. After Churches had been confiscated, they were
often leased back to their communities through the Council of Twenty system (this was of course done with restrictions on the religious activity that could take place there). Churches and monasteries were used also for other purposes post confiscation. Monasteries were sometimes used as concentration camps. Churches were used in accordance with the release by the Commissar of Education, “On the Use of Buildings Formerly Religious.” Under this decree, these buildings were turned into grain storage facilities, textile mills, stables, mental health asylums and libraries, among other uses. Closure of religious infrastructure was one of the main anti-religious strategies employed by the Bolsheviks to limit the influence of the Church.

The Bolsheviks particularly targeted education. Education of youth was targeted by the Bolsheviks because it was a means through which they could cut off the next generation from religion by preventing religious education. On December 24th, 1917, Lenin ordered the Commissar of Education to convert 40,000 churches into public schools. With this decree, however, came the requirement that they not teach religion. The separation decree banned the teaching of religious dogma or religious prejudice in both state and private schools. This policy proved to be more difficult than have anticipated. One of the first challenges that surfaced was finding teachers who were able and willing to teach in a non-religiously biased way. One of the ways this problem was combatted was through the introduction of a complex teaching method in 1921. This method focused on learning through exploration and questioning. It was believed to that questioning to learn would undermine the church and make teaching separate from the church because it damaged the belief that the church knew everything. The method was designed to teach through questioning. Preventing religious education was one of the major ways the Bolsheviks hoped to influence the next generation and damage the development of their religious beliefs. Again, Lenin was breaking away from Marx who specified that individuals must reach self realization and cast off the cloak of religion- not have others do it for them.
Another method the Bolsheviks used to influence the Russian population was through propaganda. Lenin supported militant anti-religious propaganda, directly breaking from Marx’s anti-militant approach. In 1922, Lenin wrote about *Pod Znamenem Marksizma*, a journal designed to be a militant “Marxist” publication (whether or not it was truly following Marx’s ideas, it was viewed as “Marxist”). Lenin wanted the journal to be a militant materialist publication as well. He described the systems currently in place to promote atheism and their inefficiency, then suggested the role this journal should fill:

“It is therefore highly essential that in addition to the work of these state institutions, and in order to improve and infuse life into that work, a journal which sets out to propagandise [sic] militant materialism must carry on untiring atheist propaganda and an untiring atheist fight. The literature on the subject in all languages should be carefully followed and everything at all valuable in this sphere should be translated, or at least reviewed.”

Lenin also noted the failure of his administration thus far to distribute militant atheist literature to the masses and described its necessity in writings:

“It would be the biggest and most grievous mistake a Marxist could make to think that the millions of the people (especially the peasants and artisans), who have been condemned by all modern society to darkness, ignorance and superstition, can extricate themselves from this darkness only along the straight line of a purely Marxist education. These masses should be supplied with the most varied atheist propaganda material, they should be made familiar with facts from the most diverse spheres of life, they should be approached in every possible way, so as to interest them, rouse them from their religious torpor, stir them from the most varied angles and by the most varied methods, and so forth.”

Lenin believed propaganda was essential because it would lead the masses to improved self-consciousness and spread ideas which they were incapable of reaching by themselves. Given this belief, one would imagine that propaganda would be central to the Bolshevik’s operations. This is not untrue, but the Bolsheviks saw propaganda as fitting under education. Much of the propaganda they undertook starting in 1920 was entrusted to the Glavpolitprosvet, a department within the Commissariat of Education.

The policies described above were all clustered around the advent of Lenin’s control. Another clear period of renewed religious persecution occurred with the advent of the New Economic Policy (NEP) in 1921. This new fervor war caused by concessions made to private enterprise which were seen
as un-Marxist in the NEP. There was concern about Lenin abandoning founding principles of his
government. Religious persecution was the solution to party dissent on this issue. As Gabel stated:
“What better way to fire up the boilers within the tepid and divided ranks of Bolshevism than a rousing
attack on the church?” In March 1921, the Tenth Party Congress announced the resolve to launch
“vigorous anti-religious crusade” in the hope of appeasing some of the NEP’s harshest critics. This
emphasized the need for anti-religious propaganda, an idea contradictory to Marx, while ironically
trying to move back to his ideas.

There are clear disparities between Lenin’s implementation of their shared ideas about religion
and Marx’s thoughts on the matter. Several explanations are provided by scholars about these
discrepancies. One stems from the differences present in Marx’s and Lenin’s understanding of the
masses and their journey to self consciousness. As previously mentioned, Lenin believed the masses
could not reach a state of self consciousness without external influence. This belief logically would
also apply to religion. With this belief it is only natural that religion would need a little “shove” to help
it begin to disband as Marx had predicted it would. In implementing Marxist ideas about religion it was
Lenin’s job to “nudge along the inexorable flow of history.” The 1919 Program and Rules of the
Communist Party agreed with that assessment: “The Communist Party of the Soviet Union is guided by
the conviction that only conscious and deliberate planning of all the social and economic activities of
the masses will cause religious prejudice to die out.” Lenin and the Bolsheviks certainly followed
through on that.

Other explanations related to political necessity exist. These are not mutually exclusive of those
previously proposed- the changes were the result of a combination of many different factors. One of the
political arguments made is that the Russian Orthodox church posed a threat to the new Bolshevik-
controlled government. For this reason, Lenin could not afford to wait for religion to die a natural death.
One must also consider the roles that Lenin and Marx both played in the development of Communism within Russia. Marx was the thinker, Lenin the implementer. Marx left few instructions about how he wanted atheism implemented. Lenin was tasked with not only implementing Marx’s ideas but doing so in a fragile political situation. Given the perceived necessity for speed in helping the population, giving religion a little shove was the decision only the implementer could have chosen to make. Connected to this issue, one also sees that given the failure of the occurrence of the events Marx predicted after his death, those who followed him needed an explanation for this failure. Although this idea is a larger generalization and does not apply specifically to Lenin or his administration, it does demonstrate the effects of time on the following of Marx’s ideas. As the events Marx predicted did not occur, his followers turned to religion for blame. Religion, specifically Christianity, came to be seen as “anti-revolutionary” and the “enemy” of Communism by some.

