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Foreword

The Editorial Board is pleased to present the inaugural edition of *Illuminate,* the undergraduate journal of the Northeast Regional Honors Council (NRHC). The honors students of the northeast region are extraordinarily talented. Many of the students in the region present their scholarly and creative work at NRHC's annual conference, traditionally held every spring. The purpose of *Illuminate* is to allow students to publish their work, letting it "shine on" and provide intellectual and creative stimulation to all.

This first volume aligns with the conference theme from #NRHC2019—*Generating Power: Impact. Influence. Endurance.* The 2019 conference was held in Baltimore, Maryland. The theme asked individuals to contemplate the ways power is generated, for example, from natural resources, to people's ability to use social media to crowdsource to create change in societies; from the impact of government to force social change, to the impact of science to force crops to grow quicker and stronger to provide food to the starving; from the influence of the thoughts of Mahatma Gandhi, JFK, and Martin Luther King, Jr. that have helped generations of people overcome hatred and violence, to how media influences how we see ourselves, the earth, and others in positive and negative ways; and finally, how can we generate political power that can endure other than by creating dynastic rule.

As you read and reflect upon the various contributions in the following pages of *Illuminate*, you will certainly notice the presence of this theme. The ability to create something is a form of power. The ideas that each author and contributor has shared in his/her work will generate new ideas, thoughts, and reactions. Our contributors' willingness to share their creativity, research, and arguments will certainly impact and influence our own perspectives on the topics they tackle, from the power of protest to the power of technology to power within the natural and social sciences, and more.

By publishing these 18 unique and compelling pieces in this journal and on the official website of *Illuminate* (www.illuminatenrhc.com), we will allow these works to endure and "shine on." The Editorial Board came up with the slogan, "Let your work shine on," to encourage the students of the northeast region to consider publishing their honors papers and creative works. The work students do should be celebrated and seen long after a grade has been assigned and a course is logged onto a transcript.

There are so many people to thank for bringing this project to fruition—you may read every editorial board member's biography at the end of the journal, along with the biographies of all the contributors. However, the idea that generated *Illuminate* came from Ms. Nathalie Waldschmidt. Nathalie has been an active participant in NRHC since 2015, when she first attended conference as a student. She has continued to stay involved, serving as Student Representative in 2016, and as Conference Assistant in 2017, 2018, and 2019. She continues to serve in this role for #NRHC2020. Her passion to make NRHC more student-centered than ever lives on through *Illuminate*. The Editorial Board dedicates this inaugural edition to her.

Please enjoy this first volume. It has been the pleasure of the Editorial Board to review submissions, work with contributors on edits, and bring this volume to print here and online. If you have any questions or wish to contact any of the contributors, please email us at illuminatenrhc@gmail.com.

Happy Reading!

Sincerely,

The *Illuminate* Editorial Board, 2019

Power Through Protest

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Artist Statement: "Power Through Protest" is meant to showcase the power that protest can have and how a single image can convey the emotion and feelings of an entire movement. The piece showcases a young family at an anti-family separation protest as they shared their hope, like the other protesters there that day, to put an end to President Donald Trump's executive order to detain immigrants who cross the border illegally.

Despite the many pictures taken that day, the final image was purposely selected due to the parents' faces being covered and the child's face being the only visible one in the piece. It was also conveniently illuminated by one of a few rays of sunshine that was coming through the trees that day. This image evokes a stronger sense of emotion, in that it embodies the message of those who are protesting: that despite how one may feel about the actions of their parents, these children are innocent. The children had no part in their parents' decisions. Therefore, we should consider their well being over our own political views. We must come together to ensure that their well-being comes first.

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The Power of Social Media:
Influencing Purchasing Habits of Millennials

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Abstract: Research shows that online users, particularly millennials, are influenced by their peers who they can relate to. They are also more likely to support companies that give back instead of just make a profit. Research has also shown that millennials are more likely to purchase products or services that have a lot of peer recommendations.

This research paper will not only look at the how but why social media influences millennials' buying habits. This will be done by examining ways in which social media is used by companies to target millennials and the reasoning behind why social media has so much power over the purchasing habits of millennials. In the end, ways in which brands can utilize social media sites to attract consumers to purchase their products or services will be discussed. Once social media is used effectively, it can be a powerful tool that has the potential to influence users. The researcher argues that the use of social media is one of the key ways to influence millennials to purchase a company's product or service.

The paper is divided into five sections. The first section explores the characteristics of millennials and the events in their lives that shape their behaviors. The second section explores the phenomenon known as social media by defining what it is; then, the third section examines how it can be effectively used for marketing. The fourth section looks at the relationship between millennials and social media and how they have the power to influence peers through the social media platform. The last section ties the whole paper together by analyzing how all these factors, such as social media and the characteristics of millennials, can drive sales for a company.

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Introduction

The introduction of the internet to the masses in the 90's changed the way everyone communicates with one another. As a result, millennials, those persons that were born between 1981-1996, have become the unofficial experts when it comes to the use of the internet. This is because they learned to use it since they were at an impressionable age; while older generations would have had to deviate from their traditional methods of communication in order conform to the use of this new technology.

The internet essentially paved the way for the creation of what one knows today as social media, and it has been reported that by 2017, the number of social media users grew to about 81% of the U.S. population (Bradford, Harden, & Yen, 2018). This not only has allowed persons to communicate with their friends and family but has also created an avenue for businesses and brands to communicate with consumers and persuade them to support their businesses. It has been reported that 72% of millennials report buying fashion and beauty products based on Instagram posts (Arnold, 2017).

The influence of social media on millennials and their purchase decisions is something that the author has observed for quite some time and it has led one to wonder how and why social media is able to influence consumers. Companies that understand millennials and what motivates them have the power to influence millennials' purchasing habits by effectively utilizing social media as part of the company's marketing strategy.

Understanding Millennials

Millennials are often considered the experts on anything relating to the internet and social media because they grew up around the time the internet became increasingly popular. The key to understanding millennials is finding out what events or relationships played a role in shaping them into who they are and how they behave. Only then can one begin to figure out how social media influences millennials or whether it has no impact on them at all.

According to Howe & Strauss (2003) in a study based on Americans, millennials "expect technology to simply work." Adopting new technology is very easy for them and they often look for ways to simplify technology. Howe & Strauss (2003) also characterize millennials as being special and sheltered. They claim this

is because growing up, their parents would always treat them as important and were highly protective of them. It is claimed that because of this, millennials tend to have a sense of entitlement and confidence and expect frequent positive feedback.

Millennials are also characterized as high achieving and "focus on world achievement rather than personal development" (Howe & Strauss, 2003). Growing up, millenials were often pressured by parents to achieve success and avoid risks. However, they value their parents' opinions (or any authoritative figure) in a high regard. It is also interesting to note that millennials are defined as being team-oriented and like working with others for the greater good. This team-oriented mindset causes them to be deemed a social generation as they love shopping and doing other activities with each other. This all goes back to the way that their parents and the community raised them by emphasizing collaboration. Howe & Strauss also stated that millennials are always looking for adventure; as they crave the joy of new discoveries (2003). They also stated that millennials are passionate about their values as their parents taught them that every voice matters.

It is these characteristics that help marketers to understand what drives millennials to behave a certain way and eventually leads them to buy certain things. Therefore, when targeting millennial consumers, a company's social media marketing strategy should be aimed at building and strengthening relationships with millennials. Creating avenues for millennials to connect with peers and give feedback to the company are also good strategies. Companies that allow for this, make the millennial population feel as if their opinions matters, and this is important to millennials. Furthermore, this is what creates brand loyalty.

Social Media- Networking Platform or Marketing Tool?

"In 2008, only 24% of the U.S population had a social media profile. Fast forward to 2017 and the number of social media users drastically grew reaching 81%" (Bradford, Harden, & Yen, 2018). This phenomenon known as social media has quickly become a fundamental channel of communication within our society at large, throughout most of the world. According to the Merriam Webster Dictionary, social media is defined as "forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos)." Some examples of social media sites include Facebook, Instagram, LinkedIn, WhatsApp, Snapchat, Twitter, and Pinterest.

Almost everyone with access to the internet uses some form of social media to communicate, whether it be a mom messaging a daughter, a friend sharing photos from their latest summer vacation, or even compa-

nies connecting with their customers to inform them about what they offer. Originally, social media was just used for individuals to share their opinions on different things in the form of what one calls blogging (Keith, n.d.).

Overtime, businesses saw how beneficial social media could be to them and now use social media as a marketing tool for many companies. According to Ethel Lee of Turku University of Applied Sciences, "It appears that companies of all sizes have been translating their marketing approaches to the internet because of its accessibility to their target audience and the money required to do so" (Lee, 2013). It is the perfect way for businesses to reach their target market without spending millions of dollars on advertising on the television or in magazines.

It is reported that "college-aged students are among the most prevalent population segment to use social media sites to learn about products" (Bradford, Harden, & Yen, 2018). The idea that millennials value the opinion of others and enjoy collaboration is what makes the use of social media popular among this age group. As a result, social media has become a powerful marketing tool, which has made it easier for brands to constantly be on the forefront of people's minds and perhaps influence consumer behaviors, especially millennials.

The Science Behind Social Media Marketing

According to Hannah Kuchler of Financial Times, London, estimates from Forrester Research indicates that "social media marketing spend in the U.S. is forecast to more than double to $18.7bn in 2019, from $8.2bn last year" (Kuchler, 2015). With the growing popularity of social media platforms, companies and marketing agencies now have to find a way to take advantage of these platforms that allow them to easily access consumers.

Companies have figured out how to target their consumers that use social media by tracking online users' actions and compiling that information into a database (Hill, 2015). This online tracking is done either by canvas fingerprinting (an online tracking technique that allows websites to identify and track users by drawing data from the sites used) or cookie syncing (allows "entities" that are tracking you online to share information by sharing notes in an attempt to better tailor the site to you) (Hill, 2015). The data collected allows companies to profile users into behavioral categories to target users with relevant ads.

Another strategy used by marketers is scheduling their social media posts at a perceived optimal time of the day that will lead to high audience engagement. According to a Harvard Business Review study, "Research on circadian rhythms suggests that content platforms like CNN, ESPN, National Geographic, and others can enhance their profit by at least 8% simply by

posting content following the biological responses of their audience's sleep-wake cycles and targeting content types to when the audience is most naturally receptive to it" (Kanuri, Sridhar, & Yixing, 2018). This example clearly shows the effect social media content can have on sales.

As a result, simply creating a social media account for your business will not be effective unless the company employs a strategic approach to posting content. Companies that tailor their content to attract millennials (and their desires) are more likely to persuade them to purchase their products than a company that does not.

The New Marketing Experts- Millennials

"Engaging with millennials in a personalized, authentic way is the key to a successful marketing strategy" (Marks, 2016). As mentioned earlier, millennials are very team oriented and love working with other millennials which is why the strategy of using their peers as brand ambassadors is seemingly effective. The modern-day brand ambassadors that appear across all forms of social media are known as social media influencers.

It was reported by Rebecca McCuiston, senior vice-president of influencer marketing agency 360i that "92 percent of people trust word of mouth, according to a Nielson study and influencers help marketers gain word of mouth at scale" (Kuchler, 2015). When millennials are the ones telling other millennials about a product or service, they will listen because they can relate to them and trust them more as oppose to the idea of a big corporation trying to sell them something. Jason Stein, president of Laundry Service, a marketing agency in New York, says, "Brands that use Instagram photos in their email and Facebook campaigns see higher click through rates, engagement rates and conversions- getting customers to do or buy something after seeing an ad" (Kuchler, 2015). The more authentic a brand appears to be, the more likely it is for that brand to garner support from millennials and develop a sense of brand loyalty.

Therefore, companies can no longer exclusively approach marketing strategies internally. Seeking the feedback of millennials and encouraging this population to externally act as brand ambassadors is the most effective marketing strategy today.

Turning Social Media Posts into Sales

Once companies understand what motivates millennials, they are better able to predict consumer behavior (Danziger, 2004). In Danziger's book Why People Buy Things They Don't Need, her simplest answer was "Because they do need it!" (Danziger, 2004). In an attempt to satisfy their desires, consumers buy

things they think they need. When online users constantly see ads for a product or service related to something they are interested in or a social media influencer whose opinion they value is constantly using said product or service, that sparks a desire in the consumer to attain what they are constantly seeing others use. Danziger also expressed that a person's value system influences purchase decisions.

This goes back to the fact that millennials are passionate about their values and desire to "support brands who give back to society instead of just making a profit" (Marks, 2016). Millennials are a young and vibrant generation; therefore, "brands whose marketing strategies position their products as enhancements for experiences are the ones best received by millennials" (Marks, 2016). It is also claimed that a person's spending is closely linked to their passion, value and personal tastes for specific products (Danziger, 2004). For example, a social media influencer travels to an exotic island, stays at a specific resort and shares their experience on social media via photos and videos. When ads about the same resort pop up on their social media feed, there is a great chance that a millennial planning their next vacation to the same exotic island will stay at the same resort they saw advertised on their social media several times. This is because they have now developed a sense of comfort, trust and familiarity with that resort.

Figure 1. Bar chart showing the percentage of social media users that make purchase decisions based on different actions on social media. Note: Retrieved from https://www.invespcro.com/blog/social-media-influences-purchase-decisions/

The data shows that sharing additional product information influences consumers most to make a purchase decision which strengthens the argument that millennials love when companies are transparent and authentic with them (Marks, 2016). Product recommendations also ranked high in the chart and this fact is true of millennial shoppers who often rely on peer recommendations (Arnold, 2017). This research is important because it specifically studies how social media influences the decisions of millennials. As this generation continues to gain financial independence, understand-

ing their purchasing habits will continue to be an area of study.

Conclusion

Although the concept of social media marketing is not new, it remains a phenomenon to this day because of continued innovations in the information technology world, such as the creation of new social media apps and new features within the apps that aim to cater to the ever-changing needs of its users. As a result, there is still a need for continued research on the impact of social media on consumers. This paper examined how social media can be utilized to influence the purchasing habits of millennial shoppers.

No longer is social media used to simply communicate with family and friends. Companies are now striving to master the use of social media to remain competitive in an increasingly competitive online marketing world. The best way to maximize profits would be by first understanding millennial consumers, such as their characteristics and needs; then by tailoring social media posts to entice users to buying products or services being offered. Social media is indeed a powerful marketing tool that can be used to influence millennial consumers. Its impact is far-reaching, and it has definitely changed the dynamics of the marketing industry.

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Innovations in Accounting: Accounting for the Future

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Abstract: There are powerful emerging technologies that are influencing both businesses and the accounting field. The technologies researched in this paper includes; cloud accounting, cryptocurrencies, blockchain, quantum computing, and machine learning/artificial intelligence. The findings of the research will show that implementation of technology by business will result in cost savings, increased productivity, and an increased ability to expand into new markets. However, as with all technologies, there are risks, and each company must evaluate if the benefits they will receive from implementation of a technology will outweigh the potential costs of any risks involved. The research also shows that the impact of these powerful technologies will make the accountant of tomorrow vastly different than the accountant of today. An accountant must become knowledgeable about emerging technologies and learn to work with them, or they will soon find their jobs eliminated by automation.

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Technology is changing how people do business, this requires the field of accounting to also continue to evolve. There was once a time when no one envisioned the internet, spreadsheets, or automated software. Now newer innovations are impacting the field of accounting. The accounting industry must understand and learn how these new technologies will impact their profession. Evolving with technologies keeps professionals such as accountants fast paced, dynamic, and better prepared to serve their clients. Innovations such as the Cloud, Blockchain, artificial intelligence, machine learning, quantum computing and the use of digital currencies are all going to be impacting the future of the accounting profession and what it will mean to be an accountant in this era.

Cloud Accounting

When accountants look toward the future, they will see the Cloud. No, not the fluffy white puff in the sky, but a new way of accessing accounting software from a web browser without having to install it on a computer. It is also referred to as "online accounting". Sheree Corkern, an accounting professor at Mississippi College University states in her article, published in the *American Journal of Business Education,* that "the cloud has been identified as one of the key technology trends that accountants should stay abreast of over the next decade. Its many advantages include instant accessibility, cost savings, improved productivity, and increased mobility" (2015). Cloud accounting software means that multiple people can access the data directly and simultaneously, allowing real-time updates to all involved parties and eliminating the need for physical meetings to transfer data. Data is synchronized, removing the issue of multiple versions of the same infor-

mation. Cloud accounting allows for businesses to get up-to-the minute financial information that can also be accessed and managed by their accountant.

Business owners are always on the move and increasingly use tablets and smartphones to access their financial data. Cloud accounting allows them to see their account balances, outstanding invoices, cash position and much more from anywhere, at any time, so long as they have an internet connection. Cloud accounting will allow business decision makers to have access to the most recent data, allowing them to make decisions faster, and it will streamline accounting practices.

With cloud technology, accountants can be more efficient. They will waste less time on administrative tasks, such as entering data, and chasing down documents. Instead, accountants can spend more time on advising their clients and revenue generating business practices. Corkern also writes, "all businesses are subject to change. Some grow while others downsize. Scalability enables an organization to obtain large amounts of computing resources for peak performance periods without investing in excess computing capacity" (2015). Due to cloud accounting taking place on the web instead of being installed accountants will not need to worry about updates to their computers to get the latest accounting software, having large accounting files taking up valuable data space, or having to back those files up.

As with any new technology, there are some concerns. Cloud accounting depends on a computer server functioning as its brain; if the server fails, companies will not be able to send or receive information. There is also the question of whether the third-party host managing the software has strong enough cyber security. As with all information on the internet, the possibility of cyber-attacks exists, and data can be com-

promised. According to Corkern, companies will need "their accountants to help them with understanding the advantages and challenges of cloud computing. Accountants must master this new tool to be equipped to provide greater service and add economic value to the organizations that they work with" (2015). The decision on whether to use cloud accounting should not only be based on the losses a company may suffer if the system failed but also on how its reliability, expense, and adaptability to the company's needs would offset those losses.

Cryptocurrency

Cryptocurrencies are another new technology complicating the current accounting practice. Cryptocurrency is a digital asset that is designed to use cryptography, an advanced encryption technique, to conduct and secure transactions. Large servers use computer arrays to solve complicated algorithms to validate and record virtual currency transactions on a public ledger which time-stamps and contains every transaction. Traditional paper currency differs from cryptocurrency because the government controls the supply of paper currency making it centralized, while cryptocurrency is relatively decentralized. Hugh Grove, professor at the Daniels College of Business, School of Accountancy, states, "The decentralization occurs because cryptocurrency is produced by the entire cryptocurrency system collectively, at a rate that is defined when the system is created and is publicly known at creation" (2018). What this means is that cryptocurrency is not backed by any government; it exists only digitally, and it's not subject to inflation because the creators capped the number of cryptocurrency that will ever circulate to a pre-specified amount.

Businesses are finding advantages in using cryptocurrencies, so accountants are sure to see more transactions utilizing this digital currency in the future. Because cryptocurrencies are decentralized, the government and banks can't seize it, a benefit to those that do not trust their current banking system. Cryptocurrencies are digital, so they cannot be counterfeited or reversed arbitrarily by the sender, which reduces the potential for fraud. "Cryptocurrency operates at the universal level making transactions quite easy and saving lots of time as well as money on the part of any business which is otherwise spent in transferring money from one country to the other" (Blocnation, 2018). Cryptocurrency transactions are almost instantaneous as they don't require a third-party entity or bank to run security checks, or to authorize or approve the transaction to use cryptocurrency. With the digital age the consumer market is changing and a business giving its consumers more payment options, including the use of cryptocurrency, makes the business more attractive to current consumers and opens a new market of potential consumers that would be closed to those businesses not offering this feature**.**

Cryptocurrencies growing as both an invest-

ment and as a means of commerce means "CPA tax preparers should recognize that it has tax consequences, and that it is an IRS target" (Adams 2018). How a cryptocurrency is taxed will be dependent on its usage. Cryptocurrency held as a capital asset is treated like property for tax purposes, so it could potentially incur capital gains tax when using cryptocurrencies to buy goods or services. The percentage of taxation will depend on when the cryptocurrency was bought. The *International Tax Review* states in its article "Bitcoin and other Cryptocurrencies":

> In an effort to simplify the tax system, the US is completely overhauling its tax code. One proposal especially stood out because of its impact on the taxation of virtual currencies: The First in, First out mechanism. If a person bought one Bitcoin (a cryptocurrency) at $1000 in 2013 and another at $10000 last month, and then decides to sell one at $15000, that individual must sell the one bought first (the $1000 one) and realize $14000 worth of taxable gains. (2018)

Another tax implication of cryptocurrency would be its usage by an employer to pay an employee. The "fair market value of the virtual currency is considered wages, subject to federal income tax withholding, Federal Insurance Contributions tax, Federal Unemployment Tax Act tax, and reporting on Form W-2, Wage and Tax Statement" (Adams 2018).

There is currently no specific guidance in International Financial Reporting Standards, or generally accepted accounting principles on how to account for cryptocurrencies. Most digital accounting products on the market today, that current accountants will be trained in, are still not ready to account for cryptocurrency. Besides the myriad of possible tax implications and accounting issues that using cryptocurrencies brings, other issues to consider are the ease at which it could be used for money laundering and tax evasion purposes. This is mainly due to the fact that it is not controlled by a centralized entity. While transactions may be transparent, the individuals connected to the transactions cannot be easily identified, which raises concerns for law enforcement and tax authorities. In addition, the decentralization means that there is no arbitrator to appeal to if a person is victimized in a cryptocurrency transaction. As far as its investment potential, the high volatility shown by wild value swings, and its lack of financial statements, or historical dividend payments to analyze, makes cryptocurrencies a risky and questionable venture for investment purposes. If accountants have clients that use cryptocurrencies, the accountants should obtain all their clients' cryptocurrency documentation, including copies of virtual wallets, purchases, and exchanges. In the future, an accountant will be expected to help clients to transition and navigate, moving from physical to digital currency. Accountants will be involved with evaluating and creating

internal controls for cryptocurrency and its cyber security risks.

Blockchain

Cryptocurrency transactions are recorded on an encrypted public ledger called blockchains. "Blockchains are transparent, auditable, cryptographically secure, impossible to alter retroactively, and distributed to every party involved so they always have a complete record of confirmed transactions" (Keystone, 2017). The technology allows straight entry of transactions without the use of an intermediary. Dr. Pascal Bizzaro explains that "servers known as miners verify the transactions and add them to the blocks and the previous blocks before them, thus creating the chain. Companies can then gather these blocks and add them to the blockchain databases through a cryptographic signature" (2018). The cryptology means a person would need to have the company's private key and must change all the blocks to be able to alter any transactions. The validation system prevents tampering of records, and transactions are preserved forever, resulting in an unchangeable permanent recording of transactions. Professor Krishnan Dandapani, of Florida International University, says that "it is an almost incorruptible digital ledger capable of recording practically anything that can be digitized: birth and death certificates, marriage licenses, deeds and titles of ownership, educational degrees, medical records, contracts and votes," making it useful for more than just finance (2017).

Blockchain's security and potential uses are catching the attention of businesses. The functionality of its usage to create smart contracts ensures that parties adhere to an agreement by creating an escrow type system. Blockchain eliminates middlemen; it is a peer-to-peer system. This simple two-party system can facilitate cheap electronic transactions from anywhere in the world without the use of banks or lawyers, allowing business transactions to happen almost instantly, instead of waiting days or weeks for transactions, contracts, and deeds to clear. Regulations and compliance are important concerns for businesses; blockchain extensions have the power to keep transactions secure, as well as to notify businesses of the latest regulations. Supply chain businesses are benefitted by blockchain technology by providing a secure, distributed ledger that tracks information on goods, services, and transactions. With the rise of identity theft and security breaches, blockchain may even be used to create a digital identity to replace usernames, passwords and even someday possibly social security numbers.

As blockchain technology continues to grow, it is important for accountants to be educated on the technology and its impact on their profession. This newly distributed ledger created by blockchain has been termed by some as "triple-entry accounting" because of the cryptography that seals and secures it, creating a third entry. However, this is just an enhancement of the traditional double-entry method. When a seller records a debit to account for cash received, the buyer records a credit for cash spent in the same transaction. Liv Watson, Senior director of strategic customer initiatives at Workiva, ensures that "this feature alone could solve many data integration issues. It could be used not just to prepare accurate financial statements and business analytics in real-time but also enhance productivity through a wide range of applications" (2017).

The same difficulty of changing transaction information that protects blockchain data from manipulation is also one of its problems. If a business was to omit necessary information in a contract or make an error, it is extremely difficult to correct and can end up being very costly to the company. Another potential issue arrives with the coming age of quantum computers and the ease at which they would be able to penetrate current blockchain cryptography, the only possible prevention of which would be to use quantum cryptography. However, quantum cryptography is still in its experimental stage and is not suitable for the internet because it requires a special dedicated network. Due to this issue, current cryptographers are researching using "supersingular isogenies, structured and unstructured lattices, and multivariate polynomials for quantum proof cryptography," but turning that into usable computer code and updating every computer that will require it will be extremely difficult (Prime Factors, 2018). With new types of encryption being required, this means it also changes the way browsers negotiate connections with websites. The extra data involved could make it so that the websites potentially refuse to connect or experience noticeable delays in connecting.

Quantum Computing

Quantum computing uses the capabilities of quantum physics to processes information, potentially working up to 100 million times faster than traditional computers of today. Idalia Friedson, co-founder of the Hudson Quantum Initiative, explains:

> Rather than using a binary system of bits, where each bit is 1 or 0, quantum computers use quantum bits or "qubits" composed of physical particles, often single photons. Because a bit is only ever 1 or 0, a classical computer calculates in linear fashion. In contrast, the quantum physical properties of superposition and entanglement mean a qubit is both 1 and 0 at the same time, which allows for exponentially greater computing power. (2018)

This means quantum computers, unlike traditional computers can attack all problems at the same time, considering all possible solutions to problems at once and discarding the solutions that do not work. These are the problems that are too complex, powerful and time-consuming for traditional computers, which can only

address one task at a time.

Optimization is one of the most important processes in the business world. Being able to conduct more simulations at a faster rate is easy for a quantum computer but not possible on a traditional computer; this is important in optimization problems, where there are multiple probable answers, and the task is to find the right one. "Logistics companies are already exploring route optimization while the defense industry is considering communications applications" (Morgan, 2017). Quantum computing has the potential to help generate attractive portfolios with thousands of assets with interconnecting dependencies, meaning that it can be used to identify a better way to manage risk. Today's fastest supercomputers may take months or even years to run through a series of computations, making it impractical to attempt, while quantum computers have the potential to run massive amounts of calculations all at once in seconds. Many companies regularly run large scale computations for risk management, forecasting, planning, and optimization. Quantum computing could do more than just accelerate these computations. It could enable organizations to change how they operate, by increasing revenue, reducing costs, or lowering investments in infrastructure and being able to address entirely new challenges. Businesses will be using quantum computing for: forecasting, investment management, directing resources, risk mitigation, time allocation, portfolio management, chemistry, designing communication and transportation systems, cryptography, and artificial intelligence. The companies that are not investing in the development of quantum computation may end up falling behind or even being absorbed by other companies since they may be too far behind to catch up in the technology boom.

Quantum computers are faster and more powerful than traditional computers of today; they are capable of quickly processing the technical aspects of accounting. The prospect that quantum computers will solve problems exceedingly faster than classical computers has significant implications in computational finance, including "portfolio analysis, market clique analysis, credit default analysis, and risk management" (Goddard, 2016). Quantum computing could enable faster, more complex simulations, for example, trading, optimization, market instability, and hedging strategies. Financial institutions are investigating the potential use of quantum computing in areas such as portfolio optimization, asset pricing, capital project budgeting, and data security.

Unfortunately, there is a downside to the quantum computing industry. The biggest disadvantage is that it is in its infancy of development, and people are still making parts and projections about what this computer will be. The equipment is too expensive and fragile, as well as lacking standardization, resulting in materials and designs varying wildly. Quantum computers must be cooled to a temperature close to absolute zero, which is a very hard temperature to maintain and control. Quantum processors are also very unstable, making it difficult to test them. Currently, quantum computers can only run limited business applications and specific quantum algorithms. Because of this, quantum computers may always be specialized, instead of being created for a general purpose. Most experts in the field say that quantum computers will integrate and work with, rather than replace, classical computers. It will be a valuable future technology if developers can find ways to stabilize and streamline it for practical usage and quantum computing promises to revolutionize artificial intelligence.

Machine Learning and Artificial Intelligence

Machine learning is the underlying component of artificial intelligence that describes the ability for computers to essentially program themselves by making their own predictions. "Machine learning uses neural networks that are designed to function the same way as a human brain; when algorithms process and analyze enough data, they start to recognize patterns, make connections, and classify it according to the elements it contains" (Botha 2017).

The anticipated benefits of using machine learning platforms for business intelligence include infrastructure cost reductions and operational efficiency. Artificial intelligence and machine learning platforms are getting better at predictive tasks, such as determining what customers might want based on the information the systems are fed. Advancing usages of artificial intelligence will provide opportunities for businesses to develop their customer service, logistics, sales, marketing, and research and development departments. Machine learning does not just make businesses run easier, research has suggested that the tedium of repetitive tasks can lead to a high staff turnover, introducing additional costs, such as recruitment and training. By allocating repetitive tasks to artificial intelligence, businesses can reduce costs. Another issue machine learning addresses is that of small business owners who can find it difficult to keep their books current and to remember where to allocate transactions. Accounting mistakes result in lost time and an inaccurate picture of financial performance. Accounting errors must then later be corrected. Machine learning technology can eliminate errors and save time by automatically suggesting or completing accounting codes.

Accounting software is getting smarter, it is able to automatically perform analysis, which previously required human intervention. Machine learning systems can completely automate tasks, such as a bank reconciliation. Machine learning and artificial intelligence have an increasing role in the accounting profession. Over half of all finance and insurance jobs are at medium to high risk of total automation. However, even if machines can perform all the calculations or initial accounting related tasks, an accountant is still needed to analyze the process and draw meaningful conclusions

from the data. As artificial intelligence takes over some of the more basic tasks of an accountant's role, accounting departments will downsize and eliminate some accountants' positions. The employees that are left will concentrate on job responsibilities that "require performing multifaceted and idiosyncratic calculations. There are relatively complex accounting topics, such as fair value accounting and accounting for derivatives and hedges, as well as predicting the economic effects of outstanding litigation and future warranty expenses" (Grove 2018). Accountants will also need to focus on more strategic initiatives, like process improvement, cost control, and capital optimization. Traditional human accountant skills such as skepticism, judgement, analysis, and understanding technical accounting, will become even more important because those are vital qualities that artificial intelligence is unlikely to ever duplicate. If an artificial intelligence system is well configured, it can eliminate accounting errors that are generally hard to find and thereby reduce liability. Accountants will be more proficient, more productive, and more capable of taking on and handling more clients, while also delivering more value through insight, rather than through long hours of calculating numbers.

The replacement of humans with machines, which can lead to large-scale unemployment is just one of the more serious drawbacks to artificial intelligence. The creation of artificial intelligence, results in very complex machines with very high repair and maintenance costs. Also, because machines can only do the tasks they are programmed to do, they have no emotions and cannot make judgements on what is morally right or wrong. "They cannot even make decisions if they encounter a situation unfamiliar to them, it will cause them to either perform incorrectly or breakdown in such situations" (Reddy, 2018). Human minds have creativity and the power of originality that machines cannot match.

Conclusion

Companies and their accountants must learn, evaluate, and implement emerging technologies for increased benefits for their companies. New technologies --such as cloud accounting, cryptocurrencies, blockchain, quantum computing, and machine learning-- all have the power to increase revenue, speed, output, and customer satisfaction, while cutting costs and time. Technological advances continue to bring specific and significant benefits to accountants, as well as changes that are redefining their work and even their purpose. The accountants of tomorrow will be very different than the ones of today. Instead of data entry and number crunching, they will be helping companies transition to cryptocurrency, teaching machine learning systems how to search for and organize data, and using quantum computers to calculate complex estimates. Accountants will create, implement, and evaluate internal controls of the new technologies and their outputs, ensuring their integrity. People are now inseparable from their smart devices, and new applications can give them instant ac-

cess to their financial information on the go. To stay relevant, and employed, accountants must learn to adopt and adapt to new technologies. Using available technology can put accounting and other financial advice at the heart of all business meetings and decisions, therefore increasing the importance of accounting as a profession. If companies and accountants do not stay abreast and involved with current technology, they will find themselves soon lacking in business, while technology savvy firms take advantage.

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Padding Maryland's Youth Football Policy: Creating the Solution to Long-Term Brain Disease

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Abstract: Nearly four million youth athletes play football in America every year. Recently, evidence has amassed suggesting that a neurodegenerative brain disease called chronic traumatic encephalopathy (CTE) is directly linked to the repetitive concussive and subconcussive injuries that are generated during contact football. This paper investigates the link between CTE and youth football participation, analyzes the policies and laws that govern protection for athletes in Maryland, and questions whether the current legal structure is enough to prevent the development of brain diseases in the nearly thirteen thousand Maryland athletes that engage in youth football. After examining medical research studies, law journals, and other scholarly literature, it was determined that the key to preventing youth head injuries and brain disease in Maryland is through a reform of Maryland's current concussion laws. Additionally, this work expands the medical and political discussion surrounding youth head injuries by offering recommendations and proposing guidelines for the state of Maryland to consider implementing in pursuit of a safer athletic policy. By altering the existing youth football laws in Maryland, youth athletes will be better protected from brain diseases like CTE in the future.

The surface must be clean, free from anything that will contaminate the work area. A small box is brought into the well-lit room and a chilled brain is removed and placed on the metal table. This brain is measured, weighed, and checked for visual impurities. To the surprise of the surgeons, it is perfectly normal and intact. This is quite intriguing to them, considering the thousands of impacts and damages that brain has sustained the past few years during multiple football seasons in Kansas. They then begin using large knives to slice the brain into long, thin pieces; like a loaf of bread being served at a lunchtime deli. The pieces are carefully placed under a microscope and checked again, this time looking far beyond the surface level, deep into the brain. The second examination confirms what these workers had originally thought, "This brain has been destroyed!" they exclaim, "The only thing holding it together is a glue made from clumped proteins." Their conclusion becomes a source of finality for the patient's family. Nathan Stiles died from a brain disease called chronic traumatic encephalopathy, he was seventeen years old (Parks, 2015).

Unfortunately, this story has become a far to common reality for many athletes across the United States. Chronic traumatic encephalopathy, also known as CTE, is a neurodegenerative brain disease resulting from violent and repetitive impacts, crippling football players over time. While football has remained one of America's most popular sports to watch and to play, the discovery of CTE has caused a major shift in the way football is perceived and approached by players and lawmakers alike. Even parents of young players, including those that are athletically talented, have also begun

to reconsider the advantages of the once cherished childhood sport (Zielonka, 2018). Many schools and organizations have adapted to this change, altering game rules, making better equipment, and instituting law policies to combat CTE. However, a growing body of research suggests that treating brain injuries after the fact is not enough to prevent brain diseases like CTE from developing. Instead, medical researchers argue that it is now necessary to create additional legislation that prevents brain injuries at the youth level, along with providing improved, immediate treatment for injured athletes. The state of Maryland is one such example of a governing body that needs to embrace further changes. Having already passed the head injury policy known as the Lystedt Law in 2011, the time has come for Maryland to expand the protections and boundaries that safeguard athletes from CTE by extending the existing legislation in order to create a deeper, broader head injury policy that will prevent youth players from developing this life changing disease later in adulthood ("Maryland Youth Concussion", 2011).

Football is by far the most dangerous sport in America for an athlete. A breeding ground for injuries, it has the highest injury rate of any sport and it is responsible for the highest concussion rates in youth, collegiate, and professional sports (Moran, 2015). Additionally, it has been consistently responsible for the highest injury rate of all high school sports for the past thirteen years (Kawahara, 2018). While many injuries, such as a broken bone or a torn muscle, can be easily fixed through surgery, the most startling injuries come in the form of traumatic brain injuries (TBI). These are very different from regular injuries because TBI's cause permanent damage to the structure of the brain while

simultaneously interrupting its ability to function properly. The most common TBI in football is the concussion. Concussions are categorized as a mild traumatic brain injury that directly change the neurological functioning of the brain ("What Is a Concussion", n.d.). They are usually sustained by shaking, whiplashing, or hitting the head in a way that causes the tissue of the brain to stretch beyond its normal capacity. When the brain is stretched, it forces the tissues of the brain to move and change shape, damaging the structural integrity of the tissue in the process. This form of TBI is particularly recognizable because of the noticeable symptoms that are present. While every case is unique, concussions usually impact physical, emotional, cognitive, and other bodily process, such as sleep. For the athlete, concussion symptoms range from headaches and nausea, memory problems and attention issues, depression and anxiety, and an inability to sleep ("What is a concussion?", n.d.). Considering how the brain literally controls every process in the body, it is logical to have blatant side effects from such a significant injury. Concussions also have the propensity to become specifically lethal when they are sustained in succession, an event is known as "second-impact syndrome" (Miller, 2010). Having two concussions in such a short time-frame can cause the brain to swell within the skull, an event called edema, and will eventually lead to death (Miller, 2010).

While concussions have garnered the most attention surrounding head injuries in football, subconcussive injuries are just as dangerous for the athlete. Subconcussive injuries are microtraumas to the brain tissue that causes damage below the threshold that would normally generate a concussion and destroy brain cells ("Subconcussive Impacts", 2018). Instead, the subconcussive injury causes substantial damage when sustained in high volumes, such as the many impacts encountered during a football game. As the brain is repeatedly traumatized and impacted, the structure of the brain begins to degrade, and its functions start to become inhibited. In theory, this type of damage is similar to the throwing injuries encountered by baseball pitchers. Every time a pitch is thrown during a game, the ligaments and connective tissue of the pitcher's arm are slowly stretched and damaged, eventually causing serious injury if not treated with rest and proper recovery ("Subconcussive Impacts", 2018). So, while one game of high velocity pitching may cause some initial tissue damage, pitching multiple games in a row will present a greater amount of risk. For the football player, sustaining a large amount of hits to the head, even if they do not result in concussions, will result in brain injury over a long-term period of time, just like a baseball pitcher. This sentiment is echoed by professor Lee Goldstein of Boston University who states that "It's hits to the head, not [just] concussion[s], that cause [traumatic brain disease]" (Barlow, n.d.). However, even though the long-term damage caused by subconcussive injuries is considered more harmful than the effects of a single concussion, the most concerning injuries are caused when concussive and subconcussive injuries are sustained

simultaneously. If encountered over a continuous period of time, such a combination will result in brain disease.

Chronic traumatic encephalopathy, commonly known as CTE, has become the most notable and discussed sports-related brain disease associated with playing football. Historically speaking, it was originally identified by pathologist Harrison Martland in the late 1920's and became known as "punch-drunk syndrome," an observation made from noticing the neurological effects that punches had on boxers after their fighting careers (Sigurdsson, 2017). In the 1930's, the disease would become known as dementia pugilistica, a Latin phrase describing the dysfunctional neurological condition experienced by boxers in the later part of their lives (Sigurdsson, 2017).

According to the University of Boston CTE Research Center, CTE is defined as a progressive neurological disease that causes degeneration of brain tissue and a decline in overall brain function. This is because CTE literally causes parts of the brain to rot away over time. The gradual degeneration is the result of an accumulation of a special protein, called tau, that is released after a concussion or subconcussive injury ("The Science of CTE", 2018). Every part of the brain is comprised of cells called neurons that have specific functions and jobs that coincide with the area of the brain in which they are located. The anatomy of the neuron is also similar for all brain cells and each part of the neuron has specific functions (Robb, n.d.). The neuron is comprised of four main parts: the axon terminal, the axon, the soma (body of the cell), and the dendrites. The axon terminal and the dendrites, which look like clustered tree branches, are located on opposite sides of the neuron and allow the cell to communicate information to other cells by releasing and accepting nerve impulses. The soma facilitates the transfer of information and contains all of the materials that comprise a eukaryotic organism, such as a nucleus and other organelles. The last section of the neuron, the axon, is a thin cord of nerves that connects the soma and dendrites to the axon terminal. The axon also transports information and materials throughout the neuron, holding it together in the process. The axon's long cord also has smaller cords that are sealed inside it ("The Science of CTE'', 2018). These smaller cords are covered by the protein tau to provide structure and protect the axon so it can perform its function.

While tau allows the neuron to work properly, it is also the main cause of CTE. As mentioned before, concussions and subconcussive injuries cause the brain to stretch and move within the skull. During such an impact, the axon, the weakest part of the neuron, is the most susceptible to damage and can break apart ("The Science of CTE'', 2018). This breakage causes the tau protein to become dislodged from the axon's cord and start to drift into other parts of the neuron. While afloat, the free tau proteins begin to clump together and expand, polluting the other parts of the brain tissue in the process. Most disturbingly, these free bunches of tau

will continue to spread without encountering other impacts, sometimes remaining dormant for years after the initial impact ("The Science of CTE'', 2018). This effect is known as prion spread, where a protein clumps together and expands into other areas, causing decay and damage in the process ("Prion Diseases", n.d.). As head impacts are repeatedly sustained, and the tau protein is spread, different parts of the brain begin to stop functioning properly due to the pollution. The spreading of tau is so detrimental because it disintegrates the neuron, blocks neural pathways in the brain, and will inhibit the brain's ability to function properly. Proliferation of tau protein leads to memory problems, emotional changes, and physical handicaps, eventually becoming fatal ("Prion Diseases", n.d.).

With the brain's ability to function paralyzed by the proliferation and pollution of the tau protein, many of the body's normal processes become altered or inhibited. As the tau protein clogs and kills the tissue of the brain, the areas of the brain responsible for specific body functions are destroyed in the process. For example, if the tau protein is spread to the frontal lobe, the part of the brain responsible for controlling decision making and reasoning, it begins to kill the cells within the frontal lobe's tissue; that portion of the brain will no longer be able to perform its job because the tissue has wasted away. Or, if the hypothalamus is affected, the part of the brain that controls thirst and hunger, a person will not be able to regulate their body's need for food and water. Because of this, patients with CTE will display a range of physical, emotional, and cognitive symptoms that are caused by the neurodegeneration ("Chronic Traumatic Encephalopathy", n.d.). Common physical symptoms include persistent headaches, distorted vision, and physical disability, like trouble moving or swallowing. The emotional changes include irritability, anger, impulsive actions, depression, suicidal thoughts, and substance abuse. Lastly, the cognitive symptoms demonstrate an inability to think, memory loss, and speech inhibition. There is also a connection that links this damage to other cognitive disorders such as Parkinson's disease, Alzheimer's, and dementia ("Chronic Traumatic Encephalopathy (CTE)", n.d.). These symptoms are just a reflection of the damage and degeneration that has occurred and how the parts of the brain responsible for those processes are no longer in functioning due to the neuropathology.

In football, chronic traumatic encephalopathy has become an epidemic, affecting almost all of those that play on the professional or collegiate level. In a groundbreaking study conducted by Boston University, researchers dissected 202 brains of former football players and analyzed them for signs of CTE. Their study looked at the brains of 111 NFL players, eight Canadian League players, fourteen semi-professional players, fifty-three college players, and fourteen high school players. The results were shocking, finding that over ninety-nine percent of former professional players and ninety-one percent of college players had tested positive for the

CTE. They also discovered that twenty-one percent of high school football players has contracted CTE as well. The study also found that all of the brains that did not have CTE present were already beginning to show signs of neurological diseases, like alzheimer's disease (Moran, 2018). Another study investigating CTE prevalence in football conclude that "96% of deceased former NFL football players showed signs of CTE" and that "79% of all football players tested who played at any level, including some who did not play professionally or collegiately, showed signs of the disease" (Spaude, 2017).

The research conducted by Boston University, and other institutions, also indicates that the concussive and subconcussive injuries encountered at the youth level directly contribute to developing CTE in the future. According to a study conducted by the National Center for Biotechnical Information, there are nearly four million estimated concussions caused by sporting events every year. For high school football players, concussions account for over 60% of all injuries, football itself being the leading cause of high school concussions ("What Is a Concussion?", n.d.). Twenty-percent of high school football players will also experience some form of brain injury during the course of a season; a disturbing fact when considering that the players that sustain one concussion are then three times more likely to sustain another ("What Is a Concussion?", n.d.). Even more concerning, the rates of youth concussions and head injuries are also considered to be largely underestimated, leading experts to believe that children receive brain injuries with a much higher regularity than currently reported (Crisco et. al, 2011). One such NCBI study concluded strongly that, even with a lack of precise concussion data, the large amounts of subconcussive injuries sustained during play will lead to neurological problems and disease over time, and that limiting youth exposure to these injuries is essential for their long-term protection (Crisco et. al, 2011).

Research also indicates that tackling is particularly dangerous for young players. The vast majority of concussions and subconcussive injuries are caused by tackling, hitting into another player, or making direct contact with the head ("Tackling in Youth Football", 2015). This is understandable when considering the physics behind a head injury. Despite being smaller in stature, younger athletes can still generate enough force to cause acceleration and deceleration in the brain after a collision (McKee et. al, 2009). For example, if a youth player is tackled from the front, their brain will accelerate forward and begin to stretch. Once the brain has moved to the front of the skull, it will then be pulled backwards as it readjusts in the skull. In this way, a direct hit to the head, or a tackle to the ground, creates rapid acceleration, then sudden deceleration; initiating enough force to cause the brain tissue to stretch and, subsequently, create an injury. Another study found that tackling was a leading cause of CTE and other neurological problems, showing that for every year of tackle

football played under the age of twelve, CTE symptoms appeared two and a half times earlier (McCarthy, 2018). Tackling at the youth level can also be just as dangerous as it is in higher levels of play. One research study by Virginia Tech focused on seven and eight year-old youth athletes and found that these athletes sustained over one-hundred head injuries while playing, some with impact forces just as strong those seen in college play (Robbins, 2012). The University of Purdue also looked at the danger of youth tackle football, concluding that young athletes can sustain anywhere from 226 to 1,855 head impacts per season (Robbins, 2012). Their study concluded that the weak, under-developed muscles of the athletes, coupled with their incomplete brain development, were both major factors in the incurrence of injury and long-term neurological consequences.

The development of the brain is also a critical factor to consider for youth athletes. Young athlete's brains are not fully developed at the time of contact play. A study from Boston University states that children under the age of twelve are up to twenty-percent more likely to have cognitive impairments as adults after playing football because of the damage sustained during their youth participation. The study suggests that this is because of how vulnerable the brain is to injury at a young age. "Around age 12, blood flow to the brain increases, and brain structures such as the hippocampus, which is critical for memory, reach their highest volume," continuing to say that "If you take just the hippocampus, that's a really important part of your brain. It may be that if you hit your head a lot during this important period, you might have significant memory problems later on." (Moran, 2015). For the nearly five million youth football players that participate each year on average, 70% of which are under fourteen, playing football presents a serious risk to their long-term health (Moran, 2015). Sustaining such violent injuries at the youth level creates a snowball effect where brain disease will develop more rapidly because of the regular exposure to head impacts over time.

Fortunately, this correlation between head injuries in football and brain disease has not been ignored, rather, it has motivated football leagues, sports associations, and governmental bodies to institute changes, including the state of Maryland. Currently, youth football in Maryland is governed by the policies set forth by the Lystedt Law. This law sets the mandatory procedures that control the management of head injuries and the educational awareness of football related head injuries. The Lystedt Law, originating in Washington state, was proposed in 2009 in response to the severe brain injury, and permanent disability, sustained by a thirteen year-old football player named Zackery Lystedt (Bompadre et. al, 2014). The law has three main stipulations: parents and players must be educated about the risks of concussions, any athlete that is suspected of sustaining a concussion must be removed from play immediately, and that once an athlete is removed from play, they must be cleared to return by a health-care provider be-

fore resuming participation (Bompadre et. al, 2014). It was on this basis that Maryland adopted the Lystedt Law, along with its three original stipulations, in 2011 ("Maryland Youth Concussion", 2011).

The institution of the law lead to some important findings regarding youth head injuries and their prevalence. One NCBI study, investigating the concussion diagnosis of over four thousand high school football players, found that only 66% of athletes realized that they had sustained a concussion during play and that only 43% of players reported it to their coaches or trainers (Bompadre et. al, 2014). The researchers also found that the implementation of the Lystedt Law lead to an increase in concussion diagnosis in youth players. Their study concluded the following:

> Before passage of the Lystedt law, rates of documented concussions were 11.5% (48 of 419) of total injuries (2008–2009). After the Lystedt law went into effect, rates of concussion increased to 19.7% (114 of 579) and 21.0% (111 of 529) in subsequent years. Gessel et al reported a concussion rate of 8.9% in high school athletes during the years 2005–2006, and Marar et al observed a concussion rate of 13.2% from data collected in 2008–2010 (Bompadre et. al, 2014).

Additionally, these data findings have encouraged the narrative that youth football does contribute to the development of brain disease through the large accumulation of concussive and subconcussive injuries and that the genuine need for the Lystedt Law, and its safeguards, were strongly substantiated. As it stands now, all fifty states, including Maryland, have accepted some form of the Lystedt Law as a means of protecting their athletes during play. However, while the legislation put forth by the Lystedt Law makes an honorable attempt to address the risks associated with football at the youth level, it does not produce a tangible solution that dictates and oversees injury prevention and long-term injury management for youth athletes. Specifically, it does not require Maryland to mandate strict regulations on how injury prevention is handled, who it is handled by, and it does not propose a set of guidelines—such as a concussion protocol—for teams to implement so they can effectively protect their players.

In order to create a deeper, broader policy that can prevent future CTE in youth players, the state of Maryland must expand the guidelines of the Lystedt Law by implementing a series of changes that add context and structure to the existing legislation. This new law will have to function as a set of living guidelines that instruct football institutions while providing best practices. A possible template may have been provided by the University of Marquette's Law School. In a 2017 review of a case surrounding one Mr. Daniel Bukal and the state of Illinois, Mr. Bukal claimed that he suffered from the long-term effects of football related brain dam-

age and that Illinois was responsible for damages because of a lack of mandated protocols (Spaude, 2017). In his accusation, Mr. Bukal suggested several potential implementations that would correct the lack of specific guidelines. He argued for "concussion protocols for youth athletes at both practices and games," "preseason baseline testing," "a program for concussion tracking and reporting," a mandate for medical professionals to be present during games and practices, and for an education and training program to be created for athletic trainers (Spaude, 2017). These demands offered by the law review provides a solid template for Maryland use when addressing the youth concussion imperative.

For Maryland, the implementation of similar guidelines and practices will be necessary in order to create a long-term solution to youth brain disease. Firstly, Maryland should incorporate a more effective concussion awareness initiative into their Lystedt Law. Since the medical community has established the connection between football, long-term brain disease, and youth head injuries, it is important to market football as a sport that directly causes brain disease. The current law is quite ambiguous when describing the dangers of playing youth football; having a stronger stance, one that blatantly states the known risks, will influence the choice to participate more than it does now. This addition should follow the same structure as the The Family Smoking Prevention and Tobacco Control Act that was passed by the Obama administration. This act placed limitations on how tobacco companies advertised smoking and tobacco products, provided stronger, more poignant warning labels, and prevented companies from selling "reduced risk" products to consumers ("Compliance, Enforcement & Training", n.d.). Just as hospital admissions rates and statistics for certain diseases decreased with the implementation of this act, so will the percentage of athletes that ignorantly participate in contact football without understanding the long-term risks ("Smoking & Tobacco Use," 2016). Another alteration should include the addition of baseline testing prior to the beginning and at the end of each season. The Center for Disease Control describes baseline testing as "a pre-season exam conducted by a trained health care professional [that] assess[es] an athlete's balance and brain function." Additionally, a medical professional will test for concussion symptoms or signs that the athlete is not functioning at an effective cognitive or physical level ("FAQs about Baseline Testing," 2015). Having each athlete undergo baseline testing will allow a medical team to determine whether an athlete is fit to play and will also create a reference point for the medical team to use if an injury is suspected. This test will provide a literal baseline of health for every athlete before and after a season of football.

While adding additional educational warnings and pre-season medical tactics are both important parts of this proposed update, serious steps must be taken regarding injury protocol management as well. One of the most glaring shortcomings of the Lystedt Law is that it lacks a standardized protocol for teams to follow. A concussion protocol can be defined as a "set of policies, tools, and assessments for caring for a concussion" ("Concussion Protocol 101 Guide," n.d.). A protocol should deploy a team of at least three professionals that work together in unison to provide optimal care and supervision for the athlete; the three being an injury manager, an athletic trainer, and a rehabilitation professional, such as a therapist ("Concussion Protocol 101 Guide," n.d.). The manager, a medical professional trained in neurological injuries, will monitor players for signs of concussions and symptoms of injury, diagnose injuries, and will be in charge of the healthcare team, the athletic trainer will conduct evaluations on players suspected of injuries, and the therapist will administer long and short-term treatment to injured athletes ("Concussion Protocol 101 Guide," n.d.). Additionally, the law must incorporate a set of rigid guidelines to govern the actions of this medical team. An effective template should include a basic concussion definition along with essential head injury information, baseline testing procedures, standards by which athletes are removed from play, head injury assessment standards, professional evaluation guides, average timelines for safe return, and an academic reintegration timeline ("Concussion Protocol 101 Guide," n.d.). The need for this group of medical professionals, and a protocol to guide them, cannot be understated because they are directly responsible for detecting injuries and conducting treatment for athletes during games and practices. Since the Lystedt Law does not require such a healthcare team, or a standard set of regulations, a "padded" version of the law needs to make their medical presence and a protocol mandatory.

Most importantly, an updated version of the Lystedt Law must address the dangers of subconcussive injuries, and their damaging long-term effects, by implementing an age requirement for tackle football. Currently, the Lystedt Law does not have a tackling restriction, nor does any state that has passed a variation of it. As discussed previously, the most detrimental form of brain injury to sustain in high volume is the subconcussive injury. While a competent medical staff, an effective head injury protocol, pre-season tests, and strong warning labels all contribute to identifying and managing concussions, none of these changes propose an actionable solution to the long-term threat of subconcussive injuries or the overall prevention of concussions for a youth player. With this in mind, it is necessary to withhold tackling until a later age. After analyzing the body of literature presented by medical researchers, it appears that the most acceptable age for contact play is fifteen as it is past the point of critical development. As mentioned before, the brain undergoes serious developmental growth and change during the period of childhood and adolescence, causing consistent head injuries to create extremely impactful damage. By limiting tackling to over fifteen, Maryland's youth athletes would be able to avoid the primary source of all concussive and subconcussive injuries—impacts sus-

tained from tackling. This change would allow the athlete more time for uninterrupted brain development, it would allow for most of the danger surrounding youth football to be circumnavigated, and it would let the athlete make a far more conscious, informed decision as to whether they would want to pursue an athletic career in football and accept its potential consequences at a later age.

