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ABOUT US

Established in 2016, the GW Undergraduate Review (GWUR) is the premier publication of undergraduate research at the George Washington University. It features a multi-disciplinary series of peer-reviewed articles from GW's undergraduates in its annual publication. Our mission is to engage undergraduate students in research on GW's campus and to promote the research community at large through various events and workshops alongside our journal. Our editorial boards are staffed by editors representing over twenty of GW's departments. Our organization also publishes the GW Scope, an ongoing research-focused news blog backed by a similarly robust board. GWUR is an entirely student-run organization that works closely with and is supported by the Office of the Vice Provost for Research.

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The Henequenero Legacy: The Development of the Korean Mexican Identity

EMILY NEAL

ABSTRACT

From the haciendas of Mérida in the southeast to the border city of Tijuana, Korean migrants dispersed and rooted themselves throughout Mexico's modern history. South Korea and Mexico have capitalized on this century-old emigrant population, despite Latin America being one of the regions least discussed in the scholarly literature on Asian emigration. This research explores the Korean diaspora in Mexico and how the transnational politics of their diasporic identity impact contemporary ROK-Mexican bilateral relations and Asia-Latin America politics more broadly. A qualitative investigation unveils narratives of the lives of these migrant workers and the formation of their diasporic identity from the turn of the twentieth century to contemporary Mexico. The paper included the methodological review of archival records authored by Koreans and Mexicans by drawing on critical theories of migration, transnationalism, and citizenship. Its intent is to assess the current Korea-Latin America climate by studying this diasporic development through an intersectional lens and understanding concepts of transnationalism.

INTRODUCTION

Maria Yang Chu Henney and her family still proudly sing “until that day when the waters of the Eastern Sea run dry and Mount Paektu is worn away, God protect and preserve our nation,” the first verse of the South Korean national anthem (Korean Broadcasting System, 2020). Maria, a third-generation descendant of Korean migrants, tells the reporters of the Korean Broadcasting System about her life in Mexico with her family (Korean Broadcasting System, 2020). Her grandparents migrated to the southeastern region of Mexico in 1905, along with one thousand other individuals. She cries thinking about her grandmother whose only wish was to one day return to Korea, a trip she could not embark on due to Japan's colonization of Korea. Maria palms the knife her grandparents used to cut *henequen*—agave fourcroydes—at the plantations and marvels at the journeys they made to find a better lifestyle. Maria seeks to raise awareness of this generation that developed into a unique diaspora in Latin America in the histories of modern Mexico and Korea. This rich history of Koreans in Mexico, what once was overshadowed by larger colonial structures, is now surfacing to reveal profound transnational insights.

Latin America and Asia are often bound to the periphery of global relations and forced to exist in the margins of Western knowledge production,

as Western academia tends to rely on attitudes of imperialism, settler colonialism, and capitalism. Generally, when Western scholars conduct a comparative study, Europe is the universal point of reference, meaning that the West functions as an invisible context that makes such a comparison possible (Kim, 2017). Specifically, in comparative studies of Asia and Latin America, one of the regions is viewed in a Western scope because our knowledge is shaped by how states act within the bounds of Western international society. Ideals of global capitalism often frame Latin America as commodity-rich and dismiss the region's ability to participate in global development.

Rejecting this narrow framework, this paper turns to the “Asia-Latin America as Method:” this method encourages critical analysis of “how relations of economic, cultural, and sociopolitical power and exploitation, as well as relations of solidarity and dissensus, are constructed historically and redefined presently” and examines how these changes introduce new struggles into society (Kim, 2017, p. 100). Both Asia and Latin America experienced economic and political strife throughout the twentieth century, but now they share achievements like obtaining membership in multinational organizations, creating innovative strategies for multilateral cooperation, and pioneering effective free trade agreements transnationally (Figueroa,

2021).

The journey to this advanced relationship in the twenty-first century was made possible by multiple waves of migration across the Pacific Ocean in the past century and begins with the small, diverse group of Koreans who emigrated to Mexico in 1905 (Patterson, 1993). This research traces Korean migration patterns and policy in the early 20th century and consequently examines archival records and documentary film to draw insights about transnational migration regarding modern diplomacy. By understanding Korea's history in conjunction with the testimonies from emigrants, we are better informed about transnational citizenship-making and can interpret the historical connections between bilateral relations and migration despite the paucity of first-hand accounts by this first generation of Korean Mexicans.