There is a clear disparity between Marx’s beliefs about religion and how religion should be addressed and Lenin’s implementation of those beliefs. Karl Marx’s atheism was not intended to be militant. Many of his thoughts surrounding religion were based in its roots in man’s alienation. For this reason alone, Marx believed to address religion one needed to first address its causes. Marx saw the impending doom of religion as another reason why one should not address it directly. Moving away from Marx’s ideas, Lenin did just what Marx did not believe one should do, he confronted the issue. This was done by the Bolsheviks under the guidance of Lenin through the separation decree, propaganda, education and church closures. The importance of this issue resides in this disparity. The policy laid down under Lenin was the basis for almost all other policy directed towards religion in the USSR. Therein lies the importance: the fight against religion in Russia labeled Marxism was based on policy that differed from that intended by Marx.
End Notes

1. N. Lobkowicz “Karl Marx’s Attitude toward Religion,” *The Review of Politics* 26, no. 3 (Jul. 1964): 329
2. Ibid 330
3. Ibid 331
5. Ibid 1574
6. Ibid 1576
7. Lobkowicz “Marx’s Attitude towards Religion,” 346
9. McGrath, *The Twilight of Atheism*
11. Lobkowicz “Marx’s Attitude towards Religion,” 350
12. Ibid 351
14. Ibid 197
15. Lobkowicz “Marx’s Attitude towards Religion,” 351
16. Ibid 335
17. Moroziuk, “Role of Atheism,” 193
18. Ibid 194
19. Ibid 195
20. Ibid 196
21. Ibid 202
22. Ibid 204
24. Ibid
25. Lobkowicz “Marx’s Attitude towards Religion,” 335
27. Ibid 335-6
28. Ibid 328
29. Ibid 334
31. Ibid 88
32. Moroziuk, “Role of Atheism,” 197
33. Ibid 198
34. Ibid
35. Ibid 199
38. Ibid
39. Ibid 21
41. Gabel, *God Created Lenin*, 15
42. Ibid 16
43. Ibid 135
44. Ibid 135
45. Ibid 138-9
46. Ibid 139
47. Ibid 141
48. Ibid 142
49. Ibid 142
50. Ibid 140
51. Ibid 140
52. Ibid 142
53. Ibid 142
54 ibid 140
56 Gabel, *God Created Lenin*, 144
57 ibid 146
58 ibid 144
59 ibid 147
60 ibid 159
61 ibid 164
62 ibid 164
63 ibid 161
64 ibid 164
67 ibid
68 Jacobs, *Antireligious Propaganda in the USSR*, 6
69 ibid 8
70 Gabel, *God Created Lenin*, 204
71 ibid 340
72 ibid 5-6
73 Gabel, *God Created Lenin*, 88
74 ibid 92
75 ibid 90
76 a Lobkowicz “Marx’s Attitude towards Religion,” 323
Bibliography


The Benefits of Consistency: Why the Chinese Civil Service Examination System Lasted

Madeline Sachs

Throughout Chinese history, one characteristic remained constant from the Han Dynasty (ca. 206 BCE-220 CE) through the early 20th century: the imperial system of government. This bureaucratic system, which outlasted any other pre-modern or modern form of government, involved a meritocracy. Through this system, candidates for the imperial bureaucracy were admitted based on merit, and only the best of the best attained high government positions by passing the civil service examinations. There was no political instability because of a complication in the bloodline or feuding over an unworthy ruler, as was common in many countries in Europe. These European states were run by officials who “inherited” their power. This system was prone to cause uneasiness in the event of an unsuccessful ruler. Thus, the Chinese opted for a different method of selection for all officials under the emperor: the examination system. As with any government system, the civil service examination system would eventually fall prey to the corruption of those who participated in it as well as its administrators, and these flaws would eventually lead to its downfall; however, the benefits were enough to result in a bureaucracy enforced with meritocratic principles that lasted for two millennia.

As early as 2200 BCE, Emperor Yu created examinations for government officials every three years to be sure they were still suited for government positions. Though these tests were fairly basic due to the lack of written language or literature, they worked as a means of either promoting or dismissing officials. This process soon evolved into an examination of both current officers as well as potential candidates. Starting around 1115 BCE, during the Shang dynasty, Emperor Qualität Wú Yǐ required candidates to show knowledge of the “six arts:” music, arithmetic, writing, horsemanship, archery, and ceremony. Knowledge of these factors, though seemingly trivial, proved the presence of a fine education on the part of the candidate himself.1
During the Han Dynasty, the examination system developed into the form that it would exist in for the next two millennia. The landmark addition to the examination system was the integration of Confucian texts into the required knowledge of the system. Not only did the hopeful scholars need to be learned in the “six arts,” but they also needed to understand the Confucian philosophy, Chinese government, military dealings, geography, and other such subjects that would be seen today as vital for a government official. By the time of the Tang and Song dynasties (ca. 618-1279 AD), the examination system had been perfected. Even when China was under the control of the Mongol and Manchu barbarians, the system was retained. Entrance to the first test was open to all, and government appointment from then on was purely based on merit. Scholars came from all over China to compete in the civil service examinations, but very few passed. Despite the low success rate, many boys dedicated themselves to study from early in life.

The civil service examinations defined education for every boy in China. As young boys, the Chinese were not educated, whether in a primary school system or by their parents. The father was away either working for the government, trading, or out in the fields, and the mother was not well educated herself. The mind of the young boy was truly a “clean slate” when he first entered school at age eleven, as all of his ancestors had done before him. An almanac was even referred to for a “lucky” date to begin schooling in hopes that this might influence the child’s success at the examinations. Another factor in the student’s early educational development was the teacher, usually a scholar of literati status who had not made it far enough in the examination system to achieve a government position. While in many modern schools the teacher strives for originality, in China the teacher had to conform to many guidelines in order to provide a good education for his pupils.

There were three stages of preparation for the test. The first consisted of simple memorization. The child was not taught the meaning of the words he memorized, only the words themselves. The works that were committed to memory included Confucian texts and historical literature that was
considered necessary to the child’s knowledge. The second stage consisted of the translation of the memorized words – a process that took a considerable amount of work considering the texts were in the dead language spoken by Confucius. Finally, the third stage consisted of learning to write with beautiful letters and to compose well-written essays. This was possibly the most important part of the education because much of the examination itself was based on “penmanship” and essay writing.