Finally, setting the tackling age limit at fifteen would also allow for an updated Lystedt Law to be considered more seriously and potentially passed without unnecessary legal hardship. Other states, namely California, have struggled to pass legislation banning tackling for youth players as many parents have protested such changes despite evidence of long-term damage (Kawahara, 2018). It is completely unrealistic to ban tackling limits until an age of consent, which ideally would be eighteen. Major sports associations, such as the NFL, NCAA, and many high school football associations, would strongly protest to the limitations placed on their future prospects. Such an implementation would also affect chances at collegiate scholarships and would impact funding for school programs—so much of which is derived from athletics, specifically football. Another argument can be made that withholding the age of tackling play for too long will create a situation where players are put at risk for head injuries due to their inexperience—an assertion that would have to be seriously considered. However, Maryland has already adopted legislation banning heading in soccer games for players under eleven years old (Barker et. al, 2018). Having existing legislation such as this may open a forum to discuss why the state would protect athletes from the long-term dangers of one sport while simultaneously neglecting the players of another.

Football is both America's game and one of the most influential sports in the world. However, the state of head injuries, and their long-term effects, in American football presents an epidemic that demands an impactful solution. As the medical community continues to affirm the position that youth football in particular is detrimental to long-term health and brain function, it is now necessary for governing bodies to implement enduring change. The institution of advertising restrictions and mandatory baseline testing, along with the creation of a head injury protocol and a tackling restriction for young players, are all vital changes that must be generated by an update to the current Maryland legislature. By padding the Lystedt Law through the proposed changes suggested in this work, Maryland will be able to safeguard vulnerable youth athletes, impact the long-term health and safety of football players, and will be able to create a long-term solution to athletic brain disease.

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What Wins Votes for American Presidents

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Abstract: According to Kiley (2017) the divide between American political parties and their values are as polarized as they have ever been. Political polarization can be harmful to a democratic republic since it results in hostility between representatives which impedes the ability of that government to solve pressing issues. In response to this information, the current study attempts to answer why the political divide is as polarized as it is today by uncover the factors that influence voters' support of a political candidate. To this end, students (novice voters) and faculty (seasoned voters) are surveyed to identify what influences their favorability when voting for a political candidate. Questions include items that may impact voter support such as: fitness of character, the status of the economy, health care policies, and foreign relations. Respondents will identify which issues determine their voter preference, candidate favorability, and other factors related to public approval. Prior research in this area has mostly focused on what effect the economy and foreign relations have on politicians' approval ratings. This research seeks to accomplish two goals: 1) to shed light on factors that influence voter preference and 2) to differentiate the influences of novice and seasoned voters that determine their decision on election day. The results of the study can be used as a tool for political candidates who are attempting to appeal to both the newer generations of voters and to established voters who may consider voting outside of their identified political party.

According to Kiley (2017), the divide between American political parties and their values are as polarized as they have ever been. Political polarization can be harmful to a democratic republic since it results in hostility between representatives which impedes the ability of that government to solve pressing issues. Sinozich (2017) inferred that this polarization has led to greater distrust of political institutions among American constituents. This is a serious issue because less trust and respect for political institutions may contribute to less compliance with laws which may endanger not only safety, but a unified national culture (Tyler, 2006). These consequences make it critical for researchers to identify why exactly America is becoming more politically polarized so it can counteract its negative effects. Additionally, it is important to explore why voters are drawn to these polarized candidates so that campaign managers can identify and replicate the qualities that elicit votes.

The current study explores the salient qualities voters look for when selecting a presidential candidate. Prior research indicates several factors that influence voting preferences for presidential candidates, such as: social, economic, media, familial, peer, civic, retrospective, perceptional, and policy influences (Braha and de Aguiar, 2017; Cohen, 2018a; Ellis and Faricy 2011; Kalogeropoulos, Albæk, de Vreese, & van Dalen, 2017; Taniguchi, 2016). Therefore, the literature review is broken into four subgroups: 1) The Economy 2) Perceived Success and Legitimacy 3) Issue-Specific Appeal and 4) External Influences.

The Economy

The economy seems to have a very strong appeal to American constituents. Kalogeropoulos et al. (2017) found that whenever the economy was doing well, citizens believed their government was performing well. Bytzek (2011) writes that the most significant factor Americans take into account when evaluating their nation's financial state is the unemployment rate. Moreover, the evaluation of the American economy has a negative correlation with the unemployment rate; Americans believe their finances are worse whenever the unemployment rate rises.

Although the economic state of the nation was found to influence voters, constituents also seem to be swayed by the media's portrayal of the country's financial circumstances rather than the condition of the economy itself. Kalogeropoulos et al. (2017) found that how the media reported the economy seemed to influence individuals' evaluation of their nation's fiscal power, regardless of how the economy was actually doing. While occasional media coverage depicting the economy doing poorly was not enough to lower constituents' evaluation of their nation, heavy media coverage depicting negative economic trends for a prolonged period of time had the ability to lower the public's perception of their own economy.

The strongest indicator of an incumbent's success can be predicted with economic retrospective voting. Economic retrospective voting is voting based on the current party in power if the economy has been strong under the current leader or voting against that leader's party if the economy is not as productive as voters would like it to be (Taniguchi, 2016). An exam-

ple of retrospective voting is Ronald Reagan winning his 1984 presidential reelection by an almost unanimous vote of the electoral college after he improved the U.S. economy in his first term.

Perceived Success and Legitimacy

Previously researched tendencies for democratic constituent voting reveal evidence on how candidates' perceived qualifications, genuineness, and power affect the support they receive from voters (Cohen 2018a). The perceived success and legitimacy of presidential hopefuls include these attributes and others that result in voters' confidence or lack of confidence in political candidates. For example, Cohen demonstrates that a significant number of voters believe intelligence is an absolutely necessary qualification for an American president. This study illustrated a statistically significant correlation between perceived candidate intelligence and winning the popular vote in American presidential elections. Voters form opinions on how intelligent presidential candidates are by evaluating their speech skills since candidate IQ scores are not readily available.

Along with candidate qualifications, another noteworthy factor for constituents is how genuine candidates appear and if they seem trustworthy or deceiving. Research shows that a major variable influencing trustworthiness of candidates is public support (Rodriguez, Schuitema, Claudy, and Sancho, 2018). One way in which public support can be gained or lost is by candidates evoking certain emotions from their constituents. Rodriguez, et al. (2018) observed the effects of emotions on public approval by observing the Irish population's reaction to the implementation of a water tax and politicians' explanation of the tax to their constituents. The authors found that negative emotions, specifically anger, lead to less trust for political candidates, while positive emotions, such as feelings of reliability, help build trust among constituents, but not as much as negative emotions diminish this trust.

Another factor to consider is that even though candidates may receive support and may appeal to the population, it does not necessarily mean they receive votes from those individuals. It is important to note that voter turnout can make or break a campaign. For example, if Hillary Clinton received as many votes as were predicted in the 2016 presidential election polls, she may have won the election. Research on what influences voter turnout finds many contributing variables including confidence in and perceived legitimacy of the government, geographical location, and social influences (Braha, 2017; Cohen, 2018b; File, 2013; Sinozich, 2017). For example, Cichocka and colleagues (2018) show that voter turnout for presidential elections is highest when there is a moderate level of confidence in the government among the population. Conversely, either high or low confidence levels result in lower voter turnout. Distrust in the government reduces attendance at the polls because constituents feel their vote will have no influence. Fewer votes are cast when confidence is high due to the belief that the right candidate is

sure to win regardless of an individual's vote. It may be possible that voter confidence in the government had some bearing on the 2016 American presidential election and resulted in less of a turnout by democratic supporters since the election polls strongly favored Hillary Clinton over her Republican contender, Donald Trump.

Another factor that seems to be directly correlated to voter turnout and support is the population's impression of the government's influence and power. A study to examine the public's perception of state governors' power (Cohen, 2018b)discovered that governors were more influential for their state when their political party had strong representation in Washington. If the president belongs to the same political party as a governor, that governor is generally seen as more influential. These implications may also be applicable for presidential elections since the president's perceived influence may be dependent on the party majorities of the House of Representatives and the Senate. The governor's impact on specific partisan issues was found to also play a role on their constituents' level of support. This is examined more thoroughly in the following section.

Issue-Specific Appeal

One research study found that a candidate's position and their specific political issues and policies approach (i.e., resource allocation, healthcare, immigration, and pensions) influence the support they receive from their constituents (Ellis and Faricy 2011). The study concluded that indirect spending on social programs makes public opinion lean slightly more liberal while direct spending on these programs pushes the public to be slightly more conservative. This means that conservatives gave a higher approval rating to politicians when they explicitly allocated funds for a specific issue. When politicians did not do this, liberals gave them a higher approval rating than conservatives. Similarly, Wan, Shen, and Choi (2017) also highlight the importance of procedural and distributive fairness. They define procedural fairness as whether the ends (a policy's purpose) is justified by its means (how it is pursued). These researchers define distributive fairness as whether specific groups proportionally benefit and sacrifice, such as through tax increases, for a given policy. They conclude that procedural and distributive fairness are the biggest indicators of public support for how a situation is being handled.

Additional research has found that immigration is a salient topic that determines voter trends. Specifically, Muste (2013) analyzed polls to gauge the American public's opinion regarding immigration in the United States. This review led the author to infer that American public opinion remains unfavorable regarding the idea of increasing current immigration levels. Muste (2013) also concluded that Americans regard immigrants as more beneficial and functional in society now than they did in the early 2000s. In other words, most Americans believe that undocumented immigrants are not necessarily criminals and that they do not harm the employment level of American workers. According to

Muste (2013), Americans do not want to let any more immigrants into the nation illegally but would be content with allowing the current undocumented immigrants to remain in the country. However, it is important to note that the public's feelings toward immigration policy may have changed since President Trump's 2016 presidential election, which pushed immigration to the forefront and incited contentious debates between parties.

Prior research also illustrates that policies related to pensions may influence how constituents vote. For example, Goerres (2008) analyzed older and younger voters in Britain and West Germany in 2018 to see who was more likely to vote for candidates based on their pension policies. The study concluded that older voters tend to give more support for candidates who advocate for better pensions for retirees. Furthermore, older voters also gave more attention to pension policies because they are relevant to their lifestyles.

External Influences

Most of the available research on variables that influence voter preference are focused on external influences that sway voters to either see candidates as more or less favorable. Specifically, past studies have found outside influences such as social, geographical, neighboring states, and the media play critical roles in deciding how many votes American presidential candidates receive (Braha and de Aguiar, 2017; File, 2013; Ha et al., 2018; Kalogeropoulos et al., 2017). For example, Braha and de Aguiar (2017) found that external pressures, such as peer pressure, was found to have a significant influence on voting tendencies. These researchers reviewed the votes for every county in the United States for presidential elections from 1920-2012. Multiple models were studied to account for social influences within counties, topography, and other factors that may lead to the persuasion of nonpartisan voters to vote for a particular candidate. The main conclusions of this study are that social influences play a role in presidential elections, especially regarding voter turnout and support for particular candidates.

Pacheco and Maltby (2017) explored whether the passage of Affordable Healthcare Act (ACA) legislation in one state affects public opinion in neighboring states. The authors found that a state's ACA decisions that are highly visible, are more likely to be referenced by constituents of neighboring states when compared to less visible ACA policy decisions. Furthermore, states will pass ACA decisions inspired by states with more noticeable legislation in place over states with a less visible ACA policy in effect.

Another area explored by researchers was the effect of geographical location on voting tendencies. For example, Pacheco and Maltby (2017) found that populations tend to vote for a politician if they see similar candidates in neighboring states have success, and do not support them if they resemble less-successful near-by. File (2013) also examined how geographical location may influence voters and found that states with less

clustered populations tended to have a higher voter turnout rate. File (2013) investigated fluctuations in young voter turnout using a non-experimental method of research by examining data from current population survey voting and registration supplements. The findings show a correlation between more eligible voters with a larger voter turnout of all age groups. The author also reported that younger women vote more than younger men, but that older men tend to vote more than older women.

According to Bytzek (2011) the media is arguably the most influential factor of the myriad of outside factors that can influence voting trends. His study used a time-series analysis utilizing different events in Germany as independent variables. The dependent variables were the government's popularity as well as the prime minister's popularity throughout the incidents being analyzed. The study found that current events influence the voters' opinions of a government more than other, more long-term factors. Moreover, an event's influence only affects the public's perception of a government as long as the event receives attention by the media. This study also found that scandals negatively affecting the public's opinion of a politician's party provide a benefit to the opposing parties. Uncontroversial events were found to affect public opinion on government, too, but depended on the media portrayal of these events (i.e., negative or positive). Another significant finding was that the economy alone was shown to be the biggest influencing variable on the prime minister's approval rating.

Although the economic status of a nation appears to be objective, how the population perceives their country's economic status depends in part on the media. Kalogeropoulos and colleagues (2017) investigated how the media and the economic status of a nation influences citizens' evaluations of their own government. This study used a two-wave panel design that asked over 1,000 Danish participants for their overall opinion of the economy, the frequency they consume media, and issue-specific appraisals, including an economic evaluation. There were two main takeaways: 1) the economic evaluation of a nation has strong predictive qualities on holistic government evaluation and 2) the economic news the population is exposed to primes their economic evaluations. Because of these results, this study includes questions asking respondents about the media they consume and whether they believe it affects their voting tendencies.

Given the fact that the media plays a role in influencing individuals' evaluation of the government, it is also important to discover which individuals are getting exposed to certain types of influencing media outlets and why. Ha, Ji, and Shin (2018) attempted to gain insight regarding if and how individuals selectively expose themselves to media based on their political beliefs and the implications of selective exposure to media is present. This study used a secondary data analysis of polls from the Pew Research Center's 2010 Media Consumption Survey. They found that conservative-

individuals consume more media that reinforce their beliefs whereas liberals have a more politically balanced consumption of media. They also found that individuals who consume more conservative news had a lower approval rating of President Obama, whereas individuals who view more liberal media outlets had a higher approval rating of President Obama. These results address that the media are indeed one of the factors that has caused the polarization of American political parties.

In sum, after examining what influences voting preferences, there appear to be several variables that may influence the support presidential candidates receive from constituents, such as: economic factors, perceived success and legitimacy of the government, specific-issue approaches, and external influences. The above review did not find a singular in-depth study that explored how all of the factors discussed above influenced voting preferences. Thus, this study attempts to fill the void in the literature and cumulatively explore the most influential voting factors. Based on existing research, the current study predicts that economic conditions and concerns will have the most significant influence on constituents.

Methods

The purpose of this study is to explore why certain candidates receive votes in presidential elections. Specifically, it looks to answer whether certain factors are weighed more heavily than others when constituents cast their vote and, specifically, if veteran voters have a different criterion for voting than novice voters. To answer this question, a convenience sample of students and faculty from a small, private Northeastern college (N=90) was given a SurveyMonkey questionnaire asking them about their voting history (i.e., registered to vote; identified with a specific political party and, if so, which party; how many elections they voted in), engagement in civic activities (i.e., participation in political activities, causes, and programs), criteria used to vote for candidates, and basic demographic information.

The voting criteria focused on variables that indicate how a participant may vote. These items were ranked and included factors related to the economy, perceived success and legitimacy of the current party, external influences, and issue-specific appeal such as immigration, health care policies, resource allocation, and pension policies. The economy is hypothesized to be the most influential variable for voting based on previously researched factors (Bytzek, 2011; Taniguchi, 2016). Perceived success and legitimacy were broken up into questions about fitness of character, a candidate's resume for political office, and retrospective voting or the current success/failure of a given party in power (Cohen, 2018b; Rodriguez, 2018; Taniguchi, 2016). Issue-specific appeal was divided into law and order, foreign relations, and health care policies (Ellis & Faricy, 2011; Goerres, 2008; Muste, 2013; Wan et al., 2017). Finally, participants were asked to rank external influences including familial, media, and peer influences (Braha & de Aguiar, 2017; Bytzek, 2011; File,

2013; Ha et al., 2018; Kalogeropoulos, 2017; Pacheco, 2017).

Participants

Since there were two subtypes of participants, faculty and students, the descriptive statistics display each subtype individually and are accounted for through the demographics of each respectively. The first subgroup, faculty, included 63.6% female and 36.4% male participants. An overwhelming majority of faculty participants, 84.1%, were married, 9.1% were single and never married, 4.5% were divorced, and 2.3% was widowed. The minimum age of faculty was 29, the maximum 73, and the mean was 52.81. Additionally, 97.6% were over the age of 30. A majority of faculty, 75%, reported working full time and 25% worked part time. Faculty reported that they mostly gathered their news on current events from television (68%). Approximately one quarter of faculty, 24%, answered that their primary source for news on current events was radio and only 8% admitted that their primary source on current events was social media.

The second subgroup, students, included 65.2% female and 34.8% male participants. Almost all, 93.5%, reported single and never married and 6.5% reported married or in a domestic partnership. The minimum age was 18, the maximum 48, and the average was 21.97. In addition, 91.2% of students were under the age of 24. The students responded very differently than the faculty regarding employment status with 13% answering that they worked full time, 60.9% part time, 15.2% were unemployed, and 10.9% participated in a work study program. Students indicated that they primarily receive their news on current events from social media, 65.6%, and a little more than one-third of student (34.4%) reported television. No students admitted to using radio as their primary source of current events. See Table 1 on page 37 for descriptive statistics by participant type.

Results

The current study examines if there are any correlations between a voter's age and the criteria they use to support political candidates. For this reason, it is important to acknowledge the answers supplied by faculty versus students. Table 2 illustrates voting history responses by each participant type.

Student Participants

An overwhelming majority (87%) of students reported they were registered to vote, whereas 13% reported they were not registered to vote. Almost half (48.8%) of students reported that they affiliate with the Democratic party, 36.6% with the Republican party, and 14.6% reported other. Of the students who reported other, two claimed to be a part of the Independent Party and one identified to be in the Conservative political party. The other three respondents did not disclose what party they identified with on the survey.

Most of the students, 60.9%, voted in the 2016 American presidential election, while 39.1% of participants did not. Additional analyses examined the reasons why some students did not to vote in the last presidential election. Specifically, 26.4% reported that they were not registered to vote in 2016. Of the students that did not vote, 66.7% of them reported they were under the age of 18 and therefore not eligible to vote at that time. Furthermore, another student reported that they did not believe their vote would contribute any value and three student participants did not vote because they did not want to endorse any of the candidates.

Faculty Participants

Almost all (97.7%) faculty reported they were registered to vote. A little more than half (52.6%) reported that they affiliate with the Democratic party, 28.9% with the Republican party, and 18.4% reported other. Some notable omissions are the type of political parties with which faculty affiliated other than Democratic and Republican parties. Of the seven faculty members who claimed to be affiliated with a political party other than the Democratic or Republican parties, five claimed to be in the Independent Party, one identified to be affiliated with the Green Party, and one identified to be affiliated with the Democratic Socialists of America Party.

Most faculty, 95.5%, voted in the 2016 American Presidential Election. Regarding the two faculty member participants who did not vote, one claimed to not have been able to make it to the polls before they closed, and the other did not believe their vote would have influenced the election because of the electoral college. Additional descriptive statistics regarding split-ticket voting and participation in prior elections for faculty and students is displayed in Table 2.

Civic Engagement

The civic engagement questions asked participants whether they have volunteered or participated in community service, worn a campaign button, sticker or displayed a lawn sign, donated money to a political candidate/party, expressed their opinion to a public official, expressed their opinion to a newspaper/magazine, called into a radio/television show to express opinion, participated in a protest, march or other demonstration, signed a petition about a specific issue, abstained from buying an item for political reasons, have bought something for political reasons, and if they have gone door to door for a political group/candidate. Figure 1 displays that the participants were most likely to volunteer for community service (87.3%), sign petitions (62.7%), and abstain from purchasing certain products for political reasons (62.7%). Figure 1 also shows that hardly any participants, 3.6% and 9.1%, respectively, called into television or radio shows to voice their political opinions or canvassed for a political candidate.

Voting Criteria

Additional analyses explored the type of voting criteria that are held as more influential than others. To evaluate which factors were held to be more important, the median rankings of prioritization were used (see Table 3). The participants as a whole weighed the state of the economy, a candidate's fitness of character, and a candidate's health care policies as the most influential factors to their voting decision. Each of these had a median priority level of three out of ten with one being the most important and ten being the least important.

The final section of the results examined the correlation between factors that influence voting preferences and age of respondents. The Spearman rank correlation coefficient was used to examine this relationship, which is the nonparametric version of the Pearson correlation coefficient. Spearman's correlation ranges from -1 to 1, where +1 represents a perfect positive correlation and -1 represents a perfect negative correlation between. Furthermore, zero represents no correlation.

Of all ten factors, only two variables displayed a statistically significant correlation (resume and peer influences). Figure 2 illustrates a statistically significant, negative correlation between a candidate's resume for public office and respondent's age ($\rho = -.34$, p = .001). Thus, as age increases voters are more likely to rank a candidate's resume for public office as more important. Figure 3 illustrates a statistically significant, positive correlation between peer influence and respondent's age ($\rho = .22$, p = .001). Peer voting trends are more likely to influence younger preferences compared to older voters.

Discussion

This study sought to accomplish two goals: 1) to shed light on factors that influence voter preference and 2) to differentiate the influences of novice and seasoned voters that determine their decision on election day. Based on the results there were three main conclusions: 1) the economy, a candidate's health care policies, and a candidate's fitness of character were the top three predictors for voting preferences and were equally important; 2) seasoned voters weigh a candidate's resume for public office significantly more than novice voters; and 3) younger voters are influenced by their peers significantly more than older voters.

The research used to compile the literature review led to the prediction that the economy would be the biggest influence for voters. This prediction was somewhat supported as the economy was tied with health care policies and fitness of character. The economy is likely to be ranked important because Americans believe that economic health reflects the nation's well-being as a whole (Kalogeropoulos, 2017). It is also noteworthy to state that retrospective voting is a popular type of voting and practically only accounts for the economy (Taniguchi, 2016).

It is likely that health care policies were ranked high by participants because the issue is becoming more

polarized in today's society. Democrats are looking to expand the Affordable Care Act into a concept called "Medicare for All," a policy currently being advocated by Vermont Senator, Bernie Sanders (Luhby, 2019). Conversely, President Trump and the Republican party are looking to have the Affordable Care Act ruled as unconstitutional and privatize all healthcare in America again. According to a Kaiser Family Foundation poll, Americans simply want cheaper, more affordable healthcare and prescriptions (Luhby, 2019). The drastic differences between the Democratic and Republican approaches on this issue and what these policies entail is likely why healthcare is such an influential variable for voters.

A candidate's fitness of character may be one of the most important variables when voting for presidential candidates, since the president is seen as the person who epitomizes America. Since the president is so influential, this person should embody the public's idea of good and virtue (Magness, 2016). For this reason, it is plausible that a blemish in a candidate's fitness of character could be catastrophic to their campaign.

One reason seasoned voters emphasize a candidate's resume for public office is likely due to generational differences regarding proof of skills. Vozza (2018) states that older generations look for skills that can be transferable from previous jobs and other experiences whereas younger individuals are more interested on an individual's ability to perform, a quality that is not necessarily dependent on prior experience. This may explain why older voters take into account a candidate's resume for office more than younger voters.

Finally, the reason younger voters are influenced by their peers more than older constituents may be due to generational differences in the use of media, specifically social media. The current study found that social media accounts for 65.6% of student participants primary source of news, whereas it only accounts for 8% of faculty participants primary news. Social media displays what an individual's friends and interest-groups believe and naturally leads individuals to be exposed to their peers' political beliefs and arguments (Kahne & Bowyer, 2018; Wojcieszak & Mutz, 2009). Therefore, since seasoned voters do not use social media as much as novice voters as a primary news source, they may be less likely to be affected by their peers.

Limitations

The limitations of this study include question ambiguity, convenience sample, and nonexhaustive list of voting criteria. First, it is likely that some participants did not fully understand the questions on the survey. For example, there may have been confusion when asked about party affiliation. Seven individuals answered they were a member of the Independent Party and one described membership in the Conservative Party. This is erroneous for there is no such political party called "the Conservative Party" and it's possible that participants listed they were affiliated with "the Independent Party" but really meant they were an independent voter (i.e., someone not affiliated with any party). It is unlikely that the participants were actually part of the Independent Party, for this party has a very small presence in America (Myers, 2016).

The population used in this study was a homogenous, convenience sample of student and faculty from a small, private Northeastern college. This type of population is problematic to the external validity of these results for they are mostly from the same geographical area. Additionally, using this convenience sample only accounts for the voting criteria of college students and professors, not blue-collar workers. Finally, although various voting criteria were included in the survey, some common political influences were omitted, most notably environmental stances.

Future Research

Two important, unforeseen themes were revealed from this research. First, older voters put a significantly greater value on a candidate's resume for public office than younger voters. Second, younger voters were influenced more by their peers compared to older
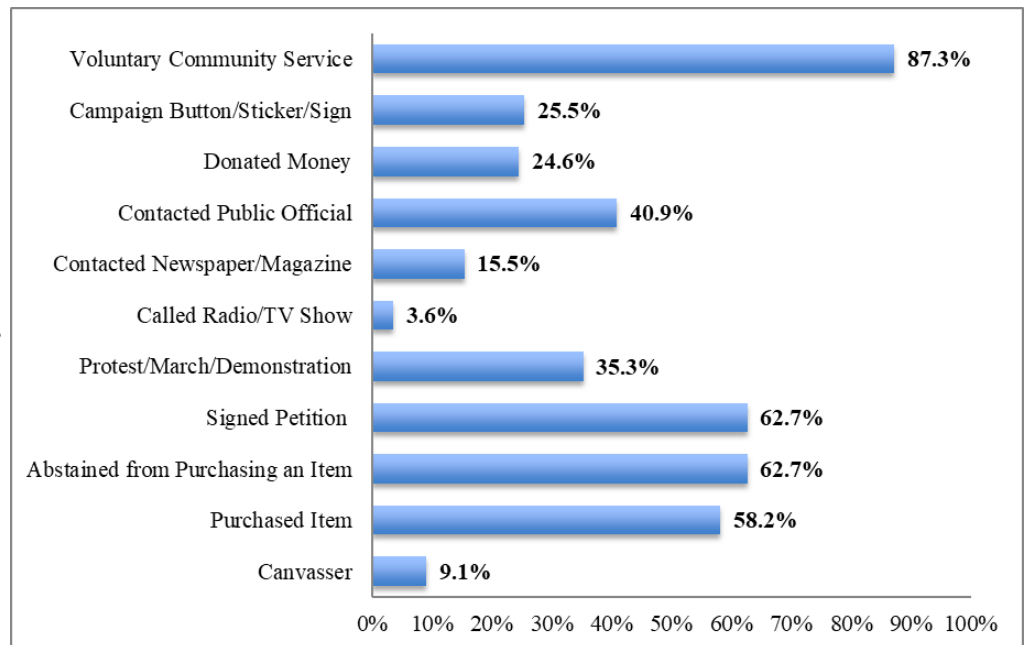

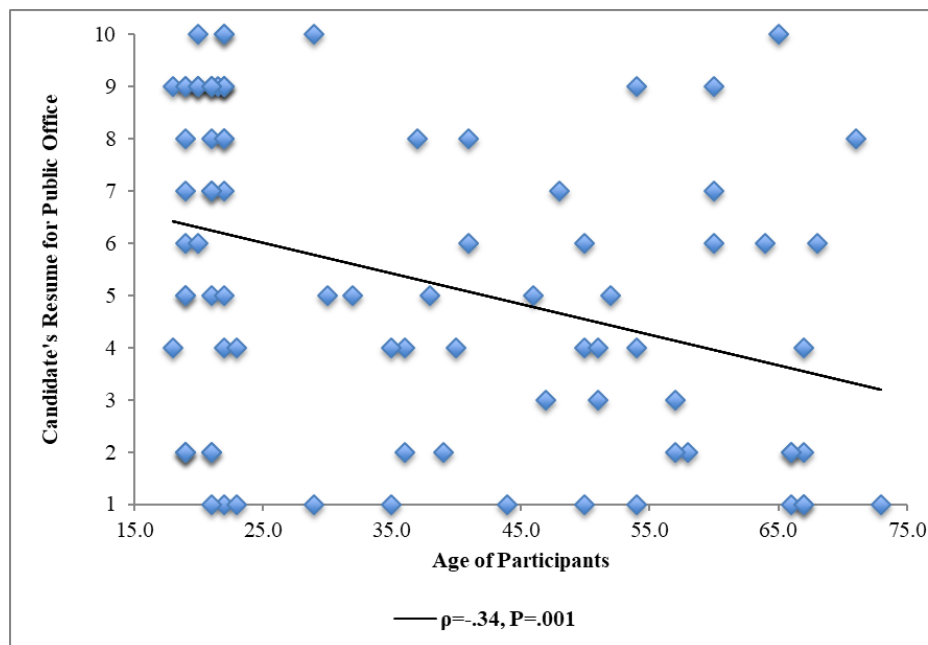Figure 1. Degree of Participant Civic Engagement

Figure 2. Candidate's Resume for Public Office Voting Criteria

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voters. Future research should focus on which factors younger voters are using to evaluate a candidate's ability to succeed in office, since younger voters do not see resumes as important as their older counterparts (Vozza, 2018). Furthermore, it should be investigated whether the reason younger voters are politically influenced more by their peers is because of social media or another, unforeseen reason. Considering the projected age shift for the 2020 electorate, it is key to understand these two themes about younger voters from the results of this study for the next American presidential election. Specifically, Generation Z, which is individuals born after the year 1996, is projected to make up 10% of the electorate and Millennials, which are individuals born from 1981-1996, are projected to make up 27% of the electorate (Cilluffo & Fry, 2019).

Conclusion

With younger voters projected to make up one third of the electorate in the 2020 American presidential election it is imperative for candidates and their campaign staff to understand where to focus their efforts to reach these constituents. For this reason, it is likely that the next presidential election will have the biggest social media presence of any American election to date. Only by receiving the support of these younger generations will the 2020 candidates be able to unify the currently polarized nation and restore the

Figure 3. Peer Influence on Voting Criteria

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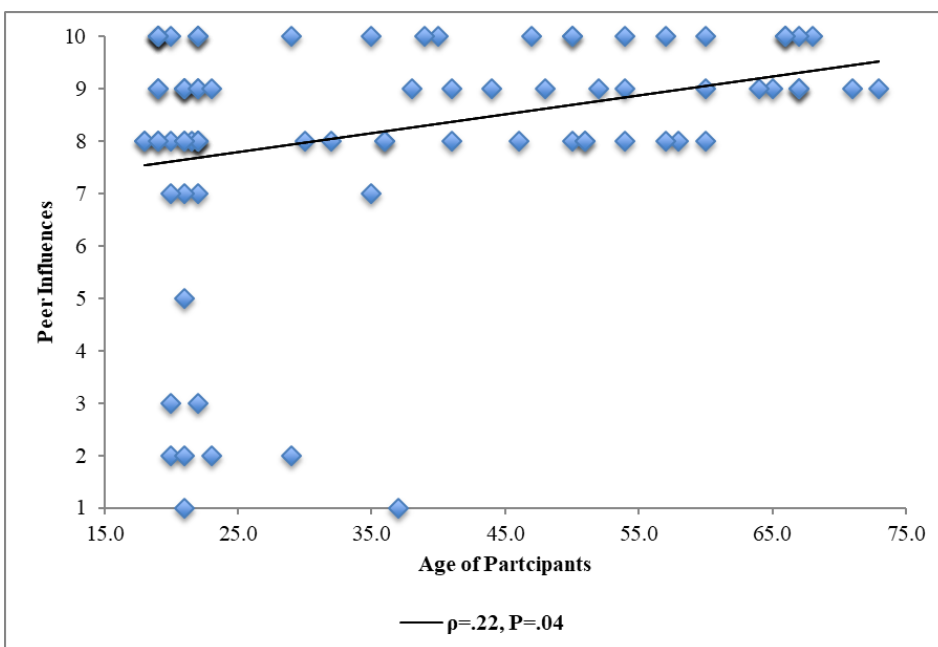
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Table 1: Descriptive Statistics by Participant Type

Variable	Faculty (N=44)		Student (N=46)	
	Frequency	Percentage	Frequency	Percent-age
Race/Ethnicity				
African-American	0	0%	4	8.7%
Asian	3	6.8	3	6.5%
Caucasian	36	81.8%	22	47.8%
Hispanic	1	2.3%	15	32.6%
Mediterranean	1	2.3%	0	0%
Prefer not to answer	3	6.8%	2	4.3%
Employment Status				
Full Time	33	75%	6	13%
Part Time	11	25%	28	60.9%
Unemployed	0	0%	7	15.2%
Work Study	0	0%	5	10.9%
Marital Status				
Divorced	2	4.5%	0	0%
Married/Domestic Partnership	37	84.1%	3	6.5%
Single (never married)	4	9.1%	43	93.5%
Widowed	1	2.3%	0	0%
Primary News Source				
Radio	6	24%	0	0%
Social Media	2	8%	21	65.6%
Television	17	68%	11	34.4%
Age	**Mean**		**Minimum**	**Maximum**
Faculty	52.81		29	73
Students	21.97		18	48

Table 3. Median Scores for Factors Influencing Voting Preferences

Factors Influencing Voting Preferences	All Participants	Faculty	Students
Fitness of Character	3.0	3.0	3.0
State of Economy	3.0	3.5	3.5
Health Care Policies	3.0	3.0	3.0
Foreign Relations	4.0	4.0	4.0
Law and Order	4.5	5.0	4.0
Family Influences	8.0	8.0	8.0
Media Influences	7.0	8.0	7.0
Peer Influences	9.0	9.0	8.0
Candidate's Resume	5.5	4.0	7.0
Success/Failure of Current Party	7.0	7.0	7.5

Table 2: Faculty and Student Participation in Voting

Variable	Faculty (N=44)		Student (N=46)	
	Frequency	Percentage	Frequency	Percentage
Registered to Vote				
Yes	43	97.7%	40	87%
No	1	2.3%	6	13%
Political Party				
Yes	35	79.5%	35	76.1%
No	9	20.5%	11	23.9%
Specific Political Party				
Democratic	20	52.6%	20	48.8%
Republican	11	28.9%	15	36.6%
Other	7	18.4%	6	14.6%
Voted Outside Political Party - Presidential Election				
Yes	27	61.4%	6	13%
No	14	31.8%	28	60.9%
N/A	3	6.8%	12	26.1%
Voted Outside Political Party - Non-Presidential Election				
Yes	34	77.3%	16	34.8%
No	7	15.9%	20	43.5%
N/A	3	6.8%	10	21.7%
Voted: Presidential Elections				
1	2	4.5%	18	39.1%
2	1	2.3%	9	19.6%
3	4	9.1%	4	8.7%
4+	36	81.8%	5	10.9%
None	1	2.3%	15	32.6%
Voted: Non-Presidential Elections				
1	0	0%	9	19.6%
2	5	11.4%	11	23.9%
3	1	2.3%	4	8.7%
4+	35	79.5%	5	10.9%
None	3	6.8%	17	37%
Voted: 2016 Presidential Election				
Yes	42	95.5%	28	60.9%
No	2	4.5%	18	39.1%

Cleaning Job

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Artist Statement: I began writing this piece as a dialogue between the two main characters, known as the driver and the passenger. As it began to take shape, I revised it to include the other elements of short fiction. From that point, I used what I considered to be the strengths of the piece, namely the dialogue and humor through non-sequiturs, to guide the conclusion of the story. I owe the existence of this story to my sister, who encouraged me to continue working on it and then to submit it to my fiction writing workshop when I was in doubt over whether it had the potential to become a viable story. I am very grateful for her encouragement.

"So then I had to kill her," said the driver.

"I see," replied the passenger.

They were in a white car, rushing down Main Street. They passed a Walgreens on the left, and then a Burger King on the right. Several department stores went by without notice. The car shook as the driver accelerated. It had a faded *Obama/Biden 2008* sticker on the back, with a nearly whitewashed *Bush/Cheney 2004* sticker beside it. The paint was peeling in several spots, revealing the swollen, rusted body of the car. The back passenger side door was missing a chunk of metal toward the bottom, leaving orangish-brown chips of rust.

The driver was a tall, slim man. He wore a brown three-piece suit along with a pair of white New Balance tennis shoes. The passenger was a short man with ample degrees of both body muscle and body fat. He wore a wrinkled white Oxford shirt. It was only buttoned halfway up, revealing a Metallica shirt underneath. He had on a pair of cargo shorts, also wrinkled, that looked about two sizes too small.

"Now I have this body in my apartment just sitting there," said the driver.

"She was sitting when you killed her?"

"No, man. She was standing. I meant that the body is just there now."

"So she was standing. And then she fell?"

"Well, yeah."

"Was it more of a crumble or more of a smash?"

"It would've been a crumble, but then the coffee table got in the way and it was a smash. Blood all over the goddamned newspaper circulars too."

"Oh, Lord!"

"Yeah man."

They passed a McDonald's on the right. The sign that usually announced deals on food read NOW HIRING ALL SHIFTS. The passenger noticed that a man was digging in one of the dumpsters behind the restaurant. He almost mentioned it, but decided not to.

"So, What circulars were they?" the passenger asked.

"I don't know. Walmart, JCPenney, Sears…"

"Wait—there's still Sears around?"

"In some cities I think."

"Any around here?"

"Nearest one in Pittsburgh I think."

"Ahh, shit. We don't have time to make it there and back before the body starts to smell."

"Hold up." The driver allowed the car to slow, as though for effect. They were approaching a red light. "Are you really suggesting shopping when I have a dead body in my house?"

"I just thought there might be some deals. I mean, they've gotta attract customers if they want to stay open at all."

"Fuck me."

"Hey man. I'm just saying. Don't you think you might need some new rugs after this?"

"I'll deal with that later. Right now we just need to do this cleaning job."

"Lunch first though."

"I told you, lunch after. Whatever you want. After." The light turned green, and the driver applied his foot to the gas.

"Lunch first or no help."

"Fine. Your fat ass hasn't changed since penitentiary; I'm not going to bet on you changing now. What you want?"

"Chili."

"Chili? Really? Chili?"

"Yeah man. I want some chili. Wendy's chili. This whole thing got me real hungry."

"Fine. But it's drive through and then eat it in the car. Reach into the glove compartment, I think I have some Wendy's coupons in there."

"Let me see. Here they are. Oh shit! What's all over these?"

"Call it barbecue."

"I don't even think there's a Wendy's coupon in here. Are you sure this ain't that lady's blood?"

"I'm sure." The driver grunted. "Look harder."

"Men's Wearhouse, Pizza Hut, Sephora...really?"

"I see it. Give me those." He turned into the Wendy's.

The driver made the order and got the passenger his meal of chili. He pulled the car back out onto Main Street as the driver slurped up his lunch. He continued another two miles down the road until he reached his apartment building. It was the kind of building where the individual apartments opened up to the outside rather than an interior hallway. His apartment was on the third floor, west side. The structure was made of cinder blocks, trimmed in red. It reminded the passenger of their days together in penitentiary.

The driver's apartment was carpeted in maroon shag. The walls were brown, with orange baseboards and crown molding. The front door opened to the living room, which evolved into a kitchenette toward the back. On the left were two doors. One opened to a bedroom, the other to a bathroom. The living room was furnished with brown leather furniture. It was worn, but not tattered. The coffee table was in the center of the room, with two large bookcases to its right. Between the bookcases and the coffee table, there was a body.

It was a woman's body. She had probably been in her late twenties. The flesh was white, like a child's teeth after his annual dental cleaning. The eyes were ajar. The neck was sliced open from side to side. Surrounding the body, the maroon carpet was a slightly different shade and was crusty, as though someone had spilled red baking soda all over it.

Upon entering the apartment, the passenger had resumed eating his chili. Not noticing where he was walking, he tripped on the body and dumped the chili all over it.

"Oh, sweet shit!" said the passenger.

"Are you fucking with me right now?" asked the driver.

"No. Why?"

"Because you just spilled a whole container of chili all over the body!"

"Hey! It was a third of the way gone. And this is a whole human body. What's a bigger mess: one whole body, or two thirds a cup of chili? Now, say I had come here, into your home, right. And say I'd had a whole, unopened, uneaten chili. And say I spill it all over this nice body you got here. Then I'd say, 'Go ahead! Be mad!' But I didn't. It's only two thirds, man."

"You know what? What makes a bigger mess: to add one body to zero bodies and get one body or to add one body to one body and get two bodies?"

"Come on man. What are you talking about?"

"What I'm talking about is this: either we start cleaning, or this ends as a double murder suicide."

They began to clean. The driver moved the coffee table into the kitchen, and situated the furniture so that he could unfold a large, blue tarp. He had gotten it at the pool and hot tub supply store before he'd picked up his helper. Then, they carried the body onto the tarp. As they set it down, the body let out a gasp of noxious gas that smelled like an infected wound.

"The body smells worse than the chili," said the driver.

"Thanks, man," said the passenger. As they continued the cleanup, he began to laugh.

"What's so funny?"

"Have you ever heard of the story called 'A Shocking Accident'?"

"I'm not really interested in hearing the story of how you were conceived. Not again."

"No, it's not that. Come on, man. It's a short story about this guy and this pig…"

"Sounds a lot like the story of your conception."

"You take that back."

"You're right. I'm sorry. So there's a guy and a pig?"

"Well, the story starts out before that. This boy, right, he's in this like boarding school or something. And the headmaster calls him into the office. And the headmaster says that there's been an accident, a shocking accident. It turns out the boy's daddy died. Sad story."

"And the pig?"

"Oh, that's the crazy shit. So, the daddy died because a pig fell on him."

"A pig fell on him?"

"Yeah. Right outta the sky."

"How, dare I ask, does that happen?"

"It says in the story. I don't remember. Anyway, the pig fell somehow and killed the guy. And when the son finds out, the first thing he asks is what happened to the pig."

"What did happen to the pig?"

"They never say. I guess it must've died, too."

"Sad state of affairs."

"Yeah. So then years later, the boy's all grown up, right. And he's looking for some pussy."

"Does this end up being about bestiality?"

"No. Shut up and let me tell the story. So he's with this woman, and he finally tells her the story of how his daddy died. And what is her response?"

"She asks what happened to the pig?"

"Exactly. And after that shit, he knows this girl is the one."

"Great for him. One question."

"What?"

"What does this have to do with anything?"

"I never said it had to do with anything. I just thought it was a nice story to get us through this mess."

"You know what? I thought it sucked."

They finished wrapping the body in the blue tarp and sealed it by wrapping it with white duct tape.

"Great, the goddamned thing looks like a mummy now," said the passenger.

"Well, that's good news because we're donating it to Museum of Natural History," said the driver.

"No shit! That's awesome. But wouldn't it be easier just to take it down to the dumpster?"

"You idiot. It's not going to the history museum. And we can't take it to the dumpster. Do you know the likelihood of the body getting found if we put it the dumpster? Nine out of ten. Cops would be up here with-

in the day."

The passenger laughed. "Who the fuck is finding all these bodies in dumpsters then? It's gotta either be people with garbage fetishes or people diving for food. If you got the fetish, I think finding a body would just be a kink. And if you're at the place in life that you're diving for food, why not just hold the body as ransom. The fella who dumped it'd be liable to show up and pay whatever you want to save himself from jail time."

"How do you propose someone would do that? Take out an ad in the classifieds?"

"Nah, nobody reads the paper anymore. Except you, I guess, because you like the circulars. The best bet would be local TV advertising."

"God, help me," said the driver. "You know, it's no wonder you got caught stealing so many times that they threw you in penitentiary with me."

"You know as well as I do that was all the public defender's fault. That would've been a damn fine car to own if I'd gotten away with it. A lot better than that piece you drive around. And you're not one to talk, Mr. Murder in the Second Degree."

"I got out, didn't I? Good behavior," the driver said. He began to sop up the blood and chili that remained with a washcloth and cold water that he had laced with some dish soap. He mixed the concoction in the bucket that usually held the plunger. "It'd be nice if you'd lend a hand."

The passenger ignored him and hoisted his body onto the kitchen counter, which squeaked in complaint. There was a half-filled glass of something in the sink. He sniffed it. It smelled like whiskey. He sipped it and found that it was a cheap brand, but continued to sip anyway. "So, then, what do you propose to do to get rid of the body?"

"It's not difficult. Anytime something like this happens to me, there's only one guy to call."

"Lester," said the Passenger.

"Hey, an intelligent response for once. Exactly right. I already put the call in. We wait until ten-thirty or so this evening. This building is mostly elderlies, but I want to make absolutely sure they're all in for the night before we haul out."

"Wanna hit that sweet spot between them hitting the hay and them taking their first pee."

"Somehow, I think there's wisdom to that. Lester himself will be there by quarter of eleven. All we have to do is drive in, put the body and five grand in cash in front of the outhouses, and drive away."

As the driver said this, the passenger snorted a sip of whiskey up his nose. "Oh hot handed Christ!" he yelled. He blew his nose into the sleeve of his oxford shirt and took a deep breath. "Where the fuck does a garbage man get five thousand dollars?"

"Hey, it pays to read the circulars. Lots of good deals and coupons in there. And by the way, five thousand is a deal because I'm an employee. Most of the time this service is ten grand, fifteen or even twenty for really hot cases."

"Is this case hot?" asked the passenger.

"Cold as that body there on the floor." The driver got up off the floor and dumped the bloody water down the sink. The fragrance of lemon soap with notes of feces, chili, and decaying flesh wafted up as the water swirl down the drain.

"Man, seeing the body all wrapped up like that really makes me hungry for an enchilada," said the passenger. "Got any coupons for that?"

The driver was scrubbing his hands, and glanced toward the passenger. "I'll have to see. Fast food coupons would be in the glovebox. You're a sick motherfucker."

"Can I be honest with you?" asked the passenger.

"I'd prefer you be dishonest, but if you must be honest, be so."

"Why did you kill her? I mean, it's not so bad a thing, what you told me."

"I have my reasons and my ways." The driver shook his hands, sprinkling the kitchen floor with water.

"Hey, I'm not questioning. You know what they say, don't bite the hand that feeds you chili and enchiladas. I'm just saying, it was a mistake that could've happened to anyone. You're streaming some pornography, some wholesome guy-on-girl, and---oh shit!---you accidentally hit the "Link to TV" button. The porn blasts onto your neighbor lady's TV as she's watching her shows. Bye-bye, Andy Griffith. Hello, pizza delivery guy. Sorry, I don't have the cash. Can I pay another way? So the neighbor isn't happy. She comes to complain. But why kill her?"

The passenger had his mouth open to continue on, but the driver interrupted him. "What the fuck are you talking about? I never said I was watching that. I said I was watching a show. I was watching a show on my phone, and I accidentally streamed it to her TV, so I had to kill her. I can't have people being nosy about what I'm watching."

"You know what?" asked the passenger.

"What?" said the driver.

"If I could go back in time, I would've referenced *Everybody Loves Raymond* rather than *Andy Griffith* a few seconds ago. I still feel wrong about mentioning Andy Griffith's name in this venue."

"What in God's name is the matter with you? Just watch TV or something until we get this body out of here."

"Fine. And look at it this way: you lucked out and streamed your program to the television of the only other young person in this facility."

"I'm pretty sure she was the only one who had a TV new enough that you could stream to it. It's a little strange she even came over. Why not just turn it off on her TV?"

"Maybe she liked you," the passenger said. He sat on the couch and turned on the television. "Hopefully no one will accidentally stream something to this television while I'm watching my shows." He kept flipping the channels. "Wouldn't want *Dr. Phil* to

get interrupted by someone streaming *Desperate House-wives* two doors over."

The driver pounded across the room and grabbed the passenger by the shoulders. "How the fuck did you know that's what I was watching when I streamed over to the neighbor's place?"

"You watch *Desperate Housewives*! Oh sweet shit!" He was laughing. The passenger got up and pushed the driver's hands off him.

The driver grabbed the passenger by the neck and tackled him back to the couch. He wrenched harder, and the passenger's face went to the color of chili, then purple. The driver clutched onto the neck like a driver would the steering wheel of a speeding car. He let go when he knew the passenger was dead.

"Oh sweet shit is right. Two bodies now. One dead body and one dead body taken together is worse than one dead body taken alone." The driver was now talking to himself, like he usually did.

The man picked up his cell phone. When he unlocked it, *Desperate Housewives* began to play. He swiped the app closed because he didn't want to see any spoilers by accident. He opened the phone app and hit the number for Mom.

The phone rang three times. "Hello," said Mom, in a raspy voice that seemed to be seeking for air.

"Hi Mom, it's me. I've had a bit of a problem. Can you come?"

"Why should I?"

"I don't know what to say, umm, I guess you could call it a shocking accident. There's been a shocking accident."

"Get that fucker you were in jail with to help you."

"Yeah. I don't think he's available today. We could get lunch."

"Chili does sound good."

The man tried hard not to vomit. "Sure. We could get chili."

"I'll be on my way after I finish my program."

"What're you watching?"

"Oh, you wouldn't know of it. *Desperate Housewives,* it's called. Not a program for men."

The Evolution of Dystopian Literature

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Abstract: This paper served as my Honors Senior Thesis, which I composed my final year of undergrad, and was reviewed and approved by two literature professors before being completed. It compares two works of dystopian fiction, George Orwell's 1984, and Phillip K. Dick's The Man in the High Castle, both of which were written in response to current events unfolding at the time. They portray worlds, both past and future, that comment on contemporary problems and make the reader question our current society. Furthermore, my thesis discusses how these novels prove to be dystopian, and why this genre is still important for the literary world today. These novels hold incredible power, and continue to influence and affect people living in a world 60-70 years after they were written. My thesis explains the events proceeding 1984 and The Man in the High Castle, shows how these works of literature remain relevant, and also compares them to modern adaptations of dystopian literature. Overall, the dystopian narrative is an important aspect of our literary world, and can give us insight into our real political and social concerns.

Dystopian literature has sparked an interest, particularly in teens and adolescents, over the past couple of decades. This phenomenon has occurred many times in history, typically during a period of change or controversy in the country's political climate. Two of the most renowned works to fall into this genre are George Orwell's *1984* and Philip K. Dick's *The Man in the High Castle*. Both novels feature middle aged protagonists who essentially have no control over their lives and the world they live in. In recent years, a new genre commonly called "Young Adult" (YA) dystopian fiction has also become increasingly popular, representing worlds that parallel our own in a safe and fictional way. Works such as *The Hunger Games* (Collins 2008) and *Divergent* (Roth 2011) depict disturbingly corrupt societies in which young protagonists are somehow, by means of extraordinary talent and dumb luck, able to save the world. This type of story tends to give young readers hope and confidence, and many become "adventure franchises" which are later adapted into movies and tv shows. Overall, dystopian literature has certainly changed dramatically in recent years, but overall interest in these stories and how they represent our society, seems everlasting.

1984: A Haunting Representation of our Modern World

It is speculated that George Orwell's influence for writing *1984* was as a response to the buildup of atomic weapons after World War II. The creation of the atomic bomb brought warfare to a whole new level, and one that it could not come back from. Orwell's portrayal of Oceania in the novel, is that of a state that is mostly destroyed by nuclear war, and that lives in constant fear of being attacked by its enemies while possessing a per-

manent threat to those that oppose it. Orwell "gives an impressive picture of how a society must develop which is constantly preparing for war, constantly afraid of being attacked, and preparing to find the means of complete annihilation of its opponents" (Fromm 262). This feeling is repeatedly found throughout history, first during WWII, then the Cold War, and even now in our own post 9/11 society. Oceania leaves a lasting impression on readers because it contradicts the idea that "we can save freedom and democracy by continuing an arms race and finding a 'stable' deterrent" (Fromm 262), which was a popular idea in the mid-20th century. Many people believed that no country with nuclear weapons would ever attack the US out of fear of retaliation, but *1984* shows something quite different. Oceania, Eurasia and Eastasia do not withhold their weapons out of fear of repercussions, but rather constantly bomb one another, until whoever is left standing becomes the ultimate victor.

However, Orwell does not just warn against modern war tactics but also the invention of other technologies like telescreens and listening devices. Winston and his fellow *comrades* live in a world where they are under constant video and audio surveillance throughout most of their lives, a phenomenon that was not yet possible at the time Orwell was writing but that is frighteningly real today. Orwell "was imaging the possible consequences of political totalitarianism in his own time and taking especially into account how modern technologies would make such totalitarianism more possible than ever before" (Jackson 376). Therefore, Orwell recognized the limits of totalitarian governments during his own time period but forewarned that with the rise of technology, governments would be able to supervise and control both the actions and the *thoughts* of its citizens like never before. In many ways, *1984* is more representative of the world in which we live in today than it

was of post WWII Britain, due to the significant increase in modern technology.

A serious invasion of privacy in our own country became increasingly apparent to the public in 2013 when Edward Snowden's "exposure of the mass spying conducted by the United States National Security Agency" (Giroux 22), caused a frenzy among the American public. This sparked a ton of controversy and citizens compared the spying to that of Orwell's "Big Brother." Ironically enough, the government's reasoning for the operation was to protect against terrorists, like the ones who caused the 9/11 attacks. It seems as if the more protections we try to put in place, the more our country itself begins to look like a dystopia. Executives from both political parties such as Obama and Trump have suggested Snowden should be brought home and face criminal charges; however, many Americans consider him a hero. Congress responded to the incident by passing the "USA Freedom Act, improving transparency about government surveillance and limited government power to collect certain records" (Roth & Shetty). Despite Snowden bringing forth an important political and social issue and the resulting adjustment in the law, politicians still have tried to paint him as the "bad guy." He is comparable to the *1984*-character Goldstein, whose existence is never proven in the novel, but whom acts as the Party's scapegoat. Snowden may have breached confidentiality, but his actions appear to have been more beneficial to society than harmful.

Furthermore, critics have claimed that the current administration is partially, if not mostly, responsible for the public's sparked interest in dystopian novels as well as depicts frightening parallels to the governments described in these books. Similar to the world of "Big Brother," Trump's administration turned American politics into a "spectacle of fear, divisions and disinformation" (Giroux 21). The government has become a parallel to the government of Oceania, which is full of contradictions. Winston's world is divided into four ministries, "the Ministry of Truth, which concerned itself with news…The Ministry of Peace, which concerned itself with war; the Ministry of Love, which maintained law and order, and the Ministry of Plenty" (Orwell 8). It's obvious early on in the novel that each of these ministries are hypocritical to their titles, and that they all play a role in maintaining the "fear, divisions and disinformation" of Oceania.

The most famous and utterly shocking parallel between the current administration and Oceania is Kellyanne Conway's mention of "alternative facts" during a press conference in 2017. The media exploded after this conference, describing the term as a "move reminiscent of the linguistic inventions of Orwell's Ministry of Truth" (Giroux 23). Not to mention, many speculators have claimed that "alternative facts" is simply an "updated term from what Orwell called 'doublethink'" (Giroux 23). *Doublethink* is defined as "to hold simultaneously two opinions which cancelled out, knowing them to be contradictory and believing in both of them" (Orwell 32). In the novel, *Doublethink* is used as a tool for people to prevent themselves from being guilty of *thoughtcrime*. This could range from simply not believing in what the Party says to actually plotting against the Party. *Doublethink* is a way for the citizens of Oceania to protect themselves from the Party when they know what they are being told is untrue. People have argued that Conway's use of the term "alternative facts" was the executive branch's attempt to legitimize the practice of *doublethink* and get away with false claims. Overall, this ordeal made the public frantic, and people began to worry over whether or not they could believe what the government tells them.