NINETEENTH-CENTURY KOREAN MIGRATION PATTERNS

The development of the Korean diaspora in Mexico is especially unique because it occurs around the same time as other Korean emigrations yet boasts a history unlike that of the Korean diaspora in the Far East and Asia. In the late nineteenth century, political competition between Russia and Japan shaped the geopolitical sphere of Korea as the two powers desired influence in the nation. Starting in 1876, the Treaty of Kanghwa became a foundation for imperial goals for Japan in Chosŏn Korea (Quintanilla, 2021). From 1895 to 1905, the Korean state's internal weakness opened a platform for the two powers to assert dominance (Seth, 2019). In 1896, one group of Koreans founded the Tongnip Hyŏphoe, or Independence Club, to disseminate information about new social and political ideas that countered Russian and Japanese influence (Seth, 2019). The Independence Club saw large growth and was able to shape new conceptions of Korean independence and national sovereignty. In 1897, King Kojong even declared himself emperor of the newly proclaimed Great Korean Empire (1897–1910) to prevent further Japanese encroachment (Seth, 2019). However, due to the economic hardships and health epidemics plaguing Korea, these efforts failed to bring about any large institutional change (Quintanilla, 2021). As a result, Korea fell further to Japanese influence, and Foreign Minister, Pak Che-sun, signed the Protectorate Treaty of 1905 which granted the Japanese government the right to take necessary action to protect Korea if threatened and occupy certain regions of the nation (Seth, 2019). Japan thus gained control of all Korean financial and foreign affairs, thereby assuming leadership of all diplomatic missions and relations. This protectorate ultimately led to the annexation of Korea by Japan in 1910 (Seth, 2019). During these years of political instability and economic turmoil, Korea experienced several waves of emigration:

Korean emigrants moved to Europe, Asia, and North America, most notably to Russia, Japan, Hawaii, and Mexico.

Korean migration to Manchuria stems from the border disputes between East Asian powers in the beginning of the Korean empire; it continued in the 1870s and after the annexation of Korea by Japan in 1910 (Ravello, 2018). Before the turn of the 20th century, Koreans, desperate to flee the harsh conditions and famine, migrated to the land in which they felt they had some ancestral claim, the Manchurian region of Qing China (Ravello, 2015). Korea also shares a longer border with the Chinese region, which explains why there are more emigrants in China than in Russia. Manchuria represents an interesting case of Korean emigration because Koreans had been settled there for so long that some did not consider themselves immigrants in any capacity. This was not the case for Koreans in Russia, though, as they were forcefully moved multiple times.

From the latter half of the nineteenth century up to the Japanese colonization of Korea in 1910, many Koreans also migrated to the Russian Far East to flee political turmoil and poverty (Shen, 2018). It is estimated that by 1910, more than 54,000 emigrants were residing in Russia, largely concentrated in the port city of Vladivostok (Shen, 2018). Joseph Stalin feared these Koreans were spies for imperial Japan so he deported over 172,000 ethnic Koreans to Central Asia, the present-day nation-states of Kazakhstan and Uzbekistan, in 1937 (Kim, 2018). This group later formed its own post-Soviet ethnic identity, Koryo-Saram with help from Uzbekistan and Kazakhstan, who required citizens to document their ethnicity on passports creating a diaspora with legal citizenship in Central Asia and documented ethnic roots in Korea (Kim, 2018). While some states like Uzbekistan and Kazakhstan recognized Korean migrant identities, this was not the case for all instances, especially for Western hemisphere migrants.

While many Koreans fled to Manchuria and the Russian Far East at the turn of the twentieth century, the Korean government encouraged another form of cross-border migration—a transpacific migration. In the first decade of the twentieth century, the Korean government began to send willing migrant laborers to Hawaii to work on sugar plantations. The colonial government in Korea (1910–45) continued to support emigration to the United States throughout the 20th century because emigrants sent foreign currency back to Korea to support their families (Yoon, 2012). Japanese colonials manipulated emigration to their advantage by confiscating peasant farmland in the 1910s, which then caused a wave of forced migration of Korean peasants to Japan in the 1920s (Shen, 2018). Comparably, the beginning of the century saw an influx of migrants from Asia to Latin America, most notably the movement of Koreans to the Yucatán region of

southeastern Mexico.

At the time, the Korean government's emigration policy was fluctuating and under review. Before emigration across the Pacific occurred on a larger scale, the emigration policy required overseas travelers to get *jipjo*, or permission, from *kamni*, the authority at the seaport (Park, 2006). Following the first wave of migration to Hawaii, the "Imperial Rules and Regulations of the Department of Emigration of the Empire of Korea" was established in 1902 and formally recognized the Department of Emigration, or *Suminwon* (Park, 2006). The Royal Edict granted power of overseas emigration specifically to an American entrepreneur, David W. Deshler, which meant any activity carried out without his permission was illegal (Park, 2006). Deshler was introduced to King Kojong through Horace N. Allen, the United States Minister to Korea at the time. Allen had enlisted Deshler previously to bring Korean workers to Hawaii to work on the sugar plantations (Pomerantz, 1984). Roughly one year later in October of 1903, Yi Yong-ik, a powerful royal advisor, abolished the emigration regulations due to rumors about the treatment of Koreans in Hawaii (Pomerantz, 1984). Yi's action halted emigration and created an opening for illegal cross-border travel.

