I am very excited and proud to present the twenty third edition of the Lehigh Review: Transitions. Over the past three months, I have been extremely privileged to work with the staff of the Lehigh Review as we not only reviewed but compiled the journal that you now hold in your hands.

Transitions has sought to encapsulate and showcase the best research and artwork that Lehigh University undergraduate students have accomplished, and make this work available to the public. The pieces in Transitions talk not only of changes through time that our society has, or will, face, but also of shifts in dialogue and generations. As our society and culture continues to shift, certain issues in this stage of transition are examined by our authors in a new, critical light. Tackling issues such as city fragmentation, Dubai: the Spectacle of Flows, offers a unique perspective on both the ground-breaking architectural accomplishments of luxurious Dubai as well as the economic downfalls that the city overcame while building one of the tallest buildings in the world. Building on this, An Ethical Study of Nuclear Waste Disposal at Yucca Mountain, is a well-written, current piece that examines both the architectural difficulties of implementing a national nuclear waste depository but also the moral facet of creating such a program in close proximity to human life that can easily be altered by an accident at such a site. Both Playboy: A Portfolio of Art and Satire and Technology, Trends, & Transformation: Examining the Evolution of Poster Design have explored historical changes that have occurred in the world of print, as artists and authors have experimented with different methods of self-expression. Finally, The NBA and LeBron James: An Analysis of the Relationship Between Media Representations and American Society not only defines how society’s perception of the NBA has shifted over time with the guidance of a new director, but also highlights how influential artists such as Kendrick Lamar have caused this.

Each piece presented in Transitions is unique in its approach to its subject matter, is well-written and thoughtful, and originality of thought and quality of research resounds in them. Our included artwork speaks also of the transitioning times that each collegiate student faces in the world around them, and showcases the incredible accomplishments of Lehigh’s art department. Our artists and authors have tackled difficult subjects that are defining our changing culture and society, providing new and unique answers to important issues while representing Lehigh’s leaders of tomorrow. I hope that these selections will foster conversation and dialogue, inspire action, and most of all, generate appreciation for the impressive work produced by the university’s undergraduates.

Alexandra Corell
Editor in Chief
INTRODUCTION: GROWTH OF A GLOBAL CENTER For the past few decades, Dubai, a seaport in the United Arab Emirates, has been developing into a major global city. During the 20th century, oil was discovered off the coast and Dubai profited from the oil trade revenues as it became a major trade center in the Middle East. The oil trade significantly contributed to the growth of the city until the 1990’s when the leaders began pushing to develop the spectacle that is contemporary Dubai. Dubai dramatically transformed between 1991 and 2005, just fourteen years, which can be attributed to its rapid evolution. Dubai, obsessed with spectacular expansion, continues to grow with unprecedented speed.

Without a doubt, the world is amazed and intrigued by the spectacle of Dubai. The need for Dubai to have the biggest, tallest, and most extreme everything has created an attraction based on superlatives and extravagance. This attraction is a catalyst for increased flow of trade, tourism, labor, communications, and information, all of which have furthered the accelerated development of Dubai. Ultimately, the radical urban projects and spectacles of Dubai have become symbols of global aspirations and dreams.

Abstract Over the past few decades, Dubai has developed into a major global city by using spectacular, iconic architecture to attract flows of capital, people, and ideas. Because of this, Dubai has had a rapid and unique urban development. The skyline is now made up of skyscrapers and luxury resorts, many of which have radical designs, and the area of the city has been increased through the construction of artificial islands off of the coast, a dramatic contrast to the barren, desert landscape just a few decades ago. A city based on superlatives, Dubai provides a unique and interesting urban model which is explored in this paper.

DUBAI: THE SPECTACLE OF FLOWS

BY: KATIE HOOVEN

Untitle Hannah Han
Dubai have created an allure which has attracted flows of capital, people, and ideas from nations across the globe.

![Image 1](image1.png)

Tourism has become a central component to Dubai and its economy. In typical Dubai fashion, tourism is based on luxury and lavishness. Established in 1997, Jumeirah International Group introduced the trend of spectacular, iconic architecture in Dubai. The use of iconic architecture is a global strategy to “enhance the appeal of the city” and attract investors, tourists, visitors, and therefore, capital. One of the first iconic resorts built was Burj Al Arab (figure 3). With fifty-six stories and at 1,053 feet, this luxury five star hotel was the tallest hotel in the world at the completion of its construction in 1999 and is the third tallest hotel in the world currently. The hotel was designed to mimic the shape of a sail of a throne, an Arabian vessel. Unsurprisingly, there is an alluring feeling about Burj Al Arab. Most notably, it is built upon an artificial island that is 920 feet out to sea. The seeming inaccessibility creates the allure almost entirely on its own, and the self-

Dubai is the epitome of “splintering urbanism” as coined by geographers Stephen Graham and Simon Marvin. Its infrastructures, including networks and information and communication technologies, fragment the experience of the city. At the same time, all of the networks rely on each other to function. The infrastructure systems contribute the growth of the city, both socially and physically, and attract international capital.

![Image 2](image2.png)

Dubai’s unique urbanism

Contrasting to cities of the past that were separated from each other, presently major cities are interconnected and part of a world system. This is due in large part to the rapidly changing contemporary world through the development of technology and innovation. Due to technological advances, boundaries between countries barely exist. Travel, trade, and communication are easy and expeditious, sometimes almost instant, because of the disintegration of boundaries. Now, people travel and move all over the world quickly with transportation luxuries like cars and airplanes, and the media can connect the global with local using technologies, like cars and airplanes, and the media concept of “splintering urbanism” as coined by geographers Stephen Graham and Simon Marvin. Its infrastructures, including networks and information and communication technologies, fragment the experience of the city. At the same time, all of the networks rely on each other to function. The infrastructure systems contribute the growth of the city, both socially and physically, and attract international capital.

![Image 3](image3.png)

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Figure 1: A street in Dubai in 1991 compared to the same street in Dubai in 2005. In the image on the right, the street has transformed into a highway, and the rapid development of the city is clear.

![Image 5](image5.png)

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![Image 6](image6.png)

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![Image 7](image7.png)

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Figure 2: 2014 figure and ground analysis of Dubai. Dubai courtesy of the Urban Research Lab.
proclaimed seven-star luxury is appealing to world travelers. The spectacular Burj Al Arab made itself into the symbol of Dubai for a period of time after it opened in December, 1999 due to the success of the emergence of its iconic architecture. Burj Al Arab is intentionally extravagant and excessive, and everyone loved the spectacular theme. Its image was used widely in advertisements to attract tourists, and this tactic was lucrative. In the late 1990’s, the emphasis on luxury travel was so strong that it was estimated that ten percent of Dubai’s GDP was spent on tourism. The construction of spectacular resorts such as Burj Al Arab contributed to the incredible growth of tourism to the city. By 2012, almost ten million tourists were traveling to Dubai and staying in one of the hundreds of hotels, of which several have five stars. According to the Department of Tourism and Commerce Marketing, in 2011, “Dubai’s hotels recorded a ten percent increase in the number of tourists.” Because of the success of increased global flows due to the iconic architecture, project proposals in Dubai continue, each more radical and spectacular than the last. The spectacle of the high end hotels and resorts, which began due to the success of Burj Al Arab, has significantly strengthened the overall allure of and growth in tourism to Dubai, and consequently the expansion of Dubai. Since the opening of Burj Al Arab, many lavish hotels and resorts have been constructed in Dubai, using spectacle and 1,539 rooms, twenty-one restaurants, a waterpark, 65,000 marine animals, a shark lagoon, and one of the most sophisticated dolphin bays in the world. Consistent with Burj Al Arab, Atlantis, The Palm declares itself “iconic” and attracts visitors by dazzling them with splendor. Dubai’s need and appreciation for exhibitionism is apparent in Atlantis, The Palm, with its brag worthy list of world class features and activities. Another resort, Ski Dubai (Figure 5), Dubai’s indoor ski resort, is nothing less than ostentatious. In the heart of the desert, Dubai managed to create and sustain a 242,190 square foot ski resort, complete with real snow. This remarkable resort maintains a temperature of thirty-four to thirty-six degrees Fahrenheit for perfect skiing conditions and a refuge from the desert heat. Ski Dubai proves that Dubai strives to accomplish anything to be considered the best travel destination in the world. Ostenstibly, many of Dubai’s resorts were built around the premise of extravagance and luxury to appeal to high class travelers. Every resort is decorated with chic furnishings, capturing “panache and style,” and details are highly regarded. Undoubtedly, luxury resorts continue to entice travelers to visit Dubai to be treated like royalty. Everything that is part of the hotels and resorts must be the best, giving Dubai’s hospitality sector little competition from around the world. REAL ESTATE: RECLAIMED LAND To further attract investment, a real estate sector was established in the late 1990’s. The construction of Palm Islands had a huge impact on real estate. The Palm Islands consist of three artificial islands, Palm Jumeirah, Palm Jebel Ali, and Palm Deira. Palm Deira, the largest of the three palms, is seven and a half times larger than Palm Jumeirah (Figure 6) and five times larger than Palm Jebel Ali. Each island resembles a palm tree and has a residential, leisure, and entertainment centers built upon it. Construction of the first two palms began in 2001, and by 2004, they were both sold out.12 Because of their success, the third Palm Island and the World Archipelago were constructed, creating more space for real estate projects. The development of the real estate sector attracted the interest of many wealthy investors. As a result, the demand for real estate projects dramatically increased, and Dubai continued to launch projects. By attracting people, the construction of spectacular real estate architecture has dramatically increased the population. Fifty years ago, Dubai was home to only 30,000 people. Now, due to the attraction of Dubai’s spectacles, more than 2.3 million people inhabit the city.13 This increase means that many foreigners occupy the city, allowing for global outreach and high-profile investments. Evidently, the construction of spectacular real estate, particularly Palm Islands, has attracted global investors and stimulated the development of Dubai. While the size of the three palms varies, the general appearance and structure is the same, and the same state of the art engineering procedure was employed for the construction of The Palm Islands and The World. The islands were constructed using all natural materials, unlike previous manmade islands which used concrete and steel for structural stability.14 Dubai wanted to prove that it could do what had not been done in the past by pushing engineering to the extreme. The biggest challenge was developing reclaimed land that would stay in place without any structural materials. Another challenge was finding suitable sand for the project. While Dubai has a plethora of sand available in the surrounding desert, this sand was too fine to be used in the construction. The ideal, course, dense sand used for the projects was acquired from the bottom of the Persian Gulf. In order to construct the islands, sand was sprayed by dredging ships, which used Differential Global Positioning Systems to guide sand placement within .39 of an inch desired boundaries. After the placement of the sand, vibration compaction technologies were used to ensure that the manmade masses did not settle over time. Dubai’s goal of constructing engineering-intensive projects on a strictly short schedule had been achieved. Reclaiming land by constructing massive manmade islands is another facet of Dubai’s extravagance and excess. The staggering cost of the projects was not an issue for Dubai, which wanted to enhance its real estate sector and attract high end buyers. The islands have done just that and promote the dreamlike atmosphere of contemporary Dubai. Certainly, the construction of The Palms and The World proves that Dubai is capable of breaking boundaries and developing complicated engineering projects that contribute to its utopian culture. UNFORESEEN DEBT CRISIS By 2008, it seemed as though the diversification efforts of the sons of the late Vice President and Prime Minister had succeeded. Rather than being the main source of capital flow, oil only made up five percent of Dubai’s GDP. Additionally, the three billion dollars in annual foreign direct investment supported the ranking of Dubai’s economy as the seventeenth most attractive city for foreign investment.15 At this time,
Dubai was buzzing with activity, and the future seemed bright for the gulf city. While the rest of the world economy was suffering from the credit crunch, as of September 2008, Dubai seemed to be immune to the economic turmoil. Projects were continually being proposed, parties were constantly being held, and hotel rates were consistently increasing. In truth, Dubai’s spectacles were only hiding economic issues, and they could do so only for a limited amount of time. Behind the curtain, foreign investors were losing interest; tourists were finding cheaper vacation destinations; and the banks were having difficulty finding credit on the free market, so owners started selling properties. Naturally, people were losing confidence in Dubai, which ultimately caused Dubai’s stock market to crash.

In only a few short months, Dubai’s economy changed from one of stability and promise to one left in shambles. By the end of 2008, many projects were left incomplete due to the massive eighty million dollars of 2008, many projects were left incomplete. As a result of the massive eighty million dollars.

The overall development of Dubai drew continuous attention from the entire world, and Dubai was able to globally publicize the plan for the construction of Burj Khalifa.

Following the bailout, Burj Khalifa opened on January 4, 2009. A “superlative in every respect,” Burj Khalifa is the centerpiece of the city and brings a new glow to Dubai as the hub for tourism, dining, and entertainment. At 2,722 feet tall and 163 stories, Burj Khalifa currently holds many world records including tallest building in the world, tallest free-standing structure in the world, highest occupied story in the world, and highest observation deck in the world. Burj Khalifa surpasses the height of all other buildings in Dubai by far, a bold and extreme decision that exaggerates the spectacle surrounding it. Its height scoops the skyline, defining it as the center of luxury. Burj Khalifa contains an extravagant Armani hotel, indulgent condominiums, increasingly popular observation decks on floors 124 and 148, and boutique offices. Because it is radical and spectacular, Burj Khalifa has drawn attention back to Dubai. The city is experiencing an increase in capital flows, allowing it to heal and pursue fantastic projects.