A prime example of *doublethink* in the novel is when Winston is told that Oceania is at war with Eurasia, and that they always have been at war with Eurasia. However, Winston distinctly remembers "it was only four years prior since Oceania had been at war with Eastasia and in alliance with Eurasia" (Orwell 31-32). Like Winston, those who know that Oceania was once at war with Eastasia never admit it, and simply accept that Oceania is at war with Eurasia because to do otherwise would be to go against the Party. As Winston's character goes to show, *doublethink* proves to be a difficult task when one possesses a strong conscience and the need for the truth. It is unfortunate that Orwell's "Ministry of Truth" is where Winston holds his job falsifying records. Although he does not agree with the actions of the Party, he even admits "if all records hold the same tale- then the lie passes into history and [becomes] truth" (Orwell 32). Winston's personal struggle throughout the novel is to convince himself not to commit *thoughtcrime*, but in the end, his conscience refuses to let him overlook the injustices that the Party is guilty of.

Moreover, Orwell's world also emphasizes the importance of language, and how it can be used to make or break society. Language takes on a very peculiar form in *1984* with the development and perfection of *Newspeak*. *Newspeak* is one of the Party's several tactics to keep the public of Oceania oppressed by "steadily reducing the number and kind of words in the dictionary and, of course, enforcing the diction as the source of speech" (Jackson 380). In the novel, *Newspeak* is still being perfected, and Winston's comrade Syme, is currently working on the most updated edition, with its end goal being the simplest form of speech possible. Syme tells Winston as they wait for their food, "You think, I dare to say, that our chief job is inventing new words. But not a bit of it! We're destroying words-scores of them, hundreds of them every day. We're cutting the language down to the bone." (Orwell 45). Therefore, even Syme admits that it is *Newspeak's* main objective to reduce the number of words used in Oceania's vocabulary, but he seems too fascinated with the task to register the imminent danger that comes with destroying words. Syme admits to Winston that "the whole aim of Newspeak is to narrow the range of thought" (Orwell 46), and by doing so the Party will be able to achieve further control over its people. *Thoughtcrime* will be "literally impossible, because there will be no words in which to express it" (Orwell 46). Therefore, the goal of *Newspeak* is to create a language that

would make it impossible to commit treason against the Party. Ironically enough, Winston during this conversation thinks, "Syme will be vaporized. He is too intelligent" (Orwell 47), a prediction that will eventually come true. Therefore, Orwell warns how language, and its complexity, are important to keep a society going. Language allows people to express their thoughts and ideas freely, and the more restricted a language becomes the easier it is for a government to control its people.

The simplicity and reduction of language is another way in which skeptics compare the Party to the current administration, with Trump's avid use of platforms such as Twitter and his supposed "affection" for the uneducated. Trump has created his own way of delegitimizing language and speech with the #fakenews movement. The current Commander in Chief has used his Twitter account, a platform that is specifically designed to get one's point across in very few words, to take "ownership of the notion of 'fake news' [by] inverting its original usage as a critique of his perpetual lying and redeploying it as a pejorative label aimed at journalists who criticized his policies" (Giroux 26). Therefore, by delegitimizing the speech and language of those who oppose him, he essentially controls what the country can claim as "real journalism" and what is deemed as "#fakenews." This control is frightening to the public, as what is true and untrue has become indistinguishable. On top of all of this our society has in general begun to use fewer words. With almost the entire millennial generation on social media platforms such as Facebook, Instagram, Snapchat and Twitter, our minds have been taught to think in the simplest forms possible. Our lives and daily experiences are limited to captions of just a few words, preventing us from sharing complex ideas.

Overall, *1984* proves to still be relevant to our current society and administration. Oceania warns against many modern issues such as governmental infringement on the public's privacy, the inability to distinguish between truth and falsehood, and the reduction of our language to its barest forms. *1984* divulges deeply into these issues despite being written 70 years ago, and serves as a platform for what dystopian fiction should look like. This novel has remained consistent in our culture due to the concerningly accurate parallels between Oceania and the world we live in. Ultimately, it is important for our society to continue to read and analyze this book because it presents us with a grim truth that many of us do not want to face, but which has become increasingly important.

The Resurgence of Dick's *The Man in the High Castle*

Philip K. Dick's *The Man in the High Castle*, a novel that came out in the wake of the Cold War, also pertains to many of the social and political issues we are faced with today. The novel has received a newfound popularity among the public, now in its third season as an Amazon Prime series. *The Man in the High Castle* *(MHC)*, a novel of Alternative History, depicts a dystopian United States that has been taken over by the Japanese Empire in the west and the German Reich in the east, with a lawless "wild west," Neutral Zone in between. Dick's multilayered world in *MHC* warns against the dangers of government interference in everyday life, as citizens, particularly American citizens, are closely watched by government police. Dick, like Orwell, manages to make commentary on over-intrusive governments and the importance of language to maintain freedom.

In *MHC*, the story focuses on a banned novel, a book within the book, titled *The Grasshopper Lies Heavy,* which contradicts the emergence of the Japanese and German Empires. In *Grasshopper*, the United States and Great Britain become the victors of WWII. This does not parallel real history, with the US and Soviet Union claiming victory, but rather gives the reader a second version of alternative history (Gray 60). *Grasshopper* is written by a man named Hawthorne Abensen, the titular character, who is rumored to live in a secluded "fortress" to protect him from those who are outraged by his work. *Grasshopper* has been banned in the country and Juliana, the protagonist, wishes to meet the author. Public interest in banned literature has occurred quite significantly in this country with famous works such as *The Catcher in the Rye* (Salinger 1951), *The Great Gatsby* (Fitzgerald 1925), and even J.K Rowling's famous *Harry Potter Series,* being banned from schools and other public institutions on the grounds of having inappropriate or questionable content. Despite *Grasshopper* being "banned through the United States. And in Europe," it is still described as "popular… Another fad. Another mass craze" (Dick 68). Therefore, Dick may be hinting that human curiosity and interest is more powerful than any government agency, even a totalitarian regime. Even still, by banning *Grasshopper* the government demonstrates its attempt to limit the people's consciousness and keep them from fantasizing with these ideas.

The Man in the High Castle also dives deep into the question of right and wrong. It seems apparent in the novel, since it is mainly told through the perspectives of Americans Juliana, Frank Fink, and Robert Childan, that the "enemy" would be the German and the Japanese. However, in *Grasshopper*, due to its reversal of the victors, the whole concept of "right" and "wrong," and "good" and "evil," is put into question. It experiments with the idea that "evil is an illusion" (Rieder 215). After all, who is to say that the US and Great Britain would not be just as "evil" as the Japanese and German having won the war. The bombings of Hiroshima and Nagasaki certainly would be evidence to suggest so. Joe Cinnadella makes this argument when Juliana questions him about *Grasshopper*, stating "They talk about the things the Nazis did…The British have done worse…those mass fire-bombing raids that Churchill thought were going to save the war" (Dick 85). Here, we see the perspective of good and evil being flipped as Cinnadella exposes the evils committed by one of the Allied powers during the war. As we also see in *1984*,

the idea in "absolute evil" as pushed by the Party, is flawed. Much like Oceania's enemy changes from Eastasia to Eurasia and back again, the characters and regimes in *MHC* prove to be just as ambiguous. The reader's may find their alliance changing while reading the book, just as the perspective of the characters' change.

Furthermore, suggesting that the Nazis and the Japanese were the true victors of WWII explores the idea that "Nazism really triumphed in World War II" (Rieder 215). After all, Nazism is what caused the war to begin with and brought significant devastation to Europe. Moreover, shortly after the conclusion of the war the US and the Soviet Union began the Cold War, frantically competing with one another to show off their power and arsenal of massive nuclear weapons. Rieder quotes Katherine Hayles in his interpretation of *MHC,* explaining "the winner of any war is locked into the necessity of continuing to fight, to maintain his superior position. This effort eventually destroys him…The winner is paradoxically the loser" (215). Therefore, in our own real world, the US and Soviet Union can be interpreted as losers because they were forced to continue to build up their arsenal and flaunt their political power long after the war ended. Other countries were able to focus on rebuilding, while we continued to fight.

What truly makes *MHC* such a captivating work of Alternative History, is not just that it makes us reflect on how we see the world and the governments which run it, but it also makes us reflect on ourselves as individuals. A character who repeatedly blurs the lines between right and wrong in the novel is Japanese Trade Minister Tagomi. Tagomi is the main representation of the Japanese Empire in the novel, and he plays sort of a double role throughout the entirety of the story. To American Robert Childan, he is an intimidating character, a Japanese official who essentially represents those who oppress the American culture. However, Tagomi plays a different role during his interactions with Mr. Baynes, the German official, where the latter clearly has the upper hand. Between these two characters we see how even in a world where the Japanese and German are the victors, there is still an imbalance of power between the two nations. More importantly, the tension between these two nations is a direct representation of that between the United States and the Soviet Union during the Cold War, and how each country strived to maintain their political influence and standing.

However, Tagomi's character becomes even more ambiguous at the end of the novel, when his character goes through a major developmental arch. It begins with his killing of two German SD men. Tagomi finds himself alone in a place where his own people have taken over. Tagomi eventually accepts his fate after he is transported to another world by means of a pendant that was given to him by Robert Childan. He finds himself in a San Francisco with no "pedecabs," overrun by whites and concrete highways. He thinks "After death we seem to glimpse others, but all appear hostile to us. One stands isolated." (246). Therefore, Tagomi's journey to an alternate universe represents the current

situation he is in. He is isolated now that he has murdered the two SD men and strained relations between the Japanese and German even further. It is only after this experience, that he is able to go into work and face his fate. Ultimately, Mr. Tagomi walks on the line of good and bad throughout the entirety of the novel. This ambiguity is part of what makes *MHC* so interesting to modern day readers, as it does not clearly differentiate between good and bad, but rather plays with the idea that humanity, in and of itself, is both.

This idea holds true for our political climate in the United States today. It has been argued that, now more than ever, politicians have been making decisions based on partisan politics instead of doing what is best for the country as a whole (Greene 396). Studies have shown that the party in which an individual chooses to support is due to more than just political values, but also social values. The social aspect of political parties makes one feel a strong connection with the party, and stirs up feelings of resentment towards the opposing party. It is said that, as humans, we tend to "instinctively categorize the world into myriad dichotomous groupings consisting of *us* and *them*" (Greene 394). Therefore, it is only natural to assume one's own political party that they identify with as "good" and the opposing party as "bad." In times of political unrest and controversy, it could even be easy to picture members of an opposing party as "evil" for not seeing that the ways of one's favorable party as clearly right. Overall, the concept of good and bad is one that has been trifled over since human history began. It is natural for us to view our own group as being right and the other group as being wrong, but what novels such as *MHC* reminds us, is that the lines between these two opposing ideas are actually much more complex than they seem.

Ultimately, *The Man in the High Castle*, like *1984,* addresses many of the same political and social issues that remain current in our society today. Dick warns about government interference in our everyday lives with the banning of *Grasshopper.* He shows that a government with the wrong intentions will limit its people's freedom in what they can say, do, and write in order to remain in power. He also warns about the illusions that political parties can make in framing opponents as the "bad" guys. In a time of political controversy and unrest, it is easy to perceive those that hold different views as ourselves as being "bad," but Dick reminds us that individuals, political parties, and even governments, are much more complex than they seem. Overall, Dick's *MHC* confronts many problems our society has faced throughout history, and continues to face today, earning the novel its new place in popular culture.

Dystopian Literature for the Modern World

Our political climate has altered countless times since the publications of *1984* and *The Man in the High Castle*, and this change is now showing in the literature world. Nowadays, if you walk into a bookstore, you're

more than likely to find a "'Young Adult Dystopian' section" (Fisher 27), something you probably would not have come across 20 years ago. This new subgenre, if you will, has become mainstreamed into our culture, with narratives like *The Hunger Games* (2008) and *Divergent* (2011) series having huge sales and being adapted into movies. These novels resonate well with young readers because they "engaged feelings of betrayal and resentment rising in a generation asked to accept that its quality of life will be worse than that of its parents" (Fisher 27). Due to current issues impacting our society and the lives of young people, it appears they decided to develop their own literary response, and the results were massive.

The YA Dystopian narrative uses metaphors to portray problems and concerns arising in everyday society. This form of literature began trickling into the literary canon following the attacks on September 11, 2001 (Ames 3). These tragic attacks seemed to have once again brought this literary genre back to life, much like after WWII and the Cold War. However, this new brand of dystopian novels may not be solely influenced by atrocities such as 9/11, but also the aftermath of them. We now live in a society where it is considered normal to be on video multiple times a day, and we essentially have very little understanding of how much information our government can collect from us. People can now expect to have their belongings searched at the airport, as well as have to go through metal detectors at border security. We live in a world with ever increasing protections, however when these safety precautions begin to infringe on personal privacy, much like Orwell's "Big Brother," our society begins to increasingly reflect the conditions portrayed in these novels.

YA Dystopian novels help adolescents deal with these situations and pressures in a harmless way. The popularity of YA dystopian fiction comes from "seeking a safe space to wrestle with and perhaps displace, the fears they play upon" (Ames 7). However, it is also important to note that this new brand of dystopian literature not only presents readers with metaphorical political scenarios, but also resolves them, "amidst the comfortable narrative threads of young adult narratives: coming of age rituals, identity struggles, romantic love triangles…" (Ames 7). These novels almost always portray corrupt governments that are ultimately taken on by a teenager or young adult looking to "find themselves." The protagonist typically overcomes a personal struggle while also being able to fight off a corrupt government and saving the society in which they live in. Although these stories are certainly entertaining and help build self-esteem in young adults, they do not necessarily portray the realities of over-intrusive governments and technologies as works like *1984* and *MHC* do.

In *The Hunger Games*, for example, Katniss and Peeta are able to change a longstanding tradition of having only one ultimate victor for the titular games, when they develop a relationship for the spectators watching them. In the novel, the "Gamemakers pick up on the romance by announcing that there will be a change in the rules…there can be two winners" (Fisher 28). Therefore, Katniss and Peeta, despite their apparent helpless position being the two tributes from the poorest district in Panem, District 12, are still able to change the tradition of how many tributes can win the games. Katniss and Peeta ultimately both walk away from the games as victors, having outsmarted not only the other adolescents forced into the competition, but those who created it as well.

It is quite clear how this kind of exceptional and confident protagonist differs greatly from the ones we see in *1984* and *MHC*. Winston, for example, does not have the same mental capability or power as Katniss Evergreen to deceive the always-watching eyes of "Big Brother." The Party of Oceania is much more difficult, if not impossible, to allude, and anyone who is caught breaking the rules is punished severely. Although Winston believes he is out-smarting the Party by meeting Julia in secret, it is later revealed that the Party knew of their affair the whole time and was simply waiting for the right moment to arrest them. Therefore, the government in Oceania cannot be alluded by simple tricks and does not respond lightly to those who break the rules, making Oceania a lot more comparable to our own society. The same holds true for the Pacific United States and the Greater Nazi Reich in Dick's novel. Juliana is able to avoid government control by living in the Neutral Zone, but she is limited to its confines, plus she puts herself in danger by venturing out of it to look for "the man in the high castle." Overall, stories like *The Hunger Games* certainly have sparked attention in the past couple decades, but may not as accurately represent the danger of over intrusive governments as earlier works of dystopian literature.

While YA dystopian novels have been gaining the spotlight in popular culture, sales for the classics have also spiked in recent years. The *New York Times* article "George Orwell's '1984' is suddenly a best seller" claims that in 2017, Orwell's famous *1984* saw an incredible "surge" in sales, "rising to the top of the Amazon bestseller list in the United States and leading its publisher to have tens of thousands of new copies printed" (de Freytas-Tamura). Therefore, it appears that over the past couple years people have become increasingly interested in early works of dystopian literature. Furthermore, the article also states that Philip K. Dick's alternative history book *The Man in the High Castle* has also had an increase in sales, and is now in its third season as an Amazon television series. Ultimately, people are definitely becoming curious about dystopian literature, and this phenomenon makes us wonder whether our post 9/11 society has helped resurface anxieties about the future world we live in.

Overall, dystopian literature, despite having changed dramatically over the last couple of decades, continues to be a genre that fascinates the general public. It is clear that these novels serve as "reflections of the issues that were important to the period in which their authors lived" (Sargent 21). Orwell's *1984* and Dick's *The Man in the High Castle* portray attitudes of skepticism of one's government and fear of the machine in several ways. The novels warn about the power of

literature and how a government that controls it will have a greater control not just over its citizens' actions, but their thoughts as well. Alongside sparked interest in novels like *1984* and *The Man in the High Castle,* so has a new, modern genre of dystopian fiction emerged, the Young Adult dystopian novel. These novels, like Collin's *The Hunger Games* portray young protagonists who, unlike the earlier works, are able to use both moral and mental superiority to outsmart the political regimes that look to suppress them. Some critics argue that due to the subtle and overall positive nature of these novels, they might not have as long of a shelf-life, but these works still managed to engulf a whole generation of young readers. All in all, political structures may change and genres may alter, but the idea of dystopia and all that it represents will remain consistent in the literary world.

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Ever Experience Suffering, Death, Evil, and Still Have Hope? Wiesel and I Have

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Abstract: I presented this paper at this year's NRHC Baltimore Conference. The essential purpose of this research paper is to invite readers to become critical readers of war literature. In other words, readers learn how Elie Wiesel's *The Night Trilogy* allow them to learn more about the true meaning of war and its atrocities

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Introduction

War is conflict, and disagreement is destruction. Therefore, one should ask the following question: How does literature flourish from death, loss, pain, and suffering? War literature exposes one to war and its cruelties. It also warns humanity against the pursuit of armed conflict, as well as argues for world peace. War literature depicts war as the world's deadliest weapon of mass destruction—pure suffering. It tends to be subjective, and war literature attempts to explain the sufferings through vivid and descriptive language. War literature wants one to understand the true meaning of war and its atrocities—death, violence, cruel distress, and loss of hope.

The primary focus of this paper is to critically analyze Wiesel's *The Night Trilogy: Night, Dawn, Day*. For instance, Wiesel's literary works force one to question the true meaning of religion. In fact, one should ask the following questions: Why do the righteous suffer? Why would God allow Wiesel, a religious young boy to suffer at the evil hands of Adolf Hitler? Perhaps, in life, questions are meant to be asked; yet, an answer to a specific question is never guaranteed. The works of Elie Wiesel will forever force readers to ask many thought-provoking questions that enable them to grow as critical thinkers and learners.

Wiesel's war texts argue for world peace and warn humanity against war. War literature is authentic literature that attempts to inform one that in life, war can force him or her to question the true meaning of life and hope. In *The Night Trilogy: Night, Dawn, Day*, one envisions himself or herself in Wiesel's world—before, during, and after the Holocaust. For that reason, the goal of this paper is to analyze Wiesel's depictions of suffering, death, evil, and hope. Hence, forcing one to question why bad things happen to good people, specifically God's devotees. In other words, my analysis of Wiesel's texts shows the readers that in life, one cannot escape or avoid suffering, death, and evil (Harrington 7). Yet, it is vital for one to realize that hope for a better tomorrow will always be present—one must just be willing to look for it. This paper will also describe how Wiesel's texts depict the Holocaust from a historical and traumatic perspective—Dominick LaCapra's trauma theory.

Critical Analysis of *Night*—Wiesel's Depiction of Suffering

In *Night*, Wiesel chooses his words carefully, and this makes it difficult for one not to feel sympathy for young Wiesel and the Jewish people. Wiesel forces one to embark on a long journey—pure suffering. At the age of fifteen, Wiesel sees his life change within a blink of an eye. Wiesel goes from studying the Talmud and Kabbalah to becoming a new member of Satan's world, along with millions of other Jews in Auschwitz: "A prolonged whistle pierced the air. The wheels began to grind. We were on our way" (Wiesel 40, *Night*). Here, it is evident that Wiesel and his family are being transported to the concentration camps. Wiesel's state-of-mind is no longer the same—initial exposure to the suffering caused by war. Before being deported to Auschwitz, Wiesel and the Jewish people of Sighet were forced to see the creation of a ghetto. The ghetto in Sighet was established between April 18-20, in 1944, shortly after the German occupation of Hungary. About 14,000 Jews from Sighet, as well as nearby villages, were forced to move and live in the ghetto. Nearly a month later, specifically between May 17-21, Jews from Sighet were deported to Auschwitz ("Sighet" 1). Living in the ghetto marked the beginning of Wiesel's exposure to life suffering as a whole. Being constrained in Sighet enabled Wiesel to realize that in life, one cannot avoid suffering, regardless if he or she studies the Talmud and

Kabbalah or not.

As Wiesel is being transported to Auschwitz, he is thinking about Moishe the Beadle and his prophecy: "He no longer mentioned either God or the Kabbalah. He spoke only of what he had seen. But people not only refused to believe his tales, they refused to listen (Wiesel 25, *Night*). Moishe witnessed the Gestapo—the official secret police of Nazi Germany—brutally murder innocent Jews in the Galician forest. Moishe's survival has significance: "How had he, Moishe the Beadle, been able to escape? By a miracle. He was wounded in the leg and left for dead…" (Wiesel 24, *Night*). Moishe's survival is symbolic. He is God's messenger. Moishe is attempting to inform his people that the Nazi police will invade Sighet. They want the Jews dead. However, the people of Sighet refused to believe in Moishe, including Wiesel.

Two years later, specifically on the seventh day of Passover, in 1944, Nazi Germany took complete control of Sighet: "'I warned you,' he shouted. And left without waiting for a response'" (Wiesel 28, *Night*). Moishe fears for his life, as well as the lives of the Jewish people in Sighet. Moishe is also upset; he warned his people that danger awaited them. This shows that in life, it seems that human beings are purposely blindsided. Thus, in life, one is meant to encounter suffering, as per it is silent, as well as knocks on one's door when it is destined to do so. This makes suffering worse, especially since one is caught by surprise—no warning. Now imagine and keep the following narration in mind: "My father was crying. It was the first time I saw him cry. I had never thought it possible. As for my mother, she was walking, her face a mask, without a word, deep in thought" (Wiesel 37, *Night*). This quotation marks the beginning of suffering for the Wiesel family, one that was destined to commence and arrive with no warning. The tears of Mr. Wiesel are symbolic, as per it signifies his emotions and response to what he, his family, and people are enduring under the Nazi regime—the start of a long journey of suffering. Why? Personally, after reading *Night* closely, I noticed that prior to the rise of the Nazi Party, Wiesel and his people lived their life for God. Their lives revolved around studying the Talmud and Kabbalah and going to the synagogue. However, an unexpected transition to pure suffering changed not only Wiesel's life but the lives of millions of other Jews as well. Many remained faithful to God, while others began to question why He would allow His people to suffer.

Life consists of mysteries and unanswered questions. This is depicted throughout Wiesel's *Night*. For instance, after being transported from Sighet, Wiesel and his family arrived in Auschwitz: "But we were pulling into a station. Someone near a window read to us: 'Auschwitz.' Nobody had ever heard that name" (Wiesel 45, *Night*). Today, Auschwitz will forever be recognized as the home of the world's greatest

evil—the Holocaust. Today all of humanity has come to learn that no explanation or literary work can justify why millions of Jews were forced to suffer and witness their journey here on earth come to an end. The Holocaust remains a pure mystery that not even Wiesel's literary works could understand or describe. To Wiesel, such mystery did not become a reality until he saw children and babies burnt to death, in flames: "Never shall I forget the small faces of the children whose bodies I saw transformed into smoke under a silent sky" (Wiesel 52, *Night*). This marked the beginning of a frustrating and upsetting moment for Wiesel—the moment he began to question his faith. How can God allow His innocent children to be burnt to death? What did the Jewish people do to deserve such cruelty? This forces Wiesel to question the true meaning of life and his faith—God's purpose in one's life. This is evident in the following quotation: "Some of the men spoke of God: His mysterious ways, the sins of the Jewish people, and the redemption to come. As for me, I had ceased to pray I concurred with Job! I was not denying His existence, but I doubted His absolute justice" (Wiesel 63, *Night*). Young Wiesel would have not stopped praying nor doubted God's absolute justice if it were not for his early experiences as a prisoner at Auschwitz. Readers must understand that this conversation about God among the male prisoners marks the beginning in which young Wiesel officially begins to question his faith, specifically his God's method in allowing His people to suffer. The depiction of questioning God's process in *Night,* shows readers that ~~the~~ in life, every religious human being questions the way his/her God deals with human suffering here on earth, but not His existence.

On the other hand, in life, one only begins to question God's purpose in ~~their~~ life, when one begins to suffer, especially when one feels abandoned by God. The sense of neglect forces one to question one's faith—no longer fully devoted to God. It is important to keep in mind that the sense of abandonment and faith go hand-and-hand, mainly because from a religious point-of-view, one would never expect to feel neglected by God. In this case, Wiesel has: "The Almighty, the eternal and terrible Master of the Universe, chose to be silent. What was there to thank Him for?" (Wiesel 51, *Night*). Here, Wiesel seems to no longer love his God unconditionally nor a devotee of the creator of heaven and earth. Wiesel is claiming that his God chose to remain silent, especially when His people needed His mercy the most. Thus, forcing the reader to realize that war has undue all of Wiesel's faith.

Moreover, in *Night*, Wiesel depicts suffering as a major theme throughout his memoir. Wiesel is attempting to show the reader that in life, one will encounter suffering at least once—if not multiple times. For that reason, it is pivotal for one to find different ways to cope with suffering. For example, Wiesel managed to survive one of the world's greatest evils—the Holocaust. How so? Wiesel found a way to ex-

press his beliefs and feelings regarding what it means to suffer through his writing. Writing is an essential form of expression, especially since it enables one to express feelings, thoughts, and ideas regarding a subject matter.

Legacy of Wiesel's *Night*—A True Depiction of War Suffering and Evil

The purpose of this section is to describe how Wiesel's *Night* portrays war suffering and evil. This makes Wiesel's text powerful; it is his legacy. In "Legacy of *Night:* The Literary Universe of Elie Wiesel," Fine argues that "Wiesel writes from the perspective of a witness-story-teller who knows that the essence of his story—filled with unanswered political, philosophical, and theological questions is impossible to communicate" (1). Therefore, when reading and analyzing *Night*, it is important for readers to keep in mind that throughout his memoir, Wiesel describes his experiences during the Holocaust from a unique standpoint (Fine 1). When reading the text "one cannot separate his life from his work; both possess moral beauty and a deep religious feeling" (Cedars 298). This is because Wiesel's memoir is a literary text that illustrates both the history of the Holocaust and Wiesel's traumatic experiences.

When reading a war literature text, the reader should ask the following question: "What does the writing of history have to do with the writing of trauma?" (Sanyal 301). Such question is pivotal because it forces one to realize that writing about history and writing about trauma are two different things. Sanyal's review of LaCapra's *Writing History, Writing Trauma,* argues that writing about history (the past) and writing about trauma (a real-life traumatic experience) are different: "As the comma between them suggests, writing history (writing about the past) and writing trauma (conveying that past's resistance to writing) are not incompatible representational practices, even if they have been traditionally opposed as the dichotomy between history and literature, historicism and psychoanalysis or historiography and literary criticism" (Sanyal 301). In LaCapra's text, the goal is to depict clearly to the readers the distinctions between writing about history and trauma—with respect to major historical events. Yet, in *Night*, Wiesel depicts both the true history of the Holocaust and his traumatic experiences at Auschwitz.

Wiesel writes about both history and trauma and this is clearly depicted in the following quotation: "'From this moment on, you are under the authority of the German Army. Anyone who still owns gold, silver, or watches must hand them over now. Anyone who will be found to have kept any of these will be shot on the spot'" (Wiesel 41-42, *Night)*. Here readers learn that Wiesel was able to write this narration from two standpoints, factual and traumatic; hence, making *Night* a text that clearly depicts history and trauma. When reading the text, the reader is invited to embark on two unique journeys. One journey enables the reader to learn about historical facts, from the establishment of the ghetto in Sighet to the liberation of Buchenwald. The other journey invites readers to visualize Wiesel's traumatic experiences during the Holocaust, such as his arrival at Auschwitz.

In *Writing History, Writing Trauma*, LaCapra argues the following: "In other words, writing is a medium for expressing a content, and its ideal goal is to be transparent to content or an open window on the past—with figures of rhetoric serving only an instrumental role in illustrating what could be expressed without loss in literal terms" (3). When applying LaCapra's argument to *Night*, the reader is able to realize that Wiesel writes about history and trauma with clear rhetoric and this enables the reader to get a clear understanding of the memoir's subject matter. Nevertheless, Wiesel's memoir opens a unique window for the readers, one of history and trauma, and this is where LaCapra's argument about writing about history must be considered when analyzing the war text, mainly because Wiesel is ideally transparent. He uses clear, vivid, and descriptive writing to portray his message. For instance, Wiesel ends his memoir by telling his readers that he was able to see himself in front of a mirror once again, three days after his liberation from the concentration camps. This was something that he had not done since living in the ghetto. The mirror symbolizes self-reflection; he survived one of the world's greatest evils.

With that being said, Wiesel's text calls for readers to realize that history can repeat itself. King Faisal El-Hashemite I once said, "He who reads history foresees the future." With *Night* being a text that describes history and trauma, one can claim that it is also a text that attempts to bring awareness to current wars and especially civil unrests like those in modern Syria and Nicaragua. One can claim that the innocent civilians from these respective locations can one day go on to publish memoirs describing the history of their civil wars and their traumatic experiences with the war as well.

Moreover, there are many history textbooks, novels, biographies, and so on, that aim to teach one, and future generations the realities of the Holocaust. For that reason, Wiesel will forever be known as one of the world's greatest Holocaust writers. When writing *Night* and presenting it to the world, Wiesel took risks, "those of artist, philosopher and theologian…" (Diamond 284). The risks that Wiesel took were unavoidable. Thus, making *Night* a text that one should read and analyze more than once, mainly because when reading it, the reader gets the chance to develop a personal relationship with the words on each page. Wiesel encourages the reader to see life from different perspectives, as well as challenges him or her to think critically about all aspects of life.

In conclusion, life may be the greatest gift of all. It is also the most mysterious, especially since all of humanity tends to truly believe that in life, everything

happens for a reason. Wiesel was meant to be a member of this cruel world. He never gave up on humanity. As Wiesel mentions in *Night*, the Holocaust should never be forgotten. The history of the Holocaust will forever be an eternal living memorial; a memoir that depicts history and trauma. Wiesel uses vivid, descriptive, and transparent rhetoric to convey both the history of the Holocaust and the traumatic experiences he was forced to endure as a young man.

The Portrayal of Suffering in Wiesel's First Novel—*Dawn*

For this portion of the paper, the focus shifts from critically analyzing Wiesel's depiction of suffering, death, and evil in the memoir *Night,* to analyzing the portrayals in Wiesel's first novel, *Dawn*. The novel is written from a narrative point-of-view. The goal of the novel is to explore Wiesel's hidden doubts, which derived after the Holocaust: "So I wrote this novel in order to explore distant memories and buried doubts: What would have become of me if I had spent not just one year in the camps, but two or four? If I had been appointed Kapo? Could I have struck a friend? Humiliated an old man?" (Wiesel 140, *Dawn*). In his novel, Wiesel invites the reader to join him on a journey of buried doubts and questions. Wiesel's hidden uncertainties and questions show the readers that there is a relationship between his doubts, questions, suffering, and trauma. The connection makes the journey possible because of Wiesel's real-life suffering and traumatic experiences.

In addition, sixteen years after being liberated from Buchenwald, Wiesel was able to share with the world a narrative of trauma—one of doubts and unanswered questions. It is important to realize that there is a reason why being able to write about trauma, in this case, writing from a narrative and traumatic point-of-view takes time. As he explains Cathy Carruth's theory, James Berger states that "Caruth argues that trauma as it first occurs is incomprehensible. It is only later, after a period of latency, that it can be placed in a narrative" (Berger 577). It is significant for readers of war literature, especially those written from a traumatic perspective, to understand that each word used to express one's trauma is carefully selected. The end goal is for the words to share an experience and evoke a sense of emotion in the readers, and in *Dawn*, Wiesel awakens a sense of sympathy from the readers.

Dawn begins with Wiesel describing the novel's protagonist Elisha, as a young survivor of the death camps. Wiesel describes Elisha as "…an orphan bereft not only of his father and mother, but of hope…" (Wiesel 139, *Dawn*). Now, the key question that comes to mind when reading the first page of this novel is the following: Will Wiesel depict Elisha as a young Holocaust survivor who will express his suffering and pain endured in the camps through evil acts?—

Such as by committing murder or forcing others to experience suffering as well. Wiesel portrays suffering and evil from different standpoints. For instance, the readers can claim that Elisha is a lost human being with no hope. Hence, being recruited by a powerful terrorist movement does not seem wrong in the eyes of Elisha, mainly because as a young teenager, he has seen members of the Nazi Party commit horrific acts, such as the murder of innocent human beings. Wiesel wants the readers to understand that he is not defending Elisha's violent act. He simply wants readers to realize that Elisha, a miserable victim of war, took a different path in life after the Holocaust. As Wiesel mentions in *Dawn*, "And yet, this tale about despair becomes a story against despair" (Wiesel 141, *Dawn*) Wiesel wants the readers to understand that life is mysterious and that not even writing one's thoughts on paper could explain such mystery. This claim forces one to ask himself or herself the following question: How different would life be if suffering was not destined to be a part of one's life? Wiesel's tale surely would not be about despair or against it.

At the beginning of the novel, the reader encounters the following statement, from the protagonist, Elisha: "Tomorrow, I thought for the hundredth time, I shall kill a man, and I wondered if the crying child and the woman across the way knew" (Wiesel 143, *Dawn*). The tears of the crying child represent the cry of an innocent child who feels that suffering and evil are near. Elisha does not know the man that he has been asked to kill. The reader learns that Elisha wants to hate John, the man he is destined to kill. However, deep down inside, Elisha does not want to kill John, but he realizes that his state-of-mind is corrupted due to the suffering, pain, and evil that he had experienced in the concentration camps: "I stayed for a few minutes beside him. There was a pain in my head and my body was growing heavy. The shot had left me deaf and dumb. That's it, I said to myself. It's done. I've killed. I've killed Elisha" (Wiesel 220, *Dawn*). This quotation is important because Elisha has recognized that he has killed himself mentally. He will forever suffer silently, mentally. This makes John's death significant in this tale, mainly because Wiesel uses Elisha to express his hidden thoughts and doubts as a Holocaust survivor. It is a self-reflection of himself as an evil human being with a corrupt state-of-mind. Wiesel also uses his tale to write about trauma, specifically the effects of trauma post-Holocaust. In *Night,* Wiesel writes about both the history of the Holocaust and his traumatic experiences. In *Dawn*, Wiesel uses transparent rhetoric to depict a narrative of post-Holocaust trauma. Wiesel does so by using his silent thoughts, doubts, and distant memories to convey a narrative that allows him, as well as the readers to wonder and question why traumatic experiences tend to affect one's life heavily.

When reading and analyzing the novel, it is pivotal for the reader to critically convey questions and thoughts, especially since the goal is to analyze Wiesel's representation of suffering, death, and evil,

from a narrative point-of-view. In fact, depictions of such struggles are similar to what one has learned from *Night.* For example, in *Dawn,* the protagonist, Elisha is depicted as a lost human being who suffers silently, mentally, just like Wiesel, in *Night*: "Fear caught my throat. The tattered fragment of darkness had a face. Looking at it, I understood the reason for my fear. The face was my own" (Wiesel 221, *Dawn*). Here, Wiesel ends his first novel with a vivid and a descriptive portrayal of a young Holocaust survivor who suffers silently, mentally. After committing murder, Elisha, himself realizes that has left John Dawson's child without a father and that he did not only murder John, but himself. His evil act marks the beginning of a painful life journey for Elisha—for the rest of his life. It is a journey of internal and silent suffering.

To conclude, it is important for the reader to keep the following question in mind: Does being a victim of war force one's state-of-mind to have racing and hidden thoughts of doubts? The uncertainties originate from one's experiences with suffering, pain, and evil. In *Dawn,* Wiesel wants to bring awareness regarding the following: Being a victim of war changes one's life within a blink of an eye, with no warning, and this forces one to question existence.

Wiesel's *Day*—A Text That Shows The World That Hope Is Always Alive

After reading and analyzing *Night* and *Dawn*, the following questions came to mind: Is life worth living? Does suffering make life the greatest gift of all? Will hope forever overcome suffering and its hardships? I ask such questions because in his second novel, *Day*, Wiesel teaches the readers that in life, hope will forever be present in one's heart. In fact, Barbara Kingsolver once said, "Hope is a renewable option: If you run out of it at the end of the day, you get to start over in the morning" ("Quotefancy" 1). In this portion of the paper, the following question will be answered: "In fact, the question has haunted me for a long time: Does life have meaning after Auschwitz?" (Wiesel 230, *Day).* In other words, the focus of this paper once again takes a shift. From critically analyzing suffering, death, and evil to transparently and vividly describing how Wiesel's traumatic experience at Auschwitz serves as a primary example as to how in life, regardless of the obstacles and suffering that one may encounter, he or she should always remain hopeful.

Day is a short narrative that describes how Wiesel viewed the true meaning of life after the Holocaust. A narrative that invites the readers to travel inside of Wiesel's mind and realize how difficult it was for him to adjust to life after his traumatic experiences at Auschwitz. Throughout the novel, one learns that at one point in his life, Wiesel found it impossible to find any form of joy or happiness, and that is evident in the following quotation: "For a young survivor whose

knowledge of life and death surpasses that of his elders, wouldn't suicide be a great a temptation as love or faith?" (Wiesel 230, *Day*). When reading the narrative, it is important for the readers to keep the following question in mind: Why is remaining hopeful fundamental in life? Remember, the end goal for one should be to live a life that matters. Despite his experience with suffering and moments in which he constantly found himself withdrawing from life, Wiesel still managed to find love and leave a legacy behind, as one of the foremost chroniclers of the Holocaust.

Conclusion—Final Thoughts

The goal of this paper was to invite my audience to embark on a journey of critical analysis and new perspectives—for Wiesel's *The Night Trilogy: Night, Dawn, Day*. While reading my paper, the reader got the opportunity to learn and realize that Wiesel, throughout his literary works, he writes from two points-of-view, traumatic and historical. Thus, presenting his audience with transparent and vivid depictions that describe what it means to suffer, encounter death and evil, and still have hope for a better tomorrow—before, during, and after the Holocaust. To conclude, Wiesel's texts will forever educate humanity, especially future generations to come, about the realities of war and how literature somehow flourishes from death, loss, pain, and suffering.

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Writing, Women, and the Worcester Normal School: Young Women Gaining Agency and the Diaries that Tell Their Stories

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Worcester State University

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Abstract: Worcester State University in Massachusetts was originally founded as the Worcester Normal School in 1874. Diaries written by members of the Worcester Normal School during the school's first 30 years have been available for research in the university archives, but have not been extensively gone through until this project. These diaries share experiences of young women gaining agency in the late nineteenth and early twentieth centuries despite barriers of the "women's sphere" of the time placing limitations on their perceived abilities. Worcester Normal School students were learning to be teachers and the diaries show how their writing and studies contributed to their increasing agency. Through their own words, the young women can be seen writing to engage in social issues, standing up for what they believe in, exploring their interests, and recognizing their growth as influential individuals.

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One day, not very long after the establishment of the Worcester Normal School in 1874, a young woman took out a diary and jotted down a few sentences, reflecting upon recent developments. The following day, a different young woman wrote an additional entry. This practice went on for years. Diaries from the first three decades of the Worcester Normal School stayed in the school's possession as the Massachusetts institution eventually evolved into Worcester State University. However, an air of mystery surrounds the diaries. They have been safely resting in the Worcester State University Archives, but are largely forgotten and have never been extensively gone through previous to this project. While the entries are authored by a multitude of writers (almost a different one every day), together they tell a story of young women growing up and gaining agency at the turn of the Twentieth Century. These early students, the majority of them young women, were living in the later years of the Victorian Era surrounded by notions of the "women's sphere," which doubted their capabilities. Yet, these young women were learning in classrooms of higher education and preparing themselves to become leaders of their own classrooms. As seen through their writing, the young women of the Worcester Normal School navigated societal disparity and their increasing agency at this fledgling school in a bustling city.

The Worcester Normal School was located in downtown Worcester, Massachusetts, and along with its central location within the city, the school was in a favorable locality for academic excellence. New England, and Massachusetts especially, had significant innovators

and patrons of education in the United States, such as Horace Mann, an education reformer and supporter of public education from Massachusetts during the eighteenth and nineteenth centuries. Furthermore, New England boasted an abundance of colleges, permanent grammar schools, and public schools (Hinsdale, 3). The Worcester Normal School was state-funded and the fifth of its kind in Massachusetts. As a teacher-training school, it employed the technique of an apprenticeship program to place student learners in local children's schools to sharpen their teaching skills. Teachers were in demand due to an increasing population, stricter child labor laws, and education reforms. The majority of students at the Worcester Normal School were young women, but a few young men attended each year as well (*Remembering Massachusetts State Normal Schools*, 100). Women students greatly outnumbered the men due to the prospects teaching provided women.

Teaching allowed women to have a profession. Of course, women who chose a different path did not just rest all day upon settees. Searching through census records from 1870 to 1900 for 20-year-old women in Worcester, a variety of jobs is discovered. Many women are recorded as being servants or clerks, but diversity is found within the titles of their positions. Worcester women of yore spent their days as workers in a boot shop, "tailoresses," dressmakers, milliners, corset stitchers, corset trimmers, felt burlers, and candy sellers among other professions (United States Census Bureau). While teaching was not the only option available to young women, it was an appealing choice, and women outnumbered men in other normal schools as well (Baker, 37). By 1900, women formed 75% of teachers

in the United States (Baker, 1).

Many women found teaching preferable, but women teachers' salaries were not high. Administrators even encouraged the hiring of women educators as women did not need to be paid as much as men (Baker, 14). According to Elizabeth Whitemore Baker in *The Social and Economic Condition of Women Teachers in the United States*, Massachusetts had the greatest disparity in pay of women and men in the United States (24). During the early 1900s, Massachusetts women made around 60 dollars weekly while Massachusetts men made around 151 dollars weekly (Baker, 14). Baker explained this inequality could partially be due to women occupying lower positions within their professions (25). However, though not the most impressive, women's salaries still offered freedom and independence. By earning a small sum every week, women did not have to be dependent upon their fathers, husbands, or other men in their lives. In fact, some married women could not even be teachers. There was prejudice against married women teachers and, often, a woman getting married was regarded as a resignation (Baker, 39).

Around 1884, women teachers in Massachusetts (excluding Boston) were earning an average of $6.33 weekly (Wright, 76-82). In other professions across Massachusetts, women were earning a weekly average of $5.12 as domestic servants, $4.00 as hat trimmers, and a mere $2.13 as "tailoresses" (Wright, 76-82). However, some of the professions once held by young Worcester women had the possibility of paying more than a teaching position; dressmakers outside of Boston made an average of $10.22 weekly and milliners could make $12.50 (Wright, 76-82). However, salaries from occupations involving manufacturing or selling would rely on a stability of consumers to pay; a teacher's salary was more reliable. Furthermore, the weekly revenues these professions brought women are not the only aspect of their work to be considered. Teaching did not require the difficult kind of labor one would be subjected to toiling away all day inside a grimy and stifling factory. School environments also presented less health risks than factories as the latter were filled with dangerous malfunctioning machinery and hazardous air, while classrooms might just be filled with unruly children.

Teaching was also more fulfilling than other occupations. Critics wary of women entering the workforce justified women as teachers because it seemed an extension of their role in the women's sphere. In their view, women were satisfying a maternal role by taking care of children (Baker, 34). Furthermore, by educating children, women could feel they were making more of a difference in society than if they were selling accessories in a shop or washing porcelain dishes all day long. Baker discussed how women were the face of the future considering their influence over the youth of the nation and women's contribution to social amelioration (54). Students of the Worcester Normal School and women teachers elsewhere were being prepared to take part in this power. This contributed to a changing social order where Baker remarked, "women are being transferred from domestic labor to industrial work; are being transformed from parasitism to social functioning; from incapable inferiority to trained and capable leadership; and are themselves transforming the social structure and creating new social valuations" (52). Other than impacting society, women training to be teachers were also making an impact upon themselves. Opportunities to receive additional education after high school were not available to many women during this time, and the women who chose to become teachers felt they were improving themselves. A teacher's social standing was high compared to other professions (Baker, 23), and gaining respect went hand-in-hand with gaining agency. Worcester Normal School attendees were not going to become wealthy by their endeavor into education, but students still saw the value present in their learning, as well as the agency and influence they would gain.

While the Worcester Normal School provided young women with an opportune path, the school was not a prestigious institution reserved for the wealthy. Students attended to gain practical skills and enter a profession, not as a kind of "finishing" school often expected of higher-class, refined young women at the time. Students paid a fee of two dollars to attend the Worcester Normal School, and students intending to teach in Massachusetts public schools received free tuition which was otherwise 30 dollars (Course Catalogue 1874-1885). This encouraged teachers to stay in the area they completed their education in, connecting them further with their local community. Students remaining in the state would gain agency because they would become better able to participate in local activities and make change. The low cost of attending the Worcester Normal School was less than nearby higher-education institutes for women around the same time. Venturing out from Worcester eastward and westward, Wellesley College, Smith College, and Mount Holyoke College were more prestigious higher-education options for women. Around 1900, tuition for Wellesley College was 175 dollars, while Smith College and Mount Holyoke College charged 100 dollars each for tuition (Thomas, 336-337). These other Massachusetts schools were not normal schools and it was not always necessary for the women attending them to obtain a profession, meaning they would likely have the funds to attend a pricier institution. Wellesley College's course catalogue for the 1876-1877 academic year did state a mission of offering a low tuition price for students of limited means who wanted to be teachers (113), but even in 1880, the tuition for Wellesley College was 60 dollars, twice the cost the Worcester Normal School's tuition (Wellesley College Calendar 1880-1881, 117). The Worcester Normal School was not the fanciest option in the state, but it provided the young women who attended, who may not have been able to afford other local options, the opportunities to grow their base of knowledge and achieve more agency. This can be shown through the writings left behind by these young women.

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The Worcester State University Archives holds class diaries, an apprenticeship diary, and other records, some of which are fragile and falling apart, but all of which provide information about the Worcester Normal School students. There are six class diaries from 1875 to 1880. These records were not personal journals, as the diary name seems to suggest, but rather, shared accounts between classes and students, with some entries thought to have been written by instructors. It appears as if the diaries were intended as a reflective exercise for the students. Due to the variety of entries, there did not seem to be strict guidelines for the writers to follow. Topics broadly range from the weather, visitors, academic lectures, holiday celebrations, a recipe for graham bread, to a drawing of a cherub painting a flower and a contemplation upon a prisoner's execution the following day. The apprenticeship diary, containing entries from 1903 and 1904, includes the accounts of Worcester Normal School students reflecting upon their apprenticing experiences. These entries were more structured than the class diaries, but the apprentices still shared their opinionated feelings on different subjects, often relating to the power they suddenly had as classroom leaders.

These materials in the archives, especially the diary entries, show the experiences of the young women of the Worcester Normal School. However, as mentioned previously, these young women writers were not alone among the students. Co-education, in both lower and higher education, was a heated topic at the establishment of the Worcester Normal School. Considerations in the debate of co-education were not just upon the possibilities of distraction in shared lesson-spaces, but also whether women and men had the same mental capacities that would allow similar teachings to be beneficial. If women's minds limited them from learning at the same rate as men, then women would either slow down the lessons, and thus impede upon men's education, or women would become completely lost in learning and school would be useless for them. If women were not considered capable enough to be in the same classrooms as men, they would not receive the same schooling as men and could be in danger of receiving a reduced education and falling behind. The debate of co-education was part of a larger issue surrounding the disparity between women and men.

Jerome Van Crowninshield Smith, in his 1875 book, *The Ways of Women in their Physical, Moral and Intellectual Relations*, stated:

> In every period of human history, women have been considered inferior to men. All laws for the regulation of society have invariably been so framed as to perpetuate the absurd idea, that they have neither capacity nor a right to participate in concerns of common interest, which tradition, custom, and the sovereign power exclusively confide to male members of the commu-

Smith was a medical doctor, an author, and a former mayor of Boston, placing him in sight of 1870s Worcesterites. Smith acknowledged the disparity and discrimination against women throughout his 500-page book and the prevailing ideas about women from the times are made clear.

These thoughts of inequality between women and men led to opposition of co-education. While Smith believed it was important for women to exercise their minds, he also believed a woman's true position was a practical one, perhaps in a maternal or housekeeping kind of way, and not a learned one (92). This "true position" aligns with ideas of the women's sphere. Smith was against too much education for women, especially in the Northern states, like Massachusetts because of the injury he believed it caused women's bodies (92). Mabel Hawtrey in *The Co-Education of the Sexes*, published in 1896, also acknowledged the perceived limitations of a young woman's mind. Though she was from England and not America, her book examined and reaffirmed arguments in the continued conflict of co-education. Her input also shows co-education and women's perceived capabilities were not just an American issue, but an international one. Hawtrey did not believe co-education should be employed in schools and further suggested girls should not even know of their grades because competition causes a damaging amount of strain on girls' "underdeveloped physiques" (104-105). Hawtrey believed girls were too sensitive to handle school like boys and should be separated from them. Both Hawtrey and Smith condemned increasing education for women because they believed women were not fit to handle the strain of being learned. While they may have believed they were looking out for women's best interests, they were actually restricting women by discouraging education.

Thomas Foster, in his 1874 paper, "Co-Education of the Sexes," also acknowledged the perceived weaknesses of women's minds, but, unlike Smith and Hawtrey, he was supportive of co-education. Foster's purpose in "Co-Education of the Sexes" was to attack E. H. Clark's book, *Sex in Education*, in which Clark, like Hawtrey, believed women were not suited for school due to physiological differences from men. Foster supported co-education, not due to the belief that women were not having nervous breakdowns due to academic work, but he believed men's dispositions were similar to women and they break down as well (13). Foster also stated that co-education helps make a woman independent while also making men more agreeable (15). This belief places importance on women receiving an education, however, it also shows women's education as supporting men due to characteristics associated with the women's sphere. While a woman will become more confident and increase her agency by going to school, she will also, with her nurturing nature, be a

great help and comfort to men. Foster meant a woman's presence in a schoolroom is partially to serve men while the woman's own intention may have been to increase her knowledge and independence.

Charles Follen Folsom also participated in the conversation of co-education, but from a more medical standpoint. Folsom was a physician from Massachusetts in the nineteenth century who specialized in mental disorders. In his 1885 talk, "The Relation of Our Public Schools to the Disorders of the Nervous System," he said Massachusetts was especially affected by nervous disorders due to the increased learning in the state (Folsom, 163); this is comparable to Smith's attack upon the Northern states. Similar to Foster, Folsom explained men are affected as well as women, but Folsom placed emphasis on nervous disorders in women. Furthermore, Folsom believed women were seen as weaker due to the characteristics and attitudes toward them caused by the women's sphere (181). Folsom also discussed difficulties women face that contribute to their struggles, stating that women, "must work harder, with greater worry and with more disappointments than men. There are more conditions necessary to avoid failures in women. Of course they break down earlier and oftener than men" (185). Because of their disadvantages, Folsom called for more training and opportunities for women, and this, he believed, would decrease nervous disorders. While some people saw a beneficial future in co-education, many notions of the time viewed women as too limited in their capabilities to be able to learn alongside men.

While gender inequality could be seen internationally, its presence, or at least a perceived separation between women and men, was also felt within the Worcester Normal School. The young women did not write about the inequality between women and men, but they did acknowledge differences present in society. One diary entry mentioned the students were encouraged to read from boys' books, due to the classrooms they would be apprenticing and eventually teaching in would have both girl and boy students (December 30, 1880). This shows there were books for girls and books for boys, meaning certain topics were directed at each group and contributing to the separate spheres of women and men. Another record showing separate spheres was written by a young woman whose brother asked her, "which was the worst swear; 'Gee Whiz' or 'Son of a sea cook!' I told him I knew nothing about such words as those and he said 'you would if you were a boy'" (Child Study Records). The writer almost seemed scandalized at this language, but her brother pointed out that the two of them were situated in different spheres; boys would well be acquainted with this "vulgar" language, but girls would not.

The young women students lived surrounded by ideas of the women's sphere that undermined their agency, but their writings show their tenacity toward improvement. Worcester Normal School students wrote theses, and in order to produce the work they did, the students behind the theses were well-versed in their individual topics. One student wrote a thesis titled, "The Training of Girls" (Commencement Programs 1886-1896). This student realized there was a difference between the training of girls and the training of boys or else she would have probably written "The Training of Children" instead. Another student's thesis was titled, "Defects in the Education of American Girls" (Commencement Programs 1886-1896). This title shows that the student was not only aware of a difference between the education of girls and boys, but of particular problems and deficiencies with the education of girls. Society doubted women's abilities and this extended to writing, but by tackling these topics in their theses, the students of the Worcester Normal School did not seem to be intimidated or obstructed by society's notions. While these students were not physicians like Folsom or authors of 500-page books like Smith, they still were able to use their knowledge of current topics to enter conversations about significant social issues like co-education.

Furthermore, the Worcester Normal School took an active role in showing women they could be in influential positions. Women were in places of power at the Worcester Normal School itself, acting as instructors. Additionally, Rebecca Jones was in charge of the Apprenticeship Program and responsible for many students learning the skills they needed to succeed as teachers. The apprentices also had their share of women instructors they could look up to as they apprenticed under women teachers at local middle and elementary schools. One apprentice wrote, "I have been especially pleased with Miss —'s manner while I have been at this school, and I think I have learned a great deal from her in regard to teaching, and also in regard to discipline" (November 17, 1903). Well-known influential women educators were also acknowledged within the Worcester Normal School. In 1876, Elizabeth Peabody, a Massachusetts native and supporter of establishing English-language kindergartens in America, accepted an invitation to speak at the school (January 20, 1876.1). In addition, theses from 1889 and 1890 included "Women as Educators" and "Women as Teachers," respectively, showing the students' interests toward women in positions like themselves (Commencement Programs 1886-1896).

Women writers were also acknowledged in the students' writing, showing they made an impression upon the young women of the Worcester Normal School. Elizabeth Barret Browning, George Sand, George Eliot, and Mary Russell Mitford received mentions in the records (January 11, 1877; Commencement Programs 1886-1896; Course Catalogue 1893-1898; February, 1880). Local authors were also written about, including Margaret Fuller, Celia Thaxter, and Julia Ward Howe who actually spoke at the Worcester Normal School (April 7, 1876.1; Commencement Program 1897-1907; Remembering Massachusetts State Normal Schools). However, the woman writer who received the

most attention was Louisa May Alcott.

Louisa May Alcott was a popular writer of the mid-late 1800s, and her writing was aimed at women and especially young women. She was another local author, and in 1876, her father, Amos Bronson Alcott, spoke at the Worcester Normal School. A student wrote of his visit: "I think what particularly interested me was what he said about his daughter Louisa, whom everyone knows as the author of that charming book 'Little Women'. I think no one who has read this could fail to have an interest in its author" (April 7, 1876.2). The character of Jo in *Little Women*, mirroring Louisa May Alcott's own experiences, was a young independent woman who became a writer. Both Jo and Louisa May Alcott have inspired many young women readers to do the same and this probably applied to some young women at the Worcester Normal School. Diarists also mention books written by Louisa May Alcott being added to the shelves and a photo of her being added to the school's collection (April 14, 1876.2; May 20, 1876.2). In 1890, two years after Louisa May Alcott died, a young woman wrote her thesis on "Louisa Alcott's Childhood," showing this author's lasting impact (Commencement Programs 1886-1896). The students were interested in women writers; they saw how these women used writing to achieve influence and may have been inspired to do the same.