Due to this process of education, the students’ knowledge was made up exclusively of the ancient texts. For the two thousand years that the examination system was in existence, a child’s knowledge was molded to what he needed to know for the tests. However, the knowledge gleaned from this formal education did play a larger role in the community. Because the entire elite male population, including those who did not pass the tests, was educated in the same principles, the public began to rely on the Confucian ideals as common principles that gave citizens something they could relate to in one another. Any two people could relate and communicate based on the basic principles they had learned from the classics in their early education. During the Qing Dynasty (1644-1911), as the education and the examination system developed, specific schools were started that specialized in a stage or area of learning.

As early as the Tang Dynasty, with the fully modernized system in place, all men were eligible to take the examinations, leading in part to the success of the system. Starting around age sixteen, prodigious children were sent to take the tests, so they could secure a future for themselves. Over time, the system began to favor families with money who could send their children to the regional or provincial capital more often or under nicer conditions. For many, it was a long trek to make in order to reach the testing sites, and whether an examinee got there by walking, or in a cart pulled by mules, could make a difference. Men could take the test as many times as they wanted without being penalized. There are stories of men who did not pass any examinations but kept trying from around age
twenty to age seventy, such as Pu Songling. Living in the late seventeenth century, he took the test until he could no longer physically make the trip to his provincial capital. His and many other men’s lives were ruled by the system and the prospect of succeeding on a test. After studying for so many years with the hope of passing, many could not stand the idea of failure and continued trying until they were physically incapable, an example of how the government system was a significant force in the lives of people of all ages.7

There were many procedural rules for examinees during the test itself. Upon arrival, the examinees were locked in small cells with four small tables, arranged so that one served as the chair, one was a table, and two made up the bed. This remained the same from the seventh and eighth centuries to the collapse of the system.8 The conditions were very crude, and the examinee’s entire time was devoted to composing and writing the essays, made up of perplexing questions testing the student’s acquired knowledge of the classics.9 Starting in the Tang, when the examinees arrived at the testing grounds their names, ages, appearance, residence, ancestry, and references were recorded.10 They were then sent to their “cells” where they stayed for the next week or more. Everything was strictly regulated throughout the procedure.11

In its most modern form, the test was made up of three degrees: Hsiu-tsai (“budding genius”), Chü-jen (“promoted men”), and Tsin shih (“advanced scholar”). Many students entered into the first test but only around 1.4% of them were chosen to move on. Thus, any man who moved on was both granted access to the next level of examination and given the higher status of a literati. The test for the second degree was held only every three years, so when these tests were scheduled, the advancing scholars flocked to the provincial capitals. In these next examinations, no more than 1% of the students passed. The spring following the second level examinations, the third was taken. If passed, this secured a spot in the government and prosperity for the scholar. There was also an additional, but
largely unnecessary, test conducted by the emperor. The candidates who passed this test were admitted into the Han-lin: the Imperial Academy of Letters, which constituted the highest possible scholarly rank and implied definite wealth. It was a great honor and scholars strove for this success, as it not only affected them but their families as well. The highest award was the title of laureate of the empire, awarded by the emperor himself. Thus, scholars could always strive for a higher goal and continually tried to improve, affecting the success and motivation of the government as a whole.

The examinations were composed of essays, poetry, and calligraphy. Each was regulated based on ancient styles of composition. The poetry had very specific standards including the number of lines and number of words as well as many other strict constraints. This stifled creativity in almost every respect, much like the schools, where the teachers taught to a very rigid curriculum. Though viewed negatively in today’s society, it is possible that the Chinese government was attempting to limit rebellious subjects who were thinking outside the current regime. In the essays, use of the ancient texts was required as well as specific sentence rhyming patterns. The specific pattern was called the eight-legged essay. It was composed of eight sections or paragraphs and used paired sentences for the sentence rhyming patterns. The topics ranged from problem solving as related to government needs, to discussing and criticizing problems, to explanatory essays and public documents. One essay theme concerning the art of government was as follows:

It has been said that to be a king is difficult and to be a minister is not easy. If the king is made aware of this, he can make the country prosperous by uttering just a few words.

Another theme concerning geography was more perplexing and was simply:

Securing the mean is impossible.

One question concerned industry and commerce:

The knowledge of science is different in China from that of the West. Can you suggest a means by which Chinese science may supersede western science?
Two themes of poetry were:

Large buildings need special materials.
and
The waters of fountains are always savory.\textsuperscript{14}

Whatever the subject matter, the ancient texts were used as support, and the quality of penmanship was of utmost importance. In the first level of test: the district level examinations, even if one student’s essay was far more worthy but was written with less “beautiful” letters, the mediocre content would pass.\textsuperscript{15} However, once a student passed this test, penmanship was no longer taken into consideration, so there would be no bias or bribery.

Most of the examiners who graded the tests were current government officials who had already passed the tests themselves. Very few officials were chosen to be examiners, so each had to grade many papers: at the most twenty examiners had to grade the multiple papers of as many as five thousand candidates in a short amount of time. There were functionaries made up of both chief examiners and associate examiners, with the chief examiners having the final say for each candidate while the associate examiners only read a select number of papers. On any examination administered by the emperor himself, he was considered the chief examiner; otherwise, it might be the district or provincial magistrate who served in this role.\textsuperscript{16} The examiners had to review the depth of knowledge of the scholars as well as their knowledge of the classics. Thus, they needed to be well learned themselves.\textsuperscript{17} Surprisingly, it was not until the beginning of the Qing Dynasty that examiners were required to have higher literary degrees, whereas before that, any man who was of an official standing could be chosen as an examiner. As this progression developed, the examiners themselves would have to test into their position, making it an honorable job. The next category of examiners was the supervisory officials. These men were put in place primarily to oversee the managerial aspects of the tests. They were responsible for preventing cheating and for properly recording the information for each candidate.
From a modern perspective, they were the proctors of the test. The last category of examiners were those who performed miscellaneous functions such as collecting, sealing, transcribing, and stamping papers, as well as patrolling the gates, supplying materials, and maintaining order. Both the supervisory officials and those who performed these miscellaneous functions generally made sure everything ran smoothly. One of the more interesting jobs of these officials was that of transcribing. The official scribes were appointed starting at the provincial examinations to copy the essays and poetry of the candidates for review by the chief and associate examiners so as to prevent any advantages to well-known candidates.¹⁸