KOREAN EMIGRATION TO MEXICO

This lapse in leadership was a push factor for the emigrants as poverty struck Korean citizens, and the advertised guaranteed labor pulled them to Mexico (Patterson, 1993). From the Mexican state perspective, henequen had emerged as a rather lucrative crop in the hacienda system (Park, 2006). Henequen, sometimes referred to as Yucatán sisal, is a thick hemp-like fiber used to make ropes and was coined the "oro verde" (green gold) for the economic prosperity it brought to the Yucatán (Park, 2006). The demand for this crop exceeded the supply of indigenous workers available after the Caste War (Urioste, 2019). The number of henequeneros was expanding rapidly, from 20,767 to 80,216 from 1880-1900 (Kim, 2012). To feed this growing demand, plantation owners hired British labor recruiter John G. Meyers to outsource labor from overseas. Meyers did not find luck in recruiting from other countries like Italy, Spain, the United States, Jamaica, Cuba, and China (Kim, 2012). In addition, the broker observed that Japan was attempting to monopolize the emigrant labor force in Hawaii and was actively attempting to divert Korean laborers from the island (Quintanilla, 2021). Meyers contacted the Continental Migration Company, a Japanese owned enterprise, which posited the idea of introducing Korean laborers overseas in Mexico.

In August 1904, the Company connected Meyers and Oba Kannichi, their Korean representative based in Seoul, to carry out this illicit scheme under the nose of David Deshler (Park, 2006). Deshler had to enforce the emigration restrictions that fell after the reports of

mistreatment of Hawaiian emigrants, and he could not permit the divestment of Korean labor to Mexico. Meyers and Kannichi developed the logistics for this plan but ran into issues when the government banned the issuance of passports for Koreans who were willing to go to Hawaii or Mexico (Park, 2006). Kannichi, who became the official face of Korean emigration to Mexico, turned to the British minister to Korea, and requested assistance in obtaining the passports, but he was unable to aid the operation and put the representative in contact with another official who managed to get passports for the group of migrant workers under the nose of Deshler (Park, 2006). It is misleading to assume, however, that the Korean government was completely unaware of this passport exchange. More probable is that they did not have the means to do anything about it, especially considering Korea's precarious position in world politics at the time; Korea was locked into unequal treaties which created widespread discontent within the peasant community in response to their situation (Quintanilla, 2021). The domestic issues that the Korean Empire faced were too pressing to expend resources investigating an emigration scheme. While the authorities of the operation were generating the legal documents, newspapers circulated advertisements that promised money and safety for Koreans in Mexico (Patterson, 1993).

On December 24, 1904, the *Hwangseong Newspaper* published a daily paper that falsely promoted a paradisiacal environment in Mexico (Patterson, 1993). The advertisement claimed that the climate was preferable, and the area was rid of typhus (Patterson, 1993). Other newspapers cited that Koreans would be able to keep all profits they earn without being subject to taxation and that the emigration was already approved by the Korean Foreign Office (Patterson, 1993). Those who read these advertisements were led to believe they could become rich in three years and then immigrate to Hawaii, where they would be able to live permanently. Meyers was so desperate to fix the labor shortage for his client that he completely deceived the Korean government and its people. The overseas job postings continued to circulate among various Korean newspapers and attracted a wide variety of Korean workers due the apparent promises of a better life. The Mexican work opportunity was categorized as worry-free: complete government compliance, travel and board included, family inclusivity, and simple financial brokerage through bilingual businessmen (Patterson, 1993). One thousand and thirty-three individuals, made up of *yangban* class members – the traditional ruling class – including artists, teachers, soldiers, and farmworkers, signed up to join the envoy (Park, 2006).

The migrant passengers traveled to the Chemulpo port in present-day Incheon where they boarded the *Ilford*, an English vessel chartered to Mexico by Meyers (Park, 2006). At this point, the scheme crafted by Meyers and the Continental Trading Company had evaded any detection

from the Korean or Mexican government. However, an unconfirmed illness to the likes of smallpox broke out on the ship before departure (Patterson, 1993). Because the *Ilford* was under British control, everyone had to evacuate and quarantine while the vessel was being disinfected under the orders of the British Minister to Korea. This set back the departure date by two weeks and the company corralled the migrants without explanation so that the Korean government would not notice. Families and friends who visited the emigrants one last time were appalled with the treatment of the Koreans by Meyers and, not knowing they were isolated due to sickness, claimed the group was sold into slavery, shaping how this emigration was perceived in the media.

The 1,033 Koreans finally departed for Mérida on April 4, 1905, but their exit created a commotion in the government (Patterson, 1993). On April 5, people went to the press and reported in the newspaper, *Hanseong Sinbo*, that the Koreans were sold into slavery and shipped to Mexico and that the government should stop citizens from going abroad in large groups (Patterson, 1993). It would be established one year later that large emigration overseas would be prohibited by the Korean government under Deshler for fear of giving in to these slavery charges (Patterson, 1993). The lone ship embarking on the one-month journey disappeared from the media shortly after, as no one had information on their travel. The only correspondence from this ship route was a letter that Meyers penned to his Continental Trading Company agent in Japan, Hinata Terutake (Patterson, 1993). Meyers attempted to negate any former claims of forced servitude:

The people enjoyed the greatest comfort on board the steamer...A first class Japanese physician...actually went with the people as far as Salina Cruz. Although most of the emigrants, and especially the children, arrived on board the S. S. "Ilford" at Chemulpo in an almost starved condition, when the people arrived at Salina Cruz, they were all in prime condition, and excited the admiration of the Mexican officials and the Mexican public by their healthy and cheerful appearance...The steamer was allowed to sail as an emigrant ship under the British flag and it is well known that there is no country more strict in its laws regulating the traffic of emigrants from and to foreign countries than Great Britain (Patterson, 1993, p. 94).