Students at the Worcester Normal School stood up for what they believed in and made their voices heard, even if that meant going against authority. And at their school, the authority was Mr. Russell. E. H. Russell was the first president of the Worcester Normal School. References to him occur constantly throughout the diaries, where he is referred to as just, "Mr. Russell." Yet, as much as the students seem to revere him, they did not always see eye-to-eye with him. Certain events show the agitation that could easily arise from the students at Mr. Russell's actions. In one entry, it was written that Mr. Russell refused to allow students to attend a high school graduation because he considered school to be a business and, "not to be interrupted by whatever comes along" (June 22, 1880). Mr. Russell also established a committee on tardiness and absences, believing there were two groups of students in every school, "those who could and those who could not be trusted" (December 22, 1880). It is not difficult to infer which group the late and missing students belonged. At one point, students were given time to write letters to Mr. Russell, showing the young women were encouraged to utilize their agency through writing to bring up issues they wanted Mr. Russell to know (December 7, 1880). In December, nearing a holiday break, the students decided to utilize their growing agency and take action against authority. They presented Mr. Russell with a petition they had written, requesting a change in schedule so they would not have to go to school on Christmas Eve, a Friday. Mr. Russell denied the petition, but the efforts shown by the young women were preserved in the diary (December 16-17, 1880). While

they may not have always gotten what they wanted, the Worcester Normal School students still took the initiative to voice their concerns.

As the students were going to be in charge of classrooms, they needed to gain the agency to teach, and the diaries show the students preparing to take charge. They knew what skills they needed; one student wrote that singing duets in music class is, "an excellent way of acquiring confidence which is certainly very essential in teaching" (April 19, 1876.2). The students were also aware of the significance of the path they had chosen. In awe of her future profession, a diarist wrote, "We all find life an infinitely higher and holier and nobler thing than our childhood fancied." (March 13, 1877). Another student readying herself to teach hoped she and her classmates would be influential and take the initiative, and that there would be no end as to what they would accomplish (March 8, 1879).

After gaining the knowledge necessary to teach, the students started apprenticing as teachers. Instead of preparing their agency, they were thrust into utilizing it in the classroom. One student wrote about a time when she could not get order in the class. Exasperated, she stopped her lesson, told the class what to study, and sat at her desk. The class soon became quiet and attention returned to her. In her entry for the day, she wrote, "I made them feel that I had more authority; and I resolved to do this if it took till four o'clock" (May 22, 1903). Another apprentice, after a failure at teaching the seasons, tried again the next day, and it turned into a success. She wrote, "I am just as happy tonight as I was discouraged last night." (September 29-30, 1903). As the apprentices became more confident in their new roles, others accepted their positions as well. One diarist wrote, "I opened the school this morning, and everybody seemed to take it as a matter of course. I open the school quite often. At first they seemed to think it very strange, looking around and smiling at each other. For the past two or three times there has been none of this" (May 7, 1903).

The young women of the Worcester Normal School were aware of barriers of the women's sphere, but they do not lament the disparity in society; they were becoming teachers and working toward improving their situation. They were aware of issues in their time, and they were gaining power to confront them. As the students made their way through the Worcester Normal School, they learned, they wrote, they led their classrooms of children, and they gained agency.

In 1876, one writer shared an essay theme taken from a Coleridge quote: "language is the armory of the human mind" (January 20, 1876.1). This required composition must have spurred the students into recognizing the force they could employ and the power they could gain by effectively utilizing language. While the students may not have recognized their own influence of history they were making by scribbling in the class diaries, their words show the power they accumulated

during their time at the Worcester Normal School. Even if they did not picture their diary writing as influential, their passages created history. Their own words, which would not have been known otherwise, were written down and recorded. Their thoughts and feelings that they bestowed upon the pages in ink over 140 years ago share much information. A scribbled down sentence about something that may not have meant much to the diarist at the time became significant. After graduating, the students took on classrooms and educated the following generations. Some graduates became principals of schools and presidents of clubs, some taught at colleges, some sought out further education, and many pursued their passions. A few graduates found themselves in other occupations than teaching, becoming physicians, librarians, editors, and even an architect, the knowledge they gained at the Worcester Normal School preparing them for all their future endeavors (Graduate Records, 274).

In 1879, one diarist wrote, "These schooldays are like the pages of a great book" (March 26, 1879). The schooldays written about do read as a great book, one that tells a narrative of young women gaining agency and ready to make an impact.

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The Ethics of Identifiers and Causal Relations in Journalism

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Abstract: The AP Stylebook, a guide used by many journalism organizations to inform editorial decision making, says identifiers such as race should be included in news stories when "pertinent." But how do we determine when an identifier is pertinent? My analysis of news stories demonstrates that sometimes identifiers can suggest a causal relation between an identity and an event. For example, journalists will identify race in any story involving a white police officer shooting a black suspect, even if the facts of the story suggest that the shooting was justified. Journalists also widely reported the sexual orientation of the victims in the Pulse nightclub shooting, although it later emerged the perpetrator was not aware that Pulse was known as a gay club. The dilemma journalists face – whether to include identifiers or not in their coverage – arises from an unavoidable lack of hindsight and the power of identifiers to shape public thought. Using their best news judgement, journalists must decide whether to withhold facts to avoid implying a false correlation, or to deliver the facts and risk misleading their readers.

With this in mind, I analyze high profile news stories from two of the most-circulated and influential newspapers, The Washington Post and The New York Times, to study the impact of including or withholding identifiers such as race and sexual orientation. Following that analysis, I will offer a creed journalism organizations should include in their code of ethics.

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I. STATEMENT OF PURPOSE

This thesis seeks to uncover the often faulty editorial decision making in newsrooms across the country in regard to when identifiers such as race and sexual orientation are used in a news story, and through analyzing high profile news stories from The Washington Post and The New York Times that use identifiers in faulty ways, will propose a creed journalism organizations should adopt in their code of ethics.

II. REVIEW OF CURRENT POLICY/ LANDSCAPE

Each newsroom has its own standards or news judgements on news coverage that is created under the proposal of The Associated Press Stylebook, (commonly referred to as the AP Stylebook). The AP Stylebook refers to the guidelines from the Associated Press Stylebook, and is used amongst many newsrooms as the standard by which all news is measured. It is a comprehensive reference manual, and it has long been hailed as the bible for journalists. It is a style guide based off the Associated Press, which is "the essential global news network, delivering fast, unbiased news from every corner of the world to all media platforms and formats. Founded in 1846, AP today is the most trusted source of independent news and information. On any given day, more than half the world's population sees news from AP" (Associated Press). The newest edition contains more than 3,000 a-to-z entries detailing AP's rules on grammar, spelling, capitalization, abbreviation, and word and numeral usage, according to its synopsis.

III. THE WASHINGTON POST STYLEBOOK

The Washington Post is an American newspaper published daily in Washington, D.C., and is known to have a large circulation in the United States, and a large digital following of about 1.27 million subscribers (Stelter). Below is a direct entry from The Washington Post's guidelines from their own style manual on when to use race news story. It does not have a style guide in regard to when sexual orientation should be used.

a. In general, race and ethnic background should not be mentioned unless they are clearly relevant. They are obviously relevant in stories about civil rights issues, the problems or achievements of minority groups, cultural history and racial conflict. They are also relevant and should be used in crime stories when we have enough specific identifying information to publish a police description of a suspect who is being sought.

b. Avoid ethnic labels and stereotypes such as *hard-drinking Irishman, tempestuous Latins* or *Chinese fire drill.*

c. The terms *Hispanic* and *Latino* are not always interchangeable. When referring to an individual's eth-

nicity, be as specific as possible about the country of origin: *Mexican American, Cuban American*. When writing more generally, *Hispanic* or *Latino* can encompass Americans of Mexican, Central American, Spanish-speaking Caribbean or South American background. People from Puerto Rico are Puerto Ricans (and are U.S. citizens, not immigrants), but they can be referred to as Hispanics or Latinos when grouped with others of Latin American background. By U.S. government definition, people of Portuguese background, including Brazilians, are not Hispanics. Brazilians can be referred to as Latinos when grouped with others of Latin American background. Spaniards are Hispanics but not Latinos.

d. Avoid broad generalizations on attire. A reference to "traditional dress" may represent the attire of a particular region or nation, but isn't necessarily an indication of a person's religion.

IV. THE NEW YORK TIMES STYLEBOOK

The New York Times is a daily American newspaper based in New York City read worldwide. It was founded in 1851 and is ranked as the second most circulated newspaper in the United States. Below is a direct entry from The New York Times' guidelines from their own style manual on when to use race and sexual orientation in a news story:

race should be cited only when it is pertinent and its pertinence is clear to the reader. The race of a victim of a hate crime or the subject of a police search is clearly germane, an essential part of the person's description. But the race of a person convicted of a crime is not pertinent unless the case has racial overtones; if it does, the overtones should be explained. Also see AFRICAN-AMERICAN, BLACK; (-)AMERICAN, AMERICAN INDIAN(S); ASIAN-AMERICAN, HISPANIC.

sexual orientation, never *sexual preference*, which carries the disputed implication that sexuality is a matter of choice. Cite a person's sexual orientation only when it is pertinent and its pertinence is clear to the reader. *Also see* BISEXUAL; GAY; LESBIAN; STRAIGHT (Siegal and Connolly).

V. JOURNALISM AND ETHICS

Currently, each newsroom has its own standards or character judgements on news coverage that is created under the proposal of The Society of Professional Journalists (SPJ) Code of Ethics. Although these judgements reside under each newsroom's Code of Ethics, not every newsroom's is alike. The Society of Professional Journalists (SPJ) Code of Ethics outlines four principles as the outline of ethical journalism and "encourages their use in its practice by all people in all media" (SPJ). These declared principles are to "Seek Truth and Report It," "Minimize Harm," "Act Independently" and "Be Accountable and Transparent." In addition, journalists have an ethical and professional calling to report on "newsworthy" stories, to which the Code of Ethics are applied (Society of Professional Journalists).

IV. THE IDENTIFIER OF RACE

The identifier of race and its pertinence is a multi-faceted judgement in journalism. The AP Stylebook says that identification by race or ethnicity is pertinent in biographical and announcement stories that involve significant, groundbreaking or historic events, such as being elected U.S. president, being named to the U.S. Supreme Court or other notable occurrences. It also determines race to be pertinent in stories where suspects are being sought by the police or missing person cases using police or other credible, detailed descriptions. Such descriptions apply for all races, and the racial reference should be removed when the individual is apprehended or found. Race is also concluded to be pertinent when reporting a demonstration or disturbance involving race or such issues as civil rights or slavery. The AP Stylebook advises "in other situations with racial overtones, use news judgement" (Associated Press). My analysis will examine several high profile news stories where the inclusion of such an identifier and the causal relations they implied have led to catastrophic mistruths, and was thereby journalistically unethical.

1. *The New York Times*, 4 April 2018

To begin, I would like to analyze the reporting on the death of Saheed Vassell, drawing an example from The New York Times. Vassell, 34, was shot and killed by police on a Brooklyn street corner on April 4, 2018. The police were responding to the many calls reporting a man was threatening people with a silver gun. After Vassell pointed what the officers believed to be a gun at them, he was shot and killed, but it was later revealed the item was a metal pipe with a knob on it that looked identical to a gun from afar. It was also included that the police department had encountered the man before and had classified him as emotionally disturbed. Given these facts, The New York Times decided to headline the article as "Police Fatally Shoot a Brooklyn Man, Saying They Thought He Had a Gun," and to include the identifier of "black" in the lede. The lede is the opening sentence or paragraph of a news article, summarizing the most important aspects of the story. The lede said:

"New York City police officers shot and killed a black man who was known to be mentally ill on a Brooklyn street corner on Wednesday afternoon after he pointed what the officers believed was a gun at them, the authorities said. The object, however, turned out to be a metal pipe with a knob on it." (Mueller and Schweber)

Per their style guide, race is only to be included if

pertinent and its pertinence is clear to the reader. In my analysis, The New York Times' decision to include race in the lede inappropriately injected race as a causal factor into Vassell's death without any facts to support a racial motive, and may have falsely implied it was a hate crime. In doing so, this created a racial animus and led the readership into believing race played into a cause and effect. The profession of journalism requires the gathering and presentation of facts and context so that readers can form their own opinions. Instead, the lede's identifier suggested a causal relation between the identity of Vassell and the event of his death, when no facts existed to support it.

In my version of a style guide, race would have been introduced later in the story when it was reported that, "...Other crowd members wept at how this had happened on the 50th anniversary of the Rev. Dr. Martin Luther King Jr.'s assassination. Others spoke of wanting to riot. When darkness fell, a group of about 10 protesters arrived carrying Black Lives Matter signs" (Mueller and Schweber). In this section, race would have to be included, as it was one of the reactions of the public. However, the inclusion of "black" in the lede places a heavy emphasis on race without any facts to support it, and was therefore journalistically misleading and unethical. My version of a style guide would include the guideline "Be wary of the causal relation implied on race when used in the headline/lead. Consider introducing race later in story if causation can't be proved but pertinence still exists."

2. *The Washington Post*, 22 Jan. 2019

According to its style manual, The Washington Post says that race and ethnic background "are obviously relevant in stories about civil rights issues, the problems or achievements of minority groups, cultural history and racial conflict." However, this is a vague statement that has allowed for any mention of race to become relevant in the pursuit of a narrative. In the following examples of race used in recent high-profile news story, journalists used race in a way that promotes a false narrative that is slanderous and not exemplary of journalistic integrity. A notable example of such an argument can be seen in the reporting of what became known as sensationalizing a Native American and defaming a group of Catholic high school boys. The Washington Post covered the encounter between two disparate people gathered on the steps of the Lincoln Memorial on January 18, 2019. The initial encounter that was spread around several media and social media platforms was one between Nick Sandmann, a high school boy from Covington Catholic High School waiting for his bus with his fellow classmates after the pro-life march "March for Life," and Nathan Phillips, a Native American elder who was present for the "Indigenous Peoples March."

The early reporting was wrong, in part, because it relied on a video of a small slice of a larger event. It was a slice of a nearly two-hour long video, published to YouTube on January 20, that shows what happened before and after the encounter, and this context severely contradicted the narrative the media so carelessly presented. The video that initially circulated around several social media platforms was one that showed Sandmann, with fellow students around him, face-to-face with Phillips. In the January 18, 2019 video, of which many news stories were written, Sandmann and Phillips are face-to-face. Sandmann's expression is best described as an unwavering smile, while Phillips bangs the drum in his face and chants what is probably a tribal song. You can also notice Sandmann's fellow classmates dancing to the beat of the drum, looking at each other and each other's phone. Not much is clear about the context of the situation, or about the events that occurred leading up to what can be seen in the video. But instead of exhibiting journalistic values and manners of curiosity through seeking context, news outlets eagerly adopted the unquestionably non-contextual video as an aid in the narrative of racial discourse in Trump's America, wherein it was reported the Covington boys had instigated the conflict with Phillips. Stated bluntly, the story did not have any inherent news significance, but The Washington Post fabricated significance to it through assigning relevance to race in pursuit of a narrative.

Among articles written by The Washington Post was one headlined "'It was getting ugly': Native American drummer speaks on his encounter with MAGA-hat-wearing teens" dated January 22, 2019. It was originally headlined as "'"It was getting ugly': Native American drummer speaks on the MAGA-hat-wearing teens who surrounded him." Firstly, it can be observed that the article was published even after the additional footage was made available to the public, proving the staff did not conduct due journalistic process whatsoever. The editorial decision to include the race/ethnicity of Native American in the headline was made, and this identity was being balanced against "MAGA-hat-wearing teens." The headline sets the precedent that the race of the individuals in the incident is a catalyst to what occurs and places an over-emphasis on such a label to create a narrative of racial intolerance and prejudice.

It is the role of journalists to question what is in front of them, to find more context and to seek the truth. As a college journalist I can conclude that this was not the case in a story that soon became a national, high-profile one based off of feeding a false narrative on selective context rather than reporting the truth in cooperation with the full context and facts. Reading the lede and nut grafs of the article will demonstrate that the editorial staff was explicitly feeding the public with an intentional delivery that the incident was one of a heroic Native American who was mocked by a group of Trump-supporting Catholic boys. However, watching the full video of the encounter that day shows a completely different story than the one reported by The Washington Post and undeniably shows that journalistic standards of gathering information and reporting off full context was not followed.

The lede and nut graf read as follows:

"The images in videos that went viral on social media Saturday showed a tense scene near the Lincoln Memorial.

A Native American man steadily beats his drum at the tail end of Friday's Indigenous Peoples March while singing a song of unity urging participants to "be strong" against the ravages of colonialism that include police brutality, poor access to health care and the ill effects of climate change on reservations.

Surrounding him are a throng of young, mostly white teenage boys, several wearing "Make America Great Again" caps. One stood about a foot from the drummer's face wearing a relentless smirk." (Wootson Jr. et al.)

Here, we can see that the race of the Native American man and the race of the "mostly white" teenage boys is revealed. The identity of a white Trump supporter, and the narrated event of prejudice and disrespect toward a Native American elder is a standout example of inappropriate causality. The full context of the video will reveal that the Covington High School boys were provoked and slandered by a group of Black Hebrew Israelites who initiated racial insults and derogatories toward the boys. Upon this provocation and with the permission of the supervisor, the boys begin to chant their school spirit to drown out the insults and derogatories being directed toward them. This is when Nathan Phillips, the Native American elder painted as a victim from the media comes into play, wherein facts show he confronts the group of boys and gets within inches of the face of Nick Sandmann, a boy who would become the extreme target of slander as a result of poor reporting. The Washington Post assigned the look on Sandmann's face as a result of the unexpected confrontation by Phillips to be one of a "relentless smirk." This undoubtedly aided their narrative, as did the further reporting that the teens "swarmed around him [Phillips]" (Wootson Jr. et al.) as he was preparing to leave. Although video footage plainly shows that Phillips confronted the teens and was the one who got within inches of Sandmann's face, the media still reported and sensationalized a Native American man in a way that catered to the false narrative and causality that painted it as a social justice issue and yet another example of alleged social discourse in Trump's America.

My version of a style guide would include a subset under the identifier of race that reinforces the journalist's duty in due process and bipartisanship before jumping to premature conclusions. This practice in itself would eliminate premature articles from being written in the first place, so that journalists can use their power to inform public thought in an unbiased and transparent manner. Although this has been the role of quality journalism since the beginning of the profession, quality journalism is at risk of falling victim to a left-leaning ideology that allows for news stories to be sorted by narrative. The narrative of MAGA-hat wearing teens

mobbing around a Native American man would have been the perfect example of social discourse in Trump's America, and it was framed as such by both The Washington Post and The New York Times. However, facts revealed the reporting was done entirely wrong, which warranted an Editor's Note in the previous written articles. The Editor's Note cited:

"Editor's Note: Subsequent reporting, a student's statement and additional video allow for a more complete assessment of what occurred during the Jan. 18 incident at the Lincoln Memorial, either contradicting or failing to confirm accounts provided in this story — including that Native American activist Nathan Phillips was prevented by one student from moving on, that his group had been taunted by the students in the lead-up to the encounter, and that the students were trying to instigate a conflict. The high school student facing Phillips issued a statement contradicting his account; the bishop in Covington, Ky., apologized for the statement condemning the students; and an investigation conducted for the Diocese of Covington and Covington Catholic High School found the students' accounts consistent with videos. Subsequent Post coverage, including video, reported these developments: "Viral standoff between a tribal elder and a high schooler is more complicated than it first seemed"; "Kentucky bishop apologizes to Covington Catholic students, says he expects their exoneration"; "Investigation finds no evidence of 'racist or offensive statements' in Mall incident." (March 1)."

A read-through of the editor's note shows a confession that further collection of facts and context contradicted reporting provided in the story. In other words, The Washington Post admitted it did not conduct due diligence before publishing several news stories that catastrophically misled the public and defamed the Covington Catholic High School boys, namely Nick Sandmann. One has to wonder how a major newspaper could so carelessly publish an article without any verification as to a beginning or end. The political nature of the reporting and subsequent reaction of the article begs the question of the power that ideology can play into reporting. Though unethical, as the golden rule of journalism is to be objective and bipartisan, there is no other plausible reasoning as to why this article was written other than political bias on behalf of the editorial board. According to a 2014 Pew Research Center study, which focused on "Political Polarization and Media Habits," it was deemed that, "when it comes to getting news about politics and government, liberals and conservatives inhabit different worlds. There is little overlap in the news sources they turn to and trust" (Mitchell et al.). As it relates to my analysis, this ideological divide can best be seen in Pew's study titled "Media Outlets by the Ideological Composition of Their Audience."

Perhaps the most relevant observation as it relates to my thesis is the fact that 100 percent of newspapers are more trusted by liberals than conservatives. It is to be expected that political commentators such as the conservative Glenn Beck is more watched by conserva-

tives, but it is a travesty that newspapers, who are ethically bound to bipartisanship, are significantly more trusted by the left than by the right. This displays a paramount crisis in the way newspapers are conducting themselves.

If the presentation of facts in this news story had been done correctly, the identifier of race would have been relevant. Race became relevant in the event when the Black Hebrew Israelites began to use racial slurs against the Covington High School students. In theory, this would have been an article exemplary of racial pertinence, but instead it has become a national symbol of bad journalism. The angle was one of defaming the Covington boys and sensationalizing Nathan Phillips, even without any evidence of proving a racial motive. After later footage revealed that Phillips was the one who had instigated the confrontation by walking up to the boys, it was also revealed that, moments before, a group of Black Hebrew Israelites had cited racial epithets and slurs to the group of high schoolers. If reporting had been done properly and due process had been committed, race would have been relevant in the story as racial slurs introduced a racial aspect. Instead, in the pursuit of a narrative of racial discourse, journalists ran with the story. The catastrophic condemnation the boys received as a result of false reporting is an embarrassment to journalism. This was yet another standout example of inappropriate causality.

3. *The New York Times*, 19 Jan. 2019

On the day of the incident, The New York

Times also wrote an article headlined "Viral Video Shows Boys in 'Make America Great Again' Hats Surrounding Native Elder." The editorial decision to include the race of Nathan Phillips as the presented victim of the scenario implies that it is of pertinence to the events that followed. In the organization's style guide, the guideline "The race of a victim of a hate crime . . . is clearly germane, an essential part of the person's description" (Siegal and Connolly). Although the article does not explicitly label the occurrence as a hate crime, one could find a comparison in their decision to hyperinject the identifier of race and the narrative that is created through descriptors against the boys such as "surrounding" in the headline. Immediately it is evident that the news organization decided to write an article which incited public outrage against the Covington High School boys based off a snippet of a video. The articles that followed severely misrepresented the situation.
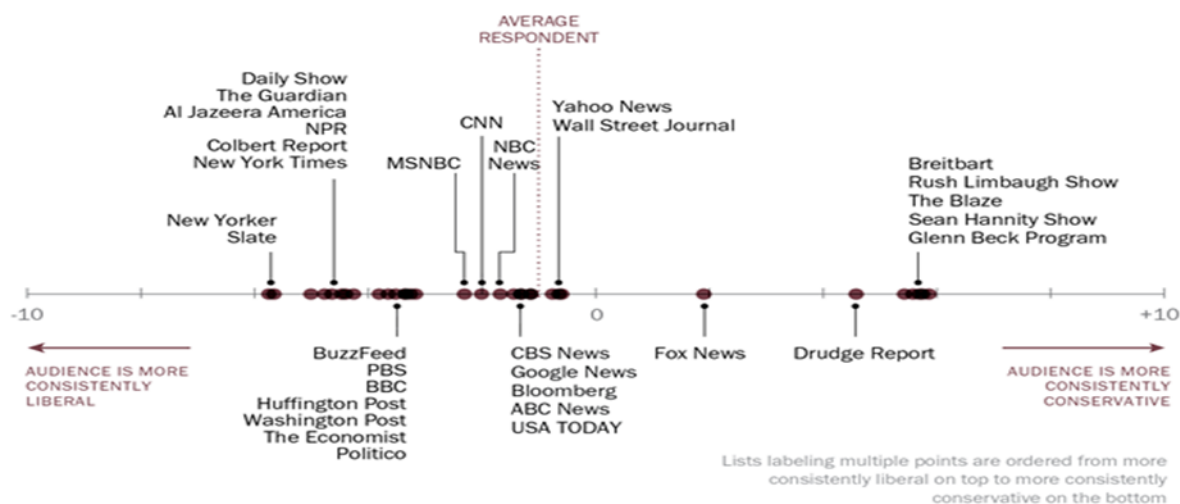
The lede and nut graaf were:

"They were Catholic high school students who came to Washington on a field trip to rally at the March for Life.

He was a Native American elder who was there to raise awareness at the Indigenous Peoples March.

They intersected on Friday in an unsettling encounter outside the Lincoln Memorial — a throng of cheering and jeering high school boys, predominantly white and wearing "Make America Great Again" gear, surrounding a Native

Ideological Placement of Each Source's Audience

Average ideological placement on a 10-point scale of ideological consistency of those who got news from each source in the past week...

American elder." (Siegal and Connolly)

The decision to include the race in the headline and the lede places a heavy emphasis between the identities of the individuals and the alleged event that occurred. According to the headline, the event was MAGA-hat-wearing boys "surrounding" a Native American man, although it was later revealed in additional video footage that the Native American man was the one who approached the boys. With this in mind, the entirety of the article is rendered false. Nevertheless, the narrative created through the injection of race in a slanderous way due to a severe shortcoming of due process created a national uproar against the Covington High School boys, and is a standout example of a news story reported completely wrong.

3. *The Associated Press*, 31 March 2018

Although The Washington Post and The New York Times have constructed a style manual under the proposal of the AP Stylebook, it is even more surprising when The Associated Press, whose official style guide is the AP Stylebook, places identifiers such as race in ways that contradict exemplary objective journalism. The Associated Press News also made the egregious error of implying a causal relation with the placement of the identifier of race in their news story "North Carolina officer shoots, kills man during traffic stop." The lede and nut graf for a better understanding are as follows:

> "WINSTON-SALEM, N.C. (AP) — A white North Carolina police officer shot and killed a black passenger who refused orders not to reach for a gun after a late-night traffic stop led to a physical struggle, authorities said Saturday. The shooting happened after Officer D.E. McGuire stopped a car containing two men and a woman about 10:30 p.m. Friday during a routine patrol northeast of downtown, according to a Winston-Salem Police Department news release. Edward Van McCrae, 60, was in the rear seat and began making suspicious movements, police say. McGuire told McCrae to stop reaching for concealed areas of the vehicle, but McCrae continued, according to the news release." (Associated Press)

An evaluation of the facts fails to provide the reader with evidence as to why McCrae's race played a role in his death, yet its placement and prominence demands attention from its readers, whether or not they agree with the correlation it implies. The account provided by the police alleges that McCrae refused orders not to reach for a visible handgun may demonstrate why the officer shot him, but the decision to include race in the lede implies a cause and effect that could not be proven with logical reasoning.

5. *Associated Press News*, 8 March 2012

It could be argued that the death of Trayvon Martin would never have reached national news had it not been for Benjamin Crump insisting that Darren Wilson had racially profiled Brown, and this is what turned it into a local story of the tragic death of a teen into a national story of white-on-black crime. On February 26, 2012, a 17-year-old boy that the media chose to also identify as African American was shot and killed by George Zimmerman, a volunteer neighborhood watch guard identified at first as Hispanic and later on as a "white Hispanic," in Sanford, Florida. The initial facts given on the night of Martin's death were that Zimmerman called the police, alleging that Martin was acting suspicious. Although the dispatcher told Zimmerman not to leave his vehicle, he began to follow the direction that Martin was walking. What happened next leading up to the event of Martin being shot to death was not certifiably known, and would later be revealed in a trial, and a concurrent FBI investigation. Zimmerman was charged with second-degree murder on April 11, 2012, in the shooting death of Martin. After a vigorous trial open to the public that ended on July 13, 2013, Zimmerman was acquitted of all charges, and was found to not harbor any racial animus.

The fatal shooting of Martin was not immediately picked up by the national press. The initial coverage was local, available in nearby publications such as The Orlando Sentinel, The Sanford Herald, and local TV affiliates in Orlando, on the death of a teenager at the hands of a volunteer neighborhood watch guard. It was not until the story became centered around the search to prove a racial motive that it was picked up by the national press. The first national news story was published in the Associated Press on March 8, 2012 headlined "Answers sought in death of teen in Fla. suburb" which appropriately did not include race in the headline or the lede.

> "ORLANDO, Fla. (AP) — The family of a Florida teen who was fatally shot after an encounter with a neighborhood watch leader on Thursday asked the police department investigating the death to release 911 tapes that may help explain how the young man died.
>
> Family members said 17-year-old Trayvon Martin, of Miami, was visiting his father and soon-to-be stepmother last month at their home in a gated community in the Orlando suburb of Sanford. He had gone to a convenience store to buy some Skittles candy and was returning home when he was confronted by an armed man who was head of the local neighborhood watch, family member said.
>
> The man hasn't been charged. His name was redacted along with Martin's name in an initial police report but he was identified as 28-year-old George Zimmerman in a police report released Thursday" (Schneider).

Race is not introduced until later in the story when it is revealed that "Martin's father, Tracy, said Thursday that family members were upset that no arrest had been made. He described the neighborhood as mixed race but his attorneys said they believed Trayvon Martin was being profiled at the time of the encounter because he was a young black man. Zimmerman is white. The attorneys also questioned why a neighborhood watch leader would carry a gun" (Schneider). Here, race is justifiably introduced as it is presented as relevant from the attorneys. However, it is worth noting that AP News erroneously identified Zimmerman as white, when he was self-registered through the United States Census Bureau as a Hispanic man.

6. *The New York Times*, 1 April 2012

One of the first articles published by The New York Times was headlined "Race, Tragedy and Outrage Collide After a Shot in Florida." Although it is understandable why race would be included in this article as the reporting primarily revolves around the protests of the public whose reaction to the event deemed race to be a motive, there is something to be said about the lack of objectivity in the article. The lede and the nut graf were as follows:

"SANFORD, Fla. — Once again, a river of protest raged through Sanford this weekend to demand justice in the name of an unarmed black teenager shot dead. It gathered strength in front of the historic Crooms Academy, the first high school for black students in Seminole County; surged through the streets; and formed a flood of grief and outrage just outside the Sanford Police Department. Once again, thousands chanted the name of Trayvon Martin, 17, the youth killed with one bullet while returning to a home in a gated community where he was a guest.

Once again, they cried for the arrest of George Zimmerman, 28, the neighborhood watch coordinator who has claimed self-defense under a Florida law with the assertive name Stand Your Ground.

With five weeks' passage, the fateful encounter between a black youth who wanted to go to college and a Hispanic man who wanted to be a judge has polarized the nation." (Barry et al.)

While it is understandable that race became an element of reporting with the heavy protests that occurred, a transparent sentence stating that no facts existed to support a racial animus should have been included. Instead, the media decided to consistently harp on the identifier of "black teenager," and this decision was also included in articles that did not include the racial identifier attributed to Zimmerman. The consistent appearance of Martin's race and the erratic appearance of Zimmerman's race demonstrates sloppy and inconsistent news judgement, and earns further mistrust of the journalism industry. The consistent use of Martin's race assigned pertinence to that identifier, and this injection of race consistently gave off the impression of a racial animus, which severely misled the public.

Although this particular event did not appropriately warrant the identifier of race yet was assigned relevance by protestors, it brought a dispute worth analyzing on how to properly identify one's race. Not even a month after Martin's death, The New York Times made the editorial decision to assign the identifier of "white Hispanic" to Zimmerman, an identifier that had not yet been used in their reporting in reference to an individual. The first time the editorial team decided to use this identifier was in the March 22, 2012 article headlined "City Criticizes Police Chief After Shooting." This editorial decision to precurse the shooter's race of Hispanic with that of "white" was one that had not been used in prior reporting, and begged the question of its function and purpose. The appearance of the identifier was in the paragraph:

"Mr. Zimmerman, 28, a white Hispanic, told the police that he shot Trayvon in self-defense after an altercation. The teenager was walking home from a convenience store, where he bought iced tea and Skittles, when he was shot once in the chest." (Alvarez)

Although my reading of the articles related to Martin indicates the over-emphasis of race was never necessary to include, it is still worth analyzing not only when race is properly include, but also how to properly identify somebody. Precursing the identifier of "Hispanic" with "white" became a national dispute between those who believed it was injected to desperately push Zimmerman away from a person of color to further the white-on-black crime narrative, and those who believed it was the most factual way of identifying Zimmerman. Whatever viewpoint one carries, it is obvious that the media struggled with the appropriate way to define Zimmerman in a way they had not yet been confronted with before. The rationale behind the decision to include "white" in identifying Zimmerman was because his father is white, while his mother was born in Peru and has black ancestry, which includes her Afro-Peruvian grandfather. At the time Zimmerman was identified as a "white Hispanic," the U.S. Census Bureau did not have a white Hispanic category. Given it was not recognized by the U.S. Census Bureau, it was journalistically unethical to identify Zimmerman in such a way, as it was not a fact, but rather an assignment of an identity by which he was not even registered as. In fact, Zimmerman was registered as a Hispanic, according to voter registration.

Per the AP style guide, from which many news organizations take instruction, identification by race or ethnicity is pertinent in biographical and announcement stories that involve significant, groundbreaking or historic events. When Barack Obama was elected U.S. president, The New York Times headlined the article

"Obama Elected President as Racial Barrier Falls." The lede of the article was as follows:

> "Barack Hussein Obama was elected the 44th president of the United States on Tuesday, sweeping away the last racial barrier in American politics with ease as the country chose him as its first black chief executive." (Nagourney)

Following the same rationale that The New York Times used in identifying Zimmerman as a "white Hispanic," one would suspect that Obama would have been identified as a "white African American," because he also has a white parent. As curious consumers of the news, it is a valid observation and argument to ponder. This observation begs the assertion that identifying Zimmerman as a white Hispanic was a way to further the white-on-black crime narrative, while successes for minority groups are not held to a similar standard of identification.

VII. THE IDENTIFIER OF SEXUAL ORIENTATION

The AP Stylebook and The New York Times Manual of Style and Usage advises for sexual orientation to be included when pertinent and its pertinence is clear to the reader. The Washington Post does not have a section in their style guide on when to use sexual orientation. Unlike the identifier of race, no straightforward rules exist to provide examples of pertinence. This absence of concrete guidance places full accountability of decision making on the existing editorial board and their basis for news judgement.

In discussing the relevance of using sexual orientation in a news story, the Orlando nightclub shooting is one of particular interest. The shooting occurred on June 12, 2016, when a 29-year-old man named Omar Mateen entered Pulse nightclub at around 2:00 a.m. and began shooting with his AR-15-type rifle and a handgun. The incident left 49 dead and dozens injured before he was shot dead by police. Pulse nightclub was one of the biggest nightclubs in Orlando, and was commonly known as a gay bar and dance club. The incident soon became a high-profile news story as the deadliest mass shooting in the United States and the nation's worst attack since 9/11, until the Las Vegas shooting in 2017. The coverage also gave the impression that this was an anti-gay hate crime, when it was later emerged that the perpetrator was not aware that Pulse was known as a gay club. In hindsight, the identifier of the sexual orientation of individuals who spend their time at Pulse nightclub, and the event of the act of terror upon them was a false causality, as the facts reveal that the motive was not one of homophobia, but rather of hatred with U.S. foreign policy in the military intervention abroad. Mateen, who was born in the United States from Afghan parents, said in a call with the Orlando Police Department while in the Pulse nightclub that America needed to stop bombing Syria and Iraq. He even asked the security guard where all the women were. Simply interviewing the security guard would have been enough to ques-

tion that the motive had been one of homophobic origins. Instead, journalists fell victim to both pressure of immediately publishing a news story, and perhaps a willingness to blindly believe what would so perfectly fit a narrative of LGBTQ intolerance.

1. *The New York Times*, 12 June 2016

The first article that The New York Times wrote on the incident was headlined "Orlando Gunman Attacks Gay Nightclub, Leaving 50 Dead." As demonstrated in the headline, the news organization made the editorial decision of including the identifier "gay," with the event of a gunman attacking, which implies a causation to the readership. In journalism, the headline is the text indicating the nature of the article, and without reading the article, the audience can assume the incident had a homophobic motive. In my version of a style guide, I believe identifiers should not be revealed in a headline unless the event being tied to it was certifiably correlated through thorough and transparent reporting. Otherwise, a headline should not include an identifier, be it race, sexual orientation, religion, etc.

The editorial staff of The New York Times also made the decision to include the identifier of gay in the lede of the story. The lede of a news story contains the most newsworthy part of the article, and the lede of this particular news story was "A man who called 911 to proclaim allegiance to the Islamic State terrorist group, and who had been investigated in the past for possible terrorist ties, stormed a gay nightclub here Sunday morning, wielding an assault rifle and a pistol, and carried out the worst mass shooting in United States history, leaving 50 people dead and 53 wounded" (Alvarez and Pérez-Peña). It is the duty of a journalist to report facts, and it cannot be denied that Pulse nightclub is known as a gay nightclub. Therefore, including the identifier in the lede is not necessarily faulty. However, my further criticism upon the article's use deals with how prominently the identifier of gay is used.

The identifier's second appearance explicitly ties the motive to homophobia, and discloses an inaccurate, false statement. It said "[The incident] was the worst act of terrorism on American soil since Sept. 11, 2001, and the deadliest attack on a gay target in the nation's history, though officials said it was not clear whether some victims had been accidentally shot by law enforcement officers" (Alvarez and Pérez-Peña). In describing it as the deadliest attack on a gay target, The New York Times explicitly wrote that it was an intentional attack against a gay population, which was later revealed to be false.

2. *The Washington Post*, 13 June 2016

The first article written on the incident by The Washington Post was headlined "Gunman who killed 49 in Orlando nightclub had pledged allegiance to ISIS." In

this version of the article, the identifier is not used in the headline, an editorial decision well-made. Similar to The New York Times, The Washington Post used the identifier in the lede of the story, reporting "A gunman who pledged allegiance to the Islamic State opened fire inside a crowded gay bar and dance club here early Sunday, leaving 49 people dead and 53 injured in the deadliest mass shooting in U.S. history, authorities said" (Tsukayama et al.). An observation worth mentioning is that The Washington Post's article was written a day later than the New York Times' article, and differs in the reporting of how many people were killed at the shooting, 49 turning out to be the factually accurate amount. This speaks to a point made by Margaret Sullivan, former public editor, also known as ombudsman, at The New York Times. Ms. Sullivan's reign as public editor lasted from 2012-2016. Currently, she is the media columnist for The Washington Post. In a phone conversation, she referred to a challenge facing all journalist's today:

> "In breaking coverage of things, a lot of times there are mistakes and false conclusions that are drawn in immediate breaking coverage, it's almost unavoidable, because it's such a chaotic time. People are dying, and there's all this stuff going on, and you're trying to figure out what's going on. It's almost like a rule of engagement that, unfortunately, some of it is going to be wrong. I wish that were not the case but it generally is, which is why the news media needs to slow down a little bit sometimes which is also very hard to do because there's competitive pressures." (Sullivan)

Ms. Sullivan's statement was directly referring to "the impression that [the incident] was an anti-gay hate crime," but still rings true to the report of how many people were killed, adding to my own point that The Washington Post's editorial decision to refrain from racing to publish the story yielded a higher caliber of journalism. However, a faulty decision was made to include the sentence "[The incident] also ignited fears of a broader campaign against the American gay, lesbian and transgender community as the first anniversary of the landmark Supreme Court decision legalizing same-sex marriage approaches" (Tsukayama et al.) without the immediate, transparent addition that the motive of the crime was not yet clear. In my version of a style guide, the transparent concept of including a sentence disclosing that motives are unclear unless they have factually been proven otherwise must always be presented. Although the article did include such a sentence in reporting, "The Islamic State has repeatedly executed gay people and released videos showing their gruesome executions. FBI Special Agent Ron Hopper said the bureau was still working to determine whether sexual orientation was a motive in the Orlando attack," (Tsukayama, et al.) it did not come until eight paragraphs later. It should have been included in the same sentence that attempted to correlate the incident to a campaign against the gay community.

3. *Grantland*, 15 Jan. 2014

Although admittedly an extreme example, one newsroom's discovery of an individual's sexual orientation who was not openly transgender led to newsrooms attributing her suicide to fear of being outed, a causal relation I argue was not supported by facts. Grantland, the ESPN-owned sports and pop-culture digital magazine, published a 7,700 word longform article on "Dr. V's Magical Putter," with the subhead of "The remarkable story behind a mysterious inventor who built a 'scientifically superior' golf club." The story, written by Caleb Hannan, was not so much about the magical putter, Oracle GX1, as it was an unraveling of its inventor Dr. Essay Anne Vanderbilt, known to friends as Dr. V. Hannan had become fascinated with learning more about the inventor, despite Dr. V granting approval for the story in an email correspondence with Hannan so long as it focused on the science behind the putter, and not the scientist. Through his own diligent research, Hannan was able to uncover that Dr. V had lied about her credentials as an aeronautical physicist from MIT, confirming that "she had faked the credentials that made the science behind her club seem legitimate" (Hannan). He also discovered that she had taken cash from an investor that she never returned. This discovery exhibited a quality level of journalism and was undeniably relevant in a legitimate line of inquiry. It was the line of inquiry that led him to the discovery that she had been born a man. He reveals this in the sentence, "What began as a story about a brilliant woman with a new invention had turned into the tale of a troubled man who had invented a new life for himself" (Hannan).

It was not long after Hannan informed Dr. V and her partner, Gerri Jordan, of his discovery of her fraudulent past and her life as Stephen Krol that Dr. V committed suicide. After detailing Dr. V's aggression toward him upon discovering he had uncovered her fraudulent past and that she was a transgender woman, Hannan reveals that Dr. V had committed suicide in this course of his reporting and writing of this longform piece. He writes:

> "Not long after she sent her email, I got a call from a Pennsylvania phone number that I didn't recognize. It was Dr. V's ex-brother-in-law, who represented the closest I had gotten to finding someone who could tell me what she'd been like in her previous life. "Well, there's one less con man in the world now," he said. Even though he hated his former family member, this seemed like an especially cruel way to tell me that Dr. V had died. All he could tell me was what he knew — that it had been a suicide. A few weeks later a police report filled in the details." (Hannan)

After criticism of outing Dr. V caught on, Grantland's editor in chief, Bill Simmons, included an Editor's Note in disclosing: *"A letter from Grantland editor -in-chief Bill Simmons on the origins of this story and how it came to be published can be read here. A guest*

editorial from Christina Kahrl detailing the problems with this piece as they relate to transgender issues can be found here.”

In light of this unfolding, The Washington Post headlined their article "Grantland offers two sides on divisive article about transgender inventor who killed herself." The editorial decision to include "transgender" (Farhi) in the headline is one worth examination, as it was never internally discussed that Hannan had any intention to out Dr. V. While he had informed her that he was aware of her fraudulent past and was able to discover that she was born a male, it cannot be said with certainty that Dr. V committed suicide because she feared being outed. However, the identity of transgender and the event of committing suicide are predominant facts in the headline, and give off the impression that the two are verifiably correlated. Perhaps the idea of being exposed of lying about her academic background and work experience and having taken cash from an investor that she never returned would have been the reason she killed herself.

The decision to include the identifier of sexual orientation is one that should be analyzed more carefully on behalf of the editorial staff of any media organization. Due to its sensitive nature, it is critical that newsrooms have a discussion about when it is relevant in a news story and create guidelines to assist the editorial decision making process. Sullivan deems that there must be a sensible and justifiable reason to include identifiers, but my analysis reveals that sometimes sensibility can be blurred by subjective reasoning, rather than objectivity and due process. Ms. Sullivan attests that these judgement calls are made by human beings and sometimes the wrong judgement is made. One reason she provided for a wrong judgement being made is because of prejudices that may or may not be acknowledged. Sullivan said it would be impossible to make an overall sweeping statement that would prevent wrong judgements from occurring, which is why she deems it so important to have diversity in newsrooms so that people can bring sensitivity to certain subjects because of their own experience that "maybe the guy sitting next to them on the copy desk doesn't have, or maybe he does have it, and that's why it's really important not to have a completely homogeneous newsroom because it's valuable to have other people's points of view" (Sullivan). Her sentiments echo that of Simmons when he included in his editorial that the biggest mistake made by the editorial board was not having somebody from the transgender community read the draft before publication. This is not to say they would have held off on publishing it, but perhaps the impression Hannan gave off when he wrote "What began as a story about a brilliant woman with a new invention had turned into the tale of a troubled man who had invented a new life for himself" would have been reconsidered as it implied a causal relation between Dr. V's fraudulent past and her status as a transgender woman.

Given these considerations, I believe sexual ori-

entation to be relevant in biographical and announcement stories that involve significant, groundbreaking or historic events, such as in being the first of something. For example, The New York Times appropriately used the identifier of gay in their article headlined "Colorado Democrats Elect State's First Gay Speaker." It cannot be argued that historical moments on behalf of groups who have been marginalized serves as a newsworthy occurrence worth identifying. As for other occurrences, being wary of the causal relation placed on the identity of an individual and the event being discussed, especially when efforts of verification have not been made, is my other conclusive point of guidance in editorial decision making.

VIII. CONCLUSION

What began as an analysis about when to use sensitive identifiers such as race and sexual orientation in a news story soon became an awakening of the narratives journalists create through their application of such identifiers. At the premise of the scientific method and logical thought, we are taught that correlation does not equal causation. And yet, journalists have been committing logical fallacies in their reporting. Seemingly minor changes in a news story can make all the difference in the profession of journalism and its obligation to truth telling. Journalists have lent themselves to shaping public thought through false causal relations in their (purposeful or ignorant) application of sensitive identifiers such as race and sexual orientation in a news story. When news stories tie an identity such as race and sexual orientation to an event in an effort to create a correlation without due process, they are doing a disservice to the public, and ultimately fabricating social justice issues. Anyone who is concerned about injustice should be concerned that the stories journalists tell are often just plain false or imply a false narrative - which most people easily dismiss as such. As a result, real social justice issues get diluted in this flood. It has played a significant role in either distrust of the media, or journalism used as a platform for confirmation bias. However, this polarized view of journalism can be rectified through a recollection of core journalistic values in the face of sensitive stories.

In future research I hope to explore how social media and protests drive coverage in preposterous ways. The presence of protests and social media has made prematurely injecting race into a news story unavoidable, which unnecessarily creates a racial animus and puts the country into uproar, even where there is no evidence to support a racial motive. This mob mentality makes race relevant because journalists must include the identifier as a part of a reaction from the public. In other words, the mob makes it a part of the story, without any facts to prove it. But journalists have to cite their side, even if it means implying pertinence. A journalist is typically expected to point out community concerns while including context, facts, etc. that let the reader weigh if those concerns are valid in any particular case. The problem is when journalists stop taking it case by case

and start sorting stories out by narrative. However, it has become a recent phenomenon where community concerns are not an accurate gauge of anything, especially in the social media age of monstrous distortion. Social media outrage seems to be the tail that wags the media dog, and it helps journalists to get things wrong over and over.

The shooting of Michael Brown, an unarmed black teenager by a white male police officer, has widely been considered an event of injustice that spread the Black Lives Matter movement twice fold, and is a notable example of how outrage drives stories. Although the movement initially started after the July 13, 2013 acquittal of white male neighborhood watch guard George Zimmerman after he shot unarmed black/African American teenager Trayvon Martin, the movement especially caught on after the death of Michael Brown on August 9, 2014. Race became a huge issue in the coverage and reaction to the event, and several high-profile news stories on the matter resulted. The immediate reaction to the shooting was that it had been the result of racial prejudice, as can be seen in The New York Time's first article headlined "Grief and Protests Follow Shooting of a Teenager." The lede and nut graf were as follows:

> "The fatal shooting of an unarmed black teenager Saturday by a police officer in a St. Louis suburb came after a struggle for the officer's gun, police officials said Sunday, in an explanation that met with outrage and skepticism in the largely African-American community.
>
> The killing of the youth, Michael Brown, 18, ignited protests on Saturday and Sunday in Ferguson, Mo., a working-class suburb of about 20,000 residents. Hundreds of people gathered at the scene of the shooting to question the police and to light candles for Mr. Brown, who was planning to begin college classes on Monday." (Bosman and Fitzsimmons)

While I would argue that the media inappropriately injected race into the story and further created a racial animus country-wide, the reporting of the story began after a mob of protests. While journalists can't control the reaction of the community, it does not excuse the fact that more prominence was not placed on what they did not know - whether or not race played a role in Brown's death. Instead, an overload of implying a racial animus was given in the following paragraphs:

> "Mr. Brown's stepfather, Louis Head, held a cardboard sign that said, "Ferguson police just executed my unarmed son." At a news conference on Sunday morning, the St. Louis County police chief, Jon Belmar, said that a man had been shot and killed after he had assaulted a police officer and the two had struggled over the officer's gun inside his patrol car. At least one shot was fired from inside the car, Chief Belmar said.

> "The genesis of this was a physical confrontation," Chief Belmar told reporters. But elected officials and advocacy groups called for a full investigation and questioned the tactics of the police, who acknowledged that Mr. Brown had been unarmed. Antonio French, a city councilman in St. Louis, was at the scene of the protests on Sunday and said in an interview that more than 100 people had gathered, most of them silently standing in groups, some leaving behind teddy bears and balloons to memorialize Mr. Brown." (Bosman and Fitzsimmons)

As can be observed from the provided introductory paragraphs of the article, no facts are available to suggest a causal relation between Brown's identity and the event of his death. In fact, it is not until the 22nd out of 26 paragraphs that the article reveals "Any other details, including the reason as to why the encounter occurred and the initial struggle ensued, are still a part of the continuing investigation," the police said in a statement" (Bosman and Fitzsimmons). Even the mere rearranging of this paragraph to the third or fourth paragraph of the story would make a significant difference in The New York Times' credibility as an objective source of information. However, the burying of this information creates the impression that it is not as newsworthy as the reaction of the community, when in reality it is the only semblance of objectivity in the face of alleged racism.

IX. RECAP

It is the duty of journalists to serve as fact-tellers. Although this thesis initially sought to provide journalists with helpful and specific guidelines on when to use identifiers such as race and sexual orientation, it turned into the uncovering of shockingly faulty editorial decision making across the country in what could be described as the pursuit of a narrative. Stated simply, journalists should never imply a causation without due process and actual evidence supporting the causation. This should not be a newfound revelation for journalists. As discussed in the analysis of news stories, if stakeholders bring relevance into a story without causation being proved, the identifier should only be presented in the same paragraph introducing the stakeholder's point of view. However, transparency must also be presented in the form of a sentence stating that the race or sexual orientation of the individual(s) has not yet been determined to have been a causal factor. Journalists must be willing to include what they do not know, instead of running with a narrative and catastrophically misleading the public. Direct relevance can only be defined with facts, not with assumptions or the desires of fitting a narrative. The only advice I can offer to journalists is to recall their job as truth tellers: Can it be proven this sensitive identifier is pertinent in implying a causal relation? If the answer is no, do not include it in the headline or the lede. It may be introduced later if a stakeholder, such as protestors, makes it relevant from their point of view, but that is the only exception. Other-

wise, the journalist becomes the fabricator of the social justice issues, and not only are real social justice issues diluted in this flood, but journalism as a source of truth and objectivity is rendered false.

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Stuck in Limbo

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Artist Statement: "Stuck in Limbo" is a story I first started writing when I was applying to college, and deals with the struggles of starting a new chapter in one's life. The story follows the character of Chris, after he is killed in a car accident on his way to work. He finds himself in "Limbo Land," where he encounters several people and situations that gradually make him more accepting to the situation that he is in. This story is about learning to move on and to make the most out of the situations we face. Chris makes new friends, loses old ones, and learns more about himself. This story can represent anyone, particularly students in high school and college, who are learning that life will take you to many places, and how to cope with the changes that life brings.

Chris' alarm rang out at precisely 8:00am. He rubbed his eyes, climbed out of bed and stumbled over to the window where he opened the thick, velvet drapes. The intense LA sun brightened up the room, its rays reflected off the dark, mahogany wood floors, making them shine. Chris inhaled deeply and let the air out slowly. Man, he loved it here. The moment was quickly interrupted by the violent spasm of his cell phone going off.

"Gotta love show biz." Chris chuckled at the little gadget. He picked up the phone, "Tell me something good Al." It was his associate producer.

A few minutes later Chris, still on the phone, left his house in a hurry.

"No, I told them specifically to wait for me for just that reason…" He got in his car and headed towards the highway while bickering with Al on the phone. "We're going to lose so much money because of this deal…I know, I'm almost there."

Chris turned the corner, completely ignoring a stop sign as he weaved through angry commuters, already done with their day before it even started.

"I knew Starlight was going to try to steal the client before our negotiations were finalized, typical."

A pickup truck crashed into the driver's side of the car. For a moment, time stood still. Then the airbag deployed, hitting Chris in the face and breaking his nose. Chris' vision went blurry and his phone dropped out of his hand. Al's voice could still faintly be heard babbling on the other end. Chris shook his head. He felt his heart beating through his shirt, as if he'd just run a marathon. He put his hand on his chest. His shirt was stained with his own blood. That was close. Another car got caught in the chaos, swiping Chris from the other side.

"Shit."

Chris passed out behind the wheel.

Sometime later, Chris woke up no longer in his car. He lay on his back on the road. Looking around, he realized it wasn't the same road he had been driving on. He closed his eyes for a moment, convinced that the crash must've done something with his head. Opening his eyes again, he found himself still on the mysterious road. He sat up, confused and noticed his nose was no longer broken. Beginning to panic, Chris frantically looked around to see if anyone was near. Perhaps the guy who hit him kidnapped him and left him here! Chris reached into his pocket to find his phone, but discovered it wasn't there, and neither his wallet. He scrambled to his feet, and noticed the figure of a woman approach him. He squinted to get a better view. Chris didn't think he knew her, but he'd met more people than he could remember in his line of business. Thinking maybe she could help, he stumbled towards the woman.

"Excuse me…Miss!" Chris said. The woman didn't reply but continued to walk briskly towards him. She had long, dark hair, olive colored eyes, and moved with a sense of purpose. Chris felt a little intimidated. "Uh, miss, I've just been in a car accident, but I can't find my car… I blacked out…It might've gotten towed or something…Do you think I could use your phone?" he asked. The woman chuckled.

"Phones won't do you much good here." She said.

"Why's that?" Chris asked.

"No service."

She now stood directly in front of him, her eyes stared at him intensely as if she was looking into his soul. Chris couldn't help but look away.

"Do you think you could point me in the direction of where I can find a working phone?"

"Sit down." The woman demanded.