 Undeniably, Burj Khalifa’s extreme height is both captivating and remarkable. The tallest building in the Middle East before Burj Khalifa was the Great Pyramid of Giza, which gives it special significance and verifies that there has been a redirection in global flows of capital. Prior to the construction of Burj Khalifa, the tallest building was Taipei 101 in Taiwan, which stands at approximately 1,700 feet tall. Burj Khalifa surpasses that height by more than 1,000 feet. Clearly, Burj Khalifa was not intended just to beat the record for the tallest building in the world; in fact, it was intended to completely obliterate the previous record and retain its title for more than a few years. This demonstrates the extreme excess and vanity that is ever so present in Dubai. In order to attain such a height, an innovative structural system designed by SOM was implemented. It consists of a buttressed concrete core with an internal steel structure, which not only allows the structure to be “remarkably tall and remarkably thin” but also allows for coveted views from each room. Burj Khalifa is the manifestation of the ideologies of contemporary Dubai; it is elegant, striking, phantasmagorical, and shrouded in vanity and superlatives.

CONCLUSION
Dubai is a city developed upon spectacles. These spectacles have been built in order to attract people and commerce. The attraction has led to the establishment of global flows into and out of the city. Interestingly, this is the reverse of typical urban development. Generally, cities are formed due to the flows of people, commerce, and knowledge, rather than the development of city attracting the flows. For Dubai, this urban strategy has been mostly successful. Just a few decades ago, Dubai was an inactive player in the global economy and had a barren urban landscape. Now, Dubai has become a top global city filled with luxury and iconic architecture and development. Despite its successful development into a megalopolis, Dubai’s urbanism is fragmented. Its spontaneous development has left holes in the urban footprint. The disconnected urban centers suggest that the city was built with no strategy for urban framework. Although Dubai’s infrastructure systems are disjointed, they still contribute to the development and attract global capital. Tourism and construction are increasing rapidly, and people across the globe have the desire to visit or live in Dubai in order to experience the high end lifestyle of the city. Indubitably, this desire is precipitated by the spectacles and superlatives of the culture that has been developed over the last thirty years in Dubai. The hotels and resorts are beyond lavish, tempting world travelers to stay the night, regardless of the cost. The Palm Islands and The World archipelago now dominate Dubai’s landscape while providing top of the line real estate properties. Furthermore, Burj Khalifa, with its staggering height and graceful silhouette is the epitome of the superlatives upon which Dubai has been built. Conclusively, the radical, spectacular projects that have been executed in Dubai have stimulated global flows that have brought people and commerce into the urban landscape, which has allowed Dubai to become a top global city. Spectacular, utopian projects will continue in Dubai and contribute to the overall vanity and extravagant ideology of the city. For now, it seems as though there is nothing that can impede Dubai’s rapid growth into lavish excellence.

BURI KHALIFA: AN OSTENTATIOUS SUPERLATIVE
Prior to the economic turmoil, tourists and investors from all over the world were confident in the spectacular development of Dubai, and the flows of people and capital continued. In typical Dubai fashion of pursuit of power and ambition, in the early 2000’s, Emaar Properties proposed the construction of Burj Khalifa (Figure 8), the tallest man-made structure in the world. Construction for the impressive, half mile high skyscraper began in 2004. The blurred boundaries of the world meant that there was global collaboration on the project. For example, the SOM office in Chicago designed the building, while the Engineering and Construction Group of Samsung C&T Corporation, located in Seoul, South Korea, was the main contractor, and Turner Construction, headquartered in New York, did the construction management on the project. Because of global flows, Dubai did not have to carry out the project on its own. The overall development of Dubai drew continuous attention from the entire world, and Dubai was able to globally publicize the plan for the construction of Burj Khalifa.

Figure 6: Palm Jumeirah, one of the three Palm Islands off of the coast of mainland Dubai. The island has been developed to host residents and travelers alike.

Figure 7: Drifting ship spray ing sand to construct The Palm islands.

Figure 8: The tallest building in the world; Burj Khalifa towers above all other buildings in Dubai, creating a dramatic skyline.
DRAWING & PAINTING

TOOLS
Zhenya Li

My brother locked me in the garage for fun and I found these tools.

UNTITLED
Yiyi Chen

This piece was painted for an independent painting class. The medium I chose was acrylic colors and ink.
I created this piece for Painting I with Professor Berrisford Boothe in Fall 2014. The assignment was to create a “master copy” of a piece by a well established artist that included a human figure. As the second assignment in an introductory painting class, this project served to acclimate students to the techniques of painting realistic figuration while alleviating anxieties about finding subject matter. I chose to emulate a cropped portion of a piece by painter Lacey McKinney called Void, because I enjoyed the graphic quality of the fully rendered woman against the stark background, the slightly abstracted use of paint, and the ambiguous nature of the subject matter.

UNTITLED
Erin Lidl

This piece was created for an art capstone with Professor Berrisford Boothe. My aim for this work was to explore dimensionality and play with form using neutral tones. The medium is acrylic and ink on paper.

APPLES TO APPLES
Savannah Boylan

This piece was made as a part of a series to study the playfulness of food. Often we breeze through the task of eating and forget the fun, vibrant, and enjoyable act of eating. Instead, we should take time to enjoy the simplistic act of watching a full apple vanish before our eyes.

UNTITLED
Jaclyn Sands

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UNTITLED
Nina Miotto

This piece was my second to last assignment in Painting I. It was done in an impasto manner (applying oil paint thickly) using only my palette knife and a still life as reference. The point of this assignment was to make quick decisions based on structure and color.

UNTITLED
Jaclyn Sands

This piece was part of a series I created for Special Topics in Studio Practice, an independent study course I took in Spring 2014 with Professor Berrisford Boothe. It is a contour line drawing, which means that the lines on the woman’s body indicate changes in value much in the same way that the contour lines on a topographic map indicate changes in elevation. In this way, I create a map for myself which details the shading of the subject.
In the era of new media, the impact of popular culture has become pervasive in the lives of consumers. Individuals have become increasingly reliant on mainstream media outlets to contextualize their social experience in an increasingly globalized world. As consumers try to comprehend where their own identity stands in the environment of which we are a part, mainstream media creates a common space of understanding through representations that reflect mainstream values and consciousness. As a result, the representations of race in mainstream media are extremely powerful in reflecting and changing attitudes towards race in society.

Abstract: Hip Hop Culture and Basketball are two social spaces that provide a mainstream framework of how race and class are depicted in American society. While these spaces are often critiqued for creating a monolithic understanding of these social dynamics, we explore the systematic forces that potentially influence the representation of these cultures in media. How do the economic forces that result from the structure of the music and professional sports industry lead to the mainstream representation of the hip-hop artist and athlete? How is popular culture created and distributed to the masses in these industries to both perpetuate social dynamics in society and act platforms of agency and change? And finally, what are the dynamics of the micro-level interactions that make society resonate with these subcultures in nuanced ways? I analyze the NBA’s representation of LeBron James and selective use of hip-hop culture, through artists like Kendrick Lamar and Kanye West, to understand how they relate to the popular understanding of race and class dynamics in mainstream America. My literature details the current state of research on the intersection of economics, sociology, and media studies regarding the music and sports industries.

The NBA & LeBron James: an analysis of the relationship between media representations and American society

By: Min Jun ‘Minni’ Kim
In the past fifteen years, the National Basketball Association, the premier professional basketball league, has capitalized on the technological developments of the 21st century. Former Commissioner David Stern made a concerted effort to bring the game of basketball to an international level. The effects of such efforts are very visible today: The NBA is the most international professional sports league in America and has been very prevalent in supporting basketball overseas in countries like China, France, the U.K., Canada, and many more. As a result, the league’s representation of American society has powerful, global effects on societies that use media to understand the realities of places of which they are not directly a part. Additionally, with the rise of hip-hop in the American music industry, the NBA has recognized the interconnected nature of hip-hop and basketball culture and has leveraged it in the past years to further the relationship of television on society and popular culture. As individuals give meaning to other objects within an individual’s society, they are “unable to empirically analyze these processes rather than ascribing politicized models of these industries.”1

As a result of the industrialization and commercialization of culture in all forms throughout the 20th and 21st century, many cultural sociologists have concluded that there is an overall homogenization of popular culture but also how consumers interact and consume other cultural artifacts. The development of New Media has added another level of interaction between society and popular culture. As individuals increasingly have the power to create content and be a part of the production of mainstream media, the production of culture analysis of popular culture becomes incomplete; we cannot solely look at the industries that are responsible for producing culture but also how consumers interact and respond to these media representations. According to Kivetsu, this is because of how media and entertainment have become major forces in transmitting culture from generation to generation. The human manifestations of popular culture, celebrities, therefore have a huge impact on the culture of youth. Children, in particular, often are in parasocial relationships with characters that they see on television. Historically, popular culture studies have primarily been drawn upon economic analysis to understand its model of production and consumption in America. However, DiMaggio criticizes these economic analyses because they are “unable to empirically analyze the complex processes of popular culture industries.”2 Assert that economic analyses are more concerned with theoretical models that are too idealized to explain social phenomena. To address this, popular culture scholars have increasingly drawn upon both sociological and economic perspectives to better understand the relationship between media and consumers. Current “production of culture” studies have been heavily macro in nature. However, Grindstaff, following the conclusions of Crane, calls for more micro-level research because of how popular culture can give meaning to other objects within an individual’s society.3 Grey’s research on the relationship of television on representations of race shows how these industries of popular culture can provide representations and paradigms for identity formation for the masses.4 These studies would provide a better way to compare the smaller markets to the mass-mediated markets and address the differences in markets and business structure. This also falls in line with the trend in this field towards economic sociology.
As basketball became commercialized and popularized in America through the NBA in the 1980s, it created a unique, shared cultural experience for consumers from around the globe regarding race. Representations of athletes on national television exposed communities to a racially dynamic space that was not often seen in typical mainstream media. Black males, who previously garnered the least exposure on television, were now exposed to role models and players. 22

This new generation of basketball fans is more dependent on media sources to contextualize their own experiences, increasing the power of influential depictions of black males and the ways that the youth are growing up. 23

The NBA has become such a prevalent media presence in American society that consumers have developed a parasocial relationship with teams and players. This has become a driving economic force in generating revenue for the entire basketball industry and has also strengthened the effects of media representations of the league. 24

In 2014, LeBron is arguably the most well-known athlete in the world. He is a two-time NBA champion, four-time league MVP, two-time Finals MVP, Olympic gold medalist, and currently the best basketball player in the world. His net worth is $270 million and earns $70 million a year in salary and endorsements. He has transcended the mainstream narrative by being a businessman, father, actor, entertainment producer, and media icon, giving him the social capital to influence various social spaces. While James is not nearly as well-known as Michael Jordan and his legacy, he is unique in that he started his basketball career at the height of developments in hip-hop culture during Stern’s time in office. His work is considered to be a breakaway from the mainstream, commercialized hip-hop that often depicts a monolithic representation of hip-hop culture. Despite the conscious nature of Lamar’s work, he has gained widespread, mainstream success. He has won and been nominated for

20 21 22 23 24
numerous awards in the entertainment industry, including seven Grammy nominations in 2013. Similar to Lebron James’s appeal, Kendrick’s mainstream appeal is partly caused by his ability to walk the fine line between many social spaces. As a native of Compton, California, he was very immersed in the world of hip-hop as it was popularized in the 90s, validating his “authenticity” as a true hip-hop artist, appealing to the hip-hop world. Additionally, his lyrical content qualifies him as a conscious hip-hop artist, which is a subgenre of hip-hop that often draws a racially diverse fan-base because of its discussion of social issues. The combination of these two factors and his sheer artistic talent creates an image of an artist who is not stereotypically “hip-hop” enough to alienate mainstream audiences, but also “authentic” to garner the respect of other hip-hop artists and the hip-hop community.

In recent months, Lamar has become extremely visible in mainstream media, as his latest single “i” has been used in marketing campaigns in various industries, most notably in the NBA. Kendrick Lamar is hugely tied to many subcultures, and as a hip-hop artist who often addresses his experience as a black male in his music, provides context for the black male experience in America to these various spaces.24

Both James and Lamar are two celebrities whose narratives represent the American Dream. James was raised by his single-mother who was 16 years old at the time of his birth. They lived in the ghetto of Akron until Lebron moved in with his pee-pee football league coach Frank Walker and his family at the age of nine. Through this good fortune and his mother’s sacrifices and hard work, he was able to rise out of his circumstance when he became the number one draft pick in 2003. Lamar also had to face difficult conditions in his youth, as he was exposed to gang activity in Compton, California in the 90s. Instead of being immersed in gang culture, Lamar was a good student who enjoyed writing in the classroom. His classroom success and consistent effort manifested in his first mixtape (a compilation of independently produced songs), which landed him a record deal at a young age. This record deal set the stage for his commercial success a few years down. These narratives have contributed to the level of popularity that these two celebrities have had in mainstream America.