Meyers's defensive tone indicates that he was denying and overcompensating the treatment of his passengers out of fear for his career and reputation.

Despite two deaths onboard, the remaining passengers arrived safely in Salinas Cruz in the Mexican State of Oaxaca on May 8, 1905 (Park, 2006). From there, they embarked on a train and steamboat journey to Progreso, a port in the Yucatán (Park, 2006). The emigrants underwent a medical inspection at the port and Mexican

officials had to quarantine seventy-three Koreans for abnormal internal temperature to contain any fever or viral sickness (Park, 2006). Regardless, 946 *coreanos*, as the Mexican people referred to them, took another train ride to Mérida, home of the henequen plantations (Park, 2006). At this point, the allegations of slavery became viable as the haciennderos, the hacienda owners, forcibly cut off the passengers' *sangt'u*: (Park, 2006) *sangt'u* symbolizes masculinity in Chosŏn society, where married men wore their long hair tied in a knot fashion on top of their heads. With a piece of Korean culture ripped away from the migrants, the haciennderos then bet cash to claim the 'fitter' workers (Park, 2006). This process separated families with no remorse and subjected the Koreans to dispersal among the 22 different plantations to which they were contracted (Park, 2006). While not officially slavery, this emigration was evolving to be debt peonage, a system in which agricultural laborers are indebted to their labor supervisors, where "the state officially refuses to implement bondage while tacitly tolerating and acknowledging it under another name" (Park, 2006, p.142). The Koreans were dropped off in a strange place with an intolerable climate, disease, and food, trafficked, and forced to work in inhumane conditions.

Nearly two decades later, on August 5, 1922, the *Tonga Ilbo* newspaper published a devastating account detailing the fate of these migrants (Mekshik'o, 1922). The unnamed author wrote that the Koreans were innocent and trapped in this devilish scheme, having never imagined that they would be enslaved. When the migrants realized their fate, the people went into hysteria, screaming and shouting sentiments that roughly translate to "is this the country's fault? Or is this society's fault? Or is this my fault? If not all, is it my fate" (Mekshik'o, 1922, p.3). Feeling neglected by their government, the article shares that the migrants continued to scream and cry, loud enough to shake the ground and metaphorically reach the opposite side of the Earth (Mekshik'o, 1922). The writer, who migrated to the Yucatán and managed to escape, conveys that this situation was extremely dire while he mourns the ten emigrants who committed suicide because they were not able to bear the conditions. The Korean migrant workers were left with nothing but their dreams of returning home, the haciennderos having confiscated their passports, which darkened the chance of repatriation (Kim, 2012). Fundamentally, there was a choice to be made between working at the hacienda or death.

Following the first group of Korean migrant workers to Mexico, the reports of maltreatment became a cause of distress in their homeland. The Korean government sent a telegraph to Mexico, received on August 13, 1905, that expressed concern about Koreans being enslaved in the region and requested that the Mexican government "preserve and protect their lives...until our Government protects them" (Park, 2006, p.145). This suggests that the Korean Foreign Office intended to retrieve their citizens,

which is supported by the government contacting the Korean Chargé d'Affaires in Washington, Kim Yun-Chong, to find the migrants "in order to bring them back to Korea" (Park, 2006, p.146). The response from the Yucatán government, however, refuted all claims related to the mistreatment of the Koreans and disregarded the foreign government's request for repatriation. Shortly after the telegraphs were sent, Japan made Korea a protectorate which dissolved any diplomatic sovereignty. Further, when the Foreign Office tried to physically send a representative, the Korean Finance Department vetoed the travel expenses in fear of upsetting the Japanese government, who worried that the Koreans might try to set up diplomatic relations with Mexico and ruin the plan of the Japanese gaining control of Korean overseas emigration (Park, 2006). These two attempts exhausted the powers of the Korean government and marked the last time they inspected the situation in Mexico. One scholar deems the Koreans at this point *kimin*, meaning abandoned or given up (Park, 2006). They suffered at the hands of their government, but they were not unwanted or forsaken individuals. Instead, they were victims of a weak regime that was rapidly falling into the colonial web of Japan.

While the Korean Foreign Office relinquished oversight in this deadly emigration, the Japanese diplomats monitored the development closely. In the early decades of the twentieth century, the Japanese empire's foreign policy was to undermine Korean efforts so that they could not achieve diplomatic independence and instead had to rely on Japan for these transactions (Patterson, 1993). Japan annexed Korea the same year that the henequen labor contracts expired (Patterson, 1993). The Korea the migrants left would never be the same and they mourned their homeland from afar. The Japanese took over the Korean diplomatic mission in Mexico and sent Japanese representatives to supervise the haciendas (Park, 2006). However, the Korean henequeneros refused to acknowledge the Japanese as their representatives. Their families and friends in Korea had no way of vouching for their protection due to the political pressure and annexation. The Koreans in the Yucatán were stripped of their national identity completely by this point; in their eyes, they were sold off to a new country, abandoned by their home, and then colonized by a new power while still not blending in anywhere fully. In the Japanese government's eyes, these Koreans were technically Japanese citizens but did not have any form of identification to return to the colony anyways (Kim, 2018). As a result, many Koreans decided to remain in Mexico and accept the permanence of the situation rather than flee to a different country.