Chris, overwhelmed, didn't know what to say. Who did this woman think she was talking to him like that? However, it had already been a long day and he didn't feel like getting into an argument with a stranger, so he did as told. The woman sat down on a rock next to him, and explained what happened. He got into an accident, his car was totaled, the two other drivers were in

the hospital with severe injuries, and him…

"Stop." Chris jumped up and started to pace around, "I don't know who you are or what you want, but there's no way you're telling me…" He felt tears rush towards the back of his eyes. No. There's no way he was going to cry in front of this woman. There's NO way, he told himself and…he didn't. Chris paused for a second, he had sworn he was about to embarrass himself and burst out crying but the tears, they never came. They COULDN'T come. He shook his head. He couldn't cry. As in physically COULD NOT cry. Chris started to spin in circles, realizing he never took a moment to see where he was. He was on a long two-lane highway, which was the only road in sight. Around him was a vast desert, small plants sprouted here and there, but nothing too extravagant. The sky was a pale blue, not the intense fluorescent blue of LA, but more of a smoky blue-gray color, and the sun a faded yellow. Finally, Chris collapsed back to the ground, panting heavily.

"Where am I?" Chris asked, finally making eye contact with the strange woman.

"Limbo Land." She answered and stretched out her hand. "My name is Victoria. I am the head Decisioner here. I greet all newcomers."

Chris didn't shake her hand, but gave her a nod, not knowing what a "Decisioner" was. He was too exhausted to bother to ask.

"We can stay here as long as you like." Victoria said, Chris was startled when she put her hand on his shoulder, trying to comfort him. He wasn't in the mood and shook it off.

"And then what?" He asked.

"Then, I'll take you downtown. You'll be introduced to the rest of Limbo Land."

Chris looked away from Victoria. He admired the somber landscape. The sun was setting in the distance, making the cream-colored sand appear hazy. It was beautiful, in a sad kind of way. The vast desert made one feel all alone. It reminded him of the roads he would take going back home to the town he grew up in. Back in Wisconsin.

After a few minutes Chris stood up and told Victoria he was ready. They walked silently. It was almost an hour when the town she was talking about emerged in the distance. Victoria escorted Chris into what looked like the main municipal building, and lead him down a long, marble hallway. They entered a large multipurpose room with several rows of chairs set up facing a podium in the front.

"Take any seat you like." She said.

Chris wandered through the rows of chairs, looking at the faces of the others in the room. Some were frozen still, like statues, blankly staring ahead of them, others couldn't stop fidgeting, nervously scratching their heads and arms. Chris finally found a seat in the back row by himself where he sat down and prayed to wake up from whatever acid trip he was experiencing. A few minutes later, a short man with gelled up hair and a bowtie stood up behind the podium. He introduced himself as "Ernie" and said he was the president of Limbo Land. Chris snickered, and Victoria gave him

a glare from where she was standing on the other side of the room.

Ernie went on to explain a typical stay in Limbo Land was anywhere from 6 months to a year. He said their main purpose was to get everyone adapted and prepared for their "next life," mentioning weekly meetings with the Decisioners to assist them during the process. At the end of his speech, Ernie told the crowd they would all be getting a buddy, who they would live with and who would help guide them through their journey in Limbo Land. When Chris' name was called, he stood up and walked towards the front of the room. He had to crouch down in order to shake president Ernie's hand, then Ernie turned towards a tall, blonde haired guy around Chris' age.

"Chris, this is Jamie. He will be your buddy." Ernie said, and continued calling up names.

"Hey." Jamie said.

"Hi." Chris replied.

"Why don't we get out of here? I can show you around a little and then we'll get you settled at home."

Chris reluctantly followed Jamie out of the room. As much as he did not like the idea of living in a house with another man, he also did not think he could stay in that room much longer. They exited the municipal building and walked out into the main square. Chris noticed the same dull setting sun in the distance, it didn't seem to have moved an inch since the last time he saw it.

"Hey, what time is it?" Chris asked Jamie, who checked his watch.

"5 o'clock."

"That sun hasn't moved since I got here," he explained "and I must've arrived hours ago!"

Jamie got a sudden look of realization and nodded sympathetically. "That sun doesn't move, Chris."

"What?"

"We're no longer on Earth. We keep time the same way in order to better run things, but the sun doesn't move, we're not rotating."

"Oh." Jamie's answer seemed to make sense, so Chris continued walking along. He asked Jamie if he had thick curtains to block out the sun when sleeping. Jamie chuckled and told him that he no longer, physically, needed sleep. Chris was starting to get a better feeling for this place. After all, a place where he couldn't cry and didn't need to sleep, that didn't sound so bad. He followed Jamie down the road, who pointed out places like the local barber shop, deli (where Chris learned that he also didn't need to eat but people did anyway because they liked the taste), and the bar (because who knew but apparently dead souls could also get drunk). Finally, they stopped at a house, which Jamie said was theirs.

A few days later, Chris stumbled home late from the bar. He'd been spending a lot of time there since coming to Limbo Land. It seemed no matter how friendly and supportive everyone was, he still could not wrap his head around the fact that his "life" was com-

pletely different. He missed waking up to the blue skies of LA every morning, or going to the local coffee shop in his suit and seeing all the ladies turn their heads as he walked by. Most of all, he missed his job. It had consumed his life on Earth and, quite frankly, he was not getting along without it. He missed Al, who used to call him almost every morning with some sort of melt down. As Chris walked, he noticed a small trail that led down to a set of docks. Curiously, he followed the trail down to a lake. He sat down at the end of one of the docks, staring out onto the horizon. The lake seemed to go on for miles, and it felt like he could just sit here, forever, and be perfectly content. He didn't notice a figure was walking towards him, until he heard a subtle laugh coming from the distance. He turned to see who it was, but saw only woods and the trail he had come from. He got up hastily when he heard the laugh again. It was coming from the woods, and seemed to be growing louder. He walked closer and, just at the entrance to the woods, he saw the figure. It was leaning on a tree about 5 yards away.

"Who are you?" Chris called out. The figure didn't answer at first, but flashed a smile and started to walk towards him.

"They call me Cameron." A man replied, a cigarette dangling out of his mouth.

"What are you laughing about?"

Cameron flashed another crooked smile and didn't answer, but instead asked another question in return.

"Do you miss home, Christopher?"

"How do you know my name?" Chris asked, wishing he had just gone home.

"Don't look so worried, I know everybody's name." Cameron took a long drag. "If you miss home, I got something to show you." He turned, and started walking towards the woods. Chris was unsure as to whether to follow him, but eventually figured that there was no way he could become more dead, so there was really nothing to worry about. He followed Cameron into the woods, and the two came across a clearing. In the center there was a huge pit with caution tape around it. Chris stared in amazement.

"Welcome to the Pit." Cameron turned around, took another drag of his cigarette. "I have a feeling you'll like it."

Chris eyed Cameron skeptically, it was hard to tell if this guy was being malicious or if he was just totally crazy.

"What is so great about a giant hole in the ground?" Chris asked.

Cameron laughed.

"It's not just a hole in the ground, Christopher. This is a gateway, between this world and the one you just left."

Chris paused, was this guy saying that going back to Earth was as easy as jumping down a giant hole? It didn't seem like it should be that simple.

"You see Chris. I know you don't want to be here, and I can help you go back to your old life. As long as you put in a good word for me with your new

Decisioner friend."

Chris didn't know what to say. He liked the idea of getting to see his beloved LA again, but didn't trust Cameron. Besides, if he needed Chris, someone who had only been in Limbo Land for a few days to put in a good word for him, he clearly was up to no good.

"Sorry, I'm not interested." Chris said.

He stumbled through the woods, trying to get away from Cameron and the Pit. He could hear Cameron yelling something indistinguishable at him. Chris cursed as he tripped over branches and twigs, finally making it back to the trail that had taken him to the docks. When he got home, he didn't mention a word to Jamie and locked himself in his room.

The next day, Chris came downstairs and found Jamie's eyes glued to the television. He peered over Jamie's shoulder to see what was on and saw a list of names of people who had been approved for Heaven this month.

"Those are the lucky ones." Chris remarked and Jamie, not realizing he was there, turned around.

"You're telling me, I had my meeting with the Decisioners yesterday. They said I might be eligible for next month!"

"That's great."

Chris still hadn't mentioned anything to Jamie about last night. Since nobody had previously mentioned the Pit, he had a feeling it wasn't supposed to be found. Despite his new little secret, Chris had slowly been warming up to Jamie. He had learned recently that the two of them actually had a lot more in common than he thought. Jamie had been a highly decorated police officer. He had only been in Limbo Land for two months before Chris, having died in a drunk driving accident. He fell off the wagon after his wife had perished from breast cancer only six months prior. The whole thing was tragic. Chris realized the reason him and Jamie had been placed together in the first place was because they had both died in a car accident. He guessed president Ernie and the Decisioners thought they could help each other somehow. Chris scrambled some eggs and sat on the couch, trying to see if he recognized any of the names.

"How do people actually go to Heaven?" Chris asked.

"There's a lake on the other side of town," Jamie answered, "every month a boat comes and brings those who are ready across. I'll take you down to see it sometime." Chris was about to mention that he had already found the lake, but realized that might bring up his encounter with Cameron and decided not to say anything. He continued watching the names as they rolled across the screen, wondering if his name would be listed one day.

Later on, Chris decided to return to the docks, hoping that his new "friend" wouldn't be there. He followed the trail he had used the night before, and just sat for a while, looking out onto the vast horizon. It made sense that this was where souls went to reach Heaven. The waves were a cool turquoise that glittered under the pale, never setting sun. They crashed ever so lightly on

the rocks beneath the dock and made a sound that Chris could only compare to Angels singing. It was the most peaceful place in Limbo Land.

After sitting for a while Chris eventually got up and started to walk towards the forest. This probably was a bad idea, but he couldn't control his curiosity. He did, after all, miss the life and the people he had left behind, and couldn't help but wish that he had at least gotten the chance to say goodbye. His life had ended too suddenly, and with no warning. There's so much he would have wanted to say and do if he had known his life would be forever changed on that day.

Chris meandered his way into the dark woods, stepping over loose twigs and squeezing between overgrown shrubs. Eventually he came to the clearing that Cameron had brought him to the day before. Luckily, there was no sign of him and Chris breathed a sigh of relief. He walked right up to the edge of the Pit, the yellow caution tape lay flat across his chest and he peered his head over, wondering if he would be able to see Earth, but all he could see was an endless black void. Perhaps Cameron had lied to him, Chris thought, maybe this Pit didn't even lead to Earth at all. Maybe it even led to Hell! Just as Chris was about to step back, he heard the slight crack of a twig behind him. He turned to see who it was when he felt a hand push at the small of his back. He spun an saw Cameron with a smile on his face. Losing his balance and with his arms flailing, Chris fell into the Pit.

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When Chris woke up, he was once again lying on a road. He sat up, and realized that this was the road where the car accident had happened, and he was sitting right in the intersection! Cars came and hit him from all directions, but…he felt nothing. They just went right through him! He laughed, praising whatever divine powers that be that he was in fact back in Los Angeles! After purposefully jumping in front of cars for a few minutes, he decided he would take this time to do all the things he hadn't gotten the chance to do before he died. He still wanted to tell everyone at work how much he was going to miss them. He started walking down the boulevard, occasionally sticking his hand out in traffic and cracking up when the cars went right through it.

Some half an hour later, Chris was standing outside of his building. He took a moment to admire it. So many brilliant artists had come through here. This was a place where dreams were made. He walked in and started looking for his coworkers. Chris took the elevator up to the 13th floor, and decided to fool around with the other passengers by making the buttons light up and the doors open and close.

"This is freaking me out!" one woman exclaimed, and got out, stating she was going to take the stairs.

Chris was definitely enjoying himself. When he got to the 13th floor the first thing he looked for was Al's office. He walked right through the door and saw Al sitting at his desk talking frantically on the phone.

"I know…" Al stammered, "Yes, I understand.

My sincere apologies. Our office has been a bit flustered after the passing of our managing producer, Chris…" Chris was touched. Maybe he hadn't been so forgotten after all. "Thank you so much, goodbye." Al hung up the phone, put his head in his hands.

"Hey Al!" Chris called over to him, but Al didn't hear him. "Al!"

Al looked over his shoulder, as if he might've heard something, then shook his head and started to read the papers that were piled up on his desk. Frustrated, Chris tried to come up with another way to communicate. He picked up a piece of paper, thinking he could write a note. He was looking for a pen when Al glanced up and saw the paper floating midair.

"What the hell!" Al exclaimed, grabbing the paper right out of Chris's hand. Al then dialed the phone for his secretary. "Donna, can you lower the AC? There's some kind of funny draft in here." He hung up the phone.

Chris couldn't believe it. A draft? A DRAFT?! Here he was trying to communicate with his best friend, and he excused it as some kind of draft? Bitter and angry, Chris stormed out of the office and back towards the elevator. Not a single person noticed his presence. All just walked through him as though he wasn't even there. Chris went back down to the lobby and ran out the door as fast as he could. He didn't want to be anywhere near that place.

When Chris finally stopped running, he was somewhere in the suburbs. He walked along the avenues for a long time. Still upset about what had happened in Al's office. He tried to wrap his head around the fact that his life, or "afterlife," really was going to be different after all. At least it wasn't like he was forgotten; he had seen how distraught Al was when he had mentioned his passing on the phone. He sat down on the curb, debating whether to head back or not. He wasn't even entirely sure how he could get back to Limbo Land. He wondered if anyone had even noticed he went missing.

After fighting with his thoughts for a few minutes, Chris realized he had been sitting directly across the street from his ex-girlfriend, Maddie's, house. Shit. He hadn't talked to her in years. They had met as kids back in Wisconsin and had dated through high school. She had then gone to college in New York City and left him all to himself. A few months after she left, he had decided to move to LA. It was something he had considered for a long time but didn't have the courage to do until she left. After a few years, she also moved to the area and the two of them had tried to rekindle things, but to no avail. Chris was still pretty bitter about her leaving, and things didn't get very far.

Chris got up from the curb and started walking towards the house, he peered into the window and saw Maddie sitting at her kitchen table, eating dinner alone. In the back of his mind, he figured this was a bad idea, that it would probably end the same way his visit to the office did, but once again he couldn't stop himself. He stepped through the wall, he could really get used to this, and walked towards her. He saw on the table there was an open newspaper with his obituary in it. It seems

as if Maddie hadn't forgotten him either. Just as he was about to go up and speak to her, a sharp voice echoed from behind him.

"What do you think you're doing!?"

Chris spun around and saw Victoria standing in the living room, arms crossed, an exasperated look on her face.

"Look it wasn't me... Cameron-"

"I know what Cameron did." Victoria cut him off, "Chris, we need to leave, you shouldn't be here-"

"I just wanted to say goodbye." He cut her off. "Alright, that's it!"

"And what about what just happened at the office?" Victoria reminded him.

Chris refused to listen. He put his hand on Maddie's arm and she shivered, as if hit by a chill, and pulled her arm away.

"You're only going to scare her." Victoria scolded, "We don't have much time."

"What do you mean?" Chris snapped, "We're DEAD, we have ALL the time."

"That's where you're wrong." Victoria replied, her voice quivering, "The part that Cameron must've 'forgotten' to tell you is this, if you don't return to Limbo Land 24 hours after leaving, you can never return. Chris you'll be stuck here, as a ghost."

"What?!" Chris exclaimed.

He nodded towards Victoria and they both started to run, dashing out of the house, and down the street. After running for a few minutes, Chris remembered that he actually had no idea where they were going. He shouted over at Victoria, who replied they needed to make it to the woods on the outskirts of town. Chris followed Victoria into the woods where they eventually came across a hole, much smaller and less impressive than the Pit, hidden behind a shrub. Victoria climbed down first and Chris followed her, they crawled for nearly an hour when they finally resurfaced. As Chris emerged from the ditch, he saw the same desert and two-lane highway that he had seen when he first arrived in Limbo Land.

"Is this how you bring all newly dead souls to Limbo Land?" he asked, panting.

"Unfortunately, yes." Victoria replied.

The two began their slow trek back to town. Chris was unsure of what to say, still in disbelief of the past 24 hours. Victoria seemed to recognize his uncertainty.

"Everything will be alright." She told him, "You weren't the first soul to be drawn to the Pit and you won't be the last."

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It had been about a month since the incident with the Pit. Victoria brought Chris back to the town hall that night, where the other Decisioners had been waiting, and they were all furious. Chris paid his dues for the whole thing by working as a clerk for the town hall office for the past month and for the next two still to come. He probably answered millions of calls every day from aggravated souls asking if their names had

moved any closer to being on this month's list for Heaven. He wondered if this is what criminals ended up doing for all eternity.

Chris had been spending a lot of time down by the docks. With Cameron permanently forbidden from the area, he no longer worried that his visits would be interrupted. Apparently, Cameron pushing Chris into the Pit hadn't been his first run-in with the law in Limbo Land. After a brawl at the local pub, Cameron had gotten himself put on the Extended Visitor's list, meaning his stay in Limbo Land was extended indefinitely. He thought he could get off the list by offering Chris a way back home in exchange for him putting in a good word with Victoria. Obviously when Chris turned him down, he was angry, and took the opportunity to get his revenge when Chris foolishly went back to the Pit the following night.

Chris let his feet dangle into the cool water below. Victoria accompanied him some days, and the two would spend hours just talking. He told her all about how he had gone from just a brokenhearted young boy in a midwestern town to one of the highest paid producers in Hollywood. He learned Victoria had taken up her post as Decisioner, quickly moving up the ranks to Head Decisioner, over 200 years ago. She had died giving birth to her second child, the wife of a profound judge. Chris liked his long talks with Victoria, and for the first time since coming to Limbo Land he felt like he had a friend.

Chris heard voices cheering behind him and knew his privacy was coming to an end. Today was a special day. It was finally Jamie's turn to cross the lake into Heaven. Chris was glad to see Jamie move on. Their lives had both been taken away so suddenly, too soon.

Chris stood up, and found Jamie amongst the crowd of eager onlookers. Opening his arms, the two stood in a long embrace.

"Good luck." Chris said.

Jamie nodded, and walked down to the docks. He stopped at the end of the longest one, turned and waved towards the crowd. Chris waved back eagerly. Victoria came up behind him, also waving. Jamie turned back around and climbed into a small boat that Chris had never noticed before. The boat started to move, all on its own, across the pearly waves and into the beyond. Chris didn't stop waving until Jamie was out of sight. He felt as if tears should be streaming down his face but, of course, they would never come. Victoria put a hand on his shoulder.

"One day," she said, "that'll be you."

Chris turned and hugged her. The two stood there a while, and by the time they had let go most of the crowd had left, Jamie was no longer visible. The two then started the walk back, and Chris realized that for the first time since coming here he would go home to a house all by himself. He turned around only once, to see if he could catch the slightest glimpse of Jamie, but, like Chris in Los Angeles, he was gone. He followed Victoria the rest of the way, knowing in his heart that she was right.

Reinforcement Learning Algorithms in a Multi-Snake Environment

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Abstract: Machine learning has led to significant progress in previously unsolved problems such as speech recognition and self-driving cars. Reinforcement learning is the subset of machine learning that deals with computer agents making a sequence of autonomous actions to achieve a set goal or reward. One popular way to test and train reinforcement learning algorithms is through playing video games because they have a set reward and are easy to model in ways that computer agents can understand. One area of reinforcement learning that has shown promise is multi-agent environments where more than one autonomous agent interacts in a competitive or cooperative way. While static environments are easier to solve because they have set rules that the agent can learn, this can lead to over fitting of the agent to its environment and an inability to transfer learned knowledge to other problems and environments. Multi-agent environments provide variability that has been shown to lead to more complex emergent behaviors. In this paper, I use the state-of-the-art reinforcement learning algorithms Proximal Policy Optimization (PPO) and Trust-Region Policy Optimization (TRPO) in a multiplayer clone of the classic game snake. The environment the agents compete in uses the Gym framework, and the agents use TensorFlow, a Python API for implementing machine-learning algorithms. I examine the performance of these agents after several iterations of training measured by the rewards an agent gets from playing the game. I also compare and contrast PPO and TRPO for this problem and show that PPO agents train much faster than TRPO agents and show more promising results in this environment.

Introduction

The concept of Artificial Intelligence, (AI) bestowing on computers the ability to think and reason as well as humans, has fascinated computer scientists and researchers for decades and led to many advancements in computing. As a part of the field of AI, machine learning is a discipline that uses data to train models that are then used to solve problems. This is in contrast to expert systems that use algorithms written by programmers to codify the rules that make machines intelligent. Using more robust learning algorithms and exponential increases in computing power and data storage capacity, researchers have been able to solve problems that were only solvable by humans such as natural language processing, image processing, and self-driving cars. A recent example includes DeepMind's (a subsidiary of Alphabet, Google's parent company) AlphaGo beating the top world champions in the board game Go (Metz, 2016). In this board game, two players compete to capture space by enveloping the other player's pieces. While it seems simple, there are more possible moves than there are stars in the sky, far too many to calculate the outcomes ahead of time with conventional means. This victory was significant because of the complexity of the game and the number of possible moves compared to previously solved games like chess. When IBM's Deep Blue beat the world chess champion in 1997, it succeeded because it was an expert machine that was able to calculate the results of every possible move and pick the best one. In Go, because of the large number of possible moves on the board, it wouldn't be feasible to calculate the results of every possible move. To win this game, researchers at DeepMind had to use machine-learning techniques to teach an agent how to play the game. With machine-learning, data is collected and used to train an agent to accomplish a task autonomously by optimizing functions that represent the task or goal of the agent. In recent years, machine learning has been super charged by the convergence of exponentially faster computers, increasingly cheaper computing power available through the cloud, and the reemergence of an old idea put in to practical use for the first time with this new computing power, neural networks. While machine learning can be done without neural networks, they have led to much more robust computer agents that are capable of more advanced tasks than simpler machine learning methods. Neural networks are loosely based on the human brain and the mathematical foundations of the connections that make up the human brain. While neural networks are often a simplification of the brain that they are based on, machine learning algorithms that use neural networks are already capable of superhuman ability in certain narrow tasks. This narrow but superhuman knowledge means that an AI like AlphaGo can be the best Go player in the world but will not be able to pick up chess without losing its Go playing ability. This has led to significant advances in domains that previously only belonged to humans, such as,

computer vision, speech recognition, and autonomous machines like self-driving cars.

This last category is the domain of reinforcement learning, a subfield of machine learning. As stated in "OpenAI Gym," "Reinforcement learning is the branch of machine learning that is concerned with making sequences of decisions." (Brockman et al. 2016). This is in contrast to previously mentioned problems such as classification, used in computer vision to decipher images, and regression, which is used to come to quantitative conclusions about data. "OpenAI Gym" marked the starting point of a new era of comparable and easily peer-reviewed reinforcement learning research by defining a useful interface for digital environments and laying out future directions for research. Among these future directions for research are multi-agent environments, which is the subject of this paper. In reinforcement learning the agent is the trained computer program that solves a given problem and the environment is the world that the agent interacts with and observes to solve the problem. By introducing the variability of multiple competing or cooperative agents to the playing field, we have the opportunity to observe emergent behaviors in the models trained on this environment because of the added complexity of multiple autonomous agents. These multi-agent environments also more closely resemble the real world, in which there are millions of autonomous actors working together and against each other to accomplish various goals. Since machine learning and reinforcement learning algorithms are already influencing the real world in their decisions on applications like facial recognition and self-driving cars, it is important that we find robust solutions to these problems that are able to stand up to the rigorous conditions of the real world.

We use games and simulations to test machine learning algorithms and approaches because they provide two critical features needed to train good reinforcement learning agents. The first of these is an easy way to observe the environment; because video games and simulations are already digital environments, we can easily translate them into data that reinforcement learning agents can understand by capturing the screen and turning the pixel values into arrays of data. The second feature is a quantifiable reward structure that we can use to give our agents a goal that they can use to develop more long-term strategies. Without a quantifiable reward it is hard to teach current reinforcement learning agents that rely on reward functions or policy functions that use reward functions.

This study examines the performance of two reinforcement learning algorithms on the "Slitherin" problem from "Requests for Research 2" from OpenAI (Sutskever et al. 2018). In this problem, researchers were challenged to implement a multiplayer clone of the classic game Snake and solve it with reinforcement learning agents. These agents were implemented using the stable baselines repository (Hill et al. 2018), a fork of the OpenAI baseline implementations of popular reinforcement learning algorithms (Dhariwal et al. 2017).

This environment is a clone of the game Snake that allows multiple snakes to play at once and compete for food. While the game was originally single player, this multiplayer version will allow us to observe the learned behaviors of the interactions between snakes. The Environment used in this study is a fork of the Gym environment "Gym-Snake" (Grant, 2018) that was modified to work with the stable baselines repository among other modifications described in the environment section of this paper.

In "Multi-Agent Actor-Critic for Mixed Cooperative-Competitive Environments" (Lowe et al. 2017), the authors used the Gym environment for multi-agent reinforcement learning with a novel approach called multi-agent deep deterministic policy gradient (MADDPG), which is a variation of earlier work with deep deterministic policy gradients (DDPG). This modified algorithm was specifically written to solve multi-agent problems because the existing algorithms such as Q-learning, other policy gradients, and actor-critic methods had certain limitations that prevented them from solving this problem by themselves. The results of this paper are interesting because the MADDPG agent was able to vastly outperform the other algorithms in the four environments the team tested.

In "Emergent Complexity via Multi-Agent Competition," the authors make the case for the importance of studying multi-agent environments by showing that agents trained in these environments begin to show emergent behaviors that are not normally seen in relatively simple environments (Bansal et al. 2017). The methodology of this experiment is also interesting because it utilizes two previously mentioned studies, "Multi-Agent Actor-Critic for Mixed Cooperative-Competitive Environments" and "Proximal Policy Optimization Algorithms." In this paper, Bansal et al. describes a study of emergent behaviors in a multi-agent environment using the existing PPO algorithm and this work closely aligns with the research done in this study with PPO and TRPO.

Environment

The environment used in this experiment is a multiplayer clone of the game "Snake" commonly found on Nokia 3310 phones and reproduced on many other platforms. This problem was posed by OpenAI in their second request for research that was designed to get more people working on multi-agent problems (Sutskever et al. 2018). This environment, made by Grant (2018), was designed as an OpenAI Gym environment and allows for customization in the size of field, number of snakes, amount of food, etc. This environment has been modified to work with the stable baselines repository and to provide the correct observation space and action space to the algorithm in the multi-snake environment. The rewards have also been reconfigured to return the sum of the rewards for all of the snakes rather than an array so that it works with the algorithms from the stable baselines repository. The scor-

ing system used to evaluate the trained agents is based on the rewards used to train the agent. Starting at 0, a snake receives -1 each time a snake dies and +1 for each fruit that gets picked up. The lowest score possible is -2 and this scoring system is used to try and teach the agent which actions to take by giving it a negative reward for failing and a positive reward for succeeding.

I configured the environment to use a 25 by 25 square grid, the default size, and feature 2 snakes and 5 fruit. To minimize complexity, this study used two snakes because the request for research recommended to start with 2 snakes before attempting to scale the game to more snakes (Sutskever et al. 2018). This study used 5 fruit at a time on the playing field because of the way PPO and TRPO learn. They both use random actions in the beginning to explore the environment and get feedback on their actions, so having 5 fruit on the field could make it more likely that a snake would accidentally pick up a fruit in the beginning and learn from the positive reward to pick up more fruit in the future. Each time a snake eats a fruit it grows by one square and another fruit appears on the playing field.

Methodology

In reinforcement learning, there are two major branches of learning algorithms, Q-learning, where you train a function that directly selects the action to take given a certain state, and policy gradient methods, where you train a policy that predicts the best action to take at any given state. Policy gradient methods have been shown to be more versatile and robust, and have largely superseded Q-learning, but they are often more complicated to implement and apply to problems (Schulman et al. 2017). In this environment, this study compares the performance of two reinforcement learning algorithms: Trust Region Policy Optimization (Schulman et al. 2015) and Proximal Policy Optimization (Schulman et al. 2017) over multiple training sessions and with 3 agents for each algorithm. The Open-AI baselines are high quality implementations of common reinforcement learning algorithms, including DQN, PPO, AC3, and others, that are available for reinforcement learning research (Dhariwal et al. 2017). This study was done using a fork of this software called stable baselines (Hill et al. 2018) that has an easier to use API and high-quality implementations of TRPO and PPO.

"Proximal Policy Optimization Algorithms" introduces a novel upgrade to policy optimization algorithms that improves performance in the standard OpenAI environments over previous policy optimization algorithms (Schulman et al. 2017). Policy gradient algorithms use a proxy for the actions that the agent will take instead of directly training a neural network to find those values. This generally leads to more flexibility and emergent behaviors than Deep Q Networks (DQN) which directly train the network to determine Q values that represent every possible action in every possible

scenario. PPO has many benefits added compared to standard policy gradients, as described in the abstract for "Proximal Policy Optimization Algorithms":

We propose a new family of policy gradient methods for reinforcement learning, which alternate between sampling data through interaction with the environment, and optimizing a "surrogate" objective function using stochastic gradient ascent. Whereas standard policy gradient methods perform one gradient update per data sample, we propose a novel objective function that enables multiple epochs of minibatch updates. (Schulman et al.).

I will be comparing PPO to Trust Region Policy Optimization (TRPO), an older policy gradient algorithm that does not use the minibatch updates (Schulman et al. 2015). Minibatch updates refers to using multiple smaller updates to the policy and allows implementations of PPO to be multi-threaded while TRPO is single-threaded. TRPO uses a "trust region" to make sure that changes to the policy do not change it drastically, but does not utilize minibatch updates. Due to the randomness associated with learning solely from experience, this study compares 3 agents per algorithm to more effectively compare the rate at which the agents learn and the average score of the fully trained agents. This problem was challenging because reinforcement learning methods such as Deep Q-Learning (DQN) would be unable to cope with the variability of a multi-agent environment that would otherwise be perfectly suited to solving this game in a single-player setting. PPO and TRPO were chosen for this problem because they are well suited to play this kind of game where there is random chance and no fixed sequence of events to learn. Other algorithms like Deep Q-Networks do not handle changing environments well. In training these agents there are two ways to measure the time that these algorithms take to train. A time step refers to a single turn in the game and each time step there will be an observation by the agent and a single action for each snake on the playing field. The absolute time in minutes and hours it takes to run these training sessions can then be used to compare the training performance of these algorithms. The agents were trained for 3 separate time steps, 100,000, 1,000,000, and 10,000,000 time steps broken down into the initial 100,000, an additional 900,000, and finally an additional 9,000,000. This was done to compare the results of additional training on the same agents and to save historic models of each agent at each milestone for comparison. The PPO agents were trained for all three training sessions, while the TRPO agents were only trained for two sessions because the TRPO agents took longer to run two sessions than the PPO agents took for all three, and this study focuses on the relative training time of these agents. This results in a similar training time for all the agents but a very different amount of time steps and thus experience gained in their training. The default hyperparameters for the CnnPolicy from stable baselines were used to make these agents.

Table 1. Results from the first training sessions

Agent	Time Steps	Session Run Time	Total Run Time	Smoothed Reward
PPO1	100,000	5m 44s	5m 44s	-1.996
PPO2	100,000	5m 44s	5m 44s	-1.904
PPO3	100,000	5m 49s	5m 49s	-1.995
TRPO1	100,000	1h 10m 32s	1h 10m 32s	-1.706
TRPO2	100,000	1h 9m 5s	1h 9m 5s	-1.842
TRPO3	100,000	1h 11m 3s	1h 11m 3s	-1.566

Table 2. Results from the second training sessions

Agent	Time Steps	Session Run Time	Total Run Time	Smoothed Reward
PPO1	1,000,000	54m 47s	1h 0m 31s	-0.7237
PPO2	1,000,000	56m 43s	1h 2m 27s	0.2234
PPO3	1,000,000	56m 18s	1h 2m 07s	0.3644
TRPO1	1,000,000	10h 30m 20s	11h 40m 52s	-0.8674
TRPO2	1,000,000	11h 23m 43s	12h 32m 48s	2.356
TRPO3	1,000,000	11h 4m 23s	12h 15m 26s	-1.765

When training these agents, it became difficult to complete training sessions because of how long it took to run these training sessions on my computer. These algorithms are slow on conventional CPUs (Central Processing Unit) but can be greatly accelerated with compatible GPUs (Graphics Processing Unit). The type of math that GPUs are designed to be perform quickly, 3D geometry and vector math for graphics acceleration, happens to make these specialized parts really good at the math needed for training machine learning agents as well. To overcome these limitations, the long-term training for the study was done on an Azure Deep Learning Virtual Machine because it is specifically designed for machine learning research. It comes with a full development environment and TensorFlow preinstalled and configured to use GPU acceleration. This allowed shorter training sessions, as well as the ability to train more capable agents. The virtual machine ran on a NC6 instance, a GPU optimized virtual machine with a Nvidia Tesla K80 GPU, in the US East region and sent the resulting trained models and training logs back to my computer to observe them playing and interpret the data.

Training data was collected using the logging function of the stable baselines API and the data was visualized using TensorBoard. TensorBoard is a part of TensorFlow that allows you to visualize the training data of your machine learning agents. Training data was used to extracted relevant data for the results section and to use TensorBoard to create graphs of training data. Due to the randomness inherent in learning through random exploration, the training data has a lot of noise. To combat this noise, the default smoothing coefficient of 0.6 was used to reduce the noise and expose the trends that are discussed in the results section. TensorBoard was also used to produce the graphs that are in the results section.

Results

The training data was collected using the TensorBoard logging function of stable baselines and the agents were evaluated by using the smoothing function in TensorBoard to eliminate noise and show trends in the data. The smoothing function in TensorBoard reduces the noise in the data set by applying a weight to the value (I used the default value of 0.6). The smoothed value more clearly shows the trends in the data over the course of many hours of training.

The first training session consisted of 100,000 time steps of training for all 6 agents, the 3 PPO and 3 TRPO agents, with each time step being a turn in the game (Table 1). The PPO agents were extremely fast in this stage, taking approximately 5 minutes due to multithreading, which allows multiple training sessions to happen concurrently and update the same policy. The TRPO agents took much longer to run with over an hour for each agent, but showed slightly better results at this stage of the training than PPO agents. This seems to indicate that TRPO agents are able to learn more with

less actual experience measured by turns in the game, but when comparing the run time of the agents PPO is clearly much faster, which allows for additional training to close the gap. Overall, 100,000 time steps does not appear to be enough training for either of these algorithms to produce agents that can play the game well enough to get a positive score. This negative score comes from the fact that the agent receives a negative reward when a snake dies (-1) and a positive reward when it picks up a fruit (+1), which means that a model would have to pick up at least 2 fruit to break even in a single game.

The second training sessions were for an additional 900,000 time steps to bring the total training of each agent to 1,000,000 time steps (Table 2). This step of the training is interesting because the PPO agents are starting to show some improvement with only just over an hour total of training while the TRPO agents took significantly longer to finish their training with only one TRPO agent getting a positive smoothed reward. Despite the differing smoothed rewards for the TRPO agents at this point in time, all three TRPO agents performed similarly in final testing which indicates that these smoothed rewards are due to excessive noise in the data. Since the TRPO agents took over 10 hours to finish this part of the training on an Azure NC6 instance, the last training session was only carried out by the PPO agents.

For the final training sessions (Table 3), the PPO agents were trained for an additional 9,000,000 time steps to bring them to 10,000,000 total time steps.

If we compare the time steps the agents complete by relative execution time, the PPO agents have been able to complete an order of magnitude more experience, 10,000,000 versus 1,000,000 time steps, compared to the TRPO agents. However, the amount of experience is not as important as what the agent is able to learn from that experience and whether that results in a trained model that can play the game well. According to the training data, the PPO agents do not disappoint here either, with the lowest scoring PPO agent outperforming the highest scoring TRPO agent by a sizable margin. The PPO agents also learned different strategies spontaneously through trial and error despite using the same learning algorithm and environment.

To collect more data on how the fully trained agents play the game, videos of the agents playing 10 games in a row were recorded and the scores from these sessions were averaged in Table 4. The TRPO agents did not seem to develop any recognizable strategy, and this is likely due to a lack of experience even with all of the training time these agents had. The fact that the TRPO agents did not develop any coherent strategy with more training time than the PPO agents shows the important advancements in performance that PPO introduced, especially because it is multithreaded. The PPO agents developed some unique strategies to maximize their average rewards, often employing strategies that people would use to turn around or avoid a wall in a unique way. It is also interesting that the snakes do not seem to go straight for food objects in ways that you would commonly see a person go after them, because the agents spontaneously learned strategies to stay alive

Table 3. Results from the third training sessions.

Agent	Time Steps	Session Run Time	Total Run Time	Smoothed Reward
PPO1	10,000,000	9h 27m 53s	10h 28m 24s	6.866
PPO2	10,000,000	9h 34m 13s	10h 36m 40s	4.137
PPO3	10,000,000	9h 31m 25s	10h 33m 32s	9.781

Table 4: Average score over 10 games for fully trained agents with 10,000,000 time steps for PPO agents and 1,000,000 time steps for TRPO agents.

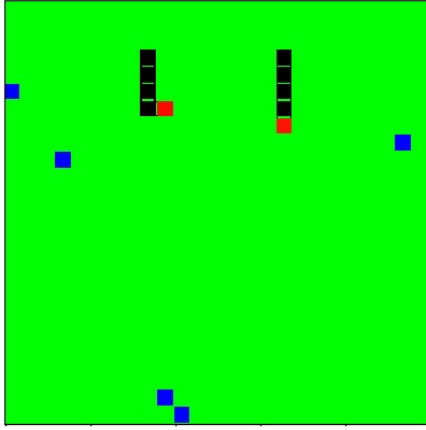| Agent	Score
PPO1	7.8
PPO2	3.9
PPO3	11.3
TRPO1	-1.3
TRPO2	-1.2
TRPO3	-1.3

Figure 1. An example of the environment with two snakes at their starting positions

that aren't readily apparent to a human observer. PPO1 and PPO2 also seemed to develop a strategy of immediately killing one snake while maximizing the other snake. PPO3 was the most interesting to watch, however, because it is the only agent that performs equally well on both snakes and this seems to be why it has the highest average score.

Conclusions

Implementing machine learning algorithms to solve multi-agent environments can still be challenging as existing tools and environments are mostly made for single-agent problems. Baseline implementations of algorithms can help because they provide a good foundation of high-quality implementations of state-of-the-art learning algorithms that can be applied to new problems. With PPO, the agents showed promising results with about 10 hours of training for each agent, while TRPO agents took longer to complete considerably less training but did show slightly better results for the number of time-steps they accomplished. While the training data seems to indicate that TRPO agents can marginally outperform PPO agents when comparing the number of completed time steps, running a multithreaded implementation of PPO with 64 threads allows the PPO agents to gain far more experience in the same amount of time and achieve far better results. This is important because the significant computing power used to train reinforcement learning agents can be expensive, and more efficient algorithms save time and money.

Out of the PPO agents, PPO1 and PPO2 seemed to focus on a single snake and obtain all of its rewards through one snake while PPO3 seems to use two snakes to achieve higher total rewards. While the snakes always started in the same places, the fruits randomly appeared and the agents had to learn to go after fruits themselves wherever they appeared instead of simply going to the same place every time. These behaviors were learned completely through trial and error, and they show that PPO agents were able to handle the variability in the environment by developing unique strategies and behaviors from scratch with

no prior knowledge of the environment. This adaptability and flexibility could prove useful in real-world scenarios because the real world is always unpredictable compared to controlled simulations and games. The most challenging part of adapting reinforcement learning to real-world scenarios will likely be building the reward structure that you need to train the agent without making it too complex, leaving the algorithm unable to learn anything useful. A good example of this is the fact that all three PPO agents were trained with the same reward structure, but only one of the policies ended up being cooperative despite the rewards being added up for all snakes. If you wanted to make sure that your agent was always cooperative or friendly you would need to quantify that behavior into the reward structure in a positive way and punish bad behavior with negative rewards. It can be difficult to quantify certain behavior, however, and it is also possible that you end up training an agent that performs in a way you do not expect with a more complicated reward structure.

Another issue is safety, especially for applications like self-driving cars. One way that this could be tackled is with simulations of car driving scenarios or any other potentially dangerous task that you cannot learn from scratch on in the real world. Another way that this issue could be tackled is by creating a system that is able to observe a human driving before attempting to drive itself (or in a simulation) in a similar way to how we teach humans to drive by first showing them and then actually giving them a chance at the wheel once they have formed some level of understanding of the task. Unfortunately, due to the amount of experience it takes for agents to learn with current reinforcement learning algorithms, researchers will need to continue to use simulations to get enough initial experience before actually attempting to drive a car.

Despite these challenges, Proximal Policy Optimization is a promising reinforcement learning algorithm that could be used to solve some of the most challenging reinforcement learning problems facing researchers today. Using proximal policy optimization on simulations and games, researchers will be able to develop more sophisticated models and overcome these
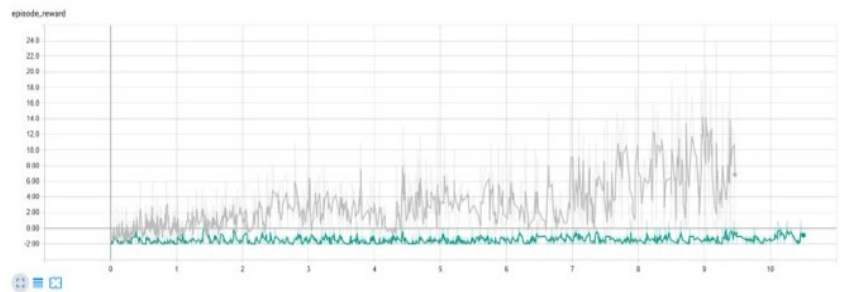

Figure 2. PPO1 (gray) vs. TPRO1 (green) rewards over the course of their final training sessions by hours run time
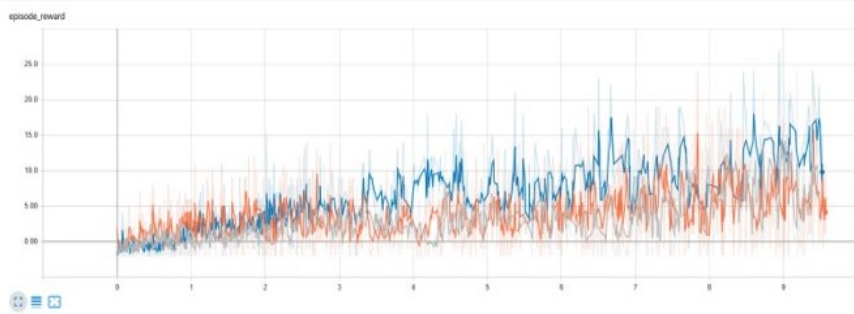
Figure 3. PPO1 (orange), PPO2 (gray), and PPO3 (blue) rewards over the course their final training sessions by hours run time.

challenges.

Future Research

In future work it would be interesting to try hyperparameter tuning to try and achieve better results in the same training time because hyperparameters play a significant role in reinforcement learning algorithms, including algorithms like PPO and TRPO. Hyperparameters are the values that are specified in advance by the researcher, instead of the parameters that are indirectly tuned by training the model. It would also be interesting to allow for multiple agents to act on the environment at the same time by allowing each model to use the same observation and pick a single action that is then grouped with the other snakes' actions and sent to the environment together as one step, because this would enable the ability to combine learning algorithms into one scenario. This would be challenging to implement due to the API of the stable baselines implementations but would provide the ability to have agents trained on separate policies compete directly on a playing field. Another area for future research would be testing how changes in the environment affect the ability of agents to learn, such as having different amounts of food and different amounts of snakes. These variations would be challenging because of how long it takes to train agents and how many training iterations would be required, but could give us new insight into the abilities and limitations of PPO.

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The Importance of Usability to the Future VR/AR Education Technologies

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Abstract: This article discusses the role that virtual and augmented reality-based learning is starting to play in the education of future healthcare professionals through the medium of simulation scenarios/technologies and how usability testing (a technique designed to evaluate a product by repeatedly testing it on users) can be incorporated to provide optimal experiences for end users. Virtual and augmented reality technologies are becoming more advanced and are being adapted from their video game and entertainment origins into healthcare learning technologies. These new technologies are no exception to the need for usability testing. One such technology is called BodyExplorer© by Lumis Corporation. BodyExplorer□ is an augmented reality learning system that projects images of anatomy and physiology onto the surface of any type of manikin. Users can interact with projected human anatomy and physiology, for example, see a functioning heart and lungs, use a light pen to strip away layers of the chest and pericardium and even perform guided simulated medication administrations. Through the use of The System Usability Scale (SUS) and individual surveys, an overall usability rating was produced for BodyExplorer© . In addition to a usability rating, insights for additional uses and alternate ways that the product could be adapted to better facilitate learning in an educational setting were discovered. By examining the data produced from usability tests on these types of education technologies, it is possible to identify and control use-related risks and hazards, minimize instances of technology induced error, and increase patient safety.

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Introduction

In the United States, and mny developed countries around the world, medical error induced deaths, also considered as types of Preventable Adverse Event (PAEs), are a common occurrence with over 400,000 PAE deaths per year as of 2013 (James, 2013). As defined by Martin and Daniel (2016), medical error is "an act (either of omission or commission) or one that does not achieve its intended outcome, the failure of a planned action to be completed as intended (an error of execution), the use of a wrong plan to achieve an aim (an error of planning), or a deviation from the process of care that may or may not cause harm to the patient." Preventable medical errors, currently the third leading cause of death in the United States behind heart disease and cancer, can prematurely end an otherwise long life or accelerate an imminent death (Martin & Daniel, 2016; Kiernan, 2018). While medical errors are caused by many different situations (including but not limited to: negligence of healthcare staff, overconfidence in healthcare staff by family members, over/under confidence of a clinicians or nurses in their own judgements, and post-surgical complications), there are also ways to combat instances of this type of error. The training of healthcare professionals is an important factor that can contribute to the elimination of medical errors. The ability of nurses and clinicians to be appropriately confident in their clinical judgments is an essential part of safe and effective healthcare (Yang, Thompson & Bland, 2012). The more experienced and confident a nurse/ medical professional is with using medical technologies,

performing medical procedures, administering crisis interventions, and identifying symptoms quickly and accurately, the less likely a deadly error is to occur (Kahriman, et al., 2018). With this in mind, it can be inferred that the thorough training of nurses and health care professionals is a necessary, and worthwhile, investment.

Different methods are currently utilized to train upcoming nurses and healthcare professionals who are enrolled in collegiate and vocational programs. Many of these institutions have implemented training programs that focus on exposing the students to realistic scenarios and other situations that could arise in a clinical setting. These training programs utilize healthcare simulation (SIM) of various types, as well as medical simulations/ simulators that incorporate virtual reality (VR) and augmented reality (AR) components. Some programs even offer technological training on the medical devices (both in and outside of SIM) that will be used to help acclimate their students to the reality of clinical practice ("Edinboro Simulation Lab," n.d.; McMacken, 2019; "Medical Simulation," n.d.; "Research and Innovation," n.d.; "Simulation Lab," n.d.).

The simulation of real-world situations in healthcare is a proven aid in healthcare education. Similar to how the usefulness of simulation has been appreciated, the need for usability evaluation at each stage of product development is also starting to be realized. As innovative products are developed for health care that are new hybrids of medical training technologies, it will
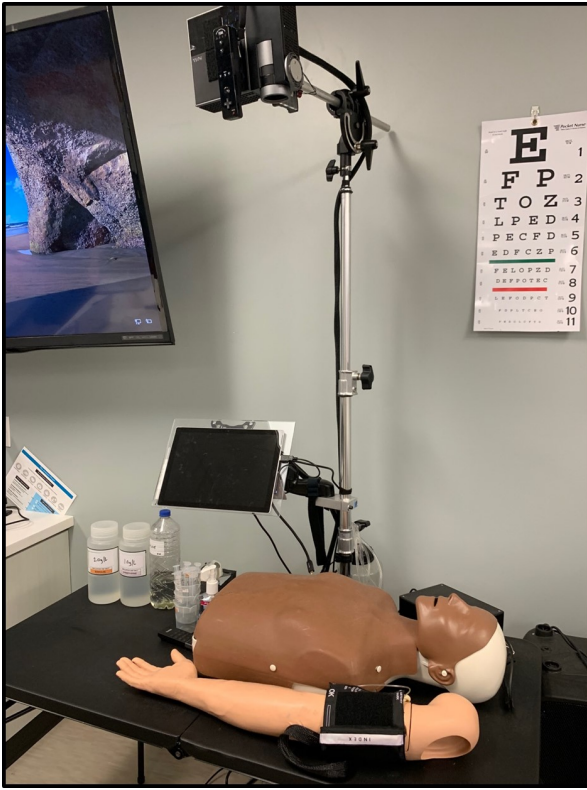
Figure 1: BodyExplorer© Learning System set up including projector, Wii remote, and computer system attached to an adjustable pole.
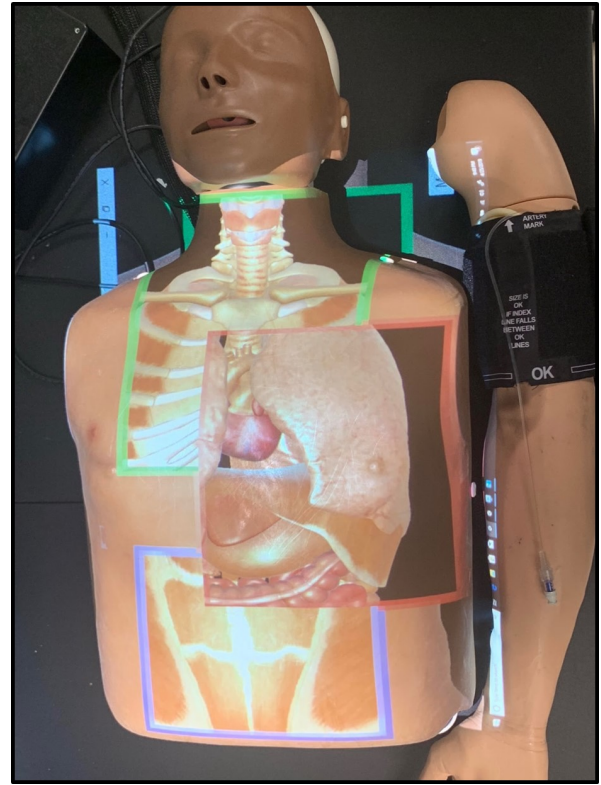

Figure 2: Close up of the anatomy windowing feature produced by BodyExplorer© displayed on the surface of a CPR manikin provided by the simulation center.

be necessary to ensure that they are actually usable. One such hybrid medical training technology is the BodyExplorer© Augmented Reality Learning System. BodyExplorer© projects images of anatomy and physiology onto the surface of a plastic/latex mannequin from a movable adjustable pole with a device bolted onto the post that is suspended above the manikin's torso (see Figure 1). Users can interact with the projected anatomy and physiology by using a light pen to strip away virtual layers of the chest and pericardium in order to see the heart and lungs working, as well as experience the results of specific simulated drug injections by progressing through a drug recognition Medication Administration module (see Figures 2 & 3). When fully functional, the BodyExplorer© system also has the capability to perform simulated cricoid pressure and rapid sequence intubation learning modules (D. Nelson, personal communication, November 28, 2018).

While advancing technologies have the potential to increase efficiency in simulation learning, factors such as a user's age, technological experience, and comfort level with technological advancements influence the technologies' rate of success. Because potential users of these technologies can have such varied uses for and levels of interactions with the same products, usability testing and usability studies are necessary tools in the assessment of these types of systems/devices. Usability tests and studies are helpful in identifying and control-

ling use-related risks and hazards, minimizing instances of technology induced error (TIE), and ultimately in improving education and increasing patient safety. Since the BodyExplorer© is an AR system, it can be used on virtually any surface and can be programed to fit the needs of virtually any end-user. With a wide range of uses, and an even wider range of potential users, it is important that this technology is as user friendly as possible. The purpose of this BodyExplorer© usability study was to help make the system more user-friendly in the future and an overall better learning tool for the students utilizing it.

Background

Specific usability problems and occurrences of technology-induced medical error share a close and statistical relationship (Koutkias, Niès, Jensen, Maglaveras, Beuscart, Kushniruk, and Borycki, 2011). Koutkias et al. also noted that such errors may be prevented through application of different methods including usability testing. This research shows that the main approach to usability engineering is known as usability testing, which is a practical and scientific approach towards evaluating how usable systems are (Koutkias et al., 2011). Many usability issues only appear when the real-world context of use is replicated in the laboratory setting, making testing that much more important (Dahl,

Alsos, & Svanæs, 2010). Usability testing can also provide feedback to designers about ways of improving the usability, safety, and degree of integration of a device/system with areas such as education.

Usability testing relies heavily on the use of usability studies. Usability studies, like most other forms of testing, are employed when initially developing a system or technology or after a system or technology has been found to function less than ideally for its intended purpose. Usability tests are multi-step procedures with a main goal of observing people (e.g. how they approached the device, if they seemed hesitant, what they touched first, where they stood, if there were any universal questions or concerns about the device, if the device attracted people of the same ages, races, and genders etc.) while using a device or system that is being investigated.

Usability studies are especially necessary for medical and healthcare devices. Many healthcare devices that are utilized within a customer's home (e.g. glucometers) require relatively long series of sequential tasks to be performed, are sensitive to user procedural errors, and may lead to health risks if used incorrectly. These devices can be more difficult for older adults to use, not only because these users are less familiar and comfortable with such devices, but also because they may have to remember sequences of steps to operate them properly (Mykityshyn, Fisk, & Rogers, 2002). More people are living longer and as a result are relying more heavily on medical equipment to monitor their health, or to provide home treatment, making the usability of these devices an imperative feature. Because these devices are so necessary and directly impact people's health, good design is especially critical. These same concepts can be applied to technologies and systems that are developed for the training of healthcare students and professionals.

Usability studies are an important part of the design and success of many different technologies. When properly utilized, usability studies can identify problems from user feedback. Usability studies allow engineers and researchers to easily correct these problems as long as they are willing to work closely with end users and take their advice. Usability studies will be needed greatly as medical simulation training technologies continue to develop and merge with other modalities such as Virtual Reality, Augmented Reality, and Mixed Reality (MR). Products similar to BodyExplorer© are being developed that also require usability testing to ensure that they will provide the user with the best learning experience. One such product is a neurosurgical training tool that allows images of dissected cattle brains to be projected onto a physical specimen to guide students and professionals through various trainings and surgical procedures (Gokyar & Cokluk, 2018). Another similar study was conducted on the "Cognitive Augmented Reality Cubes (CogARC) product. CogARC is an AR game that was developed to help students and caregivers screen elderly patients for the early detection of dementia (Boletsis & McCallum, 2016). Many other devices exist, such as the SleeveAR, MirrARbilitation, and AR-REHAB, that are designed to help students, professionals and patients progress through rehabilitation by utilizing motion tracking and specifically designed rehabilitation-based game challenges (Cavalcanti, Santana, Gama, & Walter, 2018). In each of these cases, the usability of the device was examined in order to determine its usefulness and its potential to be used as a learning tool for students and pro-
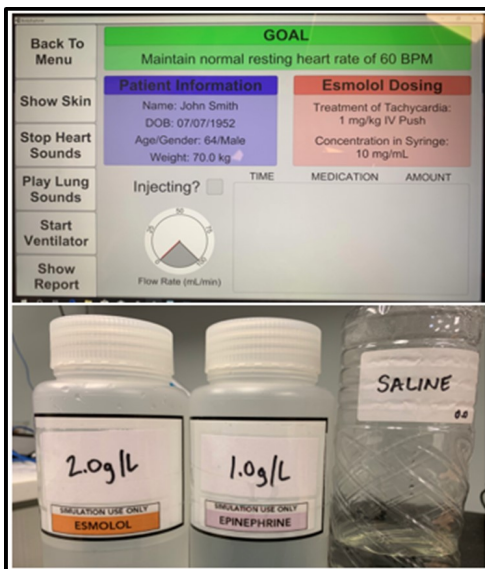

Figure 3: The drug recognition Medication Administration feature of BodyExplorer© as seen on the interactive display (top) and the simulated drugs used (bottom).