THE NBA AND LEBRON JAMES’ STYLE EVOLUTION
Former Commissioner David Stern recognized the economic power of celebrity athletes in their league when the Blat/Magic rivalry led to a resurgence in popularity in mainstream America and Michael Jordan (who was drafted the year Stern became the Commissioner) created a business empire around his own identity. Committed to his vision of an NBA Accepted by mainstream America, Stern controlled the image of the league and effectively turned the NBA into a transnational corporation by leveraging the popularity of the most talented players, creating corporate relationships, and making sure that the league was as tech- and media-savvy as possible. Stern leveraged James’s popularity throughout his career to fight the ongoing concern that the NBA was not palatable to mainstream media-savvy hip-hop artists and the hip-hop community. As a native of Compton, he was not palatable to mainstream media-savvy hip-hop artists and the hip-hop community. Stern’s image changed as a part of this trend: While he is seen in his 2003 draft photo donning a oversized, baggy all-white tuxedo that would be ridiculed by stylists and fashion communities, there is no chance that he would wear something like that ever again. He has been featured on the cover of GQ a number of times and is often praised for his style during post-game interviews and other formal events.17 His new style is not extravagant but fashionable, characterized by a sense of class that is a stark contrast to the exaggerated fashions of hip-hop celebrities to represent money and power at the time. This made James significantly more appealing to mainstream America, as he was now being represented in media not only as a basketball player but a celebrity that attends world-class events like high-end fashion shows, soccer games, and awards ceremonies. While fashion is only a part of a celebrity’s image, it is a considerably powerful one considering the social value that societies place on different clothes. James’s transition into his new style was tantamount to the long-term acceptance of the dress code policy by the rest of the league: He made it “cool” for NBA players to accept standards of style that part of society so that they will be treated as such. Before, James was simply another successful professional athlete that made money from playing basketball. After these visible changes in his media representation, he became much more relatable and marketable to the upper class. The NBA contributed to this transition so that they could better sell their product to individuals with more disposable income and power in American society through their policies and use of media.

KANYE, KENDRICK, AND CHANGING ATTITUDES IN HIP-HOP
During this time, the hip-hop industry was undergoing a significant transformation: While gansta rap was the root of hip-hop’s commercial success in mainstream America, it handled issues of race and class in a way that was uncomfortable and intimidating for mainstream American society. The music industry was not at all concerned with the way that gansta rap was interpreted by society because the sales spoke for themselves. Enter Kanye West, a hip-hop artist whose style completely changed the direction of mainstream hip-hop with the release of his debut album, “College Dropout,” in 2004. The album wrestled with themes of self-consciousness, American society and values, education, family, consumerism, and personal struggles, a complete departure from the often violent and gang-related themes of mainstream hip-hop at the time. Critical acclaim was widespread, often citing how West was able to appeal and relate to various social spaces by sticking to his identity as a “middle-class, politically conscious, post-thug, bourgeois rapper.”18 West’s success forged the path for hip-hop artists to be commercially viable while being conscious hip-hop artists. Lamar was one of those artists.

In 2013, West went on his first solo tour in five years and enlisted the help of Lamar...
to be his supporting act for the majority of the shows. During this time, LeBron was seen as one of the best artists in hip-hop, for similar reasons that West was celebrated for during the early stages of his public career. While he has seen immense commercial and critical success, Garner tackles themes that are on par with the weight and depth of West’s works, challenging listeners to be a part of experiences and conversations that are difficult to have with mainstream American society. The NBA has been extremely cognizant of the interrelatedness of hip-hop and basketball culture and has used hip-hop culture in selective ways to market itself. Artists like West and Lamar are extremely compatible with this agenda because of their mainstream appeal and hip-hop authenticity.

**LEBRON’S RETURN AND THE NBA’S RACIAL DYNAMICS**

The NBA has dealt with the depiction of the racial dynamics in America as best as possible to satisfy mainstream attitudes towards race in America. Twenty years ago, those attitudes were manifested in Stern’s dress code policies and strict policing of its players, coaches, and fans alike, and the league came down swiftly against Sterling in response: Sterling was banned from the league for his conduct, reminding basketball fans that the NBA still has to deal with the overt racist attitudes that were much more prevalent in its earlier days.

During the summer of 2014, LeBron announced that he would be returning to his hometown team, the Cleveland Cavaliers, through a widely publicized letter in Sports Illustrated. This decision sent waves across the basketball world and was a moment of self-love in the mouth of the league, reminding fans about how he disapproved of his ex-girlfriend and that he made a mistake and simply owns up to it. By the end of Stern’s career, the NBA has become a PR nightmare for his brand. Despite this, the NBA has dealt with the overt racist attitudes that were much more prevalent in its earlier days.

**THE LEHIGH REVIEW**

**THE NBA CREATED A MEDIA REPRESENTATION OF THE LEAGUE THAT WAS HARD TO IGNORE AND DISLIKE BY MAINSTREAM SOCIETY.**

The NBA has been able to reaffirm popular American beliefs to further gain popularity and generate revenue under Silver’s leadership as the new commissioner. As the NBA enters a new era of racial politics, it will capitalize on the post-racial mystique that has become so pervasive in mainstream media, representations of society and popularized in America. The obvious use of the American Dream narrative for James appeals to the values of meritocracy that American society is depicted to have been founded upon. Sports are often a space where the American Dream is realized, justifying the extravagance of the industries as a whole compared to the rest of society.

This analysis the NBA and its media representations provides a basic framework of the relationship between the economic forces of a mass-mediated market and an industry’s operations. By observing the NBA as a corporation, we can better analyze how executive decisions and league-wide marketing tactics relate to the society of which it is a part. Possible extensions of this analysis can provide the approach through varying lenses. A micro-level analysis of actual reactions to certain NBA policies and decisions would give a more nuanced look into how these decisions affect attitudes towards social stratification. Furthermore, the intersection between basketball, hip-hop, and social stratification should be further explored to analyze how these industries affect social inequality in the societies of which they are a part.

**CONCLUSION**

American society has been shaped by our media-centric culture. Individuals and communities place huge value on the "interaction" they have with media representations of their society as they contextualize their own actions and perspective with that of the rest of the world. However, because of how these representations are often engineered to send specific messages or fulfill financial incentives, their intent and effects must be analyzed to better understand how American society is depicted to have been founded upon. Systems and themes that are compatible with the American Dream narrative for James is a song about the importance of self-love in our media-centric culture. Individuals and communities place huge value on the "interaction" they have with media representations of their society as they contextualize their own actions and perspective with that of the rest of the world. However, because of how these representations are often engineered to send specific messages or fulfill financial incentives, their intent and effects must be analyzed to better understand how American society is depicted to have been founded upon. Systems and themes that are compatible with the American Dream narrative for James is a song about the importance of self-love in our media-centric culture.
3D & SCULPTURE

UNTITLED
Robert Mason

I like trying to up-cycle old or worn, discarded items, especially ones that seem to have some history. This piece was originally a rusted scythe I picked up at a yard sale. I cleaned the blade and painted it then refinished and wood-burned the handle in an attempt to redesign it as a piece of folk art.

FISH
Jaclyn Sands

This piece was created for Three-Dimensional Design with Amy Forsyth in Spring 2015. The assignment was to create a sea creature; it marked my first time working with wood to create a sculptural piece. As such, I decided to go with a very simple fish silhouette design that I knew I could execute well.
FLAT-PACK CHAIR
Elizabeth Phillips

This chair was designed for Product Design 1 and focuses on efficiently using a limited amount of material. The chair was waterjet cut from a 48” x 32” sheet of oriented strand board and can be easily assembled in under two minutes without tools and packs flat to fit in an inch-thick box almost half the size of the original material. It’s characteristic curves transform the material by mimicking the curves of the human body when seated to increase comfort while also allowing the individual pieces to ‘nest’ and maximize the limited amount of material.
Abstract This paper explores Playboy: A Portfolio of Art and Satire, published from 1919 to 1924, and the role the periodical played in the modern art movement. Published by Egmont Arens at the Washington Square Bookstore, Playboy was designed for the politically and artistically radical Bohemian Manhattan in the early twentieth century. Although Playboy ended in 1924, the contributing artists were responsible for work that is still discussed nearly one-hundred years after Playboy’s first publication. These individuals are now recognized as pioneers of the modern art movement. Playboy offers an intimate look at the interconnectivity of the resident artists of Greenwich Village, which is examined in this paper through archival research at the Syracuse University Library Archives. The Syracuse University Library Archives has collected the majority of Arens’s personal correspondences that follow the publication of Playboy as well as the development of Arens’s relationships with prominent Greenwich Village artists. This research was supplemented with scans of the original periodical from the Lehigh University Library Archives.

In the early twentieth-century United States, “little magazines” highlighted experimental literature and art that helped define the modernist art movement. Limited circulation and niche audiences characterized these eclectic magazines. One interesting “little magazine” was Playboy: A Portfolio of Art and Satire, an intended quarterly periodical that ran from 1919 to 1924. The periodical was published in color by Flying Stag Press at 17 West 8th Street, New York by editor Egmont Arens and sold for twenty-five cents per issue. Probably named after the popular play “Playboy of the Western World” written in 1907 by John Millington Synge, and perhaps a
reference to Flying Stag Press’s involvement in the Washington Square Players theatre troupe, Playboy featured work from artists such as Max Weber, Horace Brodzky, and William Gropper. Playboy ran for a total of nine issues, six of which were published in 1919 before a one-year hiatus in 1920. As part of the Greenwich Village magazine movement, Playboy exemplified the spirit of Bohemian Manhattan that was contemporary at that time. Full of quirky literature, modern art, and leftist satire, the periodical thrived on contributions from primarily unknown modern artists, many of whom grew to become influential individuals in the aftermath of Playboy’s run. By publishing his periodical out of the Washington Square Bookstore, editor Egmont Arens developed a creative hub for the artists of Greenwich Village and editorial content. A young, liberal demographic. William Gropper’s “Parliament of the People” cartoon featured in the first issue of Playboy shows Arens’s political sympathy did not change drastically in the years after his time as editor of War?, however, despite his alignment with the periodical’s politics, Arens withdrew his contributions after an argument with War?‘s publisher Karl Karsten. Karsten was Arens’s friend from his time at the University of New Mexico where they took on parallel roles for The Mirage Yearbook in 1910. In a correspondence to Arens on April 2, 1916, Karsten states he is unwilling to financially support a second issue, at which point Arens’s demands $100 dollars in back pay for his artistic contributions. Despite his dissatisfaction with the publication, Arens is assured by Karsten that once an artist has their name published in a little magazine such as War?, they receive “invitations from two or three magazines to write articles.” Karsten believes this is “a tremendous benefit” to Arens because he will be able to sell “and to write much more successfully, as the result of War?.”

Arens joined the company as a member of the Board of Trustees at his father’s request. The position was time consuming, and in a letter from Arens’s friend George Cronsyn in August 13, 1916, Cronsyn discourages Arens from assuming a managerial position for a second season. Cronsyn suggest that Arens should “confine ambition now rather “than lose fulfilment of any at all,” advice that most likely preceded Arens’s acquisition of the Washington Square Bookstore in 1917. More than his experience as editor of War?, Arens’s ownership of the Washington Square Bookstore seems to have promoted Arens to a prominent member of the Greenwich Village art scene, allowing him to recruit artists who were later seen as important shareholders in the modernist movement. The Washington Square Bookstore was established by Albert and Charles Boni in 1918, the bookstore is represented as a cultured, appreciative audience. By 1910, the Boni brothers sold their bookstore to Renée Lacoste, who passed on the shop to Arens later that year. According to the February 1918 issue of The Quill, Arens encouraged local artists to use the bookstore as a forum. Arens’s emphasis this point by reminding readers of when the bookstore acted as an impromptu stage for the Washington Square Players, an acting troupe that performed in the bookstore under Shays ownership. The artists Arens hoped to attract are listed in “Who’s Who” section of the Little Book of Greenwich Village. Reflective of the tongue-in-cheek prose that dominates Playboy’s earlier issues, the handbook assigns a silly, biographical vignette to each of Greenwich Village’s notables residents. These playful written descriptions range from “cow-girl, broncho-buster, and poetess”—would contribute to Playboy the following year. Like the Washington Square Bookstore, Arens’s publishing company, Flying Star Press, initially served Greenwich Village’s little theatre movement, a theatrical counterpart to the little magazine. In the January 1918 issue of Poetry, Harriet Monroe credits the New Theatre in Chicago for starting the little theatre movement in 1906. Like the little magazines, the little theatre served as a vehicle by which avant-garde playwrights could debut experimental work to a cultured, appreciative audience. By 1910, this movement had spread to New York, marked by the appearance of small-budget
acting troupes such as the Washington Square Players. Arens continued Shay’s work by publishing plays for the little theatre through the Washington Square Bookstore, titling his series: Flying Stag Plays. They appear as the first published works of the Flying Stag Press, advertised in the February 1918 edition of Poetry. In the same “Important Notice” in issue two, Arens writes “to function properly as a little magazine without outsourcing the printing.” This unstable periodicity seems to be due to an unexpected popularity, as the supply of issue one was “nearly exhausted,” and a general lack of funding. In the same “Important Notice” in issue two, Arens writes “to function properly as an Art Magazine, Playboy must have color plates. The high cost of process printing puts this out of the reach of a twenty-five-cent magazine.” Rather than raise the price, Arens encourages donations to the “Playboy Fund, for which checks should be mailed to Egmont Arens.” This lack of funding, plagues Playboy throughout the entirety of its run, something on which Arens regularly comments in his editor’s notes at the opening of each issue and in his personal correspondence. Arens justifies the “double number,” Playboy issues four and five, with the “high cost of paper,” and the resulting necessity of either “increasing the price…or decreasing the size.” He adds that he is “trying to raise some kind of a backing for Playboy, so it can come out more regularly.”