Though the examiners were generally very capable at their job, there were several problems with this grading system. The first was that the examiners simply did not have enough time. The process of thoroughly grading multiple works of as many as five thousand candidates was daunting and near impossible. The grading was rushed, and the chief examiner often did not even get a chance to look at some of the papers. This brings up the question of the qualification of the associate examiners. The qualification was usually not an issue, but in attempts to come up with a rationalization for their failure, many believed that at times even the best scholars did not pass the test because of faulty examiners. In the end, it was all up to the opinion of one man, and that man could be having a bad day, making the process less effective that initially assumed. However, although a good paper that was not passed was not viewed as significant, a bad paper that was passed was problematic. During the Qing Dynasty, examiners who passed bad papers were subject to disciplinary actions if the supervisory officials found out.¹⁹

In addition to under-qualified examiners that became prominent during the Song Dynasty, there were several other challenges with the system. The first was cheating. On one occasion, there was a book found, which was brought into one test with letters one-eighth the size of a rice kernel. The
candidate needed a magnifying glass to make them out, showing just how desperate the scholars were to pass the tests. It is assumed that these “crib books,” as they were called, contained information regarding the classics.\textsuperscript{20} The next problem was bribery. As the candidates worked their way up the examination ladder, more and more began to bribe the examiners to choose their essays, knowing that it was unlikely the essay would be either read by the chief examiner or noticed by the supervisory officials. Bribery became increasingly prevalent with the introduction of silver into the Chinese economy during the sixteenth century. Thus, the government introduced the scribes who copied out the essays and poems before handing them to the examiners in attempts to eliminate bias. This lessened the amount of bribery but did not succeed in eliminating it completely.\textsuperscript{21}

During the Qing Dynasty, the concept of quotas was introduced as well. The quotas were created because many successful scholars were coming from the same southern provinces where the candidates had better resources. In an attempt to make the system fairer, the government reduced the number of worthy scholars admitted into the government in general. Each province or district had a specific number of candidates who were expected to pass, regardless of qualification. For instance, in many provinces, once an examiner had finished finding papers that he deemed “worthy” to fill his quota, he might not even bother to grade the others. Though the government did become more geographically diversified because of the enforcement of the quotas, it also became more intellectually diverse, with fewer truly qualified officials.\textsuperscript{22}

Finally, the places in which the scholars were kept were not humane working environments that would help the candidate to write the best possible tests. The close quarters and limited nutrition were known to lower the scholar’s performance.\textsuperscript{23} One newspaper from the late nineteenth century also notes that there were several cases of suicide during the tests.\textsuperscript{24} The stressful conditions for test-taking could
not have been good for the candidates’ mental or moral health, especially when, after being locked up for a week and trying their hardest, they still did not succeed in passing.

The men who did move on, however, were guaranteed a prosperious life and a secure job. Their family also received the highest honor and put a flag or placard outside their door to let the rest of the town know that their son, husband, or father was a successful graduate of the civil service examination system. Despite the fact that the qualification tests were based on equal opportunity, once installed in the government, many civil servants did move up based on familial connections even as late as the Song Dynasty. Though this defeated the purpose of the system in the first place, it was still less prevalent than the completely hereditary system in most European states. Another way the passing scholars were ranked was based on the palace examination, administered by the emperor himself. The candidates no longer had to worry about passing at this point, but the goal was to achieve a higher government position.25

There were a significant number of candidates that did not pass the tests who spent most of their lives trying again and again – a luxury afforded only to those who did not need to work once over the age of twenty-five.26 They formed a community of Confucian scholars, or scholarly elite, who were “too good” for non-government jobs. It was China’s scholarly elite who would later form the groups of rebels who opposed the reformation of China during the Late Qing Dynasty. These men of lower literati status made up a large part of Qing China’s economic and commercial markets, and therefore had a large influence on Chinese government. As they began to think more abstractly, they realized that some of the rationale behind the classic texts no longer applied to their quickly developing society. They formed small pockets of intellectual rebellion, which eventually blew up into the revolution that overthrew the Qing in 1911.27 These men also used their literary knowledge for other purposes unrelated to the government. Examples were literati physicians, fiction writers, artists, and the local
equivalents of lawyers. It was within this group of scholars that there was the most hope for social mobility.\textsuperscript{28}

The fact that the proportion of passing candidates was so low led the Chinese men and women to look for an explanation as to why they or their loved one did not pass the tests. Often, the unanimous response was fate. Many thought that they did not pass for a divine reason or that once inside the test, there is no knowledge, no amount of studying that can secure one’s chances at passing; there is simply luck. As early as the late seventeenth century, this fatalistic attitude led to failing scholars not respecting those who passed and ultimately to less faith in the government as a whole. As this view grew, there became a perception that there was little connection between intellectual ability and the results of the examination. Of course, this was partially true, as seen with the unpredictability of the system.\textsuperscript{29}

The decline of the civil service examinations began as early as the fourteenth century, during the Ming Dynasty, when the eight-legged essay was introduced and rules and procedures were becoming more and more strict due to the prevalence of cheating. The inflexibility of this approach to education was part of what stunted China’s cultural spread and development starting as early as the fifteenth century. With the decline of the Qing dynasty in the early twentieth century, China also saw the decline in the imperial examination system. The system was producing fewer and fewer competent officials and the people were beginning to lose faith in the selection process. In 1905 the Qing government officially terminated the system, and revolution ended the Qing dynasty six years later, in 1911.\textsuperscript{30}

Despite its shortcomings, this meritocratic system was the best of its age and only declined because of the imminent corruption that follows many government systems with time. In terms of selection of officials, no other ancient, pre-modern, or modern governments even came close to comparing with China’s imperial examination system and meritocratic government. All other western governments chose officials based on bloodline, creating recurring and frequent rebellion and
instability. Because China chose officials based on merit, it did not have this issue, and its ruling powers often lasted for three centuries, enough time for a European state to change ruling families four times over. Though the examination system is not thought to have been a large contributor to overall stability, it did increase China’s success as a competing power from ancient times through the early twentieth century. The system also helped ease China’s transition from an ancient power to a pre-modern and modern power because unlike many other transitioning countries, it had a constant system of government.
End Notes