Figure 4: The ten original questions of the SUS Tool.

BodyExplorer Questions

For each of the following statements, mark one box that best describes your reactions to the BodyExplorer learning system *today*.

	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree
* 1. I think that I would like to use the BodyExplorer learning system frequently.	○	○	○	○	○
* 2. I found the BodyExplorer learning system unnecessarily complex.	○	○	○	○	○
* 3. I thought the BodyExplorer learning system was easy to use.	○	○	○	○	○
* 4. I think that I would need assistance to be able to use the BodyExplorer learning system.	○	○	○	○	○
* 5. I found that the various functions in the BodyExplorer learning system were well integrated.	○	○	○	○	○
* 6. I thought there was too much inconsistency in the BodyExplorer learning system.	○	○	○	○	○
* 7. I would imagine that most people would learn to use the BodyExplorer learning system very quickly.	○	○	○	○	○
* 8. I found the BodyExplorer learning system very cumbersome/awkward to use.	○	○	○	○	○
* 9. I felt very confident using the BodyExplorer learning system.	○	○	○	○	○
* 10. I needed to learn a lot of things before I could get going with the BodyExplorer learning system.	○	○	○	○	○

Done

Figure 5: The modified versions of the questions in the SUS Tool used in this study.

fessionals alike.

In addition to these AR based products, some VR training tools are also being created and tested for usability. One such tool is a VR sterile catheterization game made using the Occulus Rift system (Kardong-Edgren, Breitkreuz, Werb, Forman, & Ellertson, 2019). Other VR training products include a simulation that helps students learn clinical strategies when performing mental health assessments (Verkuyl, Romaniuk, & Mastrilli, 2018) and a game used to develop a student's pediatric nursing and care skills (Verkuyl, Atack, Mastrilli, & Romaniuk, 2016). These products are among the many innovative products that the healthcare training industry can expect to see in the coming years.

This new era of simulation and training technologies will ultimately pose unique challenges to designers and manufactures as they attempt to take all of the factors that were previously discussed into consideration and turn them into successful products. With the fields of simulation education and VR/AR/MR rapidly expanding, usability studies will be necessary if these technologies are to be successful in their intended purposes. The BodyExplorer© Study performed by the author of this paper is one such example of a usability study conducted on a piece of nursing education technology that produced a usability rating and recommendations for other system applications. This paper is a report and discussion of the BodyExplorer study which is provided be-

Table 1: User Suggestions for Potential Uses of BodyExplorer©	
Future Curriculums:	Anesthesia practice
	Anatomy of other bodily structures
	Specific organ/structure isolation
	Real time drug recognition
	Medication Administration
	Long term medication effects
	Blood Pressure practice
	Internal sound recognition – bowel, heart, lungs
	Effects of disease on internal structures
	Intubation practice
	Vein Occlusion
Other Applications:	Crime Scene Analysis
	Forensics – decomposition rates, body exhumations
	Drug & Alcohol Education
	Health Classes
	Real-time dissections
	Veterinarian training

accredited simulation center with six subjects: all faculty members. The six participants were exposed to the BodyExplorer© system for no longer than thirty minutes during which a moderator was present to introduce the system and demonstrate how to interact with it. After interacting with the system, each of the six participants were then asked to complete a survey about their perception of the system's usability. When answering the Demographics section of the survey, three of the subjects self-reported an attained education level of graduate school, two self-reported an attainment of both an undergraduate and a graduate level education, while one subject chose the "other" option without specification. When asked about their field of study, four of the subjects in the pilot study reported "Nursing", one subject reported "Health Services Administration", and one subject cited "Nuclear Medicine Technology." Five of these subjects reported their age as being between fifty-one and sixty years, while one reported an age of sixty-one years or older. As a result of the pilot study participants' survey responses, the demographic questions were adjusted before re-administering the survey.

low in its entirety.

BodyExplorer© Study

Demographics

After IRB approval, this mixed methods study was conducted at a small private university in a mid-Atlantic state. Snowball sampling, a recruitment method by which research participants recruit others for a test or study by word of mouth referral, was used to find participants. Any student, faculty/professor, or professional in a health profession (including biomedical engineering) or other persons who would either use physiological modeling in their courses or professional endeavors were invited to test the BodyExplorer© system and give their input. Sixty-five participants were recruited for the study. Of the sixty-five participants, six were used for initial pilot testing of the study's protocol. The remaining 59 participants were men and women of varying ages, education levels, and areas of study.

Pilot Study

A pilot study was performed at a skills lab in an

Instrument

The System Usability Scale (SUS) is a tool for measuring usability of a wide variety of products and services, including hardware, software, mobile devices, websites, and applications (see Figure 4). In this fashion, the SUS has the advantage of being "technology agnostic" (Kortum & Acemyan, 2013; Brooke, 2013). The SUS is not diagnostic, but solely for use in classifying the ease of use of the site, application, or environment being tested. The SUS consists of a ten-item questionnaire with five response options for respondents; Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree (Brooke, 1996; Kortum & Acemyan, 2013). In the SUS tool, the word "Website" was changed to "BodyExplorer" to better reflect the purpose of this survey and the response options were slightly altered: Agree, Somewhat Agree, Neutral, Somewhat Disagree, Disagree (see Figure 5). Each question in this ten-item survey can be answered by selecting one of five responses ranging from "Disagree" on the left to "Agree" on the right. Each of the five responses is assigned a point value with "Disagree" corresponding to 0 and "Agree" corresponding to 5. The SUS has been shown to be a reliable and valid instrument that is freely available for use with a Cronbach's alpha of 0.92 (Bangor, Kortum, & Miller, 2008; Kirakowski, 2019). The SUS has references in over 1,300 articles and publi-

cations and has become an industry standard ("System Usability Scale (SUS)", 2013).

Procedure

The study was conducted at a skills lab in an accredited simulation center. Each learning session took no longer than thirty minutes. During the sessions, consents were obtained from each participant before they were introduced to the BodyExplorer© system. One moderator was present for each session. The moderator introduced the BodyExplorer© and demonstrated how to interact with it. To interact with the system, the user held an infrared light pen that allowed them to manipulate the virtual anatomy being displayed, as well as start and stop various features including simulated heart and lung sounds and an electrocardiogram (ECG) monitor window. Users could also administer a simulated drug through the use of a syringe and a simulated intravenous injection site. While participants interacted with the system, the moderator described some of the functions of, and ideas behind, the system. The moderator also initiated any necessary system-resets, prepared for the next testing session, and extended session times if the participant wanted to share more feedback on their experience.

Data Collection

At the end of their session with the BodyExplorer©, each participant was asked to fill out a ten-item usability study questionnaire on an iPad designed to further elicit their impressions of BodyExplorer©. Participants were asked to provide answers to questions about how the BodyExplorer© system could be used in other educational settings. Throughout the entire session, the moderator assisted the participants with technical issues as needed and took notes on the participants' experiences and comments.

Data Analysis

After the data collection phase of the study was completed, the data from the survey was processed and analyzed. Once participants' scores were obtained for each of the ten questions in the survey, initially ranged from 0 to 5, the values were converted to numbers that corresponded to those of the SUS scale. According to the SUS scale's process requirements, rescoring was completed in order to normalize the scores and produce a percentile ranking with associated adjective rating scale ("System Usability Scale (SUS)", 2013). Per SUS tool instructions, the rescoring is done differently for even and odd numbered questions. The initial scores from even numbered questions (2, 4, 6, 8, and 10) were each subtracted from 5. The initial scores from the odd numbered questions (1, 3, 5, 7, and 9) each had 1 subtracted from them. Each participant's converted scores were then added together across the 10 questions and the sum was multiplied by 2.5. This converted the sum

of the original scores, initially 0-40, to post-conversion scores ranging from 0 to 100. These numbers represented percentiles and not percentages. Adjectives associated with scores were "average" = 50.9 (SD, 13.8), a "good" score was 71.4 (SD, 11.6), and an "excellent" score was 85.5 (SD, 10.4). SUS scores and the adjective rating scale represented a measure of the perceived usability of the BodyExplorer© (Bangor et al., 2009).

Results

For the sixty-five participants who responded to the survey, the SUS tool provided insight on the usability of the BodyExplorer© system. The average SUS score reported across various technologies is 68 out of 100 (these scaled scores are not percentages) placing the average score in the 50th percentile (Bangor, Kortum, & Miller, 2008; Brooke, 2013; Kirakowski, 2019; Tullis, & Albert, 2008; Sauro, 2011). The average SUS score for BodyExplorer© was 73.38 (SD: 14.87, range: 58.51-88.25). According to the percentile ranking of SUS scores, this places BodyExplorer© slightly above the 60th percentile (Sauro, 2011). This indicates that BodyExplorer© has a higher usability score than a majority of all applications tested.

A review of digital video recordings of the participants interacting with BodyExplorer© indicated that there was an overall satisfaction with the system. Participants overwhelmingly reported that they enjoyed using the system. Participants thought that the current functionality (simulated breathing, heart and lung noises, and audio and visual feedback) was impressive and helpful. Both the anatomy windowing and the drug recognition modules were met with curiosity and approval. Some participants even thought that the technology was intriguing and questioned how it was programmed. Many users speculated that BodyExplorer© would be a feasible replacement for the expensive Anatomage Tables currently on the market. A majority of the participants also stated that they believe the BodyExplorer© would be more useful as a learning tool than any of their anatomy textbooks. A few major themes emerged from the recorded data. Participants reported multiple different ideas for future curriculums and other uses for the system outside of nursing and health care training (see Table 1 below).

While a vast majority of the comments and feedback about BodyExplorer© was positive, there were some aspects that participants were skeptical about. Many of the negative comments concerned confusion about how the light pen and Wii remote function together. Participants as a whole struggled to use the light pen to navigate the system. While a majority of these participants were able to adapt to and figure out how to best use the light pen, some were unable to completely grasp the technique. Another concern was about the calibration process used for the system. Participants with knowledge of this topic expressed concerns about the inaccuracies in the calibration process being comparable

to that of the Smart Board white board's calibration system. Another main concern was about the complexity of the setup procedure. After having the procedure briefly explained to them, participants commented that they did not believe they could set it up without extensive help from a moderator or professor.

Discussion

The direct interaction with the system combined with the SUS survey and audio and visual recordings of all sessions allowed for the evaluation of the overall usability experience of the BodyExplorer© Learning System both qualitatively and quantitatively. Based on the findings from the 65 total responses to the SUS, the BodyExplorer's usability rating can be considered "good" in accordance with the adjective scoring system. This result suggests that the BodyExplorer© system is perceived to work well but has room for definite improvements despite scoring above average according to the SUS scoring system. When the qualitative data gathered from recordings and direct interactions with participants is considered along with the SUS score, it can be concluded that BodyExplorer© could potentially be marketed as a viable product in its current state, although it is not as polished as it could be.

General reactions of participants to the system show that the technology is still so new and interesting that most participants are willing to ignore some to the minor inconveniences and technical glitches present in the BodyExplorer's system. While potential users are enthralled by the current technology and its vast range of potential uses, improvements are necessary if the system is to improve enough to be commercially marketable. The identification and collection of other potential uses for the system were another factor in the organizational layout of future improvement and product development. Usability, while an indicator of overall ease of use, is not necessarily indicative of the product's future market success. Due to constant developments in the medical field, devices must be capable of change to ensure that the best possible standard of care is provided to patients without compromising the availability and profitability of the device itself. In addition to usability, the system should also be evaluated for its efficacy of learning. A huge consideration for a product like this is if people are actually learning more efficiently using this AR learning tool than they are with other traditional methods. Once these questions have been answered then one of the last factors that must be considered is the return on investment that can be expected for institutions that would purchase this system. Further studies are recommended for the BodyExplorer© Learning System to answer these questions.

Conclusions & Recommendations

This study evaluated the usability of the BodyExplorer© Learning System. BodyExplorer© was found to be a viable learning tool for nursing students

with a usability rating of "Good" according to the SUS scale. The system is fairly intuitive but still requires the presence of a trained operator for all use. Most users found that they could adapt to the system and eventually learn with it. From the interactions had with BodyExplorer©, participants of this study produced many suggestions for potential alterations to the system. Many participants could see multiple uses for the technology as it is developed further and suggested both improvements and alternate applications of the system. Based on the results of this study, these suggestions can be sorted into two main categories: recommendations for future curriculums and recommendations for uses outside of the healthcare field.

Recommendations for future curriculums that could be developed for the BodyExplorer© include modules that cover:

- Anesthesia Practice
- Anatomy & Physiology of other bodily structures
- Isolation & Manipulation of specific organs/organ structures
- Real-time Drug Recognition
- Medication Administration
- Long-term Medication Effects
- Blood Pressure Practice
- Auscultation Practice – Bowel, Heart, Lungs
- Effects of Disease on Internal Bodily Structures
- Intubation Practice
- Vein Occlusion

These suggestions provide a comprehensive potential suite of training modules for students and professionals who would use BodyExplorer© as a training tool. The creation of these customized training modules would provide a wider client base for this product. With added functionality and a wider client base, the potential for increase in revenue once BodyExplorer© is commercialized could also be expected to increase. In addition to expanding BodyExplorer's functionality in the healthcare training realm, creating alternate versions of this technology to be applicable to other industries and training programs could have a similar effect on the expected client base and revenue streams. With this in mind, recommendations for uses of BodyExplorer© outside of the healthcare field include modules that cover:

- Crime Scene Analysis
- Forensics – Decomposition Rates & Body Exhumations
- Drug and Alcohol Education

- Health Classes – Sex Education

- Mortuary Services – Autopsies of Virtual Cadavers & Embalming Procedures

- Veterinarian Training

Before these future curriculums and applications should be considered, the BodyExplorer© system will need updates to certain physical components. The BodyExplorer© system is still in its Beta Version and as such various improvements are being made. Suggestions for updates to the BodyExplorer© system are made based off of observations made during the course of this study. One recommended improvement to the system would be the inclusion of small table that would attach to the projector pole to reduce the need for recalibration due to accidental shifting of external components. Another recommendation would be a simpler infrared light pen than the one currently being used. The number of buttons on the pen confused many of the study participants. A simpler infrared pen with one button would make the system more intuitive to use. As an alternative to the infrared light pen, a complete overhaul of the motion tracking/interaction aspect of the BodyExplorer© is recommended. The Wii remote and light pen combo was shown by the results of the SUS tool to work well, but improvement is still needed. Many participants struggled with the gap that was created between the tip of the infrared pen and the cursor seen in the projection. The gap between the user's hand and the actual position of the cursor due to calibration inaccuracies was slightly disorienting and made operating BodyExplorer© difficult. This gap problem could be solved by utilizing a different method of motion tracking similar to that of the Kinect motion sensor.

Limitations

The findings should be interpreted in the context of the limitations of the study. One substantial limitation of this study was related to the inability of every participant to spend the same amount of time directly interacting with the BodyExplorer© system. Some participants were able to interact with BodyExplorer© one-on-one with input from the moderator while other participants experienced it as a group. For those students that interacted with the system in a group setting, not all got to interact with BodyExplorer© for the same length of time. Some student groups were larger than others as a result of time constraints and scheduling conflicts with the day to day activities that took place in the same accredited simulation center room that the system was set up in. Also, because the participants in this study have included students who were asked to participate on behalf of a university teacher, the sample may include students who had higher or lower expectations of the BodyExplorer©, or no insights on how it could be utilized as a learning technology for nursing or other students. The audio/video recordings taken of the sessions were also problematic. The audio/video recordings were

used to collect user impressions as they were interacting with the system that may not have been expressed through the survey alone. Due to technology issues, some video feeds did not pick up audio as well. The pilot study yielded some interesting ideas about uses for the technology due to the experience and occupations of the participants, but no audio feed exists so it is impossible to transcribe those ideas.

Another limitation of the study was the demographics survey. The demographics survey was amended after the pilot study so that the questions about education level and age range were clearer, however, the survey needed a few other small tweaks due to the fact that the age range was extended upward and not down. This resulted in at least one participant to have to select an age range higher than their actual age. Despite the slight inaccuracy in reported ages, this should not affect the overall conclusions drawn from the study. The sample did not include a breakdown of male versus female responders; therefore, any gender differences in perceptions of the BodyExplorer© system could not be explored. Additionally, this study was only performed at one school and in one state. Due to this fact it is impossible to know if any reactions or feedback obtained about the BodyExplorer© gathered at other schools, or in different states, would be similar to the results of this study.

Moving Forward

Simulation technology has come a long way since it was first introduced. High-fidelity simulation manikins have become more streamlined and are now able to internally house many of the bulky components that made them hard to use and store. Current high-fidelity manikins are also more functional and easily programmable than their early counterparts as they are able to connect to all computers, cameras, and recording systems through WIFI connections. Today's highest-fidelity manikins cost thousands of dollars even though they are now easier to operate, move, and repair. Despite the cost, it is still possible for many to find a version of the technology that falls within a price range or budget. This is because simulations and simulators now exist in all shapes, sizes, and fidelities. Because of this fact, simulation has actually turned out to be a flexible and durable form of medical education and training (Lateef, 2010). This will only continue to be true as more affordable simulation technologies in the VR/AR realm are developed. Simulation technologies show great potential as teaching and learning tools for aspiring nurses and healthcare workers with it being widely acknowledged that SIM provides opportunities for students to get hands-on practice without the consequences of hurting a living patient. This type of training is valuable because it allows students to make mistakes, reset the scenario, and try again. For students with no prior experience working as a nurse, these first practice sessions without an actual human patient provide a unique

opportunity to learn in a safe environment (Damewood, 2016).

Providing nursing/healthcare students with access to better, more user-friendly educational tools will only help to lower their chances of making mistakes in the field due to inexperience or technology induced error. TIE occurs when employees are unfamiliar with how to use/operate hospital technologies and systems. Kushniruk, Borycki, Anderson, & Anderson (2009) explain that when a nurse cannot operate a piece of equipment or confidently navigate a health information technology due to inexperience, lack of training, or poorly designed user interfaces, it may result in medication errors, and ultimately injury or death of that patient. Many existing technologies that nurses and other healthcare workers interact with are poorly designed and hard for someone with little experience to operate, potentially increasing the occurrence of TIE. It is possible that the new forms of healthcare SIM training being developed will be able to better acquaint students with in-hospital systems, procedures, and technologies. While these new methods of training are important, it will only help address the problem if the training technologies are also user friendly, well designed, and intuitive. Through the implementation of usability studies, such as the one performed on BodyExplorer©, it will be possible to create these effective training technologies and to identify and control these new technologies' use-related risks and hazards, minimize instances of technology induced error, and increase patient safety around the globe.

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Optimal Medication to Treat *Trichophyton* Tinea Capitis: Comparison of Griseofulyin and Terbinafine

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Abstract: The researcher identified how each pharmaceutical drug, griseofulvin and terbinafine, affects tinea capitis. *Background*: Tinea capitis is a dermatological infection common in children of African descent.[1] Additionally, the optimal conditions for the fungus to spread are in warm, moist temperatures.[2] Although, <u>*Trichophyton* tinea capitis</u> is controlled, it is becoming more common in urban areas. There are many treatment options for <u>*Trichophyton* tinea capitis</u>. Treatments of tinea capitis include itraconazole, fluconazole, and terbinafine.[5] However, the literature review examined specifically if griseofulvin or terbinafine is a better treatment for *Trichophyton* tinea capitis. *Conclusion*: After review, despite previous findings, the author concluded that terbinafine is the superior option compared to griseofulvin in treating *Trichophyton* tinea capitis, which is easily contracted. Providing the optimal treatment to patients gives them power and autonomy over their health; moreover, the terbinafine impacts the community by relieving the symptoms and curing *Trichophyton* tinea capitis.

Introduction

Tinea capitis is a dermatological infection common in children of African descent.[1] The pediatric fungal infection is common within urban areas and is characterized by scaling and dry, itchy skin.[1] The infection is caused by dermatophytes, a fungus found on dead skin cells.[2] Tinea capitis may develop if hair goes unwashed or is wet for an extended period of time.[2] A small injury to the scalp could also cause the fungus to infect the skin.[2] The optimal conditions for the fungus to spread are in warm, moist temperatures.[2]

The fungal infection is present throughout the world, and has become more frequent in countries such as the United States of America and Ethiopia.[3] Different environments are more prevalent to different types of tinea capitis which cause infection.[3] *Trichophyton* and *Microsporum* are two genera that characterize the fungal infection.[3] *Trichophyton* species is specific and prevalent to North America, while *Microsporum* is common to Europe and Africa.[3] Although, *Trichophyton* tinea capitis is controlled, it is becoming more common in urban areas. There are many treatment options for *Trichophyton* tinea capitis. The various medications provide patients with the power and autonomy over their health. These treatments are offered via oral granules or tablets.

Griseofulvin is the primary oral medication used to treat tinea capitis, specifically *Trichophyton* species.[4] Griseofulvin, also referred to as the "gold standard", has been the top medication prescribed to patients for more than 50 years.[4] However, *Trichophyton* is becoming resistant to griseofulvin, as indicated by the need to increase dosage, length of treatment, and the number of times the medication is taken weekly.[4] Sulfide or ketoconazole shampoo is also prescribed as an adjunct medication to ensure a successful treatment, as well as to stop the spread of infection.[5]

Other treatments of tinea capitis include itraconazole, fluconazole, and terbinafine.[5] According to Elewski,[5] itraconazole is an effective treatment that is provided as a liquid; however, the treatment is not well received in healthy children. Itraconazole also has an adverse effect of severe diarrhea in children.[5] The treatment lasts about 4-6 weeks for a complete cure.[5] Fluconazole is another treatment of *Trichophyton* tinea capitis. Elewski[5] states fluconazole is a safe medication with an 89% complete cure rate; however, according to Chander and Manchanda,[6] the duration of the complete cure is 10 weeks. Both itraconazole and fluconazole are not as effective as griseofulvin, because of adverse effects and length of treatment, respectively. Terbinafine, however, is a superior drug compared to griseofulvin when treating *Trichophyton* tinea capitis.[5] Itraconazole and fluconazole treatment medications are available; however, they do not fulfill the following criteria established for the most effective treatment.

A complete cure is necessary to evaluate the degree at which the treatment is successful or effective. Complete cure is included among the set criteria to determine efficacy of treatment. Complete cure is defined as a combination of mycological cure and clinical cure.[1] Furthermore, mycological cure is characterized by negative fungal culture.[1] Clinical cure is the absence of any physical signs of dermatophyte on the scalp.[1] The criteria for a safe, effective treatment of *Trichophyton* tinea capitis include moderate to exceptional progress of complete cure of infection, superior rate of cure, and mild adverse effects. Mild adverse effects are acknowl-

edged by the severity of the adverse effect and whether treatment needs to be discontinued. Moderate improvement indicates average improvement of symptoms (about 50% cure), and exceptional improvement (60%-100%) signifies an above average improvement of the treatment duration criterion. Griseofulvin and terbinafine both meet the criteria; however, terbinafine produces better results in a shorter amount of time.[6]

Complete Cure

A complete cure is necessary for the improvement of *Trichophyton* tinea capitis. Many studies measured the complete cure by identifying the mycological cure and clinical cure. As previously stated, an indication of a successful treatment option, results in a complete cure of at least 50%. Studies administered medication based on weight of patients at high dosages of griseofulvin (15-25mg/kg). The studies included did not test the medications with any adjunct medication, such as sulfide shampoo.

The confidence interval and p-values were statistically calculated to conclude which medication was more effective in terms of complete cure. A confidence interval creates a range in which the probability of a result is likely to occur. In each study a confidence interval cannot cross 1 on the number line; therefore, if the range crosses 1, the comparison of data is not significant. P-values determine if a comparison of data is significantly different from one another if the value is less than 0.05. According to Chander and Manchanda,[6] 24/25 patients who received griseofulvin had a complete cure (96%); however, the patients received two high doses of 15-25mg/kg/day. The increased dosage compared to the other medications resulted in biased data. Additionally, Chander and Manchanda[6] prescribed the third group terbinafine, which had an 88% complete cure. Chander and Manchanda[6] had confidence interval of 0.92-1.38 and a p-value of 0.609 indicating there is no significant difference between the two treatments. Both medications resulted in similar complete cures.

In randomized, controlled study, Elewski[3] et al combined multiple trials and concluded the complete cure for griseofulvin was 39% (170/434). Griseofulvin had a complete cure of 34.01% (67/197) in trial 1; similarly, the complete cure in trial 2 was 43.46% (103/237). The study determined the concentration of medication for each child based on weight. Children 10kg to 40kg received 62.5mg to 125mg respectively.[3] The majority of patients received 19.9mg/kg/day of griseofulvin. Within the randomized controlled test, Elewski et al[3] recorded the complete cure at 45.1%. The study indicated between the two groups tested that trial 1 had a 46.23% effectiveness of complete cure and trial 2 had 43.99%.[3] There was a significant difference between the two treatments in trial one, but similar complete cures in the second trial. According to Elewski et al[3], terbinafine

was statistically significant overall regarding complete cure compared to griseofulvin ($P < 0.05$). Out of the two trials, the first trial had a recorded p-value of 0.01 indicating significant difference in complete cure. The second trial, however, was not significantly different with a p-value of 0.95.[3]

In a study lead by Dastghaib et al,[7] griseofulvin was observed to have a 76% complete cure (13/17) with 17 patients that had *Trichophyton* tinea capitis. Deng et al[8] recorded clinical cure and mycological cures from ranges 80%-100% prescribing griseofulvin for all *Trichophyton* species of tinea capitis. Though the study did not measure complete cure, it measured the two components that made up the complete cure. Three groups were tested in the study and each group was treated for a specific duration of time with the medication. Clinical and mycological cures almost reached 100%,[8] indicating a successful efficacy rate; however, the increase of complete cure might have been an error. Results as high as 100% are infrequent, particularly when testing griseofulvin within 8 weeks as the study had done. The medication prescribed to treat *Trichophyton* tinea capitis in other studies also showed successful rates of complete cure. Many studies demonstrated the efficacy of terbinafine curing *Trichophyton* tinea capitis with similar or exceptional progress regarding complete cure. Hamm et al[9] stated a 64% complete cure when testing terbinafine on *Trichophyton* tinea capitis species. Each patient was prescribed terbinafine based on the patient's weight. Children weight range was from 10kg to over 40kg while the medication ranged from 62.5mg to 250mg respectively. Friedlander et al[10] found a 42%, 49%, and 56% complete cure within different durations of time for terbinafine. Therefore, as more time passes, terbinafine becomes more effective in treating the fungal infection. The concentration of medication based on weight was identical to the dosage distribution in the study performed by Hamm et al.[9] A confidence interval was generated from a study performed by Tey et al[12] and the complete cure as 95%. The recorded confidence interval (CI), 0.785-1.919, indicated no significant difference between the two treatments which demonstrates the same efficacy of the two medications. The p-value also identified that there was no statistical significance between griseofulvin and terbinafine within the overall analysis ($P = 0.37$).[12] Each medication has effective cures for *Trichophyton* tinea capitis. Some studies identified increasing complete cures, while others found lower complete cures for both griseofulvin and terbinafine. Terbinafine is another alternative in treating children with *Trichophyton* tinea capitis.[5] Both treatments cured *Trichophyton* tinea capitis; however, they each differed in the rate at which it cured the fungal infection.

Rate of Improvement

The rate at which *Trichophyton* tinea capitis is cured provides critical information on the conclusion of

which medication is superior. Since griseofulvin and terbinafine both cure *Trichophyton* tinea capitis with the same efficacy, the rate of improvement is the concluding factor. Chander and Manchanda[6] recorded complete cure within 6 weeks using griseofulvin. Four patients out of 25 total in the group were given an extended 7-8 weeks of treatment.[6] Additionally, Chander and Manchanda[6] recorded complete cure within 2 weeks after administering terbinafine to the 25 person group; however 3 patients were not cured. Other studies including the study performed by Dastghaib et al[7] concluded complete cure within 8 weeks (76% cure).

Deng et al[8] measured the duration of treatment for 2, 4, and 8 weeks with dosage ranging from 62.5mg to 125mg determined by weight. The highest complete cure resulted within the 8 weeks to 1-year duration.[8] Complete cure increased based on duration of treatment; however, after 8 weeks the complete cure was 100%. The statistics favor griseofulvin compared with terbinafine. According to Deng et al,[8] an effective treatment for *Trichophyton* tinea capitis is 2-4 weeks indicating 2 weeks is an adequate length of time for treatment. The complete cure was exceeding 80%; however, as previously stated error was included based on the integrity of the children and their families to report observations on time and to be truthful about improvement. Error is highly suspected, since other 8-week duration treatments did not obtain similar results compared to other studies.

Tey et al[11] observed studies that tested griseofulvin for a complete cure within 6-12 weeks, with an average of 8 weeks. Tey et al[11] also reported a mean treatment duration of 4 weeks administering terbinafine with a 2-6-week range. Furthermore, a review written by Chan and Friedlander[12] mentions the average duration of treatment for griseofulvin is 6-8 weeks and a duration of treatment for terbinafine in 2-4 weeks. Sulfide or ketoconazole shampoo are most commonly used as adjuncts to griseofulvin;[5] however, without the adjunct medication griseofulvin treats *Trichophyton* tinea capitis within a 6-8-week time period.[6,7,8,11,12] Terbinafine has the same dosage concentration and possibly lower in some cases. Friedlander et al[10] states 2- and 4-week durations of administering terbinafine reveals more improvement than the first week of administering medication. Most comparative studies report that 4-week duration with terbinafine is the equivalent to an 8-week duration using griseofulvin.[10] Hamm et al[9] concluded 2 weeks are required for *Trichophyton* tinea capitis to cure most patients. Dependent on the severity of the condition, terbinafine commonly treats *Trichophyton* tinea capitis within a 2-4-week duration.

Many studies compared 6-8-week treatment of griseofulvin with 2-4-week treatment with terbinafine and concluded griseofulvin was better because of a superior complete cure value. Although, the majority of studies indicate the two treatments are both efficacious, the optimal treatment to improve symptoms of *Trichophyton* tinea capitis, in regard to rate of cure, is

terbinafine.

Adverse Effects

Adverse effects (AEs) are critical in determining the right treatment for a patient. The severity and intensity of AE predicts how the medication will affect the patient and may cause more harm. Adverse effects were recorded based on observation, test results, and the patient's integrity to communicate with the researcher. Griseofulvin could cause a number of AEs such as headache, respiratory problems, and gastrointestinal symptoms, which include abdominal pain, diarrhea, and vomiting.[11].

Similarly, Dastghaib et al[7] stated griseofulvin had an AE of nausea; however, the AE was not severe and discontinuation of treatment was unnecessary. Tey et al[11] concluded that the studies analyzed did not include severe adverse effects while testing griseofulvin. Terbinafine use could result in similar AEs of griseofulvin. Tey et al[11] reported the same AEs for terbinafine as griseofulvin. Chan and Friedlander[6] stated the most common AEs for terbinafine within the analysis of the comparative study were headache, rash, and gastrointestinal symptoms. The study also states that the medication can be excreted with breast milk; therefore, mothers who are nursing should not be prescribed terbinafine.[6] Friedlander et al[10] had 44% of patients report mild to moderate AEs with the study including respiratory and gastrointestinal symptoms, which were the most frequent. One patient had to discontinue treatment for a severe AE, which was an uncommon case. Hamm et al[9] states terbinafine is a safe, effective medication for patients; similarly, the other researchers have concluded the same thing. Terbinafine and griseofulvin could both cause the patient to experience AEs, specifically respiratory and gastrointestinal symptoms. However, the AEs experienced are commonly mild to moderate and infrequently severe. Elewski et al[3] concluded from the studies analyzed, that nasopharyngitis, headache, and pyrexia were the most common AEs for both griseofulvin and terbinafine. Discontinuation of treatment for most studies were uncommon.[3] Deng et al[8] determined both griseofulvin and terbinafine were safe treatments indicated by AEs. Both griseofulvin and terbinafine produce minimal mild to moderate AE.

Conclusion

The criteria require a treatment with moderate to exceptional progress of complete cure, superior cure rate, and mild adverse effects. Based on the criteria set for the optimal medication to treat *Trichophyton* tinea capitis, terbinafine is superior to griseofulvin. The studies that concluded exceptional progress of complete cure ($X > 50\%$) prescribed high dosages of griseofulvin

(20-25mg/kg/day) and longer duration of treatment. Terbinafine, although treated with the same concentrated dosage, only required 2-weeks of treatment with similar complete cure, which indicates terbinafine is the superior treatment. Both had similar side effects that did not influence discontinuation of treatment. Each study tested was safe and treats patients similarly, the critical difference is that terbinafine obtains the same results in a shorter amount of time. Most studies concluded that griseofulvin was the superior and recommended treatment because of cost, but the decreased duration should save money. Furthermore, the shorter treatment duration would help children and parents get rid of the fungal infection sooner decreasing the chances of children irritating the area or suffering from the infection. Overall, since terbinafine is superior over griseofulvin, the medical staff is able to provide an impactful treatment to patients. The optimal drug allows for a shorter treatment period, which restores patients back to their state of health before the infection.

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U.S. Nursing Shortage: Fact or Fiction?

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Abstract: In the United States (U.S.), the nursing profession has evolved with efforts in advancing the professional role of the registered nurse (RN). Recent studies provide evidence supporting that RNs must pursue a baccalaureate degree (BSN) or higher for consideration in the workforce. The minimum education requirement suggests that BSN-prepared nurses are better qualified to enhance patient safety and lower patient mortality and failure-to-rescue (failure to prevent deterioration) rates. This renewed focus indicates that a nursing shortage does not exist; however, many hospitals may not consider non-BSN graduates for employment. High patient-to-nurse ratios not only negatively impact patient outcomes but result in higher burnout rates and decreased job satisfaction. Recent studies suggest there is no clear differentiation between the associate degree (ADN) and BSN-RN practice at the patient's bedside. ADN-RNs are qualified to perform the same skills as the BSN-RN at the bedside, while the BSN-RN is trained to perform managerial tasks outside of the patient's room. The purpose of this paper is to address the lack of differentiation between ADN and BSN nursing programs and recommend a solution to the current high patient-to-nurse ratios.

Introduction

The Magnet Recognition Program is an evidence-based intervention to achieve better patient outcomes while providing a better work environment (Kerfoot & Douglas, 2013). Magnet hospitals are considered to be the highest ranked organizations in the healthcare field due to successful retention rates of qualified nurses and reputable work environments. The Magnet culture has gained recognition with an increase of about 8% of hospitals nationwide. Magnet hospitals hold the benchmark standard in national hospital rankings by following the evidence-based practice and are associated with more specialty-certified nurses, nurses with higher education levels, favorable working environments, and lower patient-to-nurse ratios. These factors result in lower patient mortality rates (McHugh et al., 2013). Many hospitals across the US aim for Magnet status by following the standard staffing requirements based on research. The requirements state nurses should obtain BSN degrees or higher for consideration of employment. Despite arguments suggesting that RNs must earn a BSN degree or higher, no clear evidence indicates a marked difference in skillsets between ADN- and BSN-prepared nurses at the bedside.

The "original" Magnet hospitals were formed in the 1980s and held a reputation of having excellent work environments resulting in lower burnout rates, and higher job satisfaction. In the 1990s, the American Nurses Credentialing Center's (ANCC) Magnet Recognition Program was formalized to identify hospitals that followed the original standard. Lower fall rates and lower mortality rates among Medicare patients, deficient birth weight infants, and postoperative surgical patients are reported in Magnet hospitals. However, Magnet research does not specify the effects of nurse staffing levels for bedside nurses. Research is designed to analyze the organizational structure of the work environment and its impact on patient outcomes. While many RNs across the US experience burnout and job dissatisfaction due to unfavorable work environments, such as those caused by high patient-to-nurse ratios, numerous studies note an association between high workloads and low staffing, resulting in "high patient mortality and failure-to-rescue rates" (Buerhaus et al., 2005). In 2002, California was the first state to mandate patient-to-nurse ratios to improve patient care and surveillance. Hospitals adhering to the Magnet recognition program standards achieve successful retention rates of qualified nurses and provide favorable work environments (McHugh et al., 2013).

Historical Considerations

In the 1980s and 1990s, the proportion of women under 30 years of age who chose registered nursing as a profession declined from 30% to 12%, while the average age of RNs increased from 37.4 to 41.9 years (Auerbach et al., 2011). A shift toward entry into nursing at a later stage in life was trending. Unless the downward trend was corrected, a large number of RNs were set to retire, and a looming nursing shortage would occur. Shortfalls of about 400,000 RNs were expected by the year 2020. Recruitment initiatives were set by organizations nationwide to make nursing a more attractive career choice. An increase in two-year associate degree programs occurred and new methods were implemented in baccalaureate programs that attracted more applicants, particularly women in their late 20s and early 30s (Auerbach et al., 2011). For example, the number of accelerated baccalaureate degree programs offering a BSN increased from 84 to 231. Additionally, the num-

ber of federal funds, such as loan repayment programs and monies for baccalaureate- and master's- level nursing education, increased to $240 million in 2010 from $80 million in 2001. Employers offered tuition benefits, sign-on bonuses, flexible work schedules, and increased salaries. Additionally, employers implemented mentorships for new graduates, nurse recognition events, financial incentives for quality improvements, and career development programs.

The first nursing shortage occurred from 1990 to 1992 and was the result of a national average of an 11% increase in hospital registered nurse (RN) vacancy rates. The brief shortage only lasted two years, and observers predicted an oversupply of nurses shortly. In 1998, hospitals experienced the second shortage of the decade. It began in intensive care units (ICU) and expanded to medical and surgical units by 2002. By 2001, the national average hospital RN vacancy rate increased to 13%, and nearly 1/5 of hospitals reported having an increase of 20% in vacancy rates. According to an American Hospital Association survey (2001), 126,000 full-time RN positions were vacant in 2001. The federal government reported that demand exceeded the supply of RN nurses by 110,000 in 2002. National surveys said that nurses felt "burned out" and "dissatisfied" with the workplace environment (Aiken et al., 2001). For nearly eight years, the nursing shortage became the longest lasting in 50 years. Analysis of the United States labor market showed positive economic trends in RN wage increases. An additional 185,000 RNs were hired by 2003, including RNs over the age of 50, RNs under the age of 35, and foreign-born RNs (Buerhaus et al., 2005). Problems associated with the nursing shortage have a substantial impact on the quality of work life, quality of patient care, and the amount of time spent with patients (Buerhaus et al., 2005). It also affects the early detection of complications, and the ability of nurses to maintain patient safety.

Predictions by Buerhaus et al. (2009) suggested a shortage of RNs by 2018 that would grow to about 260,000 by 2025. This projection is due to the large baby-boomer RNs nearing retirement and being replaced by a smaller workforce of RNs to follow. The nursing profession made new efforts to further the level of education of RNs in more recent years. Research by Aiken at al. (2002; 2003; 2013), which covered a 12-year period, suggests that RNs who deliver patient care should obtain a BSN degree. The studies showed improved patient outcomes as evidenced by decreased patient mortality rates relating to an increased number of BSN-prepared RNs. As a result, state legislatures, the Institute of Medicine (IOM) Future of Nursing Report, and the American Nurses Credentialing Center (ANCC) Magnet Recognition Program made an effort to increase the percentage of BSN-RNs in the industry. Despite these efforts to increase the number of BSN-prepared nurses, various educational pathways continue to thrive, allowing graduates eligibility for licensure.

The "BSN in 10" is an example of a New York State legislative proposal in support of ADN-RNs to advance their education within ten years; however, it lacks differentiation in the practice role (Matthias, 2015). This approach disregards evidence demonstrating the importance of the RNs education level impacting patient outcomes. The IOM recommends an increase of BSN-RNs to 80% by 2020; however, this recommendation fails to differentiate the practice roles of BSN-RNs — it suggests an eventual reduction of diploma and ADN programs. The American Association of Colleges of Nurses (2014) (AACN) stated, "while the IOM 80 by '20 supports an RN workforce that favors BSN nurses, it fails to discuss mechanisms for continuing to employ differently prepared RNs, especially as a potential nursing workforce shortage looms in the health care system in the US" (p. 111). According to the 2013 National Workforce Survey of Registered Nurses, 18% of RN nurses hold a diploma, 39% practice with an associate degree, and 34% obtained a baccalaureate degree. These results represent an unrealistic expectation of potentially reducing the availability of ADN programs as an entry-level option.

Educational Considerations

Understanding how to utilize prepared RNs from different backgrounds by recognizing the original intent of the different educational pathways is needed. Matthias (2015) described three historical examples to address the original purpose of graduates from various educational channels. Researchers examined early diploma (1873), BSN (1916), and ADN (1952) programs in a case study research conducted by Matthias (2011). The program or school used in each case study were Bellevue Hospital Training School for Nurses (diploma), the University of Cincinnati School for Nursing and Health (BSN) and Orange County Community College (ADN). Despite the development of each pathway to specify nurse practice roles based on educational preparation, a lack of distinction existed between graduates (Matthias, 2015).

The diploma pathway was established in 1873 and influenced by the Nightingale model at the Bellevue Hospital Training School for Nurses in New York, New York. In the early 1900s, the BSN program was designed to provide an entry-level pathway for practice in community health. The Cincinnati General Hospital School of Nursing and Health established a dual diploma/BSN program for student nurses in 1916. The program provided liberal studies within an undergraduate program, qualifying students to assume a role as a public health nurse upon entry into practice. These guidelines set professional recognition for graduates who were trained in schools meeting minimum educational guidelines, allowing distinction between the trained and untrained nurses in the field (Matthias, 2015). Regardless of the advanced curriculum designed within the dual diploma/BSN programs, graduates received the same licensure as nurses trained in hospital-based diploma schools (Matthias, 2015). The ADN pathway was established in 1952 to distinguish technical and professional roles in the nursing profession. Mildred Montag, a faculty member at Columbia University's Teachers

College, proposed an ADN program in community colleges. She created a model identifying the difference between the ADN- and BSN-RNs. She defined a nurse holding a baccalaureate degree as a professional nurse, and the nurse with an associate degree would be limited to routine circumstances requiring skilled techniques and sound judgment at the bedside. Experimental programs were implemented, resulting in a successful expansion of ADN programs while diploma programs steadily decreased (Matthias, 2015). Montag's model of differentiation was never implemented, and hospitals determined the roles of the nurse based on licensure. Until recently, hospitals did not consider educational experience; therefore, the roles of diploma, ADN, and BSN nurses lacked practice differentiation.

ADN programs promote diversity while allowing the opportunity to enter the workforce for individuals who are unable to enroll in a baccalaureate program, which could be due to enrollment capacity, distance, or tuition costs (Matthias, 2015). The number of RNs enrolling in RN-to-BSN programs increases every year. In 2012, 100,000 RNs enrolled in RN-to-BSN programs compared to 35,000 in 2004 (Matthias & Godwin, 2016). These numbers indicate that nurses with a diploma or an associate degree hold the potential to become future BSN-RNs. The need to differentiate practice roles based on education should be considered while making an effort to increase the number of BSN-RNs in the workforce, which would allow the current educational pathways to strengthen the nursing workforce, and prepare RNs with a clearly defined practice role based on education. The National League for Nursing (NLN) (2010) stated, "the level of competence for nursing judgment varies between the ADN/diploma RN and the BSN RN in that the former 'integrate[s] nursing science in the provision of safe, quality care' and the latter 'synthesize[s] nursing science and knowledge from other disciplines in the provision of safe, quality care'" (p. 112). Clinical ladder programs have been developed to retain bedside nurses, improve quality care, and identify the different levels of competency among nurses. A clinical ladder program encourages non-BSN RNs to further their education while providing bedside care and provides institutions with guidance in hiring and staffing RNs while clearly defining practice roles (Matthias, 2015). Differentiation does not limit the scope of practice, nor does it require removing direct care responsibilities. Instead, the focus is on different competencies acquired through varying levels of education. Clinical ladder programs can refine the AACN essentials and NLN competencies while differentiating practice roles as the availability of BSN-RNs expands in the workforce.

While history has shown waves of shortages, the current problem is not one of too few nurses. A recent surge of available nurses has occurred due to increased enrollment in nursing education programs and career incentives such as tuition benefits and sign-on bonuses (Buerhaus et al., 2005). With the influx of nursing graduates every year, why are hospitals short staffed in critical care and medical-surgical units? Perhaps there is a growing but false distinction between the skillsets of ADN and BSN nurses. Many nurse educators attempt to reduce the barriers that prevent associate degree nurses from progressing into a baccalaureate program. A significant obstacle is a failure to identify the difference between an ADN and a BSN education. Accreditation measures individual programs against an established set of outcome standards with which programs must comply. Currently, two academic accreditation organizations exist in the US: the Accreditation Commission for Education in Nursing (ACEN) and the Collegiate Commission on Nursing Education (CCNE). The ACEN accredits schools from various educational pathways, and the CCNE's goal is to approve baccalaureate, graduate, and residency programs. Nurse educators need a better understanding of what is taught in each type of program and what standards are expected in each to identify the differences between ADN and BSN education. The AACN identifies three primary roles of the BSN-RN: "provider of care, manager of care, and members of the profession" (Landry et al., 2012). Nurses practice advocacy for their patients and focus on providing education in the plan of care. As managers of care, they work autonomously and collaborate with interdisciplinary healthcare professions. Nurses employ strong clinical reasoning and knowledge to perform assessment skills and communicate with patients and team members.

The Kansas State Board of Nursing Annual Report (2012) identify the AACN Baccalaureate Essentials outcomes in accredited ADN programs in Kansas through research using qualitative and quantitative data. A conference for ADN instructors was held at the University of Kansas. A survey containing the nine AACN Essentials and corresponding outcomes was distributed to each participant before the seminar. Questions asked if the outcomes were met, partially met, or not met in the associate degree program. Open-ended statements by the participants provided qualitative data about AACN outcomes. The results revealed that all 17 nationally accredited associate degree programs in Kansas were represented (Kumm et al., 2014). Analysts of the Kansas State Board of Nursing considered above 80% as indicating an outcome was met, below 70% reporting an outcome was not met, and any value in between indicating that remaining outcomes were partially achieved. Results showed that 42 outcomes were satisfied, and 12 outcomes were not met, and ADN programs partially met 16 outcomes. Information management, patient care technology, professionalism, and BSN-RN practice were among the majority of the AACN's Baccalaureate Essentials outcomes that were reached. Additional outcomes met included technology centering on care at the bedside, the electronic health record (EHR), and gathering assessment data to provide quality care. Kumm et al. (2014) stated, "professional outcomes not met related to the history of nursing, contemporary issues, ethical dilemmas, and lifelong learning" (p. 219).

ADN education programs train graduates to perform comprehensive assessments and exercise patient-centered care while demonstrating patent teaching. Kumm et al. (2014) confirmed that "educators stated

topics such as community healthcare, evidence-based practice (EBP), genetics, quality improvement, finance, and policy would be better taught in baccalaureate programs" (p. 220). Analysis of data revealed that it is necessary for associate degree graduates to be active bedside nurses with intuitive practices of safe patient care. Knowing the ADN curriculum can facilitate BSN educators to construct outcome-based RN-to-BSN programs that avoid redundancy. Liberal arts education, essential organizational and system leadership, scholarship for EBP, healthcare policy, finance, and regulatory environments, interprofessional communication for improving patient health outcomes, and clinical prevention and population health are suited for an RN-to-BSN program. Findings support the theoretical framework provided by the AACN, which explains the three roles of the BSN-RN. ADN nurse educators concluded that 42 of the 109 baccalaureate outcomes were met in the accredited ADN programs in their state and that 67 of the baccalaureate outcomes are needed to construct RN-to-BSN curricula (Kumm et al., 2014).

Several qualitative studies (Adorno, 2010; Anbari, 2015; Delaney & Piscopo, 2007; Einhellig, 2012; Morris & Faulk, 2007; Rush et al., 2005) involving semi-structured individual interviews with ADN-to-BSN graduates were conducted with the research question: "what components of their coursework do ADN-to-BSN graduates perceive as having contributed to their ability to keep patients safe" (Anbari & Vogelsmeier, 2018, p. 301). A sample of eight ADN-to-BSN graduates was obtained with the criteria being that nurses had adult acute or critical care responsibilities to make sure the workplaces were similar. Only RNs with two to six years of work experience were included in the study to control the amount of practice with patient safety. Benner's (2001) theory suggests that RNs in practice two to five years should have similar skills, regardless of education. All eight participants attended an online RN-to-BSN program, while four had programs that required completion of clinical hours in a hospital setting (Anbari & Vogelsmeier, 2018). The clinical rotations centered on management, leadership, and community care. Graduates who completed an ADN-to-BSN degree regard their higher level of education as worthwhile and that it improved their practice. However, participants were unclear about how a baccalaureate degree affected their capacity to maintain patient safety.

When participants were asked how their BSN coursework determined their capability to maintain patient safety, several stated that the additional coursework developed stronger critical thinking skills. They also mentioned their approach to care had changed, and that they had a better comprehension of nursing management and leadership. However, they lacked specific examples of how the coursework enhanced their ability to maintain patient safety. One participant stated, "my BSN and my experience did not change any nursing practice or safety or medication administration. I mean, I did not give one med[ication] I do not think during my BSN completion. So it was, it was paperwork and a

BlackBoard discussion and a homeless shelter clinical" (Anbari & Vogelsmeier, 2018, p. 301). RN-to-BSN graduates continued to explain their experience with patient safety came with the practice rather than a higher level of education. One participant explained that her ADN education provided the opportunity to work as an RN and gain the experience needed to keep patients safe. All participants perceive their baccalaureate degree as an accomplishment, and a way to advance in their career. Findings confirmed the outcome of another study that was conducted by Matthias and Kim-Godwin (2016), who reported no significant difference in nursing practice and maintaining patient safety with a BSN education in RN-to-BSN graduates. Possibly RN-to-BSN programs do not improve patient outcomes. However, if a difference in outcomes exists, it is unclear. For example, one participant described an understanding of legal and insurance issues. However, no direct relationship shared expanded knowledge of patient safety. Aside from job security, the advantages of a BSN education must be identified to emphasize how an advanced degree relates to better patient outcomes.

Although the National League for Nursing (NLN) and the American Association of Colleges of Nursing (AACN) have documented essential standards differentiating ADN- and BSN-prepared RNs, a universal understanding has not been identified. The increased demand for BSN-prepared nurses urged a supply of ADN-prepared nurses to advance their level of education. Many nurses have returned to school to obtain or maintain employment, and the number of nurses who enrolled in RN-BSN programs in 2012 increased to almost 100,000 compared to the 35,000 who returned to school in 2004. An understanding of the students' perceptions of ADN- and BSN-prepared nursing practices may help determine the differences in competencies between both levels of education, which may also help educators facilitate a more effective transition to BSN nursing practice and help students identify the differences expected once they achieve a BSN degree. A qualitative study was used to assess the perceptions of ADN- and BSN-prepared nurses (Matthias & Kim-Godwin, 2016). The study consisted of 171 newly admitted students who were enrolled in an online RN-to-BSN program at a southeastern university. During the second week of class, the following questions were asked: "(1) How would you differentiate practice within your work setting between the ADN and BSN nurses? Describe your differentiation model with an example, (2) How does your differentiation model reflect your professional expectations for returning to school with regard to growth, change, and opportunity?" (Matthias & Kim-Godwin, 2016, p. 209). The following themes were reported upon analysis: "'A nurse is a nurse' at the bedside, beyond the bedside, BSN wanted, digging deeper, and appraisal" (Matthias & Kim-Godwin, 2016, pg. 209). All participants reported similarities in the skills and advocacy of ADN- and BSN-prepared nurses at the bedside. No indication emerged of any significant difference between hands-on skills, safe care, assess-

ment, or scope of practice. Participants agreed that the baccalaureate curriculum identified by the NLN and AACN was necessary beyond the bedside. Four critical roles of the BSN-RN were recognized: "leader, change agent, comprehensive approach, and evidence-based practice" (Matthias & Kim-Godwin, 2016, pg. 209).

More significant opportunities for leadership roles result with a BSN-degree, and one participant stated, "a BSN education helps train the nurse to be a leader in the field and act as a leader in the work environment" (Matthias & Kim-Godwin, 2016, p. 209). In terms of a comprehensive approach, students perceived a BSN-degree as a way to enhance the method of community health. The change in hiring practices represents an external force urging students to return to school. According to participants, obtaining a BSN degree was essential to conform to hospital requirements. Many acknowledged the limitations in career advancement without it. Some internal motivation stems from a desire to enhance their identity and advance in their career with a higher level of education. Many students returned to school intending to obtain leadership and management positions for future positions as nurse educators. A significant number of participants could not identify the differences between ADN- and BSN-prepared nurses until reading the NLN and AACN documents provided in the study. Although research suggests that baccalaureate-prepared nurses are needed at the bedside to improve patient safety, the findings of this study indicate that the participants could not recognize any difference in bedside care by a nurse with an ADN degree (Matthias & Kim-Godwin, 2016).

Socioeconomic Considerations

In 1999, the National Council of State Board of Nursing assessed the RN job description. The findings represented a 98% relationship between BSN- and ADN-RNs, including routine nursing care activities, teaching, and managing care. The human capital theory implies that if a BSN degree improves clinical proficiency at the bedside, then employers should compensate for the growing marginal product with increased wages. However, hospitals recognized the advantage of a BSN-RN to provide patient safety was regarded as a public benefit rather than giving financial incentive (Spetz & Bates, 2013). The nurses' perception for completing a higher level of education is due to a growing body of research, presenting a correlation between RN education levels and patient outcomes. Also, insurance reforms have issued penalties and rewards for patient care outcomes, leading hospitals to acknowledge that financial rewards are possible with BSN-prepared RNs. Spetz and Bates (2013) stated, "if so, then employers should reward baccalaureate-educated nurses with higher wages and pursue strategies to increase the education level of their employees" (p. 1861).

Poor work environments and high workloads result in excessive burnout rates and job dissatisfaction for nurses in the healthcare setting. These conditions result in a costly turnover and adverse patient outcomes. Attractive wages are incentives for job seeker when considering employment in the workforce. Increasing salary to solve retention issues and promote incentive for new potential employees is a short-term intervention. However, the wage is not the only factor to consider. Work environments tend to be a more favorable factor to consider when seeking employment. Healthcare workers associate better work environments with lower burnout, increased job satisfaction, and more reasons to stay at their job (McHugh, 2014).

Considering that higher wages compensate for poor working environments may be accurate. A secondary cross-sectional analysis from a survey conducted by Aiken et al. (2011) included RNs in California, Florida, New Jersey, and Pennsylvania in 2006-2007. The survey included information regarding the work environment and nurse staffing ratios. Magnet hospitals were used as a measure to exemplify a pleasant work environment with better outcomes. Magnet hospitals were used to compare the work environment to non-Magnet status hospitals.