THE KOREAN MEXICAN IDENTITY

Moreover, the Korean people experienced a fraught process of assimilation into Mexican culture. The

sociopolitical state of Mexico in the 1910s was shaken after the eruption of the Caste War (Urioste, 2019). This armed conflict lasted 54 years, beginning in 1847, and represented the injustices committed against indigenous Mexicans by colonial forces (Urioste, 2019). Yucatán had long enjoyed autonomy under colonial rule due to its remote location in the region, and when Mexico gained independence, the indigenous people agreed to join the nation. This ushered in a new social order where colonial descendants treated the indigenous and mestizo races, those who had mixed European and indigenous descent, as inferior, so the Mayan militia initiated a violent campaign against the white population (Urioste, 2019). In the 1850s, hundreds of thousands were killed on both sides (Urioste, 2019). This conflict was not officially resolved until 1901 when Porfirio Diaz claimed the last pieces of territory from the Mayans and placed creoles in charge (Urioste, 2019). This context illuminates already tumultuous race relations in the Yucatán, with Koreans migrating to perform similar labor in the haciendas, like the indigenous people. Their place in the Yucatecan social hierarchy was marked with confusion as Koreans were passively excluded by Mexican people (Kim, 2012).

Because they occupied the same position of labor as the "Indios," the racial category for indigenous peoples in the caste system, Korean immigrants were looked down upon socially (Kim, 2012). They remained on a higher rung than the indigenous because of their ability to discontinue their labor contract when it was over. In effect, society was unsure how to treat them because Koreans did not fit the white standard but held more autonomy than the Mayans, so they remained in an in-between space. This exclusion is best explained by Hahkyung Kim in that Koreans were not "endowed a certain social category to be placed within Mexican society, yet [were] not antagonized" as indigenous people (Kim, 2012, p. 233). Mexico held an indifferent attitude towards immigrants; sometimes acting out of xenophobia and then, on the contrary, lusting for their foreignness. The Korean workers became known as "*aenikkaengs*," which is the Korean romanization of *henequen*, which shows their role in Mexican society (World Press Foundation, 2017). It is interesting to note that Korean immigrant laborers were not barred from integration efforts like Chinese and Japanese workers were, though this does not imply that they followed through in integrating. One hacienda manager observed the Koreans upon their arrival and remarked that they were robust people with good color, and "*habiendo no pocos de constitución verdaderamente hercúlea*"—meaning they had herculean builds (Park, 2006, p. 144). In addition to their physical constitutions, Mexicans were fascinated by the Koreans' frugality and diligence as they believed these traits would be useful in labor (Kim, 2012). Mexican society was very focused on class identity in the early 20th century and the presence of such Koreans troubled their hierarchical system (Kim,

2012).

For Korean migrants, integration into Mexican society was not a priority as they hoped to return to the homeland when their contracts ended. The first generation seldom attempted to learn the local language, either Mayan or Spanish, or adopt Mexican customs (Park, 2006). Instead, many migrants built Korean-style kitchens in their homes, made *kimchi* from leftover cabbage scraps, and cooked *frijoles* into *meju* (Park, 2006). They retained Confucian values and practices which further alienated them from Mexican social dynamics. This cultural separation isolated Koreans further in the haciendas, and because the laborers rejected the idea of the Japanese governing them, they remained stateless for several years until the adoption of the Mexican Constitution, which was the result of the Mexican Revolution that began in 1910. With no Korean passports and no Korea to return to, the migrants were left without a nation to protect them and endured a tumultuous journey of assimilation.

Koreans existed in the gap in Mexican social perceptions. They were laborers, but not indigenous, and they were Asians, but not Chinese (Kim, 2012). This distinction was important because the Mexican state provoked immense sinophobia at the time, citing *el peligro amarillo*, the yellow scare (Kim, 2012). Working-class Mexicans blamed Chinese immigrants for the demise of the Mexican economy, including the depreciation of Mexican currency, rising food costs, and taking over labor traditionally filled by Mexican women (Romero, 2011). Koreans related to Mexicans on the individual level, demonstrated by the practice of interracial marriages, but Koreanness as an ethnic identity represented the opposite of *Mexicanidad* in society. This ideology valued citizens based on their race and class in society in a shadowed attempt at integration that revolved around the idea of *mestizaje*, the cultural classification of people of mixed race. When the henequen contracts expired, Koreans, unable to be categorized in the racial structure of Mexico, lost their only other social indicator, which was labor, leaving them situated on the periphery of society.

The Korean Mexican identity became multidimensional. As the ethnic Koreans told a researcher in 2016, “we’re not Korean, but we’re also not Mexican. We are Korean-Yucatec [or Korean-Mayan]” (Kim, 2018, p.107). The changes in their class identity resulted in the formation of new social categories that reflected the permanent settlement of Koreans in the region. The 1910s and ’20s saw an incline in legal inclusivity for Koreans in Mexico (Kim, 2012). Because the Korean peninsula was under Japanese colonial rule, all official documentation identified the migrants as Mexican, which extended to their descendants (Kim, 2012). In 1917, the Mexican Constitution became extremely important for ethnic Koreans. Article 30 presented a *jus solis* citizenship policy, which meant that the second generation of Korean immigrants was considered legally Mexican (Mexico Constitucion, 1917).