Contributing also to the 1920 hiatus was the relocation of the Washington Square Bookstore: “I have a month’s hard work ahead of me—moving the bookshop to 22 West 8th and another Playboy,” writes Arens to Davied on April 28. The benefit of this hiatus seems to be that Arens further integrated himself into the Manhattan art scene by printing brochures for the local galleries, one of which is a catalogue for the Kring Gallery exhibition on American Sculpture located at 668 5th Avenue, New York. As a result, the three issues of Playboy published after hiatus rely more heavily on art supplied from local galleries, unlike the submission-based periodicals Arens published in 1919. For the final issue, published in June of 1924, Arens reaches out to William Ivins at the Metropolitan Museum of Art asking “whether it would be possible to secure a photograph of the picture ‘Map of Venice’ in the book Bernard von Breydenbach – ‘Peregrina in Terre Sainte’ (loaned by the Morgan Library) for reproduction in Playboy.”

In the years leading up to the 1920 hiatus, Playboy acquired a cult following. In Playboy’s seventh issue published in 1921, Arens acknowledges in an editor’s note that despite “having many subscribers” Playboy “did absent himself for many moons.” According to the Playboy subscription cards found in the Egmont Arens Papers at Syracuse University Library Special Collections, the annual subscription program was approximately 225 subscribers from 1919 to 1921. Thirty-three percent of the subscribers were from New York City, ten percent were from California, and nine percent were from New York State. Twenty-five of the fifty states and ten foreign countries were represented in the subscription cards. Some unexpected subscriptions include requests from Havana, Cuba; Osaka, Japan; Paris, France; and Shanghai, China. The cards also show Arens had a subscription exchange with the editor of Poetry. This wide range of readership corresponds to Arens’s own observations in a letter to Davied on January 8, 1920. The rejection letters not only help to establish a set of artistic guidelines by which submissions are filtered, but they also show the extent of the magazine’s reach, far outside the niche of Bohemian Greenwich Village. Arens writes that he sent copies of Playboy to a person from Ft. Wayne, Indiana, who inquired about joining the periodical’s staff. Arens is pleased with the diversity of submissions, but he is also sad for only a few of the individuals have “the courage” to be successful in “this great adventure of literature and art.”

This letter to Davied marked the peak of their correspondence, Arens goes so far as to write Davied a mock letter to Davied a mock: “I play at business, to do…I am a flood of half-articulated ideas and emotions, but they are submerged in a flood of figures about the price of paper, and counting of money, renting of apartments, and store accounts, etc.” He adds that he “wanted to give some kind of a backing for Playboy, so it can come out more regularly.”

During the 1920 hiatus, Arens encourages donations to the “Playboy Fund” for which checks should be mailed to Egmont Arens. In the January 8, 1920, letter to Davied, Arens writes that his marriage to Greenwich Village writer Josephine Bell is unsalvageable. Initially, Arens writes that he is “far too impasioned a person to undertake having affairs,” but by March, Arens disregards his earlier caution and begins to use Playboy as an emotional liaison between himself and Davied. He offers her a job as a secretary at the Washington Square Bookstore, hoping to persuade her to come to New York and leave her home state of Kentucky. In the letter, Arens gives Davied explicit instructions on how to proceed so Bell will not be suspicious. He described Davied’s move to New York as “an adventure fraught with danger, yet very fine if I’ve got enough character between the two to pull it through.” In a March 3, 1920, telegram to Davied, Arens turns down the job offer and refuses to move to New York. Arens is quick to admit even he is torn between the “possibility of doing hurt and the impossibility of continuing unsatisfied” in a letter to Davied on March 4. At the bottom of his note, Arens writes he has “engaged a young man as secretary,” the type of wry observation in Playboy’s earlier issues.

At the height of their correspondence, Arens goes so far as to write Davied a mock Playboy. In April 1920, Arens sends her a five-page editorial called “The Savagery of Songs of Play and Rest.” The introduction page reads: “Here on this day of warm sun, I have run away from my work into a park of budding trees to write a little book for you. The edition will be limited to one copy.” The book followed the layout of Playboy, with Arens’ original sketches and accompanying text. The content is a letter to Davied: “Want: Good doctor to cure wounded heart. Apply quick!” and another advertisement to dissuade Davied from going to college: “School of Life: Don’t decide on a college course till you’ve investigated this school. Learn to live and love and knowledge will dwell with you always.”

If the ironic use of Playboy as a go-between for Arens and Davied, his letters grant a great deal of insight into the depth of Arens’s influence on Playboy’s content. In one correspondence, he compares himself to the main character of W. Somerset Maugham’s The Moon and Sixpence, a play based on the life of artist Paul Gaugin. In this letter, Arens talks about The Gauguin Issue of Playboy by writing that “It will be the number in which I will be reflected—that is the side of me that I like.” The Gauguin Issue, or Playboy number six, deviated from the periodical’s traditional format in that the majority of featured art comes from a single artist. Here Arens role as editor lends his most transparent. Unlike previous years where he stays primarily uncredited, Arens authors a five-page editorial called “The Savagery of Songs of Play and Rest.” The introduction page reads: “Here on this day of warm sun, I have run away from my work into a park of budding trees to write a little book for you. The edition will be limited to one copy.” The book followed the layout of Playboy, with Arens’ original sketches and accompanying text. The content is a letter to Davied: “Want: Good doctor to cure wounded heart. Apply quick!” and another advertisement to dissuade Davied from going to college: “School of Life: Don’t decide on a college course till you’ve investigated this school. Learn to live and love and knowledge will dwell with you always.”

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After Davied moved to New York, the same year marked the final issue of Playboy.

There is nothing in Arens’s personal correspondences that states why Playboy ended, but there are indications that Arens’s devotion to Playboy was superseded by his work as an editor of Vanity Fair and his involvement in The Masses. On December 12, 1925 Arens receives a letter from Frank Crowninshield, editor of Vanity Fair, who writes: “I was greatly excited to hear that you are going to start The Masses again. With Gellert and Gropper you ought to have a great magazine.”

Arens also appears to have delegated some of his responsibilities as editor, when in early 1924 he establishes a Playboy advisory board at 39 West Eighth Street, New York, consisting of Louis Bouché, Frank Crowninshield, Ilonka Kárdasz, Edmund Wilson and Carl Zigrosser. During this time, Playboy underwent several changes, the most visible being the change in price-per-issue from 25 cents to one dollar. There is also a noticeable increase in the number of pages per issue, with the 1919 issues averaging approximately thirty pages, significantly lower than forty-five pages in the 1924 issue. Unlike the first issue, where Arens is credited as sole proprietor, Playboy appears to have grown into something that is beyond the capabilities of a one-person operation. In Playboy’s final year, Arens attempts a financial revival by hosting themed subscriber dances in an attempt to raise money toward the publication. The dances, sponsored by Flying Stag Press, were open only to “subscribers and their guests.” These subscriptions were issued to “representatives of the Seven Arts and their friends, and those who are on Playboy’s special list. In short, if you do not paint, sculpt or dance, if you do not act, sing or play the zimbul, if you are neither a poet, a columnist or free lance eligible for subscription, unless you get some intimate friend of the Muses to go bond for the essential beauty and joyousness of your nature.” The three balls were Dans Dionysus on October 17, New Year’s Eve on December 31, and The Circus Ball on March 20 collectively called “Playboy’s Three Lively Dances of the Seven Lovely Arts.”

Arens is even more frank about his philosophy in 1920, when he sends a rejection letter to an anonymous poet who asks to be credited under a pseudonym because he is “not naturally naughty.” Arens responds that the magazine was not meant to be risqué but rather frank. By 1924, Arens’s visuals are pushing the boundaries of risqué. An unaccredited linocut advertising “particularized ads” in Playboy’s Cubist costume carnival “Fe Fé Futuriste,” shows the backside of provocatively dressed woman as her male dancer companion groges her. In addition to these dances, the final issue of Playboy includes a plea for money, hoping to establish a group of patrons who would pledge anywhere from $250 to $25 annually. Arens promises that members of the supporting group will receive “special copies of the magazine, each number of which will contain at least one original signed lithograph, etching or woodblock print, by a well known artist.”

Despite Arens’s efforts, the 1924 issue appears to have lost traction with some of his prominent contemporaries. On October 17 Arthur Moss, editor of The Quill, writes about the final issue of Playboy in a clipping from The Paris Times: “Several Montparnassians are among the contributing editor of this number of Playboy: There is a portrait of Camille the garçon de café, by Paul Burtin; a batik by Bertram Hartman and a childishly bad page by Hunt Diederich. It actually is the artistest looking publication I have ever seen. There are several good reproductions, but the writing, particularly by the editor, is a sad waste of ink and paper.”

Seemingly fitting, the 1924 Playboy opens on an editor’s note titled “Playboy writes upon the sand,” recalling the reprint of the advance announcement found in the first issue. After the end of Playboy, Arens’s publishing company, Flying Stag Press, continued into the late 1920s, advertising “particularized printing for artists.” One advertisement states: “We have printed woodblock, linoleum blocks, catalogues of art exhibitions, portfolios, and books for such artists as Rockwell Kent, George Bellows, Ilonka Kárdasz, William and Marquette Zorach, Paul Thevenaz, Pamela Blanco, Max Bohm and Randall Davey, to mention but a few.”

Playboy was designed for the politically and artistically radical Bohemian Manhattan in the early twentieth century. Although the periodical ended in 1924, Playboy remains relevant by showcasing the development of then-unknown modern artists such as Rockwell Kent, Max Weber, and E. E. Cummings. Playboy offers an intimate look at the interconnectedness of the resident artists of Greenwich Village. At the center of this network was Arens’s, who integrated himself into the Bohemian culture by developing a center for creative activity at the Washington Square Bookstore. Arens’ anti-capitalist sentiment and his criticism of class boundaries are still viable issues in modern-day society nearly one hundred years after Playboy’s first publication.
Illustrated Visions is an artist book for Prof. Marilyn Jones’s Graphic Design II class. My goal was to take specific songs from Justin Timberlake’s 20/20 Experience album and translate them into visual pieces. My style was heavily influenced from rim lighting photography and Batman: The Animated Series. The illustrations where done in Adobe Photoshop using a Wacom tablet and compiled in Adobe Indesign.
This set of posters was designed in Graphic Design 2, and, while they have the same graphic style, they are designed for two different purposes - one to promote a concert and the other to advocate the use of reusable water bottles. Both posters use a predominately black and ivory color scheme and utilize positive/negative space to create implied shapes. Script text in a bold color draws attention to the minimal but important type. Both posters were designed in Adobe Illustrator; the final pieces were printed on semi-gloss paper and mounted on foam core.
GUARANTEED
Elizabeth Phillips

Statement: This artist book was created for Graphic Design 2 and is based on The Eddie Vedder song, “Guaranteed”, and is meant to be a visual representation of the song. Particularly influential lyrics were: “circles they grow and they swallow people whole” and “owning me like gravity are places that pull.” I used a circle motif throughout the page design to visually intertwine the lyrics and combined two accordion folds to create a design of gravity. When the books opens the pages get lighter and lighter in color and unfold to reveal the song’s lyrics. To represent the second half of the song, which does not have lyrics, the reverse side of the pages is a mirror image of the circle pattern without the lyrics, and, as the book closes, the pages grow darker and darker. The pages were designed in Illustrator, printed double sided, and hand scored; the binding/cover was hand cut and covered in specialty paper and finished with a hand-sewn clasp and painted leather-wrap closure.

MONOGRAM
Jaclyn Sands

This monogram of my initials (JS) was created for Intro to Graphic Design with Holly Tienken in Fall 2014. I created it digitally using Adobe Illustrator. My primary idea for the piece was to interlock the similarly curved forms of the letters and use the contrast between black and white to set them apart from one another.
Graphic design is a discipline and medium that has rapidly evolved and has been greatly defined and redefined in the modern digital age - making its pre-digital history often forgotten. In this essay, written for an independent art history course under the guidance of Professor Marilyn Jones, I explore how poster design, which relies heavily on the combination of word and image, is linked to the history and evolution of graphic design. By examining the development and evolution of manual printing techniques as well as the influence of different artistic movements, this essay shows how the history of graphic design and poster design have been intertwined over the centuries.