Information on hourly wage was collected from nurses in patient care, administrative roles, and other healthcare positions from hospitals participating in Medicare. Overtime pay, vacation, holiday, sick days, lunch breaks, severance, paid time off, and bonuses were included as total paid wages. The survey focused on staff nurses in acute care hospitals only. The Emotional Exhaustion subscale of the Maslach Burnout Inventory was used to measure burnout rates (Kelly et al., 2011; McHugh et al., 2011). Nurses were considered to be "burned out" if their score was 27 or above (Kelly et al., 2011). The work environment was assessed using the Practice Environment Scale of the Nursing Work Index (PES-NWI). Hospital work environments were classified as either "good," "poor," or "mixed." Hospital characteristics were divided by structural components, teaching status, size according to the number of beds - small (less than 100 beds), medium (101-250 beds), or large (more than 251 beds), and technology, such as advanced-technology hospitals where open heart surgery and/or organ transplants are performed. After collecting data, the results showed about half of the 534 hospitals analyzed were non-teaching hospitals, more than 90% of the hospitals were medium or large sized, and approximately 10% were compliant with Magnet standards (McHugh, 2014).

The average patient-to-nurse ratio in the sample was roughly 5:1, and the RNs average wage was $37.20 an hour. Little difference existed in salary between Magnet ($36.29/hr) and non-Magnet ($37.30/hr) hospitals. Hospitals with proper nurse staffing had higher hourly wages ($43.67/hour) compared to inadequate nurse staffing ($32.23/hr), teaching hospitals ($37.70/hr), hospitals with advanced technology ($38.22/hr), and large hospitals ($$38.33/hr). California hospitals had the highest average hourly wage ($45.27/hour) compared to hospitals in Pennsylvania with the lowest

average hourly wage ($29.72/hour). Finally, the average hourly wage was higher in hospitals with functional working environments ($40.49/hour) compared to the poor ($33.82/hour). Of the 26,005 nurses who participated in the survey, 24.8% reported dissatisfaction with their job, 33.6% experienced burnout, and 13.7% considered leaving their current position (McHugh, 2014).

In regards to the highest level of education, 41.0% of nurses attained a BSN degree or higher. Successful work environments are the result of job satisfaction and lower burnout rates. Although wage is an essential factor when expanding the workforce, wages do not indicate better outcomes. McHugh et al. (2011) noted that "nurses, particularly those in direct patient care roles in hospitals and nursing home, have reported dissatisfaction with wages, as well as non-wage benefits such as health care, tuition reimbursement, and retirement benefits" (p. 8). A nurse's skill level should be considered when negotiating wage rates, and competitive wages combined with attractive benefits are likely to encourage retention within the organization. McHugh and Ma (2014) acknowledged the studies conducted by Aiken et al. (2011) and noted that wages are an essential tool; however, they are not a critical factor when considering employment.

Conclusion

The goal of this research was to address the lack of differentiation between ADN and BSN nursing programs and to understand what constitutes a qualified nurse among Magnet status institutions. Why are some hospitals refusing highly skilled ADN-RNs? What patient care skills do BSN-RNs possess that ADN-RNs do not? It was discovered through research that there is no distinction between the skillsets of ADN-RNs and BSN-RNs at the bedside. Evidence states that high patient-to-nurse ratios lead to higher mortality and failure-to-rescue rates. Meanwhile, there is an influx of qualified ADN-RN graduates every year; however, there are fewer employment opportunities available. If more ADN-RNs are hired, patient-to-nurse ratios will be managed with greater success. Burnout rates will be minimized, and job satisfaction will improve. Patient care will enhance through focused supervision and more extended one-on-one interactions between the nurse and the patient. Most importantly, mortality and failure-to-rescue rates will potentially decrease, which is not to deny the BSN-RNs' role in patient care. If hospitals hire more ADN-RNs, the BSN-RN can focus on managerial tasks with a collaborative approach and experience in public health, while the ADN-RN can perform the same skills at the bedside as the BSN-RN did previously. Budgets will also improve as employee turnover and length of patient stays decrease. To conclude this research, a shortage of qualified nurses in the workforce exists. The final question to be asked is when will leaders in healthcare recognize this and act appropriately?

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Improving Police-Community Relations

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Abstract: Considerable controversy surrounds the relationship between community members and the officers who police them. While many studies are being conducted to determine how to improve police-community relations as a whole, the current study specifically explores the adolescent and young adult population. It is imperative to identify how youth respond to officers in their community (i.e., schools and neighborhoods) and how to achieve mutual respect and improve future communications. The aim of this paper is to evaluate the core issues that shape the attitudes of adolescents and young adults regarding the police. To better understand the relationship, the current study surveys approximately 100 college students to 1) measure their attitudes towards police and 2) identify what factors influence their opinions (i.e., media, direct contact, indirect contact). The survey also includes targeted questions to find out what type of police sponsored program may have influenced them, such as youth police academy, D.A.R.E., School Resource Officer, or other community-based programs. Program and policy implications to improve attitudes and respect for police are discussed and suggestions are made regarding future research in this area.

Considerable controversy surrounds the relationship between community members and the officers who police them. Moreover, recent incidents involving altercations between citizens (in particular people of color) and police officers, combined with social media accessibility have placed issues like police brutality, selective enforcement, and racial profiling at the forefront of nationwide debates. One study shows that in 2017 less than half (44%) of individuals between 18 and 34 have a "great deal" or "quite a lot" of confidence in the police, which has fallen more than 10% since 2014 for this age group (Nathan, Finklea, Keegan, Sekar, & Thompson, 2018). While there is considerable work to be done to repair strained relations between police and community, researchers suggest that younger generations need to be an integral part of reform efforts. Scholars also point out that a successful approach must involve reciprocity between youth and police agencies. In other words, police and youth need to be receptive to change and then mutually "buy in" to proposed solutions. Furthermore, law enforcement officials, community activists, and politicians believe if the attitudes of young individuals towards police and the attitudes of police towards youth can be improved, appreciable strides can be made.

The purpose of the current study is to 1) explore which factors contribute to young people's attitudes towards the police and 2) explore how law enforcement can encourage more positive attitudes within their communities. The following literature review reviews scholarship on the relationship between the community and the police as well as policed based programs that target strained community relations. Next, the methods explain the participants, procedure, and survey questions. Then, results analyze participants' experiences with the police and their subsequent attitudes about law enforcement.

Finally, the discussion includes limitations, future research, and provides program suggestions to ameliorating strained relationships between youth, communities, and law enforcement agencies.

Literature Review

The following literature review aims to: 1) identify factors that correlate with negative attitudes towards police and 2) examine programs designed to improve relationships between a community and its law enforcement agency.

Factors Correlated with Negative Attitudes Toward Police

In order to mend a police-community relationship that is struggling, the root of the problem must first be established. This can be achieved by understanding the factors that may influence a youth's attitude toward law enforcement. Findings in the literature suggest that age, social interaction, personal experiences, race, and media coverage all play isolated as well as collective roles in forming youths' attitudes towards police. For example, prior research concluded that age is an important factor when it comes to predicting negative attitudes towards police (Borrero, 2001). Young people tend to have rebellious attitudes, which in turn may create tension between youth and police officers that patrol local communities. Borrero (2001) also states that youth tend to see police as less competent and give them lower performance ratings than adults, perhaps due to a lesser understanding of the difficult duties of a law enforcement officer. Where there is a lack of understanding and respect, there is also potential for negative attitudes.

In addition to age, personal interactions can also be predictors of negative attitudes towards law enforce-

ment. Since attitudes can be the result of and a determinant of the nature of personal experiences with police, it is important to know what other influences are present in young individuals' attitudes. According to Leiber, Nalla, and Farnworth (1998), the social environment in which juveniles are socialized can also develop certain attitudes towards police. For those who grow up in households where the police are disliked, they are at risk of adapting those attitudes themselves without ever having any experiences with a police officer. Further, hearing about friends and acquaintances negative experiences with a police officer can also cause one to develop a negative perception of police (Pettersson, 2014). Unfortunately, this misconception occurs often. When a young individual's friend shares they were harassed, that individual will more often than not, develop negative feelings towards the police without knowing the context of the alleged harassment. Thus, there may be various incidents where the police have been guilty of wrongdoing. However, when someone is caught breaking the law it is common for that individual to develop a negative attitude towards police even if officers were doing their job correctly. In scenarios like the one mentioned above, the negative feelings towards police are often projected into that person's inner circle.

Race is a silent factor when it comes to distrust and negative feelings towards the police. Disproportionate Minority Contact (DMC) is present in the criminal justice system, from juvenile court to adult court, and people of color are visible as the system progresses (Piquero, 2008). The African American population comprises less than 15% of the overall population. However, African Americans accounted for roughly 28% of arrests between 1980 and 2009 (Nordberg, Twis, Stevens, & Hatcher, 2018). While research shows valid explanations for why DMC is present, efforts should be made to reduce this phenomenon, rather than accepting it as a trait of the justice system today. For example, neighborhoods with a large population of minority youth are often targeted for proactive policing (Nordberg, Crawford, Praetorius, & Hatcher, 2015). Proactive policing may have an end result of more police contacts for the population of that community and in turn lead to more arrests. While crime may be either prevented or stopped with this method, youth attitudes tend to be overwhelmingly negative when they feel as if the police are targeting them. (Nordberg, Crawford, Praetorius, and Hatcher, 2015) concluded that many minority youth's experiences with police are in fact dangerous, controlling, and prejudiced. One may argue that the youth population in the study could be exaggerating the experiences they had, but there would be no need for them to do so if they had any positive experiences with police. Few youths in the study reported that they had any positive experiences involving a type of service or protection from police. This study does not suggest doing away with proactive policing in those communities but it does touch upon the issue of DMC in a negative context rather than providing those youths with positive experiences with police.

As stated previously, the experiences of others

may have an impact on an individual's view of police. For instance, the media plays a considerable role in the development of opinions and attitudes towards police officers. If print and news media report mostly negative police interactions with the public and portray officers in a bad light, it seems logical that viewers may be conditioned by these messages over time. Also, viewers may develop their own negative feelings based on the news coverage or have their pre-existing unfavorable attitudes about the police confirmed. For example: in a study of attitudes towards police based on the experiences of young African American students, these respondents admitted that the media definitely play a role in contributing to their fear of police officers (Nordberg, Crawford, Praetorius, & Hatcher, 2015). The media's impact on the feelings of the community is often overlooked and can also be used as a tool to mend the current relationship if used correctly. If the media can influence individuals to fear police, it might also be used as a tool to promote positive public attitudes. If the media featured campaigns that promoted respect toward police and acknowledged positive stories of policing, perhaps there would be less ambivalent and negative public perceptions of police and an increase of favorable attitudes.

Programs Designed to Improve Police-Community Relations

Several programs have attempted to address the conflict between police and youth but not all have been effective. For example, many young individuals have not had enough positive experiences with police officers in an informal setting. According to Lee, Heafner, Sabatelli, and LaMotte (2017) youth participants greatly enjoyed having experiences with police officers out of uniform and conversing with them in a friendly, informal way. In addition, young individuals are considerably less likely to feel threatened or nervous around off-duty officers. A simple and casual exchange between plain-clothes police officers and youth could be a potential solution to the ongoing divergence between police and youth. As a result, youth may realize that police officers are just like anyone else and not a force that should be feared or rebelled against. Giwa, James, Anucha, and Schwartz (2014) explored how youth feel about improving police-community relations and found that youth recommend that officers should take time to socialize with younger individuals in a community and to learn more about their culture. The more involved the police are with youth in a community, the more likely it is for there to be increased trust between parties. Conversely, there also needs to be participation on the youths' side as well. If both sides do not make an effort for change, it is very unlikely that the relationship will improve over time. For instance, police officers suggest that youth should treat them with respect and understand that they are human as well (Giwa, James, Anucha, & Schwartz, 2014).

One Connecticut community program, called the Side-by-Side Program, had a successful result in

decreasing negative youth perceptions towards police. The goal of the project was to increase interactions between community youth and officers in an attempt to increase the number of police officers who are comfortable interacting with youth and improving youths' attitudes toward police (Lee, Heafner, Sabatelli, & LaMotte, 2017). Not only did youth show an increase in positive attitudes towards police, but the study showed that police displayed an increase in positive attitudes towards youth as well. The relationship between these two groups is a two-way street; effort and improvement must be shown by both the police and the youth to improve the relationship.

Another common program seen in communities is a junior police academy or cadet program. Youth are placed in a modified police academy, which demonstrate what officers' experience regarding police training and job duties. In one cadet program, cadets reported seeing a different side of officers and described them as being in a "laid back" state (Pepper & Silvestri, 2016). Seeing a different side of officers and gaining an understanding of their duties can help build a familiarity that can help youth respect officers for the various services they provide.

School Resource Officers (SRO) can also be utilized to mend the relationship between youth and police by interacting with young students on a daily basis. One of the main goals of a School Resource Officer Program is for officers to improve and develop better relationships with youth (Kelly, 2017). While their main concern is safety, an SRO can interact with students on a regular basis and should be seen as a friend by the students. Having some positive interactions with a police officer, whether they are on the street or through school based programs, may greatly assist in building trust between police officers and the juveniles in their community.

The main purpose of the current study is to expand on the above literature and explore which factors contribute to young people's attitudes towards the police and, ultimately, how more positive attitudes can be promoted among a college student population. Ultimately, it is important to develop a positive attitude among youth and police officers when they are in childhood. However, understanding past experience among the current population (i.e., late adolescent, early adulthood) can assist in recommendations for future programs that specifically focus on younger generations.

Methods

Participants

The participants in this study were sampled from a small, private Northeastern college (N=59). Of the participants, 55.9% were female and 42.4% were male. The academic standing of the participants varied from freshman to graduate student. The senior class represented the majority of the participants at 52.5%, 16.9% were juniors, 15.3% were sophomores, and 13.6% were freshmen. The lowest percentages were graduate students representing 1.7% of the participants.

The age of the participants in this study ranged from 18 to 43 years old. The average age of respondents was 22.8 years old. Additionally, approximately 76% of the participants were between 18 and 22 years of age, which represents the traditional college aged student. Also, 50.8% of participants were White/Caucasian, 32.2% were Hispanic, Latino, or Spanish origin, 11.9% were Black or African American, and 1.7% reported Asian. In addition, 3.4% of the participants reported that they were of a different racial background or preferred not to disclose their race/ethnicity.

Of all the majors reported, the three most common majors included Nursing, Criminal Justice, and Athletic Training. Specifically, nursing majors made up of 30.5% of the participants, Criminal Justice majors were the second most common group at 20.3%, and Athletic Training majors made up 10.2% of the total participant group. Furthermore, most students (66.1%) reported living in a suburban area. See Table 1 for all descriptive statistics.

Questionnaire

The purpose of the current study was to measure students' attitudes towards police and to determine the development of those attitudes. After receiving IRB approval, a survey was emailed to students asking participants to complete informed consent forms prior to starting the survey. The first part of the survey consisted of general feelings and attitudes towards the police. A rating scale provided respondent views on various statements about police. One example of a statement used in this section is "police officers protect me". The participants responded to this statement by stating whether they strongly disagree, disagree, are neutral, agree, or strongly agree.

The second part of the survey consisted of personal experiences with police. For example, participants were asked if they had ever attended a police sponsored community program and, if so, what type of program did they participate in. This question determined how common it is for a juvenile to have access to these types of programs. The final part of the survey included demographic questions.

Analysis

This analysis explores the relationship between the several predictor variables and the outcome variable in the current study. The outcome variable is an index titled Police Fairness, which, was created by aggregating responses to questions regarding general attitudes and feelings toward the police. Each item had response categories that ranged from 1 to 5 with 1 indicating "Strongly Disagree" and 5 indicating "Strongly Agree". To prevent more frequent items from dominating the scale, each item was standardized prior to averaging. The Police Fairness scale was developed from three items: police officers treat all people fairly, the police do not discriminate, and police officers are unbiased

(Cronbach's Alpha = .86). Cronbach's alpha is a measure of internal consistency or scale reliability measuring how closely related a set of items is as a group. The alpha coefficient for the three items is .86, suggesting that the items have relatively high internal consistency. A reliability coefficient of .70 or higher is considered "acceptable" in social science research.

Several predictor variables will be explored to examine if there is a relationship with Police Fairness. The predictor variables include: relatives in law enforcement, Friends in law enforcement, involvement with police sponsored community programs, negative experience with police, gender (male vs. female), race (white vs. nonwhite), major (criminal justice vs. other majors), and neighborhood type (urban vs. other). The variables race, major and neighborhood type were recoded into a bivariate measure (also known as a dummy variable).

Results

The first part of the results explores factors that may impact an individual's opinion of police officers, such as having friends or family in law enforcement and involvement with a community based police program. The second part focuses on personal experiences, such as having been pulled over or having a friendly conversation with an officer that may affect one's view of the police. In addition, several independent sample t-tests were conducted to determine which factors significantly impact attitudes towards police.

Table 2 includes results from questions focusing on prior experience with law enforcement. Of the 59 respondents 50.8% reported having relatives in law enforcement and 49.2% reported not having any relatives in law enforcement. In addition, 52.5% percent of respondents reported having friends in law enforcement and 47.5% percent of respondents reported not having friends in law enforcement. Students were also asked about their involvement with police sponsored community programs and 84.7% percent reported never having been involved with a police sponsored community program and 15.3% were involved in at least one of these types of programs. If respondents reported yes they were then asked to specify the type of program. The responses included: D.A.R.E., Youth Police Academy, and Police Athletic Leagues.

A majority of respondents (88.1%) have a "mostly positive" view of law enforcement officers. Only 11.9% percent of respondents reported having a "mostly negative" view of law enforcement officers. When asked where their views of police came from the top three responses included: personal experience, media coverage, and family member's experience. Specifically, 67.8% of respondents reported personal experience, 15.3% developed their view of police officers through media coverage, and 10.2% reported family member's experience.

Next, participants were asked about negative personal experience with police officers and the majority of respondents (61%) have not had a negative experi-

ence and 39% percent of respondents reported having a negative experience with a law enforcement officer, such as an unjustified citation or arrest.

In addition to the close-ended questions, there was one open-ended question, which asked respondents to describe their most memorable experience with a police officer. The responses included both positive and negative experiences as well as neutral experiences, such as getting pulled over and receiving a citation for breaking a traffic law. Approximately 43% percent of responses were positive, 40% percent were negative, and 17% percent were neutral.

Some of the positive response included:

A police officer once saved me from a potential date rape situation…and drove 20 minutes to my home to make sure I got there safely.

When my little brother had to be taken by ambulance to the hospital. The police officer stayed with my family until we knew he was going to be okay even after his shift ended.

A police officer giving me a ride home from an unfamiliar area that I was in my first year of college. I didn't know where I was, and was with people I didn't feel safe with from a job I just started.

There were also a number of negative responses, which included:

Being racially profiled while walking a neighborhood where my mother lives. I was targeted and detained because I looked like someone who was buying drugs. It all happened at my mother's building lobby as I was waiting for her to unlock the door. Over 30 minutes later I was let go because I had nothing on me and no criminal record…

The above respondent also went on to state that this was just one of many negative encounters.

A police officer asked to search my vehicle at a regular stop because he recognized one of the passengers in my car, which [sic] apparently had a history of drug use from over two years ago. It was MY vehicle and I was driving home. I have never heard of any drug use from him and I was not under the influence of any kind so this was extremely irrational.

Finally, several independent samples t-tests were conducted to examine if police fairness and several predictor variables. Only two variables were found to have statistically significant results: law enforcement friends and race. An independent samples t-test was conducted to examine if police fairness differed for participants who reported if they have a friend who is a police officer and those who did not report having a friend who is a police officer. The results found a statistically significant difference between participants who reported they have a friend who is a police officer (M=.22, SD=.77) and those that do not have a friend who is a

Table 1: Descriptive Statistics

Variable	Frequency	Percentage
Gender		
Male	23	41.1%
Female	33	58.9%
Prefer not to say	1	1.7%
Year in School		
Freshmen	8	13.6%
Sophomore	9	15.3%
Junior	10	16.9%
Senior	31	52.5%
Graduate	1	1.7%
Age		
18	3	5.2%
19	11	19.0%
20	5	8.6%
21	15	25.9%
22	10	17.2%
23	2	3.4%
24 and older	12	20.5%
Race		
White	30	50.8%
Hispanic	19	32.2%
African American/Black	7	11.9%
Asian	1	1.7%
Other/Prefer not to say	2	3.4%
Major		
Athletic Training	6	10.2%
Criminal Justice	12	20.3%
Nursing	18	30.5%
Other	23	39.0%
Neighborhood Type		
Urban	14	23.7%
Suburban	39	66.1%
Rural	6	10.2%

police officer (M=-.24, SD=.95); t (55) =2.04, p=.05. The results show that having a friend who is a police officer does have an effect on participants' view of police fairness.

The next independent samples t-test examined if police fairness differed for participants who reported being White and those who reported being Non-White. The findings showed there was a statistically significant difference between participants who reported being White (M=.28, SD=.88) and those that reported being Non-White (M=-.27, SD=.81); t (55) =2.47, p=.02. The results show that race has an effect on participants' view of police fairness.

Additional analyses were conducted to examine the strength of the relationship between the variables that illustrated a significant effect. Eta is the appropriate measure of association when examining the relationship between interval and nominal data. When examining the strength of the relationship between police fairness and having a friend who is a police officer, the eta statistic (.27) indicated a moderate association. When examining the strength of the relationship between police fairness and race, the eta statistic (.32) also indicated a moderate association.

Discussion and Conclusion

The main purpose of the current study was to explore which factors contribute to young people's attitudes towards the police and ultimately how those attitudes can be influenced to be more positive towards law enforcement. Based on the results of the questionnaire, two factors had a statistically significant effect on attitudes towards police: having friends in law enforcement and race.

The result of having friends in law enforcement influencing positive attitudes towards police is also found in previous research (Lee, Heafner, Sabatelli, & LaMotte, 2017). Having someone one would consider a friend in law enforcement could influence an increase in positive interactions with a police officer. Kelly (2017) suggests that positive interactions have a beneficial impact on attitudes towards police. This finding is important because it demonstrates that adding a "friend" aspect to the relationship between police and youth could potentially improve overall attitudes towards police. Prior research states that there is a desperate need to bridge the gap between these two groups (Kelly, 2017). Having friends in law enforcement could potentially make it easier to bridge that gap. Ideally, a sense of friendship would give each side some sort of understanding of the other and most importantly cause each group to respect one another. Mutual respect is an important aspect of mending a relationship. If becoming friendly and building a relationship with youth also helps build respect, then it is a step worth taking by law enforcement officers to promote happiness and satisfaction in the community.

Race also had a statistically significant effect on attitudes towards police officers. The literature supports that youth of color often have conflict with the police and these incidents typically receive the most media attention (Nordberg, Twis, Stevens, & Hatcher,

Table 2. Experience with Law Enforcement (N=59)

Variable	Frequency	Percentage
Law Enforcement Relatives		
Yes	30	50.8%
No	29	49.2%
Law Enforcement Friends		
Yes	31	52.5%
No	28	47.5%
View of Law Enforcement Officers		
Mostly Positive	52	88.1%
Mostly Negative	7	11.9%
Involvement in Police Programs		
Yes	9	15.3%
No	50	84.7%
Negative Experience With Police		
Yes	23	39.0%
No	36	61.0%

Table 3. Independent Sample T-Test between Predictor Variables and Police Fairness

	Mean	SD	T-Score	P-Value
Law Enforcement Relative			-.26	.80
Yes	-.03	.88		
No	.03	.90		
Law Enforcement Friend			**2.04**	**.05**
Yes	.22	.77		
No	-.24	.95		
Participated in Police-Community Program			.23	.82
Yes	.07	.65		
No	-.01	.92		
Negative Experience with Police			-1.24	.22
Yes	-.18	.80		
No	.12	.93		
Gender			1.41	.16
Male	.22	.79		
Female	-.10	.90		
Major			.28	.78
Criminal Justice	.07	.76		
Other	-.02	.92		
Race			**2.47**	**.02**
White	.28	.88		
Non-White	-.27	.81		
Neighborhood			.69	.50
Urban	.15	.96		
Non-Urban	-.04	.87		

2018). From juvenile court all the way up to adult court, the representation of youth of color is more visible as the system progresses (Piquero, 2008). Higher crime areas tend to have higher populations of youth of color, which in turn flags those areas as target areas for proactive policing. Unfortunately, this may lead to more arrests of youth of color for petty crimes that typically are not taken seriously in other neighborhoods. Law enforcement officers are then focused on preventing and stopping crime rather than building relationships and educating youth on how to protect themselves by staying away from the dangerous lifestyle so many of their peers have fallen into. In addition to the race of the youth, the race of officers can play a role in how youth feel about them as well. Research shows that young individuals feel more comfortable around people who have a similar background as the one they do (Borrero, 2001). To clarify, in this instance the term background refers to characteristics such as race, ethnicity, culture, and socioeconomic status. For example, Giwa, James,

Anucha, and Schwartz (2014) suggest that officers should take time to socialize with youth in their community and learn more about their culture. Cultural understanding is important when improving attitudes towards police. Even if an officer is from a different background than the youth in the community, it is extremely beneficial for them to take the time to learn about the culture they have been brought up in. An understanding in that area may result in less conflict between youth of color and law enforcement officers.

Program Suggestions

The enormity of creating a police sponsored youth program is way too vast to accomplish within the current study. That being said, with the research conducted there are multiple suggestions that can be made towards such a program. Before making any program suggestions, it is important to note the results of this study's survey reflect the attitudes of college age partic-

ipants after their opinions have already developed. The following suggestions have been developed with the intention of implementing them before the youth population has developed their attitudes towards police. Among those suggestions is having an open forum available between youth and the officers in their communities. It is also important for schools to invite officers in to build relationships from a young age. While inviting officers into the schools will be beneficial, the right type of officers must be implemented in programs involving youth. The goals of such a program should be twofold: to build respect between youth and the officers of their community and to promote and foster friendships where youth can feel comfortable reaching out to law enforcement as a resource, rather than an authority figure.

Open forums are a very valuable resource to clear the air of all issues that may make individuals uncomfortable or uneasy about a situation. Anecdotal evidence from an officer, who worked patrol for over 15 years and was recently hired as an SRO in his community's high school, suggested that one of the main issues between juveniles and police right now is that both groups do not have a good understanding of how the other feels. An open forum would encourage dialogue between officers and the juveniles in their community. It is in this type of setting that each side could freely express their concerns and take strides to improve their relationship. According to Lee, Heafner, Sabatelli, and LaMotte (2017) youth participants greatly enjoyed having experiences with police officers out of uniform and communicating with them in a friendly, informal way. These are the types of exchanges between law enforcement officers and youth that will likely yield the best results because neither side feels threatened. Rather, they are simply talking and getting to know one another. These open forums can be held in community centers, public parks, and schools.

In addition to an open forum, it is important that communities are receptive to the idea of law enforcement becoming more involved in the school system. While some neighborhoods offer opportunities like this, studies show that more than half do not. Building a relationship is much easier when respect is present at an early age. A grade school opening itself up to police officers where they can interact with youth in a friendly way can have a considerable impact on a young person's perception of officers. When a youth sees an officer driving down the street and can actually name who is driving the car rather than seeing an anonymous cop behind the wheel, they may feel much more comfortable interacting with them. This is what could be accomplished by opening up schools to police officers. Additional anecdotal evidence shows that officers' top priorities in schools are to protect students if something were to happen, educate them on how to protect themselves from bad influences such as drugs and violence, and build relationships that will promote better community-police relations. Based on what has been found in the literature and in this study, successful SRO should have enthusiasm, knowledge, and affinity for the students

they interact with which can successfully bridge the gap between law enforcement and youth. Moreover, an ideal officer for a youth program must be personable, friendly, and have an understanding of the sociocultural and socioeconomic differences that impact teen lives. In addition, SROs need to be cognizant that racial differences between the SRO and student body can impede communication at first. However, an effective SRO can bridge the racial divide by capitalizing on common interests like sports or fitness. For example, anecdotal evidence from the SRO mentioned above uses his knowledge of sports as a former high school football player and current coach and his passion for fitness and nutrition to connect with the students. He is often seen in the high school or local gym training with students and watching their sports games on the weekends to show his support. The above suggestions are essential to not only foster and promote respect between law enforcement officers and juveniles but also to encourage friendships that are intended to bridge the gap between the two groups.

Limitations and Future Research

There were several limitations of the current study. One limitation was that the study used a small, convenience sample. The study was made up of less than 100 students from a small, private Northeastern college and therefore, the results are not generalizable to the larger population. The attitudes reflected in the questionnaire were also taken at one point in time and could have been affected by recent events in the media, or even human error. Response bias is another limitation to this study as participants could have altered their responses on the questionnaire.

Future research should conduct a pilot study of a police sponsored youth program with the provided program suggestions. This pilot study would hopefully yield positive results and lay the groundwork for a program that will bridge the gap between law enforcement and youth. In addition, it is suggested to conduct longitudinal research to determine which factors affect youths' view of police over time. Since this study examined attitudes at only one point in time, it would be beneficial to explore how attitudes develop and change over time.

It is clear that there are steps that can be taken to help build a positive relationship between the police and the community as a whole by placing a priority on law enforcement's relationship with the younger population. Young people are easily influenced and rely heavily on social media and their friends for their "news". Appreciable gains in public safety and community trust of police can be made if both police and community pull their weight to reach mutually agreed upon goals. Additionally, a symbiotic relationship between law enforcement and the communities they serve is warranted to promote forward thinking and progressive changes that could dramatically shape the nature and extent of future community-police relations.

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Exploring Gender Dynamics among Migrants:
A Focus on West African Migrant Women along the
Western Mediterranean Route

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Abstract: The existing literature on West African migration revolves primarily around demographic statistics, estimated numbers of emigrants, and route theories. The faces behind said numbers are rarely discussed, while the few outlets which do humanize the issue tend to focus on the male migrant's point of view. Any scholarly discourse that does seek to represent women inaccurately portrays them as exceptional cases, leading the public to believe that women only migrate in exceptional circumstances and do not need to be accounted for in the discourse. This paper acknowledges this lack of literature on West African migrant women using gathered narratives--both fiction and nonfiction--from those women, focusing on Senegal and Ghana. The material gives voice to women who migrated along the Western Mediterranean route to reach European destinations. The material also addresses the complexities of the "migrant crisis" while debunking the myth that only men migrate and that women do not need to be represented. In light of independence in many West African countries from their former colonizers, this paper seeks to answer how human trafficking of women, women operating in the low-waged markets, and the need for women to leave their home country proves that globalization has failed many African women. The reality of migrant women's lives, which is made clear in the source material, debates and challenges the belief that globalization is solely a positive process that promotes unity and internationalism. This is done by contextualizing globalization into the lives of these women as well as into colonial history.

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Introduction

I studied abroad in both Morocco (Fall 2017) and Ghana (Winter Break 2019), and this project grew from those two experiences. While in Morocco, I spoke with several West Africans from Côte d'Ivoire, Senegal, and Ghana, who were all (for differing reasons) making their way to Europe. While in Ghana, I was able to observe how the migration of West Africans affected their home nations such as Togo, Ghana, and Burkina Faso. The urgency of this topic comes from the recent increase of migrants along the Western Mediterranean Route, which has not been covered accurately by the news and entertainment media. Although women make up over 40% of West African migrants, their voices and stories have been traditionally silenced or erased from the migration narrative.

No one is documenting or recognizing West African women as participants in the recent migrant crisis to Europe. It is shocking, after being in Morocco and Ghana, that I have only read fictional accounts focusing on the migration of *men*, watched films focusing on the migration of *men*, and seen mainstream news outlets whose clips focus solely on the migration of *men*. If men were the only demographic of people migrating to Europe, there would be very few migrant women from West Africa in Europe; however this is not factually accurate. This study intends to bring attention and focus on the *women* migrants who are also part "of

the migrant crisis" (The Nation, 2018; Fox News, 2019; BBC News, 2016). This study also raises the voices of the women who survived the journey and have told their stories, and hopefully encourages others to do the same. Their truths are missing in the discourse and their voices are the only accounts that could accurately depict their plight for policy-makers to recognize and address the crisis fully.

This project uses primary and secondary source narratives of West African migrant women who have migrated to Europe, along the Western Mediterranean route, to explain the complexity of the migrant crisis in post-colonial Africa. The narratives I compiled came from the few existing works of researchers who have done interviews with West African migrant women. It is tricky to obtain narratives from a marginalized and vulnerable population of people, therefore I decided to utilize existing narratives already obtained and published by other researchers and situate them into an appropriate political, social, geographical and economic context.

Focusing on women from Senegal and Ghana, this material debunks the widespread myths that women do not need to be represented in the discourse. Moreover, the reasons why women leave Senegal and Ghana are different from men as women have very different migrant experiences. For example, due to structural adjustment programs (SAPs) "cutting government expenditures on local health, education, and welfare programs, slashing wages, fostering export commodities and cash

crop, and devaluing local currency," more women today living in poverty feel pushed out of their home countries (Mann, 2012, p. 321). Women's insights on the topic of migration are important when discussing reasons for why migrants move and whether or not they truly have a choice. Often, these reasons from men and women on why they migrate hark back to the period of colonialism.
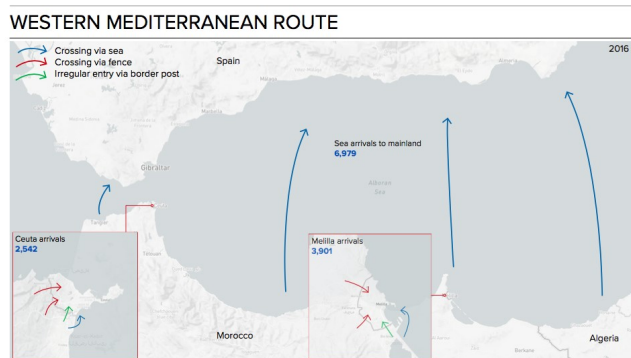
During the colonial period in West Africa (roughly between 1840 and 1960) the institutionalization of labor in the colonies relied on gender-based separation of labor. In Senegal, the *tirailleurs* (Senegalese soldiers under French control) were always men, while the domestic workers were always women. The French colonized foreign lands, such as Senegal, to enrich their economy. They forced colonized peoples to grow agricultural goods or mine raw materials for little to no pay. The impact of this is still felt today. It is shown in the land, as the soil has been depleted which makes it difficult to cultivate crops. This situation was the same for Ghana, which was colonized by the British. The British and the French were highly motivated to colonize by greed, but unlike the French, the British were interested in justifying their colonization with a duty to "civilize" and convert the native populations to Christianity (Donkor, 2009, p. 35). The British also brought their brand of what bell hooks calls "patriarchal masculinity," which was later embraced by native men (hooks, 2004, 2). Patriarchal masculinity is where "one's masculinity is defined by violence, conquest, and wealth" (hooks, 2004, 2). This is not to say that West Africa was not at all patriarchal before the arrival of the Europeans. Though this particular brand of patriarchy remains in much of West Africa today as the divisions still benefits the elite men in power.

I chose Senegal and Ghana as case studies because both countries have significant post-colonial legacies that inform the present migrant situation. Senegal was colonized primarily by the French from 1880 to its independence in 1960 (though their presence in parts of the country dates back to the 1600s); Ghana was colonized primarily by the British from 1867 to 1957. The most obvious difference in their post-colonial legacies is language. Senegal's official language, as a former colony of France is French, while Ghana's official language, as a former colony of Great Britain, is English. Language plays a major role in choosing a destination nation to which to migrate, as speaking the language of the land makes the transition much easier. These linguistic colonial legacies explain where West Africans from Senegal versus those from Ghana ultimately settle. Senegal is also closer in proximity to Europe than to Ghana as you can see in figure two. This colonial legacy explains a lot in terms of where West African migrant women end up and for what reason.
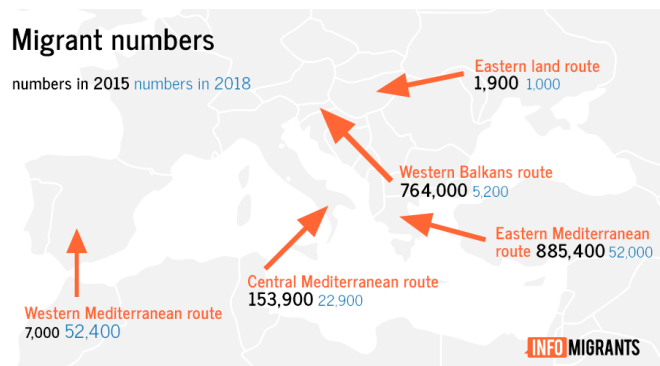

The method of imperialism from the colonizers of Senegal and Ghana was dividing land for cultivating cash crops, mining or working in temporary agricultural positions. The cultivation of cash corps was typically in cities around the coast for reasons of trade, while the temporary agriculture remained inland. This is the reason why most major West African countries have urbanized, modern cities near the coast. However, as this structure of divided land remained present to the post-colonial era, the division of labor did not entirely change either. The pressure to modernize has many post-colonial countries supporting the expansion of the colonial urbanized cities while the rural areas more or less remained untouched (Chen, 2013). As many women in West Africa are confined to these rural areas and are affected by the lack of support from their governments, their sense-of belonging begins to weaken. In rural areas there is a lack of security as the inland regions do not have access to public safety service, there is a lack of work, and women are less-likely to be educated as the major schools are located in the big cities. Social and cultural dynamics that make it especially difficult for women of low socio-economic status to live in these regions include loss of power in relationships, where women feel as though they must follow rules that their husbands or fathers uphold in the household (Lowe, 2016). Though women's "decision-making autonomy" in this region may be explained in relation to their lack of education and limited influence over material resources, the gender disparity in land ownership (due to gendered laws on land inheritance) impacts the economic status of women as well which "further perpetuates a high level of dependency on their husbands" (Lowe, 2016). Not catering to the female population in these countries causes for women to venture outward in search of work or an environment that is safe; even if the pathway to arrive to Europe is anything but safe.

The focus of this paper is on West Africa for a number of reasons. First, West Africa is geographically closest to Spain and Portugal, the entry points into Europe along the Western Mediterranean route. Second, individuals from countries in West Africa account for the largest population of Africans migrating along the Western Mediterranean route.

WESTERN MEDITERRANEAN ROUTE

This route includes leaving the African continent, crossing over the Mediterranean Sea, and arriving on European shores by boats, dinghies, ferries, or canoes. This route also accounts for migrants passing through the Sahara desert to arrive at the Mediterranean Sea too. According to Mixed Migration, a leading source for independent and high quality data, information, research and analysis on mixed migration, there has been a shift in recent years from the Central Mediterranean route to the Western Mediterranean route (Brenner, 2018). According to Frontex, the European Border and Coast Guard Agency, the Western Mediterranean became "the most active migratory route into Europe" in June of 2018, with the number of migrants reaching Spain increasing to 166% from 2017 (Frontex, 2018). To see comparisons between routes, see figure three.

The use of the term "migrant" in this case is tricky, as the word is often spoken in the media by reporters who use "migrant" as a blanket term to describe all moving people; from economic immigrants to asylum seekers. The word has also been critiqued from editors at Al Jazeera and The Washington Post for its shift in connotation, evolving from a generalized descriptor to a pejorative dehumanizing agent in American and European mainstream news outlets (Ruz, BBC, 2015; Taylor, The Washington Post, 2015). The distinctions made between different types of African emigrants are very important to note as policies vary based upon their status. For example, refugees are protected by international law (specifically the 1951 Refugee Convention) while economic migrants, or people who migrate for financial means, are not. Al Jazeera announced in 2015 that they

will no longer use the phrase Mediterranean "migrants" when referring to the recent increase of refugees crossing the sea to arrive in Europe, as the term not only generalizes the complex population but also because it is largely inaccurate (Malone, 2015). This terminology is often contested as many people who do not fit the standard definition of a "refugee" could still be in danger if they returned home. In this paper, when referring to West African migrant women from Senegal and Ghana, the term "migrant" is meant to encapsulate all women who have left their home countries due to desperate economic circumstances, lack of opportunity, violent outbreaks, or a desire to meet up with family members who emigrated before they did.

Literature Review

When writing about the migration of West African women, the themes which have to be addressed in order to analyze the situation in its entirety are Colonialism, Post-colonialism, Post-colonial feminism, and Globalization. The concepts of post-colonial feminism come out of Post-colonial discourse that, for a long time, centered on men and men's liberation. This branch of feminism uses the principles expressed in W.E.B. Du Bois' concept of the "double consciousness," (1903, p. 2). Double consciousness expresses the psychological complication experienced by black people where one must "always looking at one's self through the eyes" of white people in order to navigate society (Du Bois, 1903, p. 2).

One of the early pioneering works of post-colonial feminism was Audre Lorde's 1984 essay, *The Master's Tools Will Never Dismantle the Master's House.*" Post-colonial feminists understand that women from areas subjected to colonization suffer from "double colonization" reconfiguring Du Bois' terminology. Black feminists and post-colonial feminists have argued that black women globally experience a triple consciousness, factoring in the additional complication of regarding one's self through a male gaze. West African women are currently living within the lasting legacies of colonialism which is inherently patriarchal and racist. In this regard, they are constantly concerned with where home is for them, whether or not their society accommodates their needs, and where to go when those societies do not accommodate their needs. The following literature review attempts to support the argument that the plight of West African migrant women is rooted in colonialism and globalization, is best understood through narration, and is worthy of recognition.

Colonialism called for the stealing of land, wealth and goods, the violent usurpation and control over the bodies and psyches of the native people, as well as a narrative that justifies the means. The impacts of colonialism were so severe and deeply rooted, much of that control still exists to this day. In her book *Doing Feminist Theory: From Modernity to Postmodernity* (2012), where Mann examines feminist thought and

prominent feminists from the late 18th century to today, the chapter on colonialism and imperialism provides an in depth analysis of how colonialism impacted all aspects of women's lives and the legacy of this control. The chapter delves into how colonial rule striped colonized women of their history and identity, of any power and rights held previously, and especially of their voice. The chapter titled *Feminism and Imperialism in Early Modernity* looks specifically at the colonization of Native American women, addressing American suffragettes' interests in learning more on matrilineal Native American tribes. Though often the book looks at suffragettes in the 19th century, this chapter highlights that the reason for this is because white American women's voices looking back belong to the hegemonic narrative of how women in America obtained rights (Mann, 302). On the topic of post colonialism, this book emphasizes the presence and influence that colonizing countries often have on their former colonizers, though they have physically left their colonies. The remnants of a powerful elite, patriarchal subjugation and economic insecurity also remained post-independence. This information is very useful to this thesis, as it provides me with the language and context to better understand why women would want to leave their home countries.

In Adrien Wing's anthology, *Global Critical Race Feminism* (2000), several different authors focus on the legal rights of women globally. The most useful chapter to this thesis is titled *African Women in France* written by Judy Scales-Trent which looks at the plight of African women as Africans, as immigrants, and as women in France. The chapter gives background into how African migrants arrived in France prior to 1974 and contrasts that era with the recent increase in migration today. In 1990, the percentage of African migrant women entering France rose to around 30% from when it was around 15% in 1962 (Wing, 144). This chapter acknowledges the recent feminization of migration, begging the questions of why these women are migrating from their home countries and if these women truly have control over their mobility.

The legality of migration matters very little in France because often the color of your skin, the way you dress, and how you speak create space for assumptions and stereotyping among French nationals; African ethnicity becomes an indicator of illegal status, even when this is far from the truth (Wing, 144). This chapter helps me to understand Europe's role as the land of opportunity in the recent increase of African migrant women today, and how the European narrative of the current "migrant crisis" often leaves out their own involvement in inviting foreigners to migrate.

Mevi Hova's article *Redefining the African Diaspora: Migration, Identity, and Gender Narratives in Diasporic West African Women's Fiction* (2015) examines texts written by African women about their lived experiences abroad in relation to the patriarchy faced back in their home countries. The paper focuses on the lives of women migrants at home and abroad, while redefining migration as an enlightening experience that allows these women to see the norms of their country as an outsider. Living in two places creates space to see patriarchy as a construction which can be dismantled. The article also speaks to the post-modern transnationalism of the African migrant woman, struggling to find her place in the world with intersecting identities, trying to stay connected with the values of a nation that has been deeply damaged. This is in order to convey how the African women's fight for freedom and justice is particularly difficult as she exists in this liminal space between Western and African gender philosophies.

This article acknowledges that dynamics are changing; the dynamics of gender norms in Europe and in Africa are not what they were 20 years ago and they will likely continue to change in the continuing years as well. The purpose of this acknowledgement in this thesis goes to show that patriarchal issues in Africa are not uniquely African, nor are those issues entirely rooted in Western dominance during the colonial era. Though the British and the French strongly influenced gender relations in the country, Hova shines light on the agency that African male elites have to create potential change in the nation, but how they instead choose to benefit from former European norms which grant them dominance.

In *Empowering Migrant Women: Why Agency and Rights are not Enough* (2013), Leah Briones seeks to analyze policy aimed towards the aid of migrant women, specifically female migrant workers, in order to lay out what work still needs to be done in the protection and security of women. The author is critical of the efforts currently in place to protect migrant women who are almost always low-income and vulnerable to working domestic labor for long hours of the day. 40% of women in the labor force do not have access to social protection, including pension, unemployment benefits and maternity leave (Briones, 2015). Though the focus is on Filipino domestic workers, the book has much to say on why there is such a gendered policy disparity globally for women in areas of low-waged services where the conditions are poor and many times infringe on human rights.

Briones is critical of literature which seeks to paint migrant women as either "victims" or "agents" because she believes that this binary erases the immense influence that global political economy plays in everyone's choices. This approach takes a deeper look at agency and how outside factors influence decision making, specifically among migrant women globally. She is less focused on what conditions make migrant women's agency possible and more so on the choice to *do* and *be* (p. 166). The Senegalese women who migrates to Europe due to a loss in occupation do not necessary have the choice to do and be in Senegal if job insecurity plagues the whole city. In the global economy, we are seeing an increasing number of women in the informal labor market, but the only jobs that women have access to are the criminally low-waged jobs where women are overworked, underpaid, and subjected to unfit working conditions. This book highlights the economic context for West Africans women and answers the question of who benefits from women of color working long hours

for low salaries? According to Briones, the answer is *Feminist Post-Development Thought: Rethinking Modernity, Post-Colonialism and Representation* is an anthology written by Kriemild Saunders exploring women from the global south (or "Third World") and their paths to development and modernization versus post-development alternatives that may possible suit their current conditions better (2007). The chapter of the book that is useful to this thesis is *Counter-geographies of Globalization and the Feminization of survival,* written by Saskia Sassen (2000). This chapter speaks to how women in developing countries transnationally are more likely to be confined to the low-waged labor market due to globalization and the exploitation of women. Dependency Theory points out that many Transnational Corporations simply exploit patriarchal values through taking advantage of women's subjugation in society- where women put up with worse conditions than men because there is no better alternative other than being mothers and unpaid domestic laborers. As the Global North becomes increasingly more modernized, the rest of the world must adapt and reshape itself to remain a part of the market economy. If the developed world gets phones, the countries who make its pieces have to work a lot harder to keep up with the pace of Western fast-paced capitalism. Those countries typically employ women for these roles because they are the vulnerable population, and when the women in-country demand living wages as compensation for their work, companies look towards migrant women for cheap labor.

I use this literature because it speaks to the aspect of agency and choice among the lives of West African women. The low-income labor market according to Sassen includes foreign-born workers, illegally-trafficked people, and prostitutes. Operating within the low-income market where vulnerable women are turning a profit for these governments is known as the feminization of survival. For many West Africans migrating through the Sahara, migrants are often pushed or forced into labor in "sahara towns" which thrive off of the concentrated labor from unpaid individuals (Hagan, 18). Women are frequently raped or sexually abused on their path out from the Sahara. This chapter helps me to situate this localized situation of profiting off of vulnerable people groups in the Sahara desert into its global context of economic exploitation.

Methodology

The methodology for this research paper is interdisciplinary; I am looking at the political, sociological, geographic, and economic factors that explain why people, specifically women, leave their native countries in search of greater opportunity and/or freedom elsewhere. This interdisciplinary approach allows me to look at the issue of migration from a variety of angles and to gain a holistic understanding. Due to the complexity of this issue, the methodology for this research draws on resources from a variety of academic disciplines. The anthropological factor of ethnography concerns me the most on both the micro level as well as the macro level. In a world that is becoming increasingly more globalized, small localized spaces are under the threat of being forced into a larger collective due to the increase in communication, connection, and economic systems. Today, it is difficult for autonomous zones to reject this pressure of globalization. Examining the way in which people respond to the increasingly globalized world is of particular interest.

The lens through which I regard this topic is a post-colonial feminist lens. Since the post-World War II period when new countries came into being through fights for independence, the world has not been the same. The model for a nation-state during the early-modernity period was a state which was developed and self-sufficient. This model was often that of the colonizers, and the framework of a modern country was supposed to be learned and practiced by the colonized countries. However, at the risk of being exploited, women actually bore the burden of developing this new framework on behalf of the middle class (largely male) who rose to power post-independence in formerly-colonized countries. These women face misrepresentation and exploitation from men in their countries, men in former-colonizer countries, and even women in former-colonized countries. Knowledge of this perspective allows me to better understand the condition of women in these post-colonial West African states.

With regard to the statistical data within this paper, there are many limitations to gaining precise percentages or details. According a paper written by Djamila Schans of the MAFE (Migration between Africa and Europe) project, "accurate figures on total West African migrants in the world today do not exist due to a lack of systematic data collection on the part of the home governments and also because some migrants have undocumented status overseas" (Schans, 4). This is another reason as to why the thesis centers migrants' voices. Data analyses of this subject is difficult to obtain as the collection relies on the tracking of a population *sans papiers*.

Context

Colonial and Post-colonial

The Transatlantic Slave trade, actually serves as the birthplace in which the mass migration of African peoples outside of Africa takes place. Christopher Miller mentions in his book *The French Atlantic Triangle: Literature and Culture of the Slave Trade* (2007) that "the Atlantic triangle was traced onto the earth and into the world culture by men and women and ships, moving goods to Africa, captive Africans to the new world and colonial products back to the mother countries" (Miller, 3). The trading of people is typically referred to as "forced migration" due to the forced removal of African people from their continent by European foreigners. Colonialism, defined by the Stanford Encyclopedia of Philosophy as "a practice of domination, which involves the subjugation of one people to another," has transformed the continent of Africa from what it was pre-

colonization to regions and territories divided at the Berlin Conference of 1884. These territories became locals for the violent struggle for "markets and raw materials by the industrialized nations of the West" (Post-Colonial Studies: The Key Concepts, 1998).

African Colonies after the Berlin Conference of 1884

The worst of colonialism was bringing dualistic concepts and ideologies rooted in racism and sexism to the native people in order to divide the existing population and conquer them for many decades to come. Vickers (2002) argues that one of the most important aspects of colonialism is that its ideas are "trans-generational." This ideology lingers to this day and provides an explanation for the many civil wars, land disputes, revolutions, and migration in post-independence Africa.

Onto the colonial aspect of migration, one should mention what the French and the British were doing in these African nations in the first place. Both the French and the British were compelled and motivated to colonize these countries by greed, but justified their mission behind a civilizing rhetoric. Justifications like these were important to the Europeans as they held the power to portray themselves however they wanted, and they could not let their greed for land and raw materials tarnish their identities as developed and civilized people. This need to civilize is commonly referred to as the "White Man's Burden" referred to by Kipling in 1899. There is evidence of this sentiment among the British mentioned by Cohen in his article *The Colonized as Child: British and French Colonial Rule* (1970) where Lord Leverhulme of Great Britain said to the Governor of Nigeria in a 1924 speech, "I am certain that the West African races have to be treated very much as one would treat children when they are immature" (Cohen, 428).

An aspect very important to the method of colonialism was the concept of otherness; the idea that colonizers were people, and everyone else was something *other* than people. This type of dehumanization was used to create a hierarchy of superiors and inferiors in the colonies to maintain the socioeconomic system. During slavery, white people would never directly take slaves but would buy slaves from chiefs due to European's lack of access to the spoils of war. However during colonialism, colonists who resided in the colonies which they were occupying had to convince the colonized people that they were less-than and should treat the colonizers as authority figures based on their supposed "spatial marginality" (Staszak, 2). The British were keen on learning the languages of the colonized in order to establish a link between them and their desired colony. The French took a different approach and used indigenous people as tools of translation while providing them with privileges that the other colonized people did not have access to. This hierarchy was a way to remove morality and values from the African people groups to the point where they only saw differences among each other based on who the colonists liked more and treated better. Binaries such as civilized or barbarian, as well as good or bad were internalized and later replicated by the native populations.

Pre-colonialism, many societies in Ghana and Senegal were matriarchal, as well as in the rest of West Africa (McGee, 2015; Akena, 2019, p. 37). Patriarchy did exist in West Africa prior to colonialism, however many tribes that were "patriarchal" placed little to no importance on men dominating over women; the tribes were patrilineal and passed on power through the male's side of the family. Examples in Ghana include the Ashanti tribe, where power was passed down through the father, however the heir to the throne was always chosen by a woman. In many societies in West Africa, women played major roles and typically had access to gaining visibility in society through means of food production and land cultivation (Spencer-Wood, 2017). The complex role that many women held in society simplified for many tribes during the colonial period.

European men who were always the colonizers (rarely women) were in the camp of exploiting the labor and bodies of women for their gain, while using African men to subjugate African women in the same regard. This speaks to the tactic of dualism and institutionalization employed by the colonists which speaks to the sexist nature of West Africa today. The patriarchy imposed on women in the colonies "undermined indigenous women's sources of power through actions such as limiting them to the domestic sphere, exploiting and classifying their unpaid domestic labor as "unskilled" and therefore low status, denying women's land rights, not allowing women to exercise public or religious powers and positions, imposing the institution of patriarchal monogamy, outlawing extramarital sex, and lowering the status of children born out of wedlock as illegitimate" (Stoler, 2006, p

France's colonial system disrupted the traditional agricultural system of the Senegal River valley by instituting a tax that made natives work on a groundnut and cotton plantation system, but receiving almost no compensation. Paying the tax meant selling animals

or portions of the harvest or traveling to the coast where most of the colonial plantations were located in order to earn the money for the tax by selling labor. This conversion to monetary payments in the region was an introduction to capitalism, but more so, to the French franc. The French colonial system in Senegal was able to tax cash crops for revenue, force the native people to tend to peanuts to create a surplus of exportable goods, and divide the region and population (Nigro, 214). Due to European patriarchy at the time, those who would attend to these crops and work cyclically were women- as they were seen as weaker and less capable of building. The French used the labor of men to establish railroads and streets.

The gendered distribution of labor is at the foundation of capitalism in colonial Africa, as patriarchal divisions were the first lines drawn by the Europeans. This is a replication of the Western concepts of indentured servitude that poor white women suffered, prominent in the 17th and 18th centuries, as well as the enslaving of African women, from the 17th century to the 19th century. This meant that the subjugation of the African woman had to be maintained in a number of ways, and the dehumanizing racial element allowed for the treatment of women to be brutal, only viewing them as tools for production and exploitation.

During the colonial period, the French requested Senegalese men to emigration to France as workers to rebuild the country after the World Wars, as well as fight on behalf of the French in WWII (Mynz, 1995; Mann, G., 2004). The job of a soldier was somewhat coerced by offering wages that African men could not obtain working on railroads or in agriculture. This was because the jobs were dangerous, and the men were risking their lives. The soldiers belonged to other French-owned African territories as well. Though the members of the French Force were the tirailleurs sénégalais (Senegalese shooters). During both World Wars, France successfully recruited additional military manpower from its colonies, and this took a huge toll on familial relations in Senegal. But these acts became the birthplace for ideologies about how the metropolitan France had more opportunities than their colonies, and this sentiment that would carry on after colonialism.

The attack of the women was an attack on the culture and identity of the tribes, as it was often the duty of African women to pass on the culture. The values of the people were destroyed and replaced with European values and Christian beliefs. The British did not recognize African history, the people groups who occupied what is today known as Ghana for over 1000 years, or the rich and complex varieties of language and culture (Bush, 1999). Chinua Achebe notes that "African people did not hear of culture for the first time from Europeans… their societies were not mindless but frequently had a philosophy of great beauty… they had dignity" (Achebe, 1973, 8). Much of what the world learns about Africa is very narrow due to the great loss of its history.

Post-colonial feminists concern themselves with combatting the false narratives of colonization, African people, and women told by Europeans. The major problem with these narratives was how they impacted following generations of people to regard Africans, women and the "colonial mission" through the lens of the colonized and not the colonizer. That lens is respected and maintained, though post-colonial feminists are pushing to undo or "unsettle" these concepts of themselves to deconstruct the narratives from the inside (Piedalue & Rishi, 548) One of the well-known narratives about native African women was that they were better off colonized than under the control of African men pre-colonialism. However Said has pointed out that the regard of marginalized populations damaged by the narratives of the West reflects heavily on European men themselves. He makes the claim about the British in India, and how all knowledge and academia on India's colonial history is "tinged and impressed with" or "violated by" the data gathered by British colonists (Said, 1978, 11). Regarding the patriarchy in France during the late 1800s, it is clear that the way men regarded women and clearly controlled them as pieces of property speaks to the gendered ideologies that were projected and imposed onto the native populations.

Western education was used as a tool of breaking down and rebuilding all structures present in African countries. Post-colonial theorists acknowledge that mechanisms of perpetuation are required for oppression to continue in order for the rule to remain cyclical. One of the main methods of perpetuation was education because it created a barrier into who had access to upward mobility and who did not. Education served as another hierarchical determinant, and those disadvantaged enough to not go to school, the vast majority of people, could barely obtain a low-waged job. Education was also the breeding ground for colonial ideologies- the schools in Ghana had curricula which focused on creating an "undiversified work force and stagnant socio-economic development" (Fletcher, 312). The English language is also a medium of oppression as students in rural areas, mostly women, so not have access to gaining that linguistic competence to work in any big city. Women's mobility became restricted as they became tools of labor and nothing more. The woman's relationship with her family, clan, and community was ruptured.

Creation of crops in surplus meant African men may be able to rise in ranks by supplying for the colonizers and also having cash to spare. This beginning stage to the adoption of capitalism by African men would later lead to the economic detriment of African women. Women were tied to the land during the colonial period and were legally prohibited from going to court, so they could not fight back. The extraction of raw materials (gold in Ghana, phosphate in Senegal) as well as the production of tropical agricultural products (palm oil in Ghana, groundnuts in *Senegambia*) were methods for African men to gain a surplus amount of money. The devaluation of traditional African commerce relations, the gendered divide of labor, the taxation of the land and crops, as well as the forced labor created a proletarianized labor force. The British and the

French succeeded in destroying and rebuilding the existing systems and erasing them from history as well.

Typically in West Africa during the early post-colonial period, governments were established by loyalists to the former colonizers. Although this is neither the case for Ghana nor Senegal, it is important to note that these loyalists- always men- were willing to follow the European model of exploitation of their country post its independence: including Cote d'Ivoire and Dahomey (currently named *Benin*). However in all West African countries, including Senegal and Ghana, leaders guarded the existing structures that gave men power over women. Even post-independence women still must fight against misogynistic patriarchal structures. This begs the question "Independence for whom?" Swati Parashar mentions that post-colonialism "celebrates anti-colonial nationalisms as the act of resistance and overlooks the internal orthodoxies, injustices, silences and marginalizations" (Parashar, 371).

When Ghana gained independence in 1957 and Kwame Nkrumah came to power, the British majorly destroyed the cities on their way out. They burned down buildings, killed animals, destroyed fields for crop cultivation, all as retaliation for ending colonialism in the country (Sato, 2017). Kwame Nkrumah was very radical and had many ideas for the future of Ghana and Africa. However after he was deposed of by Joseph Arthur Ankrah in 1966 in a coup, the colonial framework was reinstituted into the country. The educational structures of contemporary Ghana are derived from those put in place by the former colonial power (Crowder, 1978). Contemporary educational systems in Ghana continue to disseminate European perspectives and world-view as their foundation.

Post-independence, Ghana has had four main phases of migration:

1. After independence, there was economic prosperity- Many students studied abroad in the UK.
2. Mid 1960s- Classified by a rising unemployment, payment deficit, political instability, and many well-off foreigners leaving the country.
3. Early 1980s- The introduction to SAPs brings about massive debt, labor groups were established, and many Ghanaians living in Nigeria were expelled from Nigeria and had to walk back to their home land in what is known as *Ghana Must Go*.

Overseas migration continues into the 1990s and 2000s. After West African countries, the most important countries of destination for Ghanaian emigrants are the United States (7.3%) and the United Kingdom (5.9%) (IOM, 2007).

Léopold Segnor, the first president of Senegal and a poet in the Negritude movement, wrote about the condition of black people within a colonial state. However Sengor was later looked down upon due to his support of African-French relations, federalism, and the French franc being used in African countries. Sengor was a part of the elite prior to the country gaining independence, being educated in French schools during the

colonial era and remaining politically engaged in the colonial regime before independence. In Sengor's plan for the future, he had little to say about women and their roles; and this was evident in the years to come (Wilder, 2015).

Like other sub-Saharan African countries, much migration from Senegal has been directed towards other African countries, and Senegalese migrants can be found in most regions of Africa (Beauchemin, 2007). Senegal also played a large part in the recent increase of sub-Saharan migration flows to Europe. While recent population statistics show that Senegalese people makes up around 4.6% of the population of West Africa (U.S. Census Bureau, 2012), Senegalese make up 18.1% of West African migrants in the main European receiving countries (Spain, Italy, France) (U.S. Census Bureau 2012). In addition to Senegalese migrants being highly represented in Europe, Senegal stands out as a country that has diversified its migration destinations, with Senegalese increasingly present in Italy, Spain, and the United States as well as their traditional destination of France. The three countries- Spain, Italy, and France- made up for about 45% of the international Senegalese community (Beauchemin, 2007).

Senegalese migration to France began before the country gained independence in 1960, when the World Wars wrecked the country and began relied on unskilled foreign labor as their labor was cheap. France was one of the countries that turned to labor recruitment and importation often in order to rebuild the country in times after wars. Although the vast majority of imported laborers came from southern Europe, many also came from France's African colonies. Employers recruited workers in the rural Senegal areas to work in low-skilled jobs facing pretty bad conditions in the auto field, textile field, and hotel industries (Fall 2005). Senegalese workers stayed in France and earned money to send back to their country before returning home and sending another family member to take their places (Fall, 2005). Many people were solely interested in making money and returning home, so the French were sure to create lodging sites for migrant workers near their place of work in order to keep them away from the French society. During the post-war period- known as *les trente glorieuses*- irregularity among immigrants was widespread. Migration became illegal from WWII to the 1970s, though many migrants still came sans papiers and found a job upon arrival. Laubenthal (2007) estimates that at the end of the 1960s, 80% of foreign workers were directly recruited by companies and entered France without a residence permit, to be regularized later by the government. The workers invited to these countries were ultimately men, however when immigration became illegal in France, there is interestingly enough an increase in women migrants from West African crossing into France.

What describes the period of post-colonialism for many West African countries is the rise of globalization, IMF and the World Bank increasing in usage and importance, and disenchantment. Violent conflicts such

as civil wars, genocides and revolutions break out all across the continent, democracy in the region is being challenged in multiple ways as authority members want to hold onto power, and political groups fight to be recognized. However in most of these cases, women are oppressed and forced to accept the will of the state, which involves co-opting nationalistic ideologies and reproducing the image of their "nation-state". National identity is reflected in its gendered impositions on women. The control of women and the control of the state become synonymous, their countries become unrecognizable to them, and women find themselves disenchanted by the illusion of freedom.

Globalization is seen in a number of different ways. Positively, Val Moghadam (2015) sees globalization as a complex economic, political, cultural, and geographic process where everything is spreading internationally: money, organizations, ideas, discourses, and peoples. However many postcolonial feminists see globalization through a critical lens. Mwase (2007) believes that even though there are innovation attributes, excessive market and profit driven globalization harbors negative disruptive and marginalizing effects (Lucas 2007). Relating to Africa, Donkor (2005) sees globalization and colonization basically as the same concept but with different time periods. Edozien (2004) says that "from an African perspective globalization is not new but a continuation of over 500 years of domination colonization and commercialization" (Ike, 138). Relating to women, Sassen believes that "economic globalization" is the reason behind women struggling to survive, causing the expansion of the low-waged labor market as an increasing number of women find themselves left behind in the rapid growth of development (Sassen, 89).

Feminization of Migration

This section of the thesis looks at the question of why there are 'more women than ever' migrating now (Saunders, 2007, 93). Humans have always moved around, it is a part of who we are as a species. However for women today, migration has become less of a choice and more so a survival tactic. More and more women feel unsafe or unaccounted for in their home countries for a variety of reasons which will be covered in a further section- but this growing sentiment coupled with the booming global market for cheap migrant labor creates situations where West Africa migrant women feel it is necessary to leave their countries. The conditions that have created this phenomenon suggest that these women should be welcomed into nation-states as refugees. When analyzing the "migrant crisis," reporters often ask why African migrants would risk their lives to arrive in Europe. However for people in seemingly inescapable predicaments in their home countries such as poverty, famine, job loss, health-related issues, staying in the home country could lead to death due to of structural issues beyond their control.

What should be highlighted in this feminization of migration is how unique it is to ever before. Not only

are the numbers and percentages of women migrating higher than ever, but now more than ever, women are migrating autonomously. This new pioneering method of migration has a very feminist look to it; Women are leaving patriarchal countries in order to go to countries that are less patriarchal. However, this situation is far from a "win" for migrant women. A UN Report (2005) mentions that "when policies and practices that discriminate against women are in place- in reaction, for example to access of resources, educational opportunities and political participation- women's capacities to participate and contribute fully to society are diminished" (Miranda, 3). Though this lack of access to resources is experienced by women before they leave their home countries as well as when they arrive in their host countries.

The Senegalese population has grown rapidly in recent years, increasing from three million in 1960 to 13 million in 2013 (Mezger Kveder, 2012). Now, 44% of Senegal's population is under the age of 15 and almost half (42%) of Senegalese live in urban areas (Population Reference Bureau 2012). While Senegal is certainly among the world's poorest countries, life expectancy at birth has increased from 39 years in 1960 to 58 years in 2011 (The World Bank, 2013) and it has shown consistent improvement in its Human Development Index (HDI) scores (Schoumaker, 2013). The Senegalese economy is dominated by the service sector (60%), with agriculture and industrial production each contributing 20% of GDP (The World Bank, 2013). Citing The World Bank in this instance is intentional, as the SAPs responsible for cutting many of the country's organizations which served the Senegalese population are also responsible for massive peanuts and cotton production (as they still remain the principal export crop) which service people in the global North. So in a country where youth make up over half the population, and 44% of Senegalese people live in the big cities, this means that the country has an interest in investing in the expansion of the large cities to accommodate the young people. More cuts in the rural region leaves over half of the population depleted of resources and support. Women in these areas must rely on immediate solutions like micro-loans when the problems are long-term and constant. Understanding this context makes it a lot simpler to empathize with women in rural areas who live in the peripheries of major cities, and to see why migrating would be a justifiable next step.

As traditional theorists of migration tend to represent migration as a male activity ignoring the gendered factors involved in leaving one's country, this thesis takes a feminist approach at regarding the increase of women migrants. Though traditionally theorists such as Kelson and Delaet (2001) believed that women mainly migrated to join husbands abroad, a very small percentage of women are in need of doing this today. According to UN Women, between 2000 and 2015, "the number of international migrants has increased by 41% to reach 244 million... Almost half of them are women" (UN Women). Though sub-Saharan African women only make up about 40% of all African

migrants, that number is very significant for there to be no representation of them in media and literature. Women make up around 75% of all international migrant workers. So there is factual evidence to support that women are not solely migrating to reconnect with their husbands. Another traditionally held belief is that women migrate to support their families. However, women in West Africa migrate for a variety of reasons that stem from colonial legacies in globalization which I will explain in a further section. Despite the evidence, much of the theories surrounding why women migrate are rooted in narrow sexist ideas about what women want, and this ideology causes reporters and news outlets to disregard women's cases of migration because they are already searching for stories of migrant men- rendering migrant women invisible.

For African Women specifically, traditional theorists of migration believed that they migrate because they are illiterate and have limited access to resources, however this ignores the wide range of structural constraints and inequalities that prevent African women from participating more fully in the migrating process. However what the 2005 UN report highlighted was that women do not really have control over their mobility. Susan Mann believes that relations like this are changing, where African women are being relied on for foreign work such as childcare, eldercare, house care, or other forms of domestic work traditionally performed by housewives in what could be called individual dependency theory. African women are a major population of migrants, occupying many places along the Western Mediterranean route. Because gender is all about power dynamics, it informs social relations such as communicating routes, working in the low-waged labor market, and safety takes on an entirely different meaning in relation to discussing migrant men's social relations.

Narratives

When studying abroad in Ghana, I recall asking my tour guide about the impacts that migration to Europe had made on Ghanaian society. The tour guide told me about his niece who two months prior had finally earned enough money to migrate to Europe through the Sahara desert. He spoke about his niece in a proud manner, saying that "she will become big one day." Delving deeper into the story, the tour guide told me that he does not know where his niece was along the Western Mediterranean route, and that he nor his family had not heard back from her in the two months that she has been gone.

I knew that the journey that migrants take to arrive to Europe was long, but I never imagined that it would take over 30 days to arrive to a region that would take no more than 10 hours by plane. Media has for a very long time dictated the way in which consumers of media perceive migration as films, novels, and the news seemingly reflect reality and tell the full story; However this has never been the case on the subject of migration. Several news stories on the subject of migration in the US and abroad are not only centered on male migrants,

but the women are barely present. This representation counters the fact that women comprise slightly less than half of all international migrants: 49% as of 2000 and 48% as of 2017 (according to 2017 UN report). Female migrants even outnumber male migrants in Europe, Northern America, Oceania, Latin America and the Caribbean. However as noted by Mendes and Silva in their piece *Women, Migration, and the Media*, "as women's bodies move across borders, discussion about the representation of female experiences in the migration process still remains somewhat mute" (243).

Irregular migration (or illegal migration) to Europe has attracted political outcry and media attention, with video of migrants from sub-Saharan Africa flowing into Europe, climbing over gates, and participating in the political tactic of fear mongering to create a narrative of invaders with an "us versus them" dichotomy. Despite this created and inflated concern, women rarely receive any coverage, nor are they interviewed on any major news casting. This just means that their plight is poorly understood, and they do not even have a voice for providing clarity. Most citizens and policy makers in European countries think that the reasons for movements among migrants are as simple as "poverty and war are pushing Africans to leave their homes, and an available region with a booming economy and welfare benefits is in the developed world" (Akiwumi, 2018). Though there is truth to this quick assumption, the premise lacks complexity and demonstrates that many people in the developed world do not care to think beyond the surface with regards to the migrant issue. Most studies of African undocumented migration to Europe are either small-scale or speculative, causing researchers to call for further examination of this issue (Beauchemin 2009).

These beliefs about the reasons for migration often fall under the umbrella of "grand narratives" which come out of globalization as a way of easily understanding the world. However, these beliefs generalize and present as truths since there is a lack of migrants voices that are taken into account in the discourse. Also the grand narratives are typically imposed concepts of a perceived reality from the more developed countries. These narratives are critiqued by post-colonial feminists who tend to stray away from Western oversimplifications of the rest of the world. They de-center Western thought by centering and acknowledging the multiplicity of marginalized women's experiences. These perceptions should serve as models for how to speak on the issue of migration as it pertains to women and their experiences.

West African migrant women are not just left out of the newspapers and networks; they are even left out of fictional literature, written out of the story books. During the colonial period, only a sub-group of elite African men had the privilege of going to school, learning how to read and write, and writing themselves back into history from the previous erasure on the part of the colonizers. However, after independence, women have still had trouble accessing higher education, and publishing houses became businesses run by men. Ousmane

Sembene, a Senegalese filmmaker, created a film called *Black Girl* (1966) on a Senegalese women who was tricked into becoming a domestic worker for a white family in France. This was a legitimate threat and fear for West African women during the 1960s and 1970s. Sembene's goal in creating this movie was to capture African women's experience because he did not see fellow female filmmakers at the major cinematic conferences.

Sembene's film was far from typical, and two films that were released prior to the release of *Black Girl* were *Frontières* (2002) (translation: Borders) and *La Pirogue* (2012) (translation: The Canoe). Both of these films follow the journey of West African migrant men. In *Frontières,* a woman is found in the Sahara being sexually abused and the men save her, while in *La Pirogue* a woman is found hiding in the boat as a stowaway. In both of these films, women are regarded as exceptional cases. These films are dangerous, because they feed the narrative that women rarely migrate, therefore they do not need to be accounted for in international policy or laws that can protect them. Though these films are fiction, they are influenced by the news sources which in turn influence how consumers of media perceive migration in West Africa.

In addition, despite the history of mobility and the recent visibility of sub-Saharan African migrants in the developed world, researchers have noted that transnational migration from sub-Saharan Africa has relatively been low. One of Hatton and Williamson's (2005) chapters *Where are all the Africans?* Argues that the demographic and economic patterns of sub-Saharan Africa in the past 20 years are similar to those that drove the European mass migrations of the 19th and 20th centuries. This generational shift has also produced a growing group of young Africans with limited prospects in these difficult economic conditions.

When examining the trends closely, there is a lot more nuance in the statistics than is presented on the news or portrayed in cinema. Statistics can tell a story as well, as IOM Dakar states on the official page "Migration Profiles were conceived of as more than just statistical reports; they were also intended to be government-owned tools for facilitating policy development" (IOM). Profiles such as these need to be examined in order to become tools for the government and aid around building policies that supports West African migrant women.

Content

Motivations for migration

In all the cases for migration through the Sahara desert along the Western Mediterranean route, there is always a strong motivation for wanting to either leave their country or arrive in the host country. This is because the journey through the desert for West African migrant women who are not familiar with the desert is extremely dangerous and only slightly less deadly than going through the Atlantic. From all the literature read

on this topic, I have boiled down the motivations for migrating for West African migrant women into five categories; four of which I will discuss in this section. The reason why women are migrating are due to:

- Poverty
- Climate change and the deterioration of the environment
- Growing urbanization
- Violence and public safety

The UN defines **poverty** as a human condition characterized by the sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political, and social rights (UNHCR, 1996). As this definition explains, poverty goes far beyond lack of income, as it does not only deprive the poor of income but of opportunity as well. Poor health due to inadequate nutrition, hygiene, and health services further limits their prospects for work. This fact is worsened by insecurity and lack of opportunity. Living in a marginal condition as poor West African women do, with no resources to fall back on, shocks become impossible to offset.

The Ghanaian Deputy Minister of Lands and Natural Resources, Mr. Benito Owusu Bio, says "If communities are given power to manage the natural resources, habitats will be secured and local communities will be strengthened." However if you do not have access to working with the largest exports of a country, or the exports which bring profit into the country, then it is difficult to find work elsewhere and sustain it. In 2017, Ghana's top exports (2017) were gold, bringing in about $4.9 billion and is a major pollutant to the environment, cocoa, bringing in about $2.7 billion, and crude, bringing in about $1.4 billion. Though women in the rural areas do have access to land, access to water becomes an issue for irrigating the plants, the process of cocoa cultivation must be heavily regulated in order for the goods to be exported, and the production of cocoa in Ghana has a reputation of exploiting children as cheap labor.

Currently one out of four Ghanaians lives on less than $2 a day. In Senegal, 38% of the population makes under $1.90 as of 2011 (The World Bank). So how could these countries be full of natural resources but such a large percentage of people living well under the poverty line? This is because many of the reserves for natural resources are not run by the company, therefore do not employ the local citizens. The only Ghanaian government-run oil company owns 15% of Ghana's oil fields. Due to transnationalism, an oil company such as Exxon may not be based in any particular country but can have some factories in Africa, some in Asia, and some in Latin America as low-waged workers cultivate raw materials to be bought and sold. Susan Mann speaks on these "Global Factories" and how the division of labor inside and outside of these factories create competition and conflict between women (330).

This thesis will not be addressing the subject of **climate change** much, however one of the major reasons for migrating is due to the climate change effects on the land. The economic situation in Senegal had declined starting in the 1960s; A major drought known as the "Sahel drought" started in 1969, the world market for Senegal's major cash crop, peanuts, collapsed, the population grew enormously, and the 1973 oil crisis deeply reduced Senegal's economic prospects (Mezger Kveder 2012).

As mentioned previously, almost half (42%) of Senegalese people live in urban areas (Population Reference Bureau 2012). This **growing urbanization** has led to the adoption of SAPs which were unfortunately cutting services that were of use to women in rural areas, such as agricultural subsidies. In addition, women were pushed farther to the margins of the agricultural food sector for the cash crops which can be exported. Education and health care became much more expensive so many mothers had to withdraw their children from school. Ghana launched its Structural Adjustment Program (SAP) in 1983. The World Bank and IMF believed that their SAPs in Ghana alleviated poverty when in fact, it did the opposite. According to Anyinam in their article "Spatial Implications of Structural Adjustment Programs in Ghana," poverty in Ghana was actually higher after structural adjustment than before its implementation. This economic hit immediately impacted women in the rural areas who could no longer sell their goods to people who could not afford them. And though Ghana experienced a minimum wage increase of 75% in the first three years of the SAPs, much of these gains were never felt amongst due to a rise in food prices, and the payment of high fees for social services.

The issues of violence and public safety in West Africa stem from the violent colonial histories of these countries. Colonialism was a masculine and violent state which claim dominance by forced and could only be overthrown with force. Imperial beliefs state that no land is occupied territory unless white settlers claimed it and deemed it legitimate. The appropriation of West African land in the eyes of the colonizer stripped them of their power, which they could only regain through taking it back. The other way of taking power from the European's point of view was to abuse and humiliate the native women. Senegal signed a treaty with France to gain their independence, and due to the lack of force, the French maintain their presence in the region to this day. Though Ghana was a little more forceful in their fight for independence, Ghana still remains a part of the commonwealth due to leadership post-Kwame Nkrumah. After independence in these countries, the ideology that violence is the method to get what you want, and the abuse of African women is OK still linger to this day. Masculinity in West Africa for men focuses on domination which never the focus before colonialism. In addition, as these countries have adopted the capitalist system (by force), the fight for resources in these countries is typically a violent pursuit as you are often dealing with people who have nothing. Women are particularly susceptible to this violence, leading them to seek safer environments elsewhere.

Dangers Faced by Women

This section examines what dangers West African migrant women face in the Sahara. These dangers are both circumstantial as well as man-made. West African migrant women tend to take the Sahara path as shown in Figure 3 as opposed to taking a boat around the West African coast and arriving in Spain, as they often do not have the financial means for safe accommodations, and rafts, dinghies, and canoe approach have high mortality rates.

Consequences that women face
In transit:
Economic exploitation
Human trafficking (sex industry, house slaves)
Dehydration and famine
Drowning
Alternative circuits
In host country:
Discrimination (sexist, racial, xenophobic)
Informal labor market

Going through the Sahara desert to arrive in North Africa and Europe is extremely dangerous if unfamiliar with the terrain. Being in a cargo truck for 15 hours driving along sand can lead a migrant in a variety of directions, most of which they have no desire to go to. Without painting Arabs and Bédouins from these Saharatowns as all anti-black smugglers waiting for West Africans to exploit, this section will delve into how West African migrant women are particularly vulnerable to smugglers (who are always men) and the dangers they are likely to face along the way. Then it will briefly discuss migrant women's liminality in North Africa, and lastly address potential dangers faced in Europe. Figure 5 is a Trans-Saharan migration map with the differing routes, however unfortunately West African migrant women are not lead in the immediate direction of their destination as the map lays out.

Typically women who are making these journeys to Europe do not live in either the major cities or

the port cities; they often live in the marginal cities, so their journey begins when they find means to arrive at the start destination. Journalists have actually done considerable work covering the extensive migration networks as laid out in Figure 5, however the literature gathered does not go into details regarding where migrants spend most of their time along the migration networks. The lives of any West African migrant currently in Saharatowns are unknown. However what is known is that black people are specifically targeted, and are placed in grotesque, racialized conditions which make it hard to leave without reinforcing their dependency on cheap black labor (Hagan, 2017). A book titled *Black Morocco: A History Of Slavery, Race, And Islam* by Chouki El Hamel highlights how North Africa and the Saharan region cannot deny its history of slavery which has a huge impact on the perception of sub-Saharan Africans today (El Hamel, 2014, p. 4). Though this is not simply a black/Arab or black/white issue, understanding the racial context of the Saharatowns is important to understanding how West African migrant women felt and dealt with along this route. During this route, these women face racial violence, sexual abuse, dangerous housing, and/or discriminatory work arrangements to potentially "fund" their continuation along the route (Hagan, 7).

The Tuaregs, semi-nomadic Muslims who live in parts of Mali, Algeria and Niger, are often the people who transport sub-Saharan migrants through Tuareg lands, driving trucks or "Hiluxes" that they can navigate on sand. Tamanrasset and Agadez- cities located in Algeria- are locals for tourism and trade, with a lot of diversity (Hagal, 42). These cities are often not like the Sahara towns that many West Africans find themselves for weeks, months, and years. Little knowledge regarding how many women are there located in these cities now, how they plan on leaving them, and what their stories are known- though it is certain that many West African migrants do not arrive in North Africa.

Upon arrival to North Africa, West African migrant women are faced with another set of complications. For starters, it is hard to obtain a job as a foreigner, so migrant women who cannot support themselves financially are likely to experience homelessness. Jobs in big cities for West African women could include doing hair, selling clothes and jewelry, or selling other goods. However their access to certain spaces to do this work is limited. Also dark women in North Africa are sometimes looked at as prostitutes as the underlying assumption is that they are there to make money. Situations where migrant women are approached by men and reject them are vulnerable to possible harassment or being reported to the gendarmes.

North Africa for centuries has acted as a region of destination and not of transit for sub-Saharan Africans, so the shift in roles from destination to transit country allow sub-Saharan Africans to move to and from Europe (not easily; many migrants died trying to cross the Mediterranean). This has created some animosity for the sub-Saharan Africans from the North Africans. Though Algeria and Morocco act as transit countries during the "migrant crisis," West African migrant women see their séjour in these countries as temporary. However, more often than not, they get stuck in the Rif Mountains as it is dangerous to reach the heavily-guarded dual-continent border to the Spanish enclaves of Ceuta and Melilla (Stenner, 2019). The European Union has outsourced its border protection to the Moroccan authorities, whereby any abuse of West African migrants is not on Europeans soil. In this regard, West African migrants become the temporary underlass, positioning Morocco closer to Spain, closer to whiteness.

Once you arrive in Europe, the discrimination does not end but takes a different form. One major danger that West African women face in Europe is sex trafficking. In a broadcast from NPR titled *Sold Into Sex Slavery: The Plight Of African Women Migrating To Europe*(2015)*,* Frayer, the reporter, was gathering research on migrants while in Spain, and claimed that she was startled to see so many African women pregnant. A Spanish social worker named Encarnación Marquez says "Sex is traded just like money, to bribe border guards or police… some migrants sell sex to human traffickers, in exchange for smuggling them into Europe. This is a tragedy no one talks about." West African migrant women are in danger at every step of the way in their search for a better life.

Migrant Women's Role in the Global Economy

Women in developing nations typically occupy the lower side of the economic spectrum when it comes to the global labor market. In Ghana specifically, the agricultural sector is the largest sector of employment, and the proportion of women above 15 whose main jobs were in that sector remained at 51% in 1999 and 2006 (IOM, 2009). This means that women's regular income is derived from the ground, so she is dependent upon the rich land though that is not what she will always get.

West African women are some of the main producers of the labor force; they have become a major element in the system of social protection. They contribute to prosperity without many benefits for them, they are paid low wages which in turn creates wealth in some other man's pocket- they are one of the most vulnerable populations, where the rich elite are capitalizing off of their desperation. The systematic link leading women's confinement to low-waged labor either in-country or abroad connect to two developments as noted by Sassen "the growing presence of women from developing economies in the variety of global circuits, and the rise in unemployment and debt in those same economies"(Saunders, 90).

Though much of the data collected refers specifically to women of the Third World, I believe that this applies to migrants as well who transcend borders though are faced with very similar economic systems which confine them to a trade and pay them very little fore this. Sassen identified three phases that can explain the gendering of the global economy and how that connects to internationalization:

- Women work in the household and through subsistence farming while the men work on cash crops to bring in the income
- Internationalizing manufacturing production to where it has become increasing more feminized.
- Women transforming their own notion of membership and how they are portrayed

Currently, West African migrant women seem to be in the third phase, where they are altering gender patterns and trans-nationalizing their homes. This phase ultimately provides women with the most agency and one could say that their mobility is empowering. However in the creation of new pathways for West African migrant women, they almost always working within the same alternative circuits which global systems profit from. The UN reported that criminal organizations which deal in trafficking and sex work generated an estimated $3.5 billion *just* from trafficking migrants per year. These global circuits which include trafficking, domestic workers, and prostitution are seeing an increasing number of women and operate partly or wholly in the "shadow economy" (Saunders, 2007, 103). The question that must always be asked is who is benefitting from women need to earn any sort of income, and how can services move from under the shadows so that regulations can support migrant workers as workers?

The Context of Reception

Upon arrival to Europe, migrants are often sold upon a dream that the big cities in Europe are regions full of opportunity. Though this traditional way of thinking is a bit outdated, migrants coming from nothing still believe that Europe has something to offer them in terms of a better life. In Vickstrom's dissertation *The production and consequences of migrant irregularity: Senegalese in France, Italy, and Spain* (2013), Vickstrom is interested in examining the political and social climates in these three European countries to discover how Senegalese migrants are received by their host countries. Portes and Rumbaut call this the "context of reception" and define it as "the policies of the receiving government, the conditions of the host labor market, and the characteristics of the immigrant's ethnic community" (Portes and Rumbaut, 2014). Beginning with the political, Vickstrom observes that the political climate surrounding migration in Europe has been a controversial topic for some time. He says "although some European countries have long histories of welcoming immigrants, the relative cultural and ethnic homogeneity of many others has thrown recent increases in foreign-born populations into sharp relief" (Vickstrom, 2).

For the Senegalese population specifically in France, they have had somewhat of a regular status during the 1960s and 1970s; though most Senegalese migrants were *sans papiers*, their acceptance into France was at the time welcoming. There is still a bit of animosity in France as these two decades followed the in-

dependence of many of France's territories, but the migrants were there to work and the country was accepting of their cheap labor. There was no explicit authorization to enter or reside in France and migrants were able to take advantage of the regularization procedures once they entered the country "illegally". Irregularity became more common among Senegalese migrants, however once the rules for regularization become much more strict in the 1980s and 90s, anxiety over immigrant integration has also increased with the recognition that unauthorized persons had this illegal status associated with their arrivals (Vickstrom, 9).

Is Migration a Choice for Women?

In rural areas of West Africa, there are regions of immense poverty, health issues that go untreated, land degradation and a high male and female unemployment which pushes women to take on more responsibility and provide family income. These are only some of the factors that contribute to the steady increase in female migration. However the feminization of migration parallels with the feminization of poverty as well as the feminization of work. Though the feminization of work seems like a positive thing, many of the jobs women are obtaining globally are criminally low-waged. And the competition for any job at all leads to women working in unsuitable conditions, working very hard in fear of being replaced.

The cyclical nature of an increasing number of women migrating autonomously is that the increase gives women an illusion that they do have a choice in deciding their fate. If the choice is "I can either stay in my country and starve or work as a servant in Mauritania," there is an illusion that women have choices and women hold the power to make those choices. Though I am not interested in denying women's agency, I argue that the choice to migrate is beyond most women's control with the support of feminist sources.

If women are chasing survival, they are being controlled. As stated in the UN's *Universal Declaration of Human Rights* all people have right to not be discriminated based off of who you are, to move where about they please, and to not be enslaved. Though these rights are human rights and do not apply to any specific country, they do show us how a specific country's laws may contrast with one's basic human rights. If women in Ghana do not feel safe where they live due to violence, leaving their regions is less of a choice and more of a necessity. Feeling like you have to work in brutal jobs that pay very little and do not offer their employees health benefits in order to eat at night is a violation of human rights- that is why many of these factories operate in tax-free zones which are practically lawless (Mann, 330). These cases give rise to specific problematic forms of migration, such as the commercialized migration of women and girls as domestic workers and caregivers, often resulting in the trafficking of women for labor and sexual exploitation.

The link between poor, low-earning women and

the emergence of sources for profit-making on a systematic governmental level, is lack of choice on the part of the women. Systems in the Sahel build their markets off of vulnerable populations who do not know the terrain well enough to escape, who would do anything to live safely and securely. West African migrant women have little to no control over their fate, as there are not enough policies that reflect what women need- therefore they need to be in positions to make decisions for themselves.

Conclusion

This thesis was focused primarily on the historical, social, and economic contexts of the West African migration of women, women's priorities in a host country, and the hazardous journey that they make from their home countries, along the Western Mediterranean Route, and to Europe. What barely received any attention in migrant discourse is the racism, lack of housing, and relative poverty that migrants are likely to face when arriving in Europe. Today, women are taking enormous risks to reach security, often at the risk of dying. Motivations to move that are worth dying deserve to be acknowledged and brought to the center of the discussion. The purpose of this thesis is to make the case that women's wants and needs are not addressed *because* they are migrants, *because* they are African, and additionally *because* they are women. Living within these intersections makes life harder due to systems of oppression.

West African migrant women have little to no control over their fate. This dire problem cannot be addressed unless policy makers, journalists, and global aid organizations understand the gravity of the consequences that West African women face in their home countries as well as abroad. Also this issue cannot be addressed until women with similar identities and backgrounds are put in the positions of power to properly represent themselves as well as address their needs and concerns. The UN Women's official page explicitly says that "placing women in decision-making roles and including their needs and realities in policies and solutions designed to address global migration and the refugee crisis make them more sustainable and responsive" (UN Women).

Transnational solidarity comes to mind when strategizing potential long-term solutions to making migration a choice and not a necessity as mandated by the IOM. When thinking transnationally about liberation from these global systems, a few ideas which arise include mapping routes in the Sahara which are declared "safe to stay'" for darker-skinned women; authors seeking to tell their stories of what they faced on their journey to survive in order to recognize that it occurred and find community in those with similar experiences; independent journalists doing incredible labor on the ground, working to give voice to the voiceless and recognize women's agency, as well as speak truth to power. The potential to strategize solutions is in the future for my thesis and I wish to continue strategizing with women who have made their way to North Africa and Europe in the future. In this study I wish I could have done more of incorporating African feminisms into my analysis so I hope to explore those themes more as well.

Since the emergence of African Literature written in European languages in the 20th century, the recurring theme of immigration has been based on the experience of the male author and developed through the creation of a male protagonist; this is especially true in Francophone African Literature. The experience of the migrant women did not appear in African Literature in French until very recently, even though women are at the center of current debates in France on the issue of immigration and there are roughly the same amount of migrant women as men. In future work I would like to delve further into the literature and cinema of West African migration of women, as I know it exists however unpopular. Although female writers from francophone Africa began to appear on the literary scene in the last two decades, they are outnumbered by men and few focus on the theme of the immigrant woman. I would also be interested in doing a study examining gendered discrimination face by women of the Maghreb in France.

Today, European critics of immigration coming from African countries claim that women have too many children and their adolescents suffer from a high rate of delinquency. Some authorities in France have demanded that the women undergo DNA testing in order to determine the parentage of these children who are growing up in large families. In future research I would like to examine the rhetoric used in European newspapers and news channels against West African migrant women and contextualize the claims in a history of biological racism harking back to Sara Baartman of the 19th century.

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Social Psychology and Panel Peer Review: Making the Most of Powerful Decisions

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Abstract: Panel peer review enables scientists to pursue new and exciting research projects with the allocation of funds and fellowship positions. However, the panel peer review process is a group decision making process and social psychology states that people make decisions differently when in groups. This paper applies this aspect of group dynamics to the panel peer review process for grant and fellowship applications, seeking to find if specific phenomena impact decision making within these panels. Four phenomena – group polarization, groupthink, common-knowledge effect, and conformity - are discussed and applied to the process. Numerous risk factors for each phenomenon were found, including similarity of panel members, lack of discussion time, prior discussion of applicants, failure to share opinions and knowledge, differing levels of preparedness, and persisting voting norms. Social psychological phenomena therefore do impact the process. Assigning panel members different sections of the applications, as well as using a "devil's advocate" or group moderator are suggested ways to reduce the occurrence of these phenomena and help improve decision making. It is ultimately concluded that understanding social psychological phenomena will help panel members take action to reduce the flaws in the review process, ensuring the best applicant is chosen and the most powerful decision is made.

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Research is the backbone of science. Ask any scientist, and they will surely explain the importance of testing ideas and hypotheses with well thought out experiments. After all, the greatest breakthroughs in scientific history, from the discovery of DNA's double helix, to new cancer treatments, all started with ideas that were tested, analyzed, and repeated. But how do scientists fund these experiments? How do they obtain opportunities to further their growth as researchers? They do so by applying for grants and fellowship positions. For example, suppose a scientist is applying for a grant that will help them conduct groundbreaking research. They have pieced together an extremely thorough and informative proposal and have submitted it for consideration. The scientist does not simply receive the funding or fellowship just because they asked for it. They must be chosen through panel peer review, a process in which panel members discuss the pros and cons of numerous applications, voice their opinions, and decide on a recipient (Olbrecht & Bornmann, 2010). These panel members, otherwise known as the "gatekeepers of science," ultimately decide the fate of grant and fellowship applicants, playing a significant role in the scientific community (Daniel et al., 2007, p.71). While this process appears to be productive on the surface, there are significant risk factors that weaken the outcome of the final decision. Because this type of review is a group decision making process, and decisions are made differently in groups, the risk of social psychological factors negatively impacting the process is relatively high. The panel peer review process is ultimately flawed, and in order to improve the quality of

decisions and ensure the best applicant is chosen, panel members need to understand these phenomena and take action to limit their effects.

If you ask a teenager that fell victim to peer pressure why they made an unfortunate decision, they will likely list a reason similar to "Everyone else was doing it! I didn't want to feel left out!" Parents and teens alike know that the choices we make are influenced by those around us, and research has proven that decisions are made differently in groups than when made individually (Obrecht et al., 2007). However, when engaged in a group discussion like panel peer review, factors such as group polarization, groupthink, common-knowledge effect, and conformity do not normally cross one's mind. These social psychological phenomena need to be acknowledged, and in order to apply these phenomena to panel peer review, it is necessary to understand each one. To do this, imagine a group of friends deciding where to eat lunch together. Two of the group members, Friend A and Friend B, joined the group late because they were discussing how much they were craving pizza. They entered the group conversation and immediately voiced their intense desire to go to the local pizza parlor. Their extreme craving was clear to the other group members, Friends C and D, and they went along with their opinion. This is group polarization at play. Group polarization is when people discuss shared opinions with each other and increase the extremeness of those opinions (Olbrecht & Bornmann, 2010). Because friends A and B fed off each other's opinions before joining the group, their desire for pizza increased to an extreme level.

Friend C secretly wanted Chinese food, but because she wanted to please her friends, she went along with the group decision to buy pizza for lunch. This is groupthink, a phenomenon that occurs when group members strive for harmony in opinion rather than considering the best possible decision (Olbrecht & Bornmann, 2010). Because Friend C did not want to upset anyone in her social circle, she did not share her opinion and fell into conformity, which occurs when group members go along with the opinions of others even if they do not agree (Olbrecht & Bornmann, 2010).

Additionally, Friend D knew that a Chinese restaurant nearby was running an incentive program, giving a ten percent discount to college students. She did not inform her friends of this information and instead went along with the consensus to go to the pizza parlor. This is common- knowledge effect: When unshared information, or information only select people know, is not voiced in discussion, causing common knowledge to influence decisions the most (Olbrecht & Bornmann, 2010). In this case, knowledge of the discount became unshared information and the common knowledge of Friends A and B's desire to eat pizza most heavily influenced the decision. Had Friend D informed the group of the discount, the outcome of their decision may have been entirely different, and the friends could have saved money while still enjoying each other's company. Eating lunch at the Chinese restaurant may have been a better decision in this case, but because of social psychology and group dynamics, it was not chosen.

The same concepts can be applied to the panel peer review process. In the previous example, the friends unintentionally excluded the factor of price when deciding where to eat lunch. Consequently, the final decision to eat at the pizza parlor may not have benefited the friends financially. Similarly, the best applicant for grants and fellowships may not be chosen if panel members fall prey to these social psychological phenomena and miss considering a unique aspect of an applicant. However, instead of missing out on a discount and losing a few dollars, the negative consequences of this in panel peer review may result in an applicant missing out on an incredible opportunity to further their research and education, potentially depriving the scientific community of significant discoveries. Therefore, the risk factors for the occurrence each phenomenon need to be understood so panels can decrease the risk of these phenomena occurring and negatively impacting the final decision. For example, the risk of group polarization increases when panel members meet beforehand and discuss their opinions of applicants (Olbrecht & Bornmann, 2010). Just as the friends in the previous scenario discussed their desire for pizza with each other and ended up with extreme cravings, panel members may discuss applicants, realize they share similar opinions, and come into the group discussion with an extreme desire for a specific applicant to be chosen. If this occurs, the extreme opinions may influence the voting behavior of other panel members, especially if the strong opinions are paired with strong public speaking and persuasion skills (Obrecht et al., 2007).

Similarly, the risk of groupthink occurring increases considerably when members have previously worked together, when they are all experts in the same scientific specialty, and when decisions must be made under a time crunch (Olbrecht & Bornmann, 2010). Similar to friends that do not want to upset each other over lunch plans, the more similar and friendly group members are with each other, the more likely they want to get along and come to a unanimous decision. This decreases their consideration of alternative candidates and may lead to a chosen recipient that is not the best choice for the grant or fellowship (Olbrecht & Bornmann, 2010).

Common-knowledge effect also increases in panel peer review when the information being discussed by the group is already known by the majority (Olbrecht & Bornmann, 2010). This can occur for numerous reasons. Group members may fear that others will not care or agree with their unshared information (Olbrecht & Bornmann, 2010). If "information is found credible by several persons," as in the case of common knowledge, then there is also an unconscious notion that that information is more reliable and safer to voice (Olbrecht & Bornmann, 2010, p. 300). However, this leads to fewer perspectives being heard and decreases the probability that the best decision will be made in the long run, like how the friends were unable to save money because the knowledge of the discount was not shared with the group. For example, if a panel member notices that an applicant's research relates to a new and promising field but does not speak up, that knowledge becomes unshared information only they know about. Science is constantly changing as new breakthroughs and fields emerge, and it is possible that certain members are more up to speed on the newest discoveries than others. If the panel member does not voice the unshared information, other panel members may not realize the promising potential of a research proposal, decreasing the chances of the best applicant being chosen.

Lastly, the risk of conformity occurring in the review process increases when decisions are difficult and must be made soon, as well as when some members have completed reading all of the applications, while others have not (Olbrecht & Bornmann, 2010). This is similar to the risk factors for groupthink, since the more stressed members are about making a difficult decision, the more likely they are to go along with the opinions of others to get the decision over with (Olbrecht & Bornmann, 2010). Additionally, if some members read the entirety of each application, while others do not, then the members with less information will more likely be swayed by the decisions of the more informed (Obrecht et al., 2007). This suggests group members may conform to other's opinions, so they do not seem unprepared. However, if these members had read each application thoroughly, they may have formed different opinions and voted for a different applicant, changing the outcome of the decision.

Conformity's impact on the review process can

also be seen by Janis (1982)'s observation that "members tend to evolve informal norms to preserve friendly intragroup relations and these become part of the hidden agenda at their meetings" (p.7). This finding is consistent with Obrecht et al. (2007), which states that "new committee members quickly acquire the culture of their committee as they begin attending meetings and… they become increasingly embedded in that culture over time" (p.85). This was discovered by a Standing Committee of the Canadian Institutes of Health Research (CIHR), which conducted a study to analyze new reviewers. The reviewers scored applicants using specific guidelines and no significant variation was found in how the applications were scored (Obrecht et al., 2007). These reviewers were then placed in different panels in order to experience committee meetings and were asked to score more applications at home. It was found that

> …reviewers with no prior experience on a fellowship committee exhibited no inter-committee differences in their at-home scores. For the 435 at-home scores by reviewers who had experienced one committee meeting, there was some inter-committee variation in their at-home scores…For the 677 scores by reviewers who had attended two or more meetings of their committees, there was statistically significant inter-committee variation in their at-home scores. (Obrecht et al., 2007, p.85)

This data shows that there is variability between different committees' voting habits. Before immersing themselves in a committee, the reviewers' at home scores were very similar. After the immersion, their voting habits differed from each other, but matched the committee they were a part of. This suggests conformity within individual committees, since new members tend to change their voting habits to fit with the culture of their committee (Obrecht et al., 2007). Thus, conformity appears to increase when panels develop specific norms of thinking. Similar to a group of friends that consistently agree to order pizza because that is what they always do, a panel may continually vote in certain ways for recipients because that is the culture of their group.

The finding that conformity and voting norms are connected suggests that conformity impacts the panel peer review process by contributing to the continuance of deep-rooted biases. Bias related to gender and scientific field has been proven in the process and is described by Bornmann and Daniel (2005) as well as Daniel et al. (2007). Bornmann and Daniel (2005) found that chemistry applicants had about half the chance of receiving a doctoral fellowship position than biology applicants from Boehringer Ingelheim Fonds (B.I.F.), a biomedical foundation in Germany. Females were also found to receive fifty percent fewer fellowships than men (Bornmann & Daniel, 2005). Similarly, a simulation conducted by Bornmann and Daniel (2004) found that if the "applicant is not male, but fe-

male, the predicted probability of [being chosen to conduct research at a German university] decreased from 50% to 33%" and "if the applicant is not a biologist, but a chemist, the probability of approval declined from 50% to 25%" (p.11). These biases likely turn into voting norms and contribute to specific traditions and cultures of review groups. Based on Janis (1982)'s and Obrecht et al. (2007)'s observations that group members tend to follow the overall group's voting norms due to conformity, it can be concluded that conformity contributes heavily to these persisting biases. It appears to act in a cyclical fashion. Bias occurs and is reinforced by conformity. Conformity then leads to persistent voting norms rooted in bias. This shows just how deeply social psychological phenomena impact the panel peer review process. Reviewers need to understand and recognize these phenomena, so biases can be disrupted and the flaws in the system can be combatted.

It is clear that social psychological phenomena such as group polarization, groupthink, common-knowledge effect, and conformity impact the panel peer review process, as shown by the numerous risk factors and negative consequences associated with each. In order for panel members to correct these flaws, ways to combat each phenomenon need to be addressed. Incorporating a "devil's advocate" from outside of the group, assigning the role of group moderator to someone inside the group, as well as having each member assess different sections of the applications are the best ways to reduce the risks of these phenomena and improve the quality of decisions. Olbrecht and Bornmann (2010) argue that having each group member assess different sections of the applications increases the discussion of different perspectives. This relates to the argument of Obrecht et al. (2007), which claims it is difficult for panel members to read the entirety of each application before the group convenes, causing the less informed members to go along with the opinions of those that read more. If each panel member was assigned a different section, members would be more likely to complete their specific part of the application than read the whole application, and would come into the discussion feeling prepared, lowering their chances of being swayed by someone else's strong opinion of an applicant.

Not only would assigning reviewers different application sections decrease conformity, but it would also help decrease common-knowledge effect and group polarization. If each person knows something different because they read different parts of the applications, then unshared information would be voiced and foster well informed decisions, weakening common knowledge effect (Olbrecht & Bornmann, 2010). This simple change to the process would force panel members to participate and share what they have to say, almost as if each member is contributing a necessary puzzle piece that comes together to form the overall picture of an applicant. Group polarization would similarly decrease because members would all know different information, making it hard for them to form and discuss similar opinions before the meeting took place (Olbrecht & Bornmann, 2010). Polarized opinions

would be difficult to form without all the information, forcing panel members to work together, communicate thoroughly, and think about applicants in different ways in order to reach a final decision.

Using a "devil's advocate" would also improve the outcome of decisions. Herbert and Estes (1997) state that hiring a devil's advocate from a consulting firm in the business setting can help "underlying assumptions [be] exposed, new alternative plans [emerge], and creativity [become] enhanced" (p.664). They explain that "an official dissenter can heighten the probability that decisions will be thoroughly researched and [propose] solutions soundly based in reality" (Herbert & Estes, 1997, p. 667). Similar to consultants offering advice to make businesses more efficient, the dissenting ideas of devil's advocates' in the context of a panel peer review can encourage new opinions to be voiced on each applicant and urge group members to think about applicants differently. Additionally, Brodbeck et al. (2002) found that sharing dissenting opinions "induces divergent thinking, that in turn, [leads] to increased consideration of unshared information" (p.49). Since voicing unshared information improves the quality of decisions, divergent thinking that is fostered by the devil's advocate can help decrease common knowledge effect, heightening the consideration of alternative choices when it comes to picking a grant or fellowship recipient. Using a devil's advocate also applies to group polarization, since the greater variety of opinions there are from divergent thinking, the less likely group members would discuss similar opinions, increase the extremeness of those opinions, and cause biased or unfair decisions to occur during the review process.

It could be argued that hiring a devil's advocate trained in social psychology to sit in on panel discussions and give feedback would be too expensive for panel groups. However, if the group cannot afford to hire a trained devil's advocate, someone in the group can be assigned the role of "group moderator." By acting as a group moderator, the assigned member should encourage participation and critical thinking by asking members why they are voting the way they are and why they believe one applicant is better than the other, essentially performing the role of a devil's advocate for their own group (Olbrecht & Bornmann, 2010). This may increase the amount of time it takes to review applicants. While a longer process may appear cumbersome, lack of discussion time is a risk factor for both groupthink and conformity, so it is important to allot adequate time for this to occur. It is also the devil's advocate or group moderator's job to "present counterarguments and offer constructive criticism [to create] an atmosphere in which others are also willing to put forward their objections" (Olbrecht & Bornmann, 2010, p. 301). In this case, assigning the role of group moderator to a group member would actually benefit the review panel, since group members would be more knowledgeable of scientific terms and concepts and could more thoroughly provide constructive criticism. This is all the more reason for panel groups to be informed of the social psychological phenomena and understand their

risks. By being aware of the consequences and understanding how to combat them, review groups can take action into their own hands to stop the phenomena from impacting their decisions.

It could also be argued that a simple way to combat group dynamics is to eliminate the group altogether. The research of Obrecht et al. (2007) suggests that having individual reviewers analyze applications in what is known as "at home review," is a more effective decision-making strategy for awarding grants and fellowships. This solution appears to make sense, as individuals would not be susceptible to social psychological phenomena. However, the benefits of group decisions outweigh the benefits of individual decisions if group members act to prevent the negative consequences of group dynamics. Divergent thinking is fueled by the sharing of different viewpoints. A single viewpoint does not measure up. For example, Langfelt (2001) examined a situation where the chair of a panel group and a panel member disagreed about an applicant. The chair did not believe the applicant should receive a grant, but the panel member did. Because the panel member voiced their dissenting opinion, other panel members spoke up and voiced their support for the applicant, ultimately awarding the applicant a grant. This would not have occurred had the chair of the group been the only reviewer. This group defeated social psychological phenomena because of its multiple viewpoints, refusing to fall into groupthink and conformity over the superior's opinion. When panel members know how to take action to combat group dynamics, the group's decision ultimately benefits and is the most effective.

Additionally, one may think the panel peer review process does not need to be changed at all because it's predictive validity in choosing the next greatest scientists is normally high. Bornmann and Daniel (2005) did find that "the selection procedure is…highly valid," relating predictive validity to the amount of times a fellowship recipient had their work cited (p. 297). The more a work is cited, the higher its credibility and prestige, thus showing the greatness of the scientist (Bornmann & Daniel, 2005). However, the article also states that the opportunities associated with the fellowship may contribute the most to the scientists' success, not the fact that they were the best to begin with (Bornmann & Daniel, 2005). They state,

> fellowships…give the fellows such an advantage in training, opportunities, prestige, self-confidence, and so on that they later become superior scientists because of the fellowship, not because they were particularly promising at the point of application. Rather than picking the best scientists, the selection committee…[creates] them. (Bornmann & Daniel, 2005, p. 309)

For example, a fellowship at a prestigious institute would place a fellow in the company of extremely well-known scientists. They would have the opportunity to

publish research and get their name affiliated with one of these scientists, potentially being one of the reasons their research is heavily cited in the first place. This fellow could theoretically be any of the applicants, but whoever the committee chooses is handed this career advancing opportunity. Panel members need to be aware that every applicant has the potential to be successful and they need to be cautious not to hop on the bandwagon of the majority's decision because they may miss an application that is a hidden gem. Making changes to the review process is important because it will help reduce the impact of social psychological phenomena and give every applicant their best chance of becoming the next greatest scientist.

It is extremely important that scientists' applications are given the fair consideration they deserve. If a scientist takes the time to prepare a grant or fellowship application, it should be judged fairly. If this does not occur due to social psychological phenomena, it may hinder these scientists from applying for other opportunities. Similarly, because scientists stress the importance of validity and accuracy in their data and research, it is assumed they want validity and accuracy in the decisions made in a panel peer review, especially since these decisions determine who will propel the scientific field forward. If social psychological phenomena occur, decisions may negatively be affected, and the best applicant may not be chosen. This may mean the difference between a groundbreaking research experiment being conducted or being tossed aside and forgotten.

Group discussion should ultimately foster different perspectives and help decisions be made more effectively than by one single person (Olbrecht & Bornmann, 2010). However, as shown by the flaws in the panel peer review process, group decisions have serious drawbacks. These drawbacks do not solely apply to peer review, since social psychological phenomena can negatively impact decisions in any group. Friends deciding where to eat lunch, company employees deliberating over budget cuts, juries deciding the verdict of a defendant, and even government officials considering taking military action can all be affected. Understanding that groups make decisions differently is essential to combatting these phenomena in any group decision making process. Just as research is the backbone of science, having all the facts is the backbone of making decisions. Not only do panel peer review members need to understand all the facts about their applicants, but they also need to understand all the facts about how group dynamics influence their consideration of those applicants. By being aware of social psychological phenomena and their risk factors, as well as making changes to the process such as assigning each member different sections of the applications and incorporating a devil's advocate or group moderator, panel members can correct flaws and significantly improve their decision making. Powerful and well-made decisions will ultimately help powerful and well thought out experiments be conducted and enable scientists to develop powerful potential.

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Meet the Contributors

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