This expansion of the category of Mexican citizenship, however, did not stop some Koreans from fleeing after the henequen market declined. Famously, “300 Mexican Korean Spartans” left for Cuba and forged their own 1000-strong diaspora there (Kim, 2021a, p.263). Besides Cuba, some men traveled to Guatemala to fight against the colonial government and earn money to support the Korean Independence movement from abroad (Kim, 2018). Likewise, the Korean independence movement shaped much of the political development of the Korean Mexican community in the mid-twentieth century.

In 1908, a group of former soldiers of the Korean Empire who emigrated to Mexico and paid a ransom to end their contract early formed a tight-knit community and founded the Asociación Coreana de Mérida, the Korean Association of Mérida (Kim, 2021). This association became a pillar in the transnational Korean independence movement and a cultural broker, in some respects, for the Korean emigrants trying to connect with their roots. Koreans felt as though membership in this organization would reduce the social isolation that they faced as a Korean expatriate community (Quintanilla, 2021). Eventually, the Korean Association in Mérida spread to Mexico City, Campeche, Veracruz, and Baja California and represented the Korean struggle for independence in Latin America. Members were required to pay 100 pesos a month in dues to maintain their status: the 900 members generated 900 pesos per month (Quintanilla, 2021). Exactly half of this monthly profit was directed toward a collaboration with the Pan-Korean Association, led by Chang-ho Ahn abroad, that promoted plans for independence (Quintanilla, 2021). The scale of their membership ultimately led to the formal recognition of the Asociación Coreana as a representative of the Korean immigrants by the Yucatecan government (Kim, 2021). The success of this movement is evidence that Koreans had to cling to their ethnic identity to survive when faced with conflicting national attitudes. Once Mexico finally accepted Koreans into the state as Mexican citizens, Koreans were already being subscribed to the global liberation movement and showing allegiance to their homeland. However, the community gained awareness of how they could utilize their ‘flexible citizenship’ in favor of themselves and the pursuit of independence.

Flexible citizenship is a sociological concept pioneered by anthropologist Aihwa Ong in her work on transnationalism (Ong, 1999). This occurs when a migrant secures legibility as a member in one state to become a citizen to benefit another state, such as their nation of origin (Quintanilla, 2021). Koreans became aware that certain legal and political institutions could be manipulated into helping them achieve their goals of Korean liberation from Japanese colonial rule. Once the Mexican Constitution granted them citizenship rights, they legally entered Mexican society while still considering themselves Korean internally. Becoming

Mexican citizens allowed Koreans to engage in “practices favoring flexibility, mobility, and repositioning in relation to markets, governments, and cultural regimes” (Ong, 1999, p.244). They could better aid the liberation movement by gaining better access to employment opportunities and services that would maximize their income so that they could send leftover funds back home. In this way, flexibility in terms of citizenship is a product and condition of late capitalism (Ong, 1999). The concepts of migration restriction and borders are produced by our capitalist regime that commodifies human beings to monetize mobility and manipulate the markets. By engaging in transnational citizenship, Korean Mexicans were actively participating in this scheme as opposed to being taken advantage of by capitalist institutions. They rightfully reaped benefits from a system that profited from their enslavement. Ong emphasizes that the role of culture is vital in “constituting state and society under varying conditions of globalization,” which is clearly demonstrated in the evolution of the Korean Mexican identity in the fight for Korean liberation (Ong, 1999, p. 244). Though global capitalism of the late twentieth to early twenty-first century differs from the earlier model of capitalism in the early 1900s, the institutions remain the same in that capitalism is a driver of migration and institutes the same socioeconomic conditions on migrants as it did one century prior.

KOREAN MIGRANT LEGACIES IN LATIN AMERICA

The *aenikkaeng* generation is unique in that it was the first generation of Korean emigrants in Latin America. The ‘forced labor to freedom’ journey represents an important piece of history that has influenced the Republic of Korea’s (ROK) diplomatic relationships with Mexico and the broader Latin American region. The basis of this argument relies on the first generation in 1905 and its descendants as they have offered Korea a distinctive leverage in inter-country relations. However, it would be remiss not to mention the next waves of immigrants to Latin America in the latter half of the 20th century and their amalgamation of identity when settling next to previous generations: about 60 years passed from the migration of the *aenikkaeng* generation to the arrival of the new wave of immigrants (Cho, 1972). Korea had gained independence from Japan and its citizens endured the war between the North and the South before reaching out to establish diplomatic relations in Latin America. It was not until 1962 that South Korea published an Overseas Emigration Law which allowed citizens to emigrate with the permission of the Foreign Office and voluntary emigration began to occur (Cho, 1972). The first official emigrants arrived in Brazil in 1963 and thousands of Koreans moved from there to Argentina, Paraguay, and Bolivia (Kim, 2016). According to data published by the Korean Ministry of Foreign Affairs and Trade, the number

of Korean emigrants registered to go to Latin America had multiple peaks in the late 20th century, most notably from 1983 to 1988 where migration ranged from 1,917 to 4,623 (Kim, 2016). Migration to Mexico fluctuated though and saw a slow rate throughout the 1980s. Near the end of the decade, the Korean Association recorded only 64 families in Mexico City (Kim, 2006). These emigrants fulfilled multiple sectors, the majority being students at Universidad Nacional Autónoma de México and the Universidad Iberoamericana, martial arts teachers, business executives, and a few general settlers (Kim, 2006). At the end of the 1990s, almost 20,000 ethnic Koreans inhabited Mexico (Kim, 2021a). This wave experienced an entirely different passage into Mexican society that only made the Korean Mexican identity more complex.