Abstract Graphic Design is a discipline and medium that has rapidly evolved and has been greatly defined and redefined in the modern digital age - making it's pre-digital history often forgotten. In this essay, written for an independent art history course under the guidance of Professor Marilyn Jones, I explore how poster design, which relies heavily on the combination of word and image, is linked to the history and evolution of graphic design. By examining the development and evolution of manual printing techniques as well as the influence of different artistic movements, this essay shows how the history of graphic design and poster design have been intertwined over the centuries.

Graphic design is a slippery medium to fully define, as it often seems to fall somewhere between art form and marketing and encompasses logo design, page layout, packaging design, and many more things. However, there is one common thread that holds all of these different aspects of graphic design together and may be the best way to define the medium - the interaction between word and image. Despite its relatively brief history, graphic design has undergone many changes, perhaps most important are the technological advances that have changed the way word and image are combined. While modern graphic design reaches into print, web, and multi-media applications, its roots in print design, and particularly poster design, are an important part of its history, present, and future. Tracking the rich history of poster design reveals technological advances, popular artistic movements, and the evolution of how word and image are combined in the field of graphic design.

The history of poster design dates back to the 1700s and largely depends on the technology and methods of printing that were used to create posters. Some printing methods like wood block printing...
are an important part of poster design, however, the technology also pre-dates what is considered the “first poster,” however, this is true of other technology that became extremely important to poster design and production, as it was the evolution of pre-existing technology that allowed for color lithographic reproduction to be able to reproduce images. Therefore, by understanding early printing techniques like wood-block printing and lithography, as well as their applications to create broadsides, other forms of advertisements, and illustrations can help explain how poster design developed and combined the usually separate entities of word and image. 

Poster design has also been influenced by a variety of different artistic movements and styles and in some cases has even been the origin of an artistic style. However, three movements in particular are very important to the history of poster design: Art Nouveau, which represents the earliest development of poster design: lithography and wood-block printing. Both mediums were popularized and advanced for different reasons, yet lithography is perhaps the most associated with poster design because although it started as a simple process to reproduce text it was developed into a technique that produced images and text in a rainbow of colors and was simple, versatile, and lent itself to rapid mass reproduction. However, wood-block printing is equally as important as is the means of producing broadsides, which can be considered the predecessor to poster design, and was also developed to be able to reproduce images. Broadside was the first “advertisements” produced and are like proto-posters, as they did not use images but contained only type. Broadsides were printed on one side only, similar to flyers, and were hung in public places or distributed to the public. The printing process was simple and only used type, which was set letter-by-letter, then the raised stamp-like letters were inked and pieces of paper pressed onto them to create the print. Their primary function was to distribute government notifications, public announcements, and were also used for commercial and personal announcements. Because of the urgency of the messages they carried, broadsides were often quickly and also crudely made. At first, they only used metal type, which was both heavy and warped at large scale, creating an uneven printing surface for the letter, making the letter not appear in its entirety and therefore compromise the legibility of the broadside. To remedy these problems and meet the demand for larger type, in 1827 Darius Wills invented a streamlined process for manufacturing wooden type, which was much quicker and easier to mass produce. Most importantly, wooden type did not warp and create an uneven surface like metal type, allowing lettering to become larger and typefaces more abundant and readily available.

Long before the wooden type invention and popularization in the 19th century, wood-block printing had been used in Japan as early as the 8th century to produce illustrated Buddhist texts, reproduce written texts, and mass produce illustrated advertisements. While wooden letters contributed typefaces, Japanese wood-block printing used a similar method and applied it to illustration. Much like the individual letters were carved out of wood to create a stamp of each individual letter, Japanese wood-block prints were created by a carver, recreating an artist’s sketch in relief. At first, wood-block prints were only printed in black and white and individually hand-colored afterward. However by the mid 1700s, they were produced in full cover by laying wood-block plates, each inked with a different color and printed one on top of the other to create a composite image with many colors. These prints were called ukiyo-e prints and influenced many Impressionist painters including Van Gogh and Degas, who drew from the flat colors and bold block contour lines that defined the ukiyo-e style. Ukiyo-e were often depicted postered on stages and even bordellos and could be reproduced sometimes thousands of times before the carving became worn and the quality of the print deteriorated. The final method of printing that also became vastly popular and the preferred method of poster production is lithography. Lithography was invented in the late 1790s by Alois Senefelder, a Bavarian playwright, who realized he could reproduce his scripts by copying them onto limestone using greasy crayon, rolling ink onto the stones, and then offset printing the type from stone onto paper. However it was almost another half-century before the process became streamlined for mass production and was enhanced to produce large-scale lithographs in multicolored, or Lithography is such an important part of poster design because it brought together type and illustration and revolutionized the field of advertising by allowing text and illustrations to be mass produced quickly. Lithography also brought the artist closer to the process of creating the image for the illustration because they were able to actually draw on the limestone, as opposed to the wood-block printing process in which the artist depended on the skills and accuracy of the wood carver who took their illustration and carved it into the wood for printing. This direct control over the illustration and poster design offered by lithography was probably what drew artists like Henry Toulouse-Lautrec and James McNeill Whistler to explore the medium of lithography and the field of poster design. Another advantage to lithography was that it allowed artists to hand-draw their own type, meaning they were not restricted to the typefaces that had been developed and manufactured for metal and wood type. Instead the world of hand-drawn type allowed artists to be inspired by these classic typefaces, while also creating their own vacations, some of which were eventually developed into typefaces that are still in use today.

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During the Belle Epoque, “beautiful Era,” lithography and posters became inseparable. The Paris Poster Craze, during which Chèret’s addition of color opened up the floodgates for poster design and so revolutionized the use of the lithograph, which had previously been used as a means of reproducing other artwork—creating prints by using it as the medium for creating an artwork, instead of reproducing something that had already been made in another medium. Although Chèret produced the first color lithograph print, he was not the first artist to use the medium. For instance, Goya used the process of lithography at the beginning of the century and others had used lithography to create black and white illustrations for books and advertisements.

However Chèret’s addition of color opened up the floodgates for poster design and so began the Paris Poster Craze during which lithography and posters became inseparable and inescapable in France. The Paris Poster Craze took place in France and designed in a variety of style. Early posters designed during the Poster Craze by artists like Toulouse-Laurrec and Jules Chèret incorporated elongated figures with bold coloring that often interacted with the poster’s typography. Their posters and those with a similar style often incorporated more painterly or watercolor-like features in the background and favored a color palette of red-orange, black, golden yellow, and less frequently a bold teal blue. The Poster Craze is known as such not just because lithographs posters were being created and produced in abundance, but because they were also being collected by people, sometimes to the point that the posters were being taken from the street.

The Paris Poster Craze demonstrates an important intersection of art, poster design, and advertisement that also characterizes graphic design. Many of these early lithographic posters were advertisements, often for theatrical productions or the opera, and Chèret is often called the “father of poster design” for producing the first multicolor advertisement lithograph print. However, the nature of the medium allowed the artist to be as directly involved as a painter, therefore these posters are just as much art pieces as advertisements. Furthermore, lithographs combined the information type-based nature of broadsides with the illustrative wood-block prints to create what are some of the earliest objects that can be classified as graphic design. The combination of hand-drawn and designed word and image in lithographic posters allow them to stretch beyond their role as advertisements and become works of art that epitomize graphic design, which even in the modern day is about the combination of word and image and combines the principles of advertising and art.

LITHOGRAPHY IS SUCH AN IMPORTANT PART OF POSTER DESIGN BECAUSE IT BROUGHT TOGETHER TYPE AND ILLUSTRATION AND REVOLUTIONIZED THE FIELD OF ADVERTISING

However Chèret’s addition of color opened up the floodgates for poster design and so began the Paris Poster Craze, during which lithography and posters became inseparable and inescapable in France. The Paris Poster Craze took place during the Belle Époque, “beautiful Era,” in France, which was the period after the Franco-Prussian War and before World War I.

Most of the noted poster designers of this time either were French or worked in France and designed in a variety of style. Art Nouveau had an undeniable influence on poster design, and perhaps the converse is also true, as the popularization of posters was happening at the same time the movement was becoming prominent. However, it is important to understand Art Nouveau style is not as easily recognizable as a style like cubism because the movement had slightly different names in almost every European country and distinct regional styles. The term “Art Nouveau” has been applied in retrospect to encompass a movement that has different styles within it, for instance the bold graphic posters of Toulouse-Laurrec are often characterized as Art Nouveau, as are the more decorative, ornate, and organic illustrations of Alphonse Mucha. Mucha is one of the most notable and well-known artists who designed posters in the highly decorative Art Nouveau style and contributed iconic poster designs and style. Mucha was born in Moravia in 1860 and moved to Paris in 1887 to study at the Académie Julian after a brief period of working as a theatrical scene painter and studying in Munich. In 1894, he designed the poster Gismonda, for the actress Sarah Bernhardt, and was then contracted by her to continue designing her posters for the next six years. Mucha also worked in the decorative arts and in 1896, only two years after his breakout poster design, his first decorative panel series, The Four Seasons, was produced. His contributions and life work include: interior decoration, published books, teaching painting in America, mural painting, and even stamp design. While his influence and interests were very broad, his influence on poster design was strong. His highly decorative style of poster design was much more dense and often included an organic-inspired border or background pattern, with a female figure that had intricately designed clothing and hair, with type that was decoratively incorporated into elements of the overall design. Mucha also favored a much more muted and diverse color palette that complimented the nature-inspired elements of his designs.

MUCHA & DECORATIVE ART NOUVEAU STYLE

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ART DECO, THE AGE OF INDUSTRIALIZATION

Art Deco is another important and robust part of poster design history which has a much more distinct style than the broad range of styles that fall under the category of Art Nouveau. Posters in the Art Deco style are also very collectable and because the style coincides with many technological advances, these posters advertise much more plays than operas, actresses, and operas. The figurative focus of Art Deco posters is rarely a figure but instead a response to the industrial revolution and contain images of transportation innovations and mass produced products. Art Deco posters make use of the newly developed airbrush, by incorporating gradients to create depth and volume. Overall they have a much more simplistic geometric composition, with bold and simple shapes. However, perhaps the most
defining characteristic of Art Deco posters is the artist’s intention for the viewer and the cleverness with which the posters were designed so that if seen in passing they could be understood, memorable, and communicate effectively. One of the posters that demonstrates this concept of cleverness of this style of poster is A.M. Cassandre’s Dubo-Dubon-Dubonnet’s triptych poster. This gradual increase of the main figure as he drinks Dubonnet wine sends a subtle yet potent message to the viewer that relies heavily on the interaction of the words and image of the poster. Meanwhile, the simplistic style and minimal bold lettering become highly recognizable and unforgettable.

Cassandre, was a very important designer in the Art Deco style and designed many iconic Art Deco posters, including the Normandie poster. Cassandre’s signature, handwritten fonts. Furthermore, the overall clean and minimalist style of art deco poster has made the style highly recognizable and unforgettable. Many aspects of Swiss design are still prominent and used in graphic design today.

The grid layout system served as a strict organization system allowing type and illustrations to be arranged and aligned according to vertical columns and even horizontal guides. However, the grid was often altered and rotated at approximately a forty-five degree angle to create more movement and variety in the poster. This system of using vertical and horizontal guides to align text and images is still in use today and is one of the most basic foundations of page layout design. Swiss Design’s attention to legibility meant that designers often favored the use of symbols or graphic patterns instead of the traditional illustrations of Art Deco posters. Although some Swiss Posters use photographs, simple illustrations made of rectangles and circles are more common. The tendency to use these simple illustrations to create symbols pushed the style even more timeless and classic than their Art Deco predecessors. Modern graphic design. The Swiss design influence and style are also still being used today, perhaps because the ultra-modern influence and style are also still being used today, perhaps because the ultra-modern posters with minimal illustration made the style even more timeless and classic than their Art Deco predecessors. Modern graphic design.

Swiss design one step further than Art Deco posters, because instead of Art Deco’s clever use of representative illustrations, Swiss design asked more of the viewer by instead using simple symbols. It is important to note that symbols, patterns, and illustration in Swiss Design also follow the grid layout, giving the entire poster a uniform organization and legibility. Symbols have become a major part of modern graphic design, namely logo design, and are one of Swiss Design’s major contributions to modern graphic design. The Swiss design influence and style are also still being used today, perhaps because the ultra-modern posters with minimal illustration made the style even more timeless and classic than their Art Deco predecessors. Modern day projects like Mike Joyce’s Swissted Posters.

Swiss design continues to design in this style using all of the principals as lithography by creating a series of four metal plates each exposed to print a specific color (Cyan, Yellow, Magenta, or Black - CMYK) and when all four plates are combined they create a full color image. While offset printing has become automated and aided by technology it is an expensive process that requires strict attention to detail from the operator, who still controls many variables like making sure the plates line up and the image is correctly registered. Therefore, instead of lithography or offset printing, most posters are printed by laserjet or inkjet printers, which also depends on CMYK to produce a full spectrum of colors. However, these printers are much more digital and therefore do not require specifically made metal plates for each print.