2 Ibid.
3 Ibid.
6 Cressey, 255.
11 Ibid.
14 Ibid.
17 Martin, 45.
22 Ibid.


29 Barr, 108.

Bibliography


Eli Whitney: America’s Greatest Trendsetter

Jen Xue

Eli Whitney, though most famous for his invention of the cotton gin, made an even greater impact by introducing interchangeable parts to the United States, a concept still used today by the world’s leaders in technology. Whitney, ironically, profited little from his revolutionary gin, and his ambition was sparked, at least in part, by a desire to make up for this lack of profit. The growing hostility between the formerly allied United States and France as well as a subsequent need for arms prompted Whitney to agree to build firearms for the United States, the machines to which he first truly applied the concept of interchangeability. Although the cotton gin was a monumental development, Whitney’s greatest impact on industrial technology lies in his introduction of interchangeability to the American manufacturing system.

Whitney’s personality, a large factor of his success, was agreeable, conciliatory, and respectable. His most important trait however, was his perseverance, applicable to his success during times of frustration and failure with many of his projects. A close friend commented on Whitney’s disposition, saying that, “Whitney perfected all that he attempted; carried each invention to its utmost limit of usefulness; and then reposed until he had occasion for something else.” In addition to perseverance, Whitney possessed an intrinsic ability to create, saying at a young age, he could “make [knives] if I had tools and I could make tools if I had tools to make them with.” This is an unmistakable pre-cursor to his adopted concept of interchangeability later in life— that machines could be used to efficiently make other machines. Whitney’s name in history is a reflection of his great ideas and accomplishments, which were pursued with an almost unparalleled rigor.

Whitney had been an inventor all his life. He was born to middle-class parents in Westborough, Worcester County, Massachusetts on December 8, 1765. At an early age, Whitney had already begun experimenting with mechanics, making chairs, wheels, and even fiddles. His sister said, “Our father
had a workshop, and sometimes made wheels...He lost no time; but as soon as he could handle tools he was always making something in the shop, and seemed not to like working on the farm.” On one account, according to the same sister, while the rest of the family was at church, Whitney feigned illness to stay at home and take apart his father’s finest watch; he put it back together so perfectly that his father never noticed. Whitney’s talent and interest for mechanics, evident at a young age, did not go unnoticed by others.

Whitney’s true career in mechanics commenced when he boarded with the Greene family at Mulberry Grove after having lost his job as a tutor. Luck struck when a party of ex-officers of the Revolutionary army visited General Green’s family in 1773. They conversed mostly about the struggles of agriculture and, most vehemently, about the difficulty of picking cotton. Mrs. Greene, joining in the conversation, offered Whitney’s mechanical brilliance: “He can make anything,” she proclaimed. Taking the opportunity very seriously, Whitney went to Savannah in search of a parcel of cotton seeds. An acquaintance of Whitney, Phineas Miller, enthusiastically encouraged him to pursue the project. Miller, had gone to Yale College with Whitney; he came to the Greene family as a private tutor and married Mrs. Greene when General Greene passed away. Miller contributed to Whitney’s project and eventually became his business partner.

Ten days after beginning work, Whitney had a rough model for the cotton gin. When Whitney and Miller succeeded in making the gin, they established a joint firm: Miller & Whitney. Even at its conception, the cotton gin was promising: it was more effective, efficient, and sanitary than the machines used previously. Before Whitney’s gin, the little cotton made in America was ginned by hand. Often, an overseer was employed to prompt the slaves to work and the norm was around a pound of cotton a day per slave. In comparison, Whitney claimed that with his machine, “one man will clean ten times as much cotton as he can in any other way before known,” and that “one man and a horse will do more than fifty men with the old machines. It makes the labor fifty times less, without throwing any
class of people out of business.”

Essentially, Whitney’s cotton gin found a time efficient way to pick cotton—cleanly separating fiber from seed without breaking the seeds. The machine was initially composed of two parts: teeth to separate cotton from seeds and an iron guard that held the cotton fibers, which was wide enough for the teeth but narrow enough so that the seeds could not pass through. A later addition to the machine, called the roller principle, was perhaps the most ingenious aspect of the invention; it involved a crank revolving so as to sweep clean the cotton from the teeth, where it previously sometimes got caught. The gin impressed people because it required less manpower and less time to reap the same amount of cotton.

Because of the gin’s relative simplicity, many people used Whitney’s idea without crediting him and consequently, the public possessed the machine before he could patent it. Whitney and Miller had intended to make all the gins, buy as much cotton as possible, and simply sell the products themselves. Not in favor of this makeshift monopoly, many people stole or copied the machine and tweaked it to evade the penalty for violating a patent-right or any other law. Miller noticed this means of evasion early, and claimed to a relative, “It will be necessary to have a considerable number of gins made, to be in readiness to send out as soon as the patent is obtained… for I am informed of two other claimants for the honor of the invention of cotton gins, in addition to those we knew before.”

Whitney and Miller hurried to patent the product, the former presenting a petition for a patent to the then Secretary of State, Thomas Jefferson, on June 20th, 1793. Whitney was delayed in completing business related to the patent because of complications such as the yellow fever epidemic in Philadelphia; the quarantine physically obstructed his entrance into the state, imitations of his gin were increasingly rampant, and problems in the actual patent writing did not allow Whitney finish patent-related business until months afterwards. On March 14, more than a year after Whitney had begun building the gin, Edmund Randolph, the new Secretary of State, granted him the patent.
Though Whitney had finally patented the machine and was optimistic about profiting from it, the Miller & Whitney firm was in bad shape. Whitney’s shop in New Haven burned down in the spring of 1795. He wrote to his father: “Indeed three thousand pounds would by no means make good my loss… it will be a long time before I can repair my loss.” In addition, Miller was a source of backwardness in the firm. He had been associated with the Yazoo Scandal, a fraud perpetuated by Georgians who sold large regions of land to political insiders at lower prices. Miller had put a large share of money in the Yazoo lands of the West, and his association with the fraud cast negative light on their company. Without financial aid from Greene family, the firm probably would have gone bankrupt, and even with the Greene’s generosity, Whitey struggled to keep his shop running. By 1797, twenty-eight of its gins were no longer in use. The burning down of the shop in New Haven, Miller’s association with land gambling, the following lawsuits, and damage to the reputation of the firm all contributed to Whitney’s financial woes.