Today, in the 21st century, some Korean Mexicans are reconciling with their migrant worker ancestors and attempting to connect with their past. The Korean emigrants did not pass down vibrant oral language traditions, but they did leave a lasting impact with food. One story, published by the Korean Broadcasting System in a video documentary from 2020, highlights a woman, Ana Maria Song, who is a second-generation Korean in the Yucatán (Korean Broadcasting System, 2020). She prepares foods like *kalguksu*, cabbage kimchi, and watermelon kimchi because her father passed down the recipes (Quintanilla, 2021). The community revived their Korean cooking, martial arts, and cultural holidays in their new settlement, Mexico (Quintanilla, 2021).

Moreover, Korean descendants are also incorporating contemporary Korean culture into their lives in Mexico to complement the older Korean traditions. An independent documentary, titled “Yo Soy Coreana,” interviewed Genny Chans Song, the Director of the Korean Immigration Commemorative Museum in Mérida (Kim, 2018). Genny Song facilitates cultural programming and engages her fellow Korean community in the area (Kim, 2018). She is passionate about educating children about Korean roots in Mexico, and thinks it is important for them to learn *Hangul*, the Korean written language, as learning the language fosters a sense of kinship in the Korean Mexican community and allows them to engage with their society across the Pacific. Part of this engagement is expressed through music appreciation: the documentary showcases a group of young women performing a K-Pop dance routine at the cultural center (Kim, 2018). The integration of current traditions into the lives of descendants from a previous Korea reflects the elasticity of the Korean identity in the transnational sphere. From the Korean perspective, the Korean Mexicans value and show loyalty to the Korean culture and respect its values, but in other perspectives, there is a bias that would say otherwise. A Mexican government-funded news documentary, called “Los que llegaron,” interviews several Koreans who emigrated to Mexico who agree that there should be space for both cultures in their lives. Many values are



FIGURE 1. | *Figure 1. Kim, M. V. (2016). El Chemulpo [Photograph]. Cross-Currents: East Asian History and Culture Review.*

the same for young Koreans and young Mexicans, and Koreans have managed to make an impact on Mexican culture, for example the growing popularity of martial arts (Canal Once, 2012). One young man noted that the working culture is slightly different in that Mexican workers usually get a long lunch break during the day and are permitted to take vacation days, whereas South Korea provides shorter breaks and has more restrictions for time off (Canal Once, 2012). However, this documentary was disseminated to the Mexican people by the government and might have instituted bias to show Mexican society in a better light. Some Mexican business owners, though, recognize the history of suffering that Koreans have faced. In fact, Michael Vince Kim's 2018 photo essay documents stories captured in film about the generation that once lived there (Kim, 2018). One of the most striking images shows an establishment, formerly known as "Bar Santiago," which was visited regularly by working laborers of Korean descent (Kim, 2016).

When they began to drink, the Koreans would yearn for their homeland by shouting "Chemulpo," the name of the Korean port they departed (Patterson, 1993). Years later, the owner changed the name of the bar to "El Chemulpo" (Kim, 2016). The solidarity and acknowledgment shown to Koreans in this instance are indicators of the changing

tides in Mexican societal relations and further acceptance of the Korean people and their migration history. Stories like that of "El Chemulpo" are evidence that the citizens of Mexico can acknowledge the painful memory of the migrants. The history of the Koreans has permeated the thoughts and attitudes of Mexican society which has opened a door of increased engagement between the two countries. For example, many Korean companies have successfully moved into Latin America and are entering the markets with force. The immersion of Korea's presence in Mexico has shined a light on the two country's special diplomatic partnership with each other that is extending into the socioeconomic sphere.

FROM THE TWENTIETH CENTURY TO THE PRESENT: KOREAN MEXICAN BILATERAL RELATIONS

The relations between Korea and Mexico have come a long way since the low period of *kimin* in the 1910s (Park, 2006). In 2019, Mérida established a Korea Day to celebrate the generations of Korean immigrants and their historical impact (Kim, 2021b). In 2021, the Mexican Chamber of Deputies approved a proposal to mark May fourth each year as National Korean Immigrant Day (Kim,

2021b). The deputy who suggested the holiday, David Bautiste Rivera Morena, is also the head of the South Korea-Mexico Friendship Society (Kim, 2021b). Morena has pushed for more acknowledgment of the Koreans in Mexico because of their long-standing friendship. The broadcasted government address in which Morena officially recognizes the Day of the Korean Immigrant emphasizes his appreciation for the Mexican Korean economic partnership and directly traces the origins of such relations to the Korean immigrants of 1905 (Cámara de Diputados, 2021).