The digital age has also caused poster design to evolve, as many advertisements or “posters” that are seen everyday are digital and even sometimes interactive. The change from physical to digital is also representative of how graphic design has transitioned from a manual system to a digital system. Before everything was designed on computer programs, posters were hand-illustrated and type was not typed into a document via a keyboard but hand cut and pasted on to the physical design mock-up, which was then sent off to the printer. The transition of graphic design into a digitally-based medium therefore asks these digital variations on posters to be considered the modern poster design.

SUMMARY
As a discipline of study, practice, and art, graphic design has become something that is an inseparable part of our daily lives and impacts them in subtle ways that may go unnoticed. Poster design is so important to graphic design history because it reveals technological advances, popular artistic movements, and the intersection of art, advertisement, word, and image.
ARCHITECTURE

UNTITLED
Yuqing Ye

The project was made for the course Visualization and Fabrication in Architecture. The course and the project itself were meant for us to study the development of a simple unit element. Each project was the production of the variation of a pattern made up of the same unit element, which is the core of the design. The technique for the project includes diagram drawing and model making. The final model is made with bristol board.

URBAN INFILL PROJECT: COMMUNITY CENTER
Jonelle Jerwick

The Urban Infill Project redesigns a small building space in an urban location. The design is constrained by the buildings on either side and is thus a practice in the logical arrangement of interior space. Program and function dictate where and how the space is organized. The project also provides an opportunity to design a building facade.
Abstract

This paper was written as a term paper for Professional Development (CEE 203) taught by Professor John Wilson. It examines the risks and benefits associated with the first proposed geological repository for nuclear waste in the United States at Yucca Mountain. It also discusses the ethical dilemmas involved with the project.

Yucca Mountain is a proposed nuclear waste storage facility in Nevada. The proposed site, if implemented, would be the first geologic repository for nuclear waste in the United States. Currently, high level nuclear waste is stored onsite at nuclear power plants and other facilities that produce nuclear waste. This is only a temporary storage method for the hazardous waste we continue to produce at a rate of about 2000 metric tons per year. The geologic repository at Yucca Mountain is the only permanent solution that has been proposed and has no backup plan.

There are many positives to the use of Yucca Mountain. First, the geologic characteristics of Yucca Mountain make it an ideal site for storing nuclear waste. Also, the site would hold all of the United States’ nuclear waste in one location, avoiding the widespread risk of potential human health and environmental problems. Lastly, it would be a permanent solution to an issue that has only been dealt with on a temporary basis thus far. However, there are also many downsides to starting use of Yucca Mountain. Property values around the facility and along transportation routes would decrease, negatively impacting the economy. Nuclear waste has a negative stigma attached to it so the perceived risk is often greater than the actual risk, but there is risk involved with the project. The two major issues of concern involving risk are, first, the possibility of exposure during transportation to Yucca Mountain from nuclear waste generators across the country and second, the

BY: JADE VAN STREEPEN & NATALIE JACKA

Yucca Mountain
An ethical study of nuclear waste disposal at Yucca Mountain
uncertainty in the long term effects on the environment. The Yucca Mountain project raises many ethical dilemmas about the risks posed to the public and the environment, and the risks to people in the direct vicinity of Yucca Mountain versus the risks to people near temporary nuclear waste storage sites, and long-term uncertainties. When analyzing these issues using different ethical theories like act-utilitarianism, pragmatism, and rights ethics, an argument can be made for both sides of each problem. The scenarios of continuing with temporary disposal practices, implementing Yucca Mountain now, or implementing emerging technologies can also be analyzed from an ethical perspective. The main conclusion drawn from this ethical analysis is that the Yucca Mountain is the best permanent solution the United States has of now. However, it should not be implemented until the benefits clearly outweigh the risks.

INTRODUCTION

Yucca Mountain is the proposed site for the first geologic repository for nuclear waste in the United States. Currently, there is no permanent disposal method for nuclear waste and it is being temporarily stored at numerous sites across the country. This lack of a permanent solution is a problem due to the high radioactivity of the waste. The United States depends on nuclear fuel for a significant portion of its energy, but if there is no way to dispose of the waste products permanently, this is not a sustainable method of energy generation. Yucca Mountain has no backup plan, so if the project is not implemented then we have no choice but to continue with temporary storage of the waste.

2 NUCLEAR WASTE AND YUCCA MOUNTAIN

Nuclear reactors produce electricity through the use of fuel made from enriched uranium pellets. The waste that is produced from this process is highly radioactive. With any radioactive materials, the hazard is reduced with time due to the fact that they undergo exponential decay. The more radioactive a substance is, the shorter its half-life is and the less time it takes to decay. In order to protect people, as well as the environment, nuclear waste needs to be disposed of carefully because this hazardous waste emits radiation and is highly toxic if inhaled. The purpose of this section is to introduce nuclear waste and discuss current disposal methods as well as the proposed Yucca Mountain facility.

2.1 Nuclear Waste

Nuclear waste can be defined as “the leftovers from the use of nuclear materials for the production of electricity, diagnosis and treatment of disease, and other purposes”. There are six general categories of nuclear waste: spent nuclear fuel from nuclear reactors, high-level waste from the reprocessing of spent nuclear fuel, transuranic waste mainly from defense programs, uranium mill tailings from the mining and milling ofuranium ore, low-level waste and naturally occurring and accelerator-produced radioactive materials.1

Spent nuclear fuel is the fuel that has already been used and its fission process has slowed, making it no longer useful or efficient for electricity generation. This used fuel is considered a high-level waste because it is still hot and radioactive which makes it potentially dangerous. Other high level radioactive wastes are materials that remain after the spent fuel is reprocessed.2

In 2003, 19.4% of all energy produced in the United States was from nuclear energy. In general, a nuclear power plant generates about 2,000 metric tons of used nuclear fuel annually. The entire nuclear industry in the United States has produced a total of about 71,780 metric tons.3 This is a significant amount of toxic waste that needs to be disposed of with minimal harm to humans and the environment.

2.2 Nuclear Waste Disposal

Unlike municipal waste, radioactive waste cannot be disposed of by incineration or landfill. Decay is the only way that radioactive waste can become completely harmless, which means that safe storage is the only option for disposal. For high level waste, the total time of decay can be thousands of years, so long-lasting storage and disposal is vital for public safety. Currently, the waste is stored in temporary locations across the United States because there is no permanent solution for nuclear waste disposal. About 10,000 meters³ of high level waste is produced each year, in spite of the fact that there is no permanent solution for disposal.4

The two types of storage used by the nuclear power plants in the United States are spent fuel pools and dry cask storage. Spent fuel pools, are made of concrete and reinforced with steel liners. They are several feet thick and the spent fuel is stored under twenty feet of water to provide shielding from radiation. The cask loading pit is in place to avoid any contact with the waste already in the pool. Dry cask storage came about because many pools were filling up with nuclear waste and therefore a new storage method was needed. Dry cask storage consists of storing nuclear waste, surrounded by inert gas, in a cask (usually a steel container that is welded shut to prevent any leakage). This type of storage can only be used once the waste has cooled in a fuel pool for at least one year and the casks must be surrounded by other steel or concrete structures to prevent radiation. Majority of the nuclear waste in the United States is stored in fuel pools; however, the number of dry casks is growing as the fuel pools are reaching capacity.5

A more permanent disposal method is needed if we are to continue producing nuclear waste. “Geologic disposal remains the only scientifically and technically credible long-term solution available to meet the need for safety without reliance on active management”, according to the National Research Council of the Academy of Sciences in 2001. Storing the waste in deep geologic repositories has been deemed the best way to permanently dispose of nuclear waste by the international science community. Many countries, including the United States, are in the process of selecting sites for these repositories and getting them approved by various government agencies. These repositories are supposed to separate the radioactive waste from the biosphere and keep the waste secure over thousands of years. In order for this solution to be viable, however, there needs to be some certainty about how secure the waste would be and if there is any possibility of leakage into the environment. Geologic isolation of the waste has been proven effective, but the long term reliability is still in question.

The Nuclear Waste Policy Act (NWPA) of 1982 regulates the disposal of nuclear waste in deep geologic repositories. The NWPA assigns regulatory responsibilities to
the facility, the EPA is responsible for setting environmental standards which will assess the safety of the site, and the NRC is responsible for regulating, licensing and overseeing construction of the repository.

2.3 Yucca Mountain
Yucca Mountain is a remote site in the desert of Nevada, about one-hundred miles northwest of Las Vegas. Yucca Mountain, as assessed by the EPA, is an acceptable distance away from any wells, agriculture, and human population. It was proposed as the primary candidate for the first geologic repository in the U.S. by the 1987 amendment to the NWPA, eliminating Yucca Mountain as proposed, will store mostly spent nuclear fuel and other high level radioactive waste. It could also store low level waste that is highly radioactive and excess plutonium, which is highly toxic. The system consists of multiple layers of barriers which will not be corroded over time and which prevent the release of radiation from the nuclear waste. The containers and barriers that protect the waste must also prevent percolating water from becoming contaminated in order to prevent releases into the environment. The proposed design consists of 120 miles of tunnels over an area of 840 acres. This would be able to store 70,000 metric tons of waste material at full capacity. "The original design concept envisioned vertical emplacement of simple steel canisters in individual boreholes; current plans call for end-to-end horizontal emplacement of large, complex waste packages in parallel, excavated drifts" which is shown in Figure 2.

The repository has been designed with maximum safety considerations. Possible exposure pathways by which humans can come in contact with the nuclear waste have been studied extensively through complex modeling. The major pathway of concern is infiltration of the vadose zone (due to karstic solutioning) which is shown in Figure 2.

8 It has been determined that the contaminated gas in the atmosphere moves to. It has been determined that exposure is not an issue and the storage of nuclear waste under Yucca Mountain is safe, however, the models used to assess these exposure pathways have a degree of uncertainty to them, which has been a point of weakness in the proposal for Yucca Mountain that opponents have preyed on. This has caused a battle between science, which has proof that the repository is safe, and politicians, who do not accept the uncertainties in modeling and in the long term effects.
Another benefit is that the use of Yucca Mountain would consolidate all of the nation's nuclear waste. According to the National Energy Institute (NEI), nuclear waste is stored temporarily at 131 locations in thirty-nine states, including sixty-six operating nuclear power plants. Nuclear waste is not any more secure in facilities close to operating plants in densely populated areas than in a remote location hundreds of feet underground. Additionally, as more nuclear waste is produced, safe storage will become more and more difficult without a large centralized repository. In 1996, the Nuclear Waste Technical Review Board (NWTRB) recommended that “the focus of U.S. policy should continue to be on the permanent disposal of spent fuel and high-level waste,” especially with the increasing need for storage capacity. As decades of waste in temporary storage combine with new nuclear waste, projected in Figure 3, the need for a repository continues to grow.

The DOE design for Yucca Mountain is governed by heavy regulations. The EPA is low, the stigma surrounding nuclear waste greatly increases the risk perceived by the public. In the management of any kind of harmful substance, there is never an absence of risk, so engineers are charged with identifying an acceptable amount of risk. Therefore, Yucca Mountain does pose risk of radiation exposure to workers, nearby residents and the surrounding environment. Additionally, a large amount of uncertainty exists when predicting the future conditions at Yucca Mountain. How will the surrounding environment respond to the thermal load created by the facility in the long term? How will these changes affect future risk to humans and the environment? Unfortunately, the closest science has come to answering these questions is thorough computer modeling, which makes many simplifying assumptions to predict future conditions.

One of the biggest hurdles for Yucca Mountain has been the issue of transportation. How will nuclear waste from all over the country be safely transported to the repository? Figure 3 depicts where the majority of the waste would have to be transported across country, from the east coast or from eastern parts of the Midwest, like Illinois. This means distances from 1500 miles to almost 3000 miles.

Nevada’s point of view, national transportation of nuclear waste is the most glaring, underexplored issue surrounding the Yucca Mountain project. With the huge mass of radioactive waste stored around the country, thousands of truck and
train shipments would be needed. Both transportation workers and citizens along transportation routes would be subject to routine radiation exposure from traveling casks of nuclear wastes. A transportation accident involving nuclear waste would be even more catastrophic. In addition, the national transportation of nuclear waste, which has never been embarked on before, would make the nation more susceptible to terrorist attacks. Cross-country nuclear waste transportation has the potential to compromise public health, environmental well-being, and national security. Economic disadvantages to implementing the Yucca Mountain project have been projected as well. First, billions of dollars would need to be put toward liability costs for public safety. This number is currently estimated at $3.7 billion. The state of Nevada cites that the negative stigma of nuclear waste will be a detriment to the local economy, which thrives partially on Las Vegas’ tourism. Property values around Yucca Mountain would decline. Additionally, the values of property along major nuclear waste transportation routes would be negatively impacted. In terms of job creation, many would argue that opportunities will be created during construction and will then drastically decline during full operation. As a whole, the people of Nevada feel that the negative economic possibilities are more glaring than the positive potential of job creation.