Another reason that Miller & Whitney failed to profit was the resentment harbored by Georgia planters for the fee of ginning. By attempting to monopolize the ginning industry, Miller & Whitney essentially “inspired” knockoff gin copies. A major debacle occurred with a man named Hodgen Holmes, a mechanic from Augusta. On May 12, 1796, Holmes was granted a patent for an “improvement” on Whitney’s original gin, signed by President Washington, Secretary of State Timothy Pickering, and Attorney General Chas. Lee. Holmes’ modified gin operated with saws rather than spikes and made the ginning process even more efficient and continuous. Holmes is just one example of the knock-off inventors Miller and Whitney faced—in fact, a substantial amount of their profits were lost in counterfeit products like Holmes’.

Miller and Whitney, in dealing with investors like Holmes, experienced what many companies still experience presently. A contemporary comparison can be made between Apple and Samsung, two large and powerful electronic companies. In April of 2011, Apple filed suit against Samsung for patent
and trademark infringement, claiming that Samsung’s Android products were too similar to its prominent iPad and iPhone. Apple alleged that the design, hardware, interface of the Android devices was unacceptably similar to Apple’s own, and, according to one representative, that it was “blatant copying.”

This case between the two technology giants turned heads, and in August of 2012, a California jury found Samsung guilty, rewarding more than $1 billion to Apple. Although the debates between companies such as Apple and Samsung are far from over, Apple triumphed in this small victory. As a huge, multinational company with thousands of people working on the case, Apple pulled through. In contrast, Whitney was a single man working to defend his intellectual property and had to address the many patent issues alone. The cases upon cases of patent and design infringement that Whitney faced left him with little money and a lot of frustration. Despite his financial and emotional struggles, his idea of interchangeable parts is consequential to the modern technology produced by such giant firms. However, it is difficult to view interchangeable parts as an “invention,” and thus Whitney as an inventor. Interchangeable parts are so heavily integrated in our technological world today that the idea of separate, uniform, replicated parts does not seem as important an aspect of industry as other innovations are.

Just as Whitney’s firm was deteriorating, tension between the United States France rose to new levels, creating new opportunities for engineers because of the prospect of war and a subsequent need for weapons. The timing could not have been more advantageous for Whitney. Following the Revolutionary War, in which France aided the United States, the relationship between the two countries steadily worsened. War between France and England in 1793 placed the United States in a delicate position; Washington’s administration wanted to maintain a good relationship with England, but were under obligations to France in the Treaty of Alliance of 1778, which, formed during the Revolutionary War, detailed military support in case of attack by British forces—establishing a Franco-American
alliance of sorts. The United States felt too constrained by this informal alliance, resulting in friction between the two countries.

Charles Cotesworth Pinckney of South Carolina had been chosen during Washington’s presidency as minister to France. When Pinckney arrived in France in attempt to reconcile the two countries, Pierre Auguste Adet, French minister to the United States, had already written to the French Minister of Foreign Relations, Charles Delacroix, rejecting Pinckney by declaring the mission a “trap.” Pinckney, rejected by the French, returned to America with his family. However, he would make a second diplomatic trip to France in 1797, which was successful, with fellow Americans John Marshal and Elbridge Gerry, as a part of the XYZ mission.

Even though this second attempt to ease tensions between the United States and France would also fail, it did produce a “militant excitement that…swept through the American people at the revelation of the crisis.” Congress nullified treaties with France, the American army was increased in size, new naval ships were built, and anticipation for war dominated the country. A problem arose in the midst of pre-war preparation: the 80,000 muskets used in the Revolutionary War had been bought from France—in fact, most materials used in making arms were from Europe and the United States was dependent on imported arms. The United States could not buy weapons from their enemies. The need for smaller, domestically produced, weapons had been evident as early as 1794. In response, Congress established two national armories: one at Springfield and another at Harpers Ferry; in addition, one hundred thousand dollars were sent to the American minister in London to secure canons and muskets.

The United States however, could not continue overseas shipping because French privateers made safe deliveries nonviable. There were even reports of French privateers off the coast of Chesapeake Bay stopping American vessels. The government grew even more worried after other reports claimed that the French were prepared to use “total mobilization,” a strategy that involved all members of the nation:
young men, old men, women, and children by delegating them jobs in preparation for war. France’s
total mobilization, it seemed towards the United States, indicated the inevitability of a coming war.  

The timing of the war and militant excitement was impeccable for Whitney, whose company
was declining and was in great need for money. The United States’ need of weapons for war was an
escape route for Whitney from his deteriorating life. Whitney, after profiting very little from the cotton
gin and his firm, eagerly volunteered to help with the production of arms. Whitney felt that supplying
weapons would be a solution to his financial problems. In a letter to a friend, Whitney said,
“Bankruptcy and ruin were constantly staring me in the face… Loaded with a Debt of 3 or 4000
dollars… I knew not which way to turn. An opportunity offered to contract for Manufacturing Muskets
for the U. States. I embraced it… By the contract I obtained some thousands of Dollars in advance
which has saved me from ruin.”  

Whitney offered to produce a large number of muskets for the
government. The contract stated that he was to manufacture and deliver, as cited in Mirsky and Nevins,
“Ten Thousand stand of Arms, or Muskets, with Bayonets and Ramrods complete fit for service, Four
thousand stands of which arms shall be delivered on or before the last day of September…”  

The total count was around fifteen thousand individual muskets. Many questioned whether the government was
being brash by accepting, or even considering, such an outrageous contract, but due to the government’s
intense apprehension of war, Whitney’s proposal was accepted.  

Both he and the government had
pressing issues that spurred them to rush into a contract. On June 14, 1798, twelve days after Whitney’s
initial offer, a contract was settled.  

The government approved another twenty-seven contracts related
to weapon making, but Whitney’s contract was the only one that was not completely written out.  