Another cultural voice is the South Korean Ambassador to Mexico, Suh Jeong-in, who has erected multiple symbols of Korean Mexican solidarity in the country (Kim, 2021a). These included the statue, Greetingman, on the Avenue of the Republic of Korea in Merida in mid-March 2021, and the plate commemorating the arrival of Korean labor migrants at the port of Progreso (Kim, 2021a). South Korea is very strategic in how it manages foreign relations and these small diplomatic actions. Another example is the commemoration of the first generation; Korean media painted the emigrants as loyal patriots and solely Korean when they experienced discontinuity in their identity that floated them between the nations (Kim, 2012). This translated to the idea from abroad that these emigrants were Korean, but many personal attitudes aligned more with Mexican identity. The formal recognition of this diaspora immigration is groundbreaking, though, because no other Asian diaspora in Mexico has received such validation nor has any other Korean diaspora internationally received such (Kim, 2021a). Korea presents a unique stance in Mexico that neither China nor Japan can relate to despite their presence dating back further in Mexico, but the political acknowledgement came too late to dissipate generalizations about the diaspora.

To demonstrate, perceptions of Korea in Latin American everyday society are propagated through a racial lens, based on the performance of race and dissemination of stereotypes (Kim, 2017). For example, Argentines relate Koreanness with exploited labor because most Korean immigrants historically found themselves in that position. Further, countries, like Argentina, have embraced a model of neoliberal multiculturalism that demands certain executions that contradict the supposed value of the structure (Kim, 2017). Hopefully, the growing amount of economic bandwidth that Korea is exercising in Latin America will transform stigmas and introduce a more positive definition of Koreanness into Latinx society.

Evidently, the Inter-American Development Bank published a trade report on Korea and the Latin America-Caribbean region (LAC) in 2015 that demonstrates the strides this partnership has made (Mesquita, 2015). Though their economic bilateralism is still based on a “commodities-for-machines” model like that of China-LAC partnerships, Korea’s foreign direct investment (FDI) in LAC has characterized it as a dynamic partner

to the region, separating itself from Asian counterparts (Mesquita, 2015, p.1). Korea concentrates its activity within LAC’s biggest markets, Mexico and Brazil, which have “accounted for over 80 percent of the total FDI inflows from Korea between 2010 and 2014” (Mesquita, 2015, p. 17). Mexico, in particular, has reached a new record in their share of Korean FDI: 27 % (Mesquita, 2015). Korean companies like LG, Samsung, and Hyundai are thriving in the region by investing in distribution and logistics centers and education and training programs (Mesquita, 2015). These companies, however, participate in capitalism in a similar way as the early 1900s haciendas, in that Mexican workers are treated as commodities and often forced to labor in poor conditions by the Korean corporations (Shim, 2017). The Mexican models of labor and economy clearly align with Korea and these countries recognize the mutual benefit of lending labor. For modern workers to escape the burdens of capitalism, they must find a way to take advantage of the system like the Koreans in Mexico who invoked transnational identity to further their ambitions. Neocolonial institutions often subjugate individuals to facilitate cooperation between large actors. This is evident in the diplomatic relations between Korea and Mexico because the countries’ key actors are utilizing the history of the Korean Mexican minority to validate and strengthen their current ambitions in both Latin America and Asia.

Cooperation with Mexico is important to Korea because of the connections to North American supply chains that Mexico holds. Korea is home to many successful ‘home-grown’ multinational firms that distinguish itself from other Asian economies which would leverage Korea to a better position with the United States (Mesquita, 2015). Korea’s economic success in the region is symptomatic of its deep diplomatic relations and struggles embedded within the Yucatán. Otherwise, most LAC nations have accumulated trade deficits with Korea which highlights Korea’s dominance in the region even more (Mesquita, 2015). In one prominent case of Mexican FDI, the Mexican firm Katcon Global built a plant in Daegu, Korea in 2012 to distribute exhaust systems and catalytic converters for the automotive industry in Korea: there is an incentive and opportunity for LAC in Korea in the future. In the current state, Korea is investing more in the region and there are no indicators that this partnership will cease at any time. The influx of Korean activity in Mexico has risen in the same timeframe that diplomatic figures from Mexico and Korea have recognized the significance of the henequen labor migration history, so it is not a coincidence that Korea is attempting to achieve more power in the region now.

South Korea has achieved soft power in addition to acclaiming economic prestige. Political scientist, Joseph S. Nye, Jr., describes soft power as “the ability to get what you want through attraction rather than coercion or payment” (Nye, 2021). Soft power can be attained through

a country's culture and values in the domestic domain and its policies internationally. The diplomatic efforts between Mexico and Korea, such as the establishment of Korean Immigrant Day, are prime examples of this international recognition that empowers countries. In an article printed in the *Chosun Ilbo* in March 2022, Mexican Ambassador to Korea, Bruno Figueroa, notes that Mexico and Korea "were ignorant of each other 60 years ago, but now they are quite close," in celebration of their diplomatic anniversary (Kim, 2022, p. 23). Figueroa attributes the ongoing free trade agreement negotiations between the countries to this history, despite the sixty-year period of ignorance the two