3.3 Discussion of Ethics

Assuming that the generation of nuclear waste continues, a number of ethical questions can be raised regarding the decision to implement the Yucca Mountain Project:

● Are the Yucca Mountain’s risks posed to the public and the environment justified?
● Which is worse: the risk to people in the direct vicinity of Yucca Mountain or the risk to people near temporary nuclear waste storage sites around the country?
● Is implementing this solution now worth the long-term uncertainties?

This section will discuss these issues from a utilitarian perspective, a pragmatic point of view, and a rights ethics standpoint. In terms of Act-Utilitarianism, a particular action is right if it is likely to produce the most overall good for the most people in a given situation, compared to the alternative options. A cost-benefit analysis from the utilitarian perspective would argue that Yucca Mountain is the most favorable option for the nation as a whole. The risks to the people and environment at the centralized location of Yucca Mountain are apparent, but this radius of impact is far less than that of temporary storage facilities around the country. Continuing to fill up these temporary facilities will put many more people and ecosystems at risk. The end goal of the Yucca Mountain project is to house all of the nation’s nuclear waste. The utilitarian decision maker might hold this end goal and its benefits paramount, and write off the risks of the means to achieve this goal, as well as the long-term uncertainties. On the other hand, when discussing the issue of transportation, a utilitarian may argue that a cross-country voyage of nuclear waste could potentially impact more people than leaving the waste in temporary storage. In a quantitative hierarchy of people and environments at risk, the transportation scenario would trump all others, and one may conclude that Yucca Mountain is not the most favorable option.

Pragmatism is a theory based in the practical applications of proofs. Our society has the desire to discover truths through scientific experiments and relate new data to old documented cases. Since Yucca Mountain is the first facility of its kind researched and developed for the United States, pragmatic decision makers may look to international cases in which deep geologic isolation of nuclear wastes was utilized in order to get a better handle on how the local community and environment were impacted in existing cases. A pragmatist may put the scientific facts and economic projections of Yucca Mountain before political concerns, making him or her more inclined to support the project. For example, as a researcher from the EPA would be inclined to support Yucca Mountain after the risk assessment was conducted. However, since pragmatism is rooted in experimentation, it is open to criticism and collaboration so that everyone has a say. Other pragmatists would certainly bring the transportation debate into the discussion, since it is the least developed part of the project. The pragmatist decision maker may choose to hold off on the implementation of Yucca Mountain due to uncertainties across the board, until research and development can clarify the risks. In rights ethics, human rights are top priority. Most rights ethicists affirm the existence of two kinds of rights: liberty and welfare. Liberty rights are defined as “rights to exercise our liberty, place duties on other people not to interfere with our freedom”. Welfare rights are defined as “rights to benefits needed for a decent human life, when we cannot earn those benefits…and when the community has them available”. The view of a rights ethic on Yucca Mountain would be more black and white than the previous utilitarian or pragmatic arguments, but could take argue both sides. A decent human life does not involve being subjected to the risk of radiation exposure. The national government and scientists are trying to compromise the liberty of Nevada citizens for their own agenda. Therefore, continuing with the Yucca Mountain project despite stark opposition from those technically, socially, economically, and politically acceptable. The report presents mistakes made due to DOE that led to the Yucca Mountain program’s failure to meet commitments and to act and a transparent manner, and loss of trust from the public and key stakeholders. However, it does acknowledge that, “deep geologic isolation continues to be the most promising and technically accepted disposal option available today”. The following sections will provide an ethical analysis of the three routes the United States could take from the current state of nuclear waste disposal: (1) continue with temporary disposal, (2) implement deep geologic isolation facilities, or (3) research and develop new technologies.

4.1 Temporary Disposal

Obviously, continuing to temporarily store nuclear waste in multiple locations around the country is the least favorable option. However, with the current state of the Yucca Mountain project and few researched and developed alternatives, the accumulation of nuclear fuel and high-level radioactive waste will continue accumulate indefinitely. However, catastrophic incidents involving these temporary facilities are rare and transportation of nuclear waste would put many more people at risk. Diving into new technologies that may cause more harm
than good should not be pursued until more research has indicated that it is less harmful than the current method.

4.2 Deep Geologic Isolation
Internationally, disposing of nuclear waste via deep geologic isolation is the most researched and utilized method. Scientific findings have given people enough confidence to fight for the implementation of Yucca Mountain. In a way, the biggest opponent the project is the “not in my backyard” mentality of Nevada residents. People of other towns have expressed their confidence in the science behind constructing a repository and are interesting in the economic benefits. For example, the citizens of Carlsbad, New Mexico want to take on a nuclear waste repository because if the prospect of economic growth and increased jobs. Strangely, their main opposition comes from the outside - “Although touted as the solution, finding a consenting community is merely the first step. The harder part is getting everyone else to sign on.” The main justification for opposing a site that the residents approve of would come down to risk transportation of nuclear waste to the site poses.

4.3 Research & Development of Emerging Technologies
Many promising new technologies exist that could completely change the way we look at nuclear waste in the United States. Nanotechnology has been proposed to separate and neutralize radioactive waste elements. Transmutation, or the changing of one element into another, could be used to convert the waste elements into less harmful material. Certain microbes have been genetically engineered to withstand radiation and to use nuclear waste elements as a food source. The waste can be reprocessed to remove useable fuels and higher-level radioactive elements. Finally, high-energy magnetic fields can be employed to separate waste components. The issue with all of these emerging technologies is that they are fairly new. The research is there, but none have been developed enough to be implemented in the near future. It is difficult to justify using one of these technologies in place of one like deep geologic isolation that has been extensively developed and explored.

5 CONCLUSIONS & RECOMMENDATIONS
The current state of nuclear waste disposal in the United States is not sustainable. As nuclear power facilities continue to operate, more and more nuclear waste is produced and stored on site. Temporary on site storage is not infinite. Yucca Mountain was proposed over two decades ago as a potential permanent solution. Currently, Yucca Mountain still has not been implemented for the disposal of nuclear waste. Through extensive research and development operations, scientists have found many benefits associated with Yucca Mountain. The site itself is geologically favorable because of its remote location and its distance from ground water resources, among other positive geologic features. Use of the site would consolidate all of the nation’s nuclear waste to one place and prevent the possibility of widespread exposure. The research that has been conducted over two decades has led to stringent radiation standards to protect workers, local citizens and the environment. Finally, the construction and operation of the facility will create jobs and other economic benefits.

The benefits, so far, have not proven to be enough to outweigh the risks. Nuclear waste has a negative stigma. Therefore, the perceived risk to the public is greater than the actual risk. For this reason, the Yucca Mountain project is met with a large amount of opposition from the State of Nevada and its citizens. The physical transportation to Yucca Mountain from nuclear waste generators across the country remains underexplored and undeveloped. More risks are associated with transporting the wastes than with leaving it at the temporary storage facilities. Additionally, property values around the Yucca Mountain facility and along nuclear waste transportation routes would decrease, negatively impacting the economy.

From an ethical point of view, the theory pragmatism as a basis for judgment would be the best way to assess the Yucca Mountain issue. As discussed earlier, pragmatism is heavily based on science, but is also open to constructive criticism to encourage the best possible scenario. The arguments in favor of the implementation of Yucca Mountain are heavily based on years of research, but are criticized by society. Moving forward, research and development agencies need to be more transparent with the public in order to regain trust in the project.

Although a permanent method of nuclear waste disposal in necessary for the United States, it is not a dire, immediate need. Storing waste on site has proven to be effective with minimal environmental and human health impacts. Eventually, nuclear wastes will accumulate to a point that a facility like Yucca Mountain is necessary. Since this has not proven to be a time sensitive issue, more research should be done in order to minimize the uncertainties. As long we have space to safely store nuclear waste and are in the process of developing a more permanent solution, we can continue to use nuclear power. Yucca Mountain is the best permanent solution the United States as of now. However, it should not be implemented until the benefits clearly outweigh the risks. The most important improvement to the proposal that needs to be made is coming up with a safe and effective method of nuclear waste transportation.
PHOTOGRAPHY

TRAFFIC POLICE
Luchen Wang

I took this photo with a 3-stop neutral density filter. Shutter speed was at 1/6 second, in order to blur out the moving vehicles, and at the same time keep the traffic officer sharp.

MAGIC HOUR
Sathya Ram

I started roaming around and happened upon this beautiful scene during a layover in Frankfurt, Germany.

I was driving back from DC one late night, and there was no one in sight, so I stopped in this desolate underground tunnel to snap this ominous scene.

This photo was the result of a project on light painting using a Hammerschlag design build in ephemeral space.

This photo was taken in front of Packer Memorial Church at Lehigh University. The editing technique used was Gradient Map. Special thanks go to my model Kaung Zeya. He had to walk back and forth multiple times in order to create the ideal composition.
TWILIGHT
Barbara Tsaousis

This photograph depicts all of the best parts of a Greek island vacation: the water, the architecture, the sunsets, and, of course, the food.
STREETS OF BETHLEHEM
Sathya Ram

Dark clouds over a quiet street in Bethlehem.

ILLUMINATE
Sathya Ram

It was a warm summer night and bugs were out to play; perfect snack for the spiders.

IMPERIAL
Danielle Campbell

This photo was taken on top of the Imperial Express in Breckenridge, Colorado in December of 2014. The powder had only been touched by a few skiers by the time this picture was taken after the run opened following a snow storm.
HYDRA
Barbara Tsaousis

This photograph was taken on a warm July afternoon in 2014. The donkeys and boats are significant because they are the only form of travel on the Greek island of Hydra—the island is entirely free of wheeled vehicles. This brings a unique experience to tourists and gives them the opportunity to experience Greece without the bustling characteristic of a popular Greek city or island during the summer months.

GOLDEN GATE BRIDGE
Luchen Wang

This photo was taken at Battery Spencer in San Francisco. The Golden Gate Bridge is usually covered in fog in the morning. I went there at three in the morning everyday for a week and was lucky enough to finally get this shot. I used slow shutter speed to get enough light and blur out the water.

SANTA MONICA PIER
Luchen Wang

This photo was taken at Santa Monica Beach in Los Angeles, CA. I tried to capture the changing color of the Ferris Wheel.

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THE LEHIGH REVIEW

Introduction

The staff of the Lehigh Review has once again collaborated with the Office of First-Year Experience to compile a selection of outstanding first-year writing samples for the “Emerging Voices” section of the journal. In the summer of 2014, incoming Lehigh students were, for the first time, given the option to choose one of two summer reading books. The first was Bathsheba Monk’s Now You See It…Stories from Cokesville, PA, a novel that weaves together several generations of Polish-American families living in a steel-mill town inspired by Bethlehem and the Bethlehem Steel Company. The second was Class Matters, a collection of articles about class in America, originally published as part of a New York Times series. The first-year students were asked to think and write critically about their own opinions regarding class and identity in education and how this may have impacted their educational career and college search. They were challenged to analyze the relationship between their own identity and class and how that might change as they matriculate at Lehigh. We are proud to showcase the responses written by this exceptional group, who remind us that excellence at Lehigh begins in the first year.

KERSTIN SCHKIRIOBA

I am a strong believer that one does not have to go to college to be successful. That being said, I chose to continue my education after my mandatory twelve years were up. When I started my college search, I had to do some serious self-reflection about why I wanted to go on to college. It had never crossed my mind to not attend. It always seemed the logical progression: elementary school, middle school, high school, college. I had to seriously think about what I wanted to do in life, and what I wanted to get out of my life.

I have always loved medicine, and I know that, to pursue that,
higher education is required. I have never envisioned myself in retail positions, or even managerial like my father. I think there is a niche of professions that I see myself happily working at, and in the medical field is where most of them lie. In relation to class systems, there is an overlying assumption that doctors are in the upper class, but I think that is the reward for putting in ten-plus extra years of school.

I have friends from high school who never went on to college; they got trade jobs, and they are doing just fine for themselves. I feel like they are in a good place emotionally, and I think they are happy with their lives. They made their own choices about pursuing amount of education they felt they needed. I think, for some, it was about their own personal happiness; they did not enjoy traditional education, so they went for a route that allowed them to learn on the job and build the skill set they wanted.

I think there are, however, people who go to college for fear that they will get a mediocre job and not be able to support themselves financially through all they want. They choose college because they believe that all people in the lower class did not go to college, and attending is the golden ticket into the middle class. I think this is a foolish view to have, as there are certainly people who attended countless years in higher education and still don’t end up having the romanticized movie-ending “rich” lifestyle.

I think that lumping class systems with or without education. I believe that anyone can move through the class systems with and without education.

MATT ENSLIN

I was born into a Wall Street world of extreme comfort and arguable excess, surrounded by those who considered themselves to be highly successful people. In this elite world, traveling through the nearby areas of Harlem and Newark often proved to be the stark reminder of the differences in class throughout this country. The pressure to achieve, to maintain the perceived level of class that I was born into, was often stifling. Unsurprisingly, the method of maintaining this tradition of remaining in the upper echelons of socioeconomic status was through achieving higher education. Since I was a young boy, even before the age of ten, the idea of going to either an Ivy League or generally upper tier university was not exactly an option. My parents spent thousands on private education, personal tutors, and essentially everything they could to ensure that I could be everything they dreamed I would be. My parents believed, like much of this country, that class was not determined by money exclusively, but by level of education. My father was encouraged by college professors in the Ivy League town of Princeton, New Jersey, and was exposed to the intellectual elite from a young age. Surrounded by anthropologists, microbiologists and mathematicians, it became ingrained in his psyche that class comes with education. A good education will open doors to you like no other avenue can, whether those doors have monetary rewards or not. Then, when he entered the cutthroat world of Wall Street after his education at Lehigh, he saw those without prestigious degrees being tossed aside and not considered for important positions.