The other contracts had been printed with the regular terms and conditions. The government needed
desperately to build a stock of arms, thus disregarded the usually considered opinion of the Purveyor of
Supplies, who voiced concern about the practicality of Whitney’s contract.
In producing these fifteen thousand stand of arms, Whitney revolutionized the concept of interchangeable parts, a concept had existed in France for some time already. (Whitney did not claim to have invented the idea of interchangeability—after his experience with the cotton gin, he never tried to patent anything again.) The production of standardized component parts was rooted in France’s standardization of weights and measures, both coming from the idea of uniformity to make parts interchangeable. In addition, Thomas Jefferson described how he had seen interchangeable parts in France during the 1780s, where the different elements of muskets that were “gaged and made by machinery,” were very similar to Whitney’s own interchangeable parts. Jefferson spoke of how he had seen this same principle of interchangeability in the workshop of Honore Leblanc in 1788, a talented French gunsmith, commenting specifically on the easy assemblage of these parts. Jefferson had seen the potential of Leblanc’s system immediately. He reported about the system to American officials, hoping to bring Leblanc to the country; however, they failed to recognize the importance of Leblanc’s work, which, at that time, was actually even more developed than Whitney’s would be later. Leblanc supplemented the scope of his system, more so than Whitney, by extending interchangeability to the barrel, mounting and stock of the gun. This all occurred ten years before Whitney used this system for only the lock on his musket. Leblanc’s system was thus more advanced than Whitney’s, but not as popular in France. When Leblanc died, his methods were almost abandoned in France. Inspectors had become critical of the quality of muskets made by machines, arguing that machines were unreliable, that, specifically, corroded machines could reduce the accuracy of cutting tools and that workers manning such machines were more prone to carelessness. Officials recommended making the arms by hand—but in France there were many artisans, and thus they could afford to do so. The United States, however, with its lack of artisans, needed rapid mass production.
Whitney’s production of arms was not as efficient as his development of the cotton gin. When his contract was formalized, he had not yet bought land to build a factory, nor materials, nor had he planned the building, recruited factory workers, or started the most difficult task—constructing the new machines that he envisioned would expedite the process of musket-making.\(^56\) But with an advance of five thousand dollars, Whitney confidently set out on his mission. He recruited workmen and attempted to purchase a mill site just north of New Haven. He did not finalize this purchase until mid-September. Furthermore, an epidemic of yellow fever quarantined the area during the summer of 1778 and halted the delivery of gunstocks. Because of this, Whitney could not buy the quality iron and steel that he needed to use in order to build the weapons.\(^57\) Unfortunately, New England iron was not of a high enough quality for Whitney to use. Whitney knew of the troubles ahead of him: “I have now taken a serious task upon myself & I fear a greater one than is in the power of any man to perform at a given time—but it is too late to go back.”\(^58\) And so Whitney pushed forward.

His system of manufacture involved separate procedures. Parts of the musket went through many processes and underwent operations by machinery, shortening the process and reducing labor. There were machines for “forging, rolling, floating, boreing, Grinding, Polishing,” all used to accelerate the process and maintain uniformity.\(^59\) Developing these separate processes ensured that if one of them failed, it could be fixed without having to change the others. Whitney built machines that each had a singular purpose, hence relatively easy to build and operate. In fact, the machinery worked so simply and efficiently that people with nearly no experience in mechanics could operate them so well that in the end, when all the parts were put together to form the musket, they were perfectly fitted to one another.\(^60\) This system, dependent on machines rather than men, ensured relative uniformity unachievable in products made by hand.\(^61\) Despite the ingenuity of Whitney’s system, he failed to deliver in due time. A late and rather lackadaisical start from scratch, yellow fever in Philadelphia, and a complicated process all contributed to the delay. The armory Whitney built alone took two years to put
into operation. He wrote to Oliver Wolcott, Adams’ Secretary of the Treasury, in June of 1799 asking for more time and money. On July 6, less than three months before the due date of the muskets that the contract stipulated, Wolcott granted Whitney’s request. Ten years later, in January 1809, Whitney finally fulfilled his part of the contract, delivering a total of around fifteen thousand arms. He profited less than two thousand five hundred dollars, but this was evidently enough to pay off his debts. Whitney’s concept of producing uniform and interchangeable parts became the basis of many future systems involving mass production and interchangeability.

After the initial issue with France, the United States became engaged in yet another conflict, this time, with Britain. Because of Great Britain’s occupation of Canada, the threat along Western outputs, and subjection of American ships and seamen to search and impressment, the United States declared War on Great Britain in 1812. When others failed to deliver another supply of arms, Whitney was signed on yet another contract; it specified fifteen thousand muskets before the end of 1820. After this contract, Whitney ran his company firmly, without too many hitches. However, he had no shortage of adversaries to feud with. One man, Callender Irvine, who wanted to see the War Department adopt a specific musket of his interest, worked recklessly to eliminate all contracts for arms, targeting Whitney’s. Whitney and Irvine fought for years, but Whitney overcame his opponent; after this victory, Whitney was left in relatively quiet peace.

Whitney did not escape the years of hard work and stress unscathed—his mental and physical health grew unstable with age. According to a friend, Whitney had “known intense mental harassment…the confusions of the household of youthful apprentices and small nephews left him scant quiet.” According to Whitney himself, “I am an Old Bachelor, overwhelmed in business… constantly resolved to marry without allowing myself leisure to take one step towards carrying that resolution into effect.” Physical illness left his mind and body weak. After developing stomach ulcers, he lived with constant nerves and overworked himself, fearing his limited time left. Eventually, his sickness, which a friend described as “severe beyond description,” killed him. Whitney entrusted his life’s work to two of his
End Notes

2 Ibid., 62.
4 Olmsted., 1.
5 Ibid., 7.
6 Ibid.
7 Ibid.
8 Ibid., 13.
9 Ibid.
10 Ibid., 14.
11 Ibid., 15-16.
12 Green, 46.
14 Ibid., 290.
15 Green, 46.
16 Cooper and Lindsay, *Eli Whitney and the Whitney Armory*, 10.
17 Green., 47.
18 Ibid., 48.
19 Olmsted, 16.
21 Olmsted, 17.
22 Ibid.
23 Green, 60.
24 Ibid., 69.
25 Ibid.
26 Ibid., 71.
27 Ibid., 72.
30 Smith and Cothren, 78.
34 Ibid., 209.
37 Ibid., 140.
38 Ibid., 142.
39 Green, 105.
40 Mirsky and Nevins, 140.
41 Green, 110.
42 Mirsky and Nevins, 144.
43 Green, 105.
44 Mirsky and Nevins, 142-143.
45 Ibid., 144.
46 Ibid.
47 Green, 103.
48 Ibid., 141.
49 Ibid., 103.
50 Mirsky and Nevins, 219.
51 Cooper and Lindsay, 83.
52 Green, 137.
53 Ibid.
54 Ibid., 138.
55 Ibid., 109.
56 Ibid., 113.
57 Ibid.
58 Cooper and Lindsay, 12.
59 Olmsted, 53.
60 Green, 121.
61 Cooper and Lindsay, 84.
62 Ibid., 117.
63 Ibid., 155.
64 Ibid., 155.
65 Ibid., 175.
66 Ibid., 151.
67 Ibid., 151.
68 Ibid., 187.
Bibliography


U-High Historians Honor Roll

William H McNeill ‘34

Awarded National Humanities Medal by President Obama, 2010
A World History (1998)
The Human Condition: An Ecological and Historical View (1980)
Plagues and Peoples (1976)
Venice: The Hinge of Europe: 1081-1797 (1974)
The Shape of European History (1974)
The Ecumene: The Story of Humanity (1973)
The Rise of the West (1963), National Book Award, 1964
History of Western Civilization: A Handbook (1949)
The Greek Dilemma: War and Aftermath (1947)

Geoffrey C Ward ‘57

Editor, American Heritage Magazine (1977-1982)
National Book Critics Choice Award, 1989
Francis Parkman Prize, Society of American Historians, 1989
Friend of History Award, Organization of American Historians, 2006
Six Emmy Awards for documentary writing

A Disposition to be Rich: How a Small Town Pastor’s Son Ruined and American President, Brought on a Wall Street Crash and Made Himself the Best-Hated Man in the United States (2012)
Moving to a Higher Ground: How Jazz Can Change Your Life (with Wynton Marsalis, 2008)
The War: An Intimate History (with Ken Burns, 2007)
Jazz: A History of America’s Music (with Ken Burns, 2000)
Not For Ourselves Alone: The Story of Elizabeth Cady Stanton and Susan B. Anthony (with Ken Burns, 1999)
The Year of the Tiger (1998)
The West: An Illustrated History (with Ken Burns, 1997)
Closest Companion: The Unknown Story of the Intimate Friendship Between Franklin D. Roosevelt and Margaret Suckley (1995)
Baseball: An Illustrated History (with Ken Burns, 1994)
Tiger-Wallahs: Encounters with the Men Who Tried to Save the Greatest of the Cats (with Diane Raines Ward, 1993)
The Civil War: An Illustrated History (with Ken Burns, 1990)
A First Class Temperament: The Emergence of Franklin Roosevelt (1989, National Book Award)
John Robert McNeill ‘71

University Professor, Georgetown University
MacArthur Grant Recipient
World History Association Book Prize (2001)
Forest Society Prize (2001)
Toynbee Prize (2010)
Beveridge Prize (2010)
President, American Society for Environmental History (2011-13)
Vice President, Research Division of the American Historical Association (2012-15)

Claiborne A. Skinner ‘73

Illinois Outstanding Teacher of American History Award (DAR, 2008)
History Instructor, Illinois Math and Science Academy

Peter Fritzsche ‘77

Professor of History, University of Illinois, Urbana-Champaign
Max Planck Institute Fellowship, Göttingen, 1998
Alexander Von Humbolt Research Fellowship, 1992, 1999
Guggenheim Memorial Fellowship, 1999
Cundill International Prize in History, 2008

Rehearsals for Fascism: Populism and Political Mobilization in Weimar Germany (1990)
A Nation of Fliers: German Aviation and the Popular Imagination (1994)
Berlin Walks (co-author, 1994)
Reading Berlin 1900 (1996)
Imaging the Twentieth Century (co-author 1997)
Germans into Nazis (1998)
The Work of Memory: New Directions in the Study of German Society and Culture (co-author 2002)
Friedrich Nietzsche and the Death of God (2007)
Life and Death in the Third Reich (2009)

Amity Shlaes ’78

Journalist, Historian

Deadline Club Award, Opinion Writing (2007)
Front Page Award, Newswomen’s Club of New York (2007)
Hayek Prize, Manhattan Institute (2009)

Germany: The Empire Within (1991)
The Greedy Hand: How Taxes Drive Americans Crazy and What to Do About It (1999)
Calvin Coolidge (2013)

Edith Sheffer (Replogle) ‘92

Assistant Professor of Modern European History, Stanford University
Paul Birdsell Prize, American Historical Association (2011)
Fraenkel in Contemporary History Award, Wiener Library London (2011)
Keller-Sierra Prize, Western Association for Women’s Historians (2011)

Burned Bridge: How East and West Germans Made the Iron Curtain (2011)
Anne E. Lester ‘92

Assistant Professor of History, University of Colorado at Boulder

Making Cistercian Nuns: Gender, Society, and Religious Reform in Medieval Champagne (2011)

Cities, Texts, and Social Networks, 400-1500: Experiences and Perceptions of Medieval Urban Space (co-editor, 2010)

Lily Koppel ‘99

Journalist, New York Times

The Astronaut Wives Club (2013)
Rachel Shelden (Shapiro) ’99

Assistant Professor of History, Georgia College and State University

*A Political Nation: New Directions in Mid-Nineteenth Century American Political History* (co-editor, 2011)


**Concord Review** Authors

Jeffery Hanauer 1998
Tom Stanley-Becker 2009
Sydney Small 2010
Kristina Wald 2012
Natalia Ginsburg 2013
Patricia Perozo 2013 (Emerson Prize 2013)
David Tong 2013
Aleeze’ Qadir 2013

**InFlame** (Student History Journal) Authors

Maddie Anderson 2014
Lauren Blacker 2013
Lillian Eckstein 2014
Eleanor Schuttenberg 2014

**Illinois State History Day**

Lexie Barber, African American History Award, Paper, 2012

Maddie Rafkin and DJ Smith, State Champions, Group Documentary, 2013


**National History Day, College Park, Maryland, 2013**

Natalia Ginsburg, 5th place, Research Paper, Women’s History Award, 2013