Regardless of vocational field or monetary prosperity, it was clear to my father that educational levels divided people, and he wanted to ensure I would have my education (or lack thereof) held me back. However, I have always had a bit of an inner conflict when it comes to vocational prospects and my immediate future. Since I was a little boy, I have had a deep love of English, history, and the social sciences. However, growing up in a world of Mercedes-Benz and Brook Brothers changed my notion of class from what my parents believed. Despite my parents’ staunch belief in the educational determination of what society decides as “class,” I became obsessed with the acquisition of significant monetary gain. I was enamored with diamond watches, cars with V8 engines, and expensive vacations. When applying to Lehigh, I was obsessed with the fact that the university is known for having successful alumni. I went to campus knowing I wanted to major in business and join the upper socioeconomic class of society, just as my father had. However, two thirds of the way into my semester, I had a realization. I don’t like business: it bores me. Knowing graphs and finance is not my ticket to respect and class: it is my education, after all. Whether it is justified or not, society determines class by level of education. It simply opens doors.

For me to maximize my education, I have decided to pursue my passions of the liberal arts, and hope that society can recognize my gifts, whether it be fair or not.

MEGAN HSU

The relationship between my own identity and my class is arbitrary, but, at the same time, it is integral part of my identity because I’ve been middle class my entire life. I don’t really know what it’s like to struggle financially because my parents have always had enough to support my family, not to mention my relatives are pretty well-off themselves. Though I’ve heard stories from my parents, who are immigrants, of financial hardship, I never really experienced it for myself. They, my dad especially, constantly remind me of my sister and me how lucky we are. And, unfortunately, such appreciation has become title for us because of our precarious relationship with him and what he says. But, I digress. What I’m saying is that I lack an understanding of classes other than my own, comfortably resting in my middle-class bubble. Of course, there is poverty surrounding me; the financial climate of where I used to live was similar to that of Bethlehem. I lived in the suburbs, but the more urban area that was only ten minutes away was laden with poverty. The school I went to was a public school that contained about 2,400 people, so I got to see kids who lived in the wealthier suburban neighborhoods and those who lived in the middle of the downtown’s less-than-stellar state. While I was aware of the hardships people had to face, I didn’t fully understand them, and that’s something I’d like to change.
community. I hope I can contribute as well, so that the Bethlehem community can make Lehigh a positive part of itself.

PRARTHNA JOHRI
I came from a small town in New Jersey before I went to college. There were the rich areas and the not so well off areas, and there were the in-between areas, and there was no one in the town who cared where you were from. What finally differentiated people in my town was where they ended up for college. More than fifty percent of my grade either went to community college or went straight into the work force. But what is really not that surprising is that there is no real correlation between class and where I have seen people go so far. An old friend of mine went from being club president and in the top ten percent of our class to dropping out of college, and someone who decided not to go to college took over his family business and is doing better than anyone could have imagined.

That being said, I find that ideally there should be a correlation between education and class; that, if I am going to college and paying anywhere from twenty to sixty thousand for tuition, that I should be guaranteed a job and at least a middle-to-high class standing. It seems that going to college and throwing my family’s and my life savings away should determine me a bright future with a shiny car and a large house with a green lawn. However, if you look at the really successful people in this day and age, how many of them dropped out of college? How many of them struggled in school and were told that they had no talent? So, from what I have seen, class has not determined education and education has not determined class.

But, that does not stop me and everyone I know from “investing” in “good” colleges and picking career choices not that we enjoy, but that will reap the most amount of money in the future. When I began looking at college majors, the only advice I got revolved around, don’t pick that major, you will never find a job with that. So, even if I know that college does not necessarily align me with a higher class, with a guarantee of success, that doesn’t stop me from hoping it will.

However in Now You See It, there was a direct correlation between education and class; those who did not finish high school stayed in Cokesville, and those who did and went to college or just left the town were presumed free. However, even Theresa Gojuk, for all her good looks and acting skills, for all her cutting of ties from her hometown, never quite made it out. So, perhaps the moral of the story was do not become an actress.

Or, more likely, the book preached that, even if you leave your town, leave the class you were born in through whatever means necessary, a part of that will always remain in you. In this day and age, it doesn’t matter what class you are as there are opportunities overflowing for scholarships in education, and, as long as you can get that college degree hanging on your wall, you can use it to dig yourself into or out of any hole and then leave it to hang on your wall and gather dust for the rest of eternity.

The staff of the Lehigh Review would like to thank Allison Ragon and Emily Shreve in the Office of First-Year Experience for their continued collaboration on the “Emerging Voices” section.
ERIN LIDL is a senior studying psychology working towards a B.S. in molecular biology. Her goal is to complete both MD and MPH degrees and become a neurosurgeon.

CHRISTOPHER HERRERA is a graduating senior, majoring in design with a concentration in graphic. He is very passionate about design and illustration and has been in love with the arts since he was a child. He attributes his growth as a designer to his time at Lehigh.

ELIZABETH PHILLIPS is a design major with a concentration in graphic design and is currently a Presidential Scholar studying to complete a second bachelor’s degree in English and getting a second design concentration in product design. She is a member of Fusion Design Studio, AACD (Art, Architecture, and Design Club), and Interns at Lehigh’s Department of Communications. This summer Elizabeth will participate in Lehigh’s Mountaintop Research Program and will finish her studies at Lehigh in December 2015, at which time she intends to pursue a career in design.

ERIN LIDL is a senior studying psychology along with a minor in studio art. She enjoys working with children and hopes to pursue a career in art therapy.

GRACE JOHN JulIO is a junior majoring in graphic and product design with a business minor. She is Design Manager for The Brown & White, a Photographer’s Forum finalist, and a member of Alpha Omicron Pi. Amidst a myriad of creative projects and processes, typography has become a recent passion of hers.

HANNAH HAN is currently a senior double majoring in architecture and art. She hopes to continue her architectural education in graduate school while continuing to make art.

JACLYN SANDS is a second-year student majoring in studio art and graphic design, and minoring in French. She hopes to complete her degree in three years, enabling her to graduate in 2016. She is a Dean’s List scholar, the 2015 recipient in the studio art category of the merit-based Horger Scholarship, and the vice president of the Art, Architecture, and Design Club.

JADE VAN STREEPEN is a member of the merit-based Horger Scholarship, and the 2015 recipient in the studio art category of the, a Photographer’s Forum finalist, and a White.

JONELLE JERWICK is a senior architecture major who will attend graduate school in the fall. She is on the Lehigh track and field team as a pole vaulter. In her free time, she enjoys traveling and the outdoors.

KATIE HOOVEN is in her fourth year of the five-year Arts/Engineering program, double majoring in civil engineering and architecture. She plans to pursue engineering with hopes of negotiating her architecture background into her engineering designs.

KERSTIN SCHRIOBA hails from Maine. She is a first-year student majoring in English and getting a second design degree in environmental engineering. She has always had a passion for art, which is why she is minoring in studio art. She’s taken drawing I, painting I, and is currently taking painting II through Lehigh’s Art Department.

MIN JUN KIM is pursuing a degree in sociology with minors in entrepreneurship and music industry. Passionate about the relationship between culture and business, Min’s Eckardt Scholar thesis research—as presented at the 2015 Eastern Sociological Society Conference in NYC—focuses on the intersection of popular culture and race and class inequality, viewed through the lens of the hip-hop and basketball industries. Apart from his academics, Min is heavily involved in the music scene at Lehigh as a DJ and music director of University Productions.

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MONIKA MARTIN is a senior studying environmental engineering. She participates in undergraduate research with a focus on water quality and waterborne pathogens. She has played Varsity Field Hockey for the past four years and is an active member of Alpha Omicron Pi.

NINA MIOTTO is a junior at Lehigh, studying pharmaceutical chemistry. In addition to the sciences, she has always had a passion for art, which is why she is minoring in studio art. She’s taken drawing I, painting I, and is currently taking painting II through Lehigh’s Art Department.

PRARTHNA JOHRI is a business major who was pretty surprised to have her piece published. She’s actively involved in her sorority, as well as multiple clubs.

RACHEL MAYER is a senior majoring in the Integrated Degree in Engineering Arts and Sciences Program with concentrations in industrial engineering and product design. She is currently the Alumni Engagement Chair for the Association of Student Alumni, a Senior Class Gift Team Leader, the Class of 2015 Class Correspondent, an Admissions Fellow, and a Lehigh Fund student worker. Rachel enjoys finding awesome new restaurants, visiting breweries, and spending as much time as she can with her Alpha Gamma Delta sisters.
ROBERT MASON is a senior environmental science major. He likes spending time outdoors, learning about nature, and playing the ukulele.

SATIYA RAM is an eclectic who focuses on modern design and challenging photography. He has a passion for film, the web, and the world.

SAVANNAH BOYLAN is a current senior studying international relations with a minor in studio art from Atlanta, Georgia. Her artwork is currently featured on the art website Easely.

YIYI CHEN is a sophomore accounting major and Japanese minor. Yiyi enjoys her life at Lehigh, and she is involved in many student organizations, such as Student Senate XXVII, LeaderShape, Global Union Core Committee, and so on. Even though she is not in the College of Arts & Science, she has a great passion for art and always has creative ideas in her mind. In the future, she will keep creating great painting pieces.

YUQING YE is a third-year architecture major from Beijing, China. She puts passion and dedication into her design. She looks forward to a career in the field of Architecture.

ZHENYU LI is a freshman industrial engineering major. She have been drawing since the age of nine and truly enjoys every moment spent in her studio.

SANTA MONICA PIER Luchen Wang
This photo was taken at Santa Monica Beach in Los Angeles, CA. It was a beautiful sunset. I used a neutral density filter to darken the sky. Shutter speed was slow to capture the movement of the water.

SAXAPHONE AND BABY Luchen Wang
This photo was taken at Central Park, New York City. It was shot with a Fuji X-e1 mirrorless camera and a Voigtlander 40mm F1.4 manual lens.

LINDERMAN MEMORIES Rachel Mayer
I created this piece in my spare time while I was reflecting back on my time at Lehigh. It was created with water color and pen.

UNTITLED Hannah Han
This work was done with an oil paint stick and paint thinner on mylar. I made this on my free time.

SOLO Sathya Ram
Chance the Rapper performing a haunting, soulful, personal piece in the limelight.

DROPLET Luchen Wang
The shutter speed for this photo is relatively slow (1/30 second). I shot it in a completely dark room and used flash to illuminate and freeze the object. It took about two hours of trying and failing to get the perfect timing.

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EDITOR IN CHIEF
ALEXANDRA CORRELL
Alexandra Correll is a sophomore international relations and English double major with a minor in creative writing. She is a Greek mentor, an avid writer, and a member of the Kappa Delta sorority. She plans to pursue a career in the publication industry.

DESIGN EDITOR
JUSTINE GAETANO is a junior majoring in graphic design and minoring in art history. This is her second year as a staff member for the Lehigh Review and her first time as an executive editor. She is a member of Fusion Design Studio and a Dean’s List scholar. She plans to pursue a career in design.

MARKETING EDITOR
TORI YU is a junior double majoring in marketing and management, with a minor in Psychology. She is a coordinator for the Eco-Reps program, the social media and marketing assistant for the Office of Sustainability, a tour guide for the Office of Admissions, and a member of Kappa Alpha Theta.

ABOUT THE STAFF

THE STAFF OF THE LEHIGH REVIEW WOULD LIKE TO EXTEND OUR SINCEREST GRATITUDE TOWARDS OUR ADVISOR, LAURA KREMMEL, FOR HER GUIDANCE AND PATIENCE, AND ALSO FOR THE NUMEROUS BATCHES OF COOKIES BROUGHT TO CLASS.

ABOUT THE STAFF

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22: Ibid.


26: Figure provided in an entry on Benjaisha Square and authored by Yasser Elsheshtawy.

27: Elsheshtawy, Dubai: Behind an Urban Spectacle, 133.


33: Maria A., “Ice Box: Dubai’s Far-Reaching Tourism Project,” a blog by Yasser Elsheshtawy.

34: Adapted from Flickr Creative Commons: “Indoor Ski Dubai,” http://www.flickr.com/photos/12525602@N00/5105968536/.

35: Adapted from Flickr Creative Commons: “Burj Khalifa Dubai,” http://www.flickr.com/photos/12525602@N00/5105968536/.


39: Courtesy of Yasser Elsheshtawy.

40: Adapted from Flickr Creative Commons: “Burj Khalifa,” http://www.flickr.com/photos/12525602@N00/5105968536/.


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3: Ibid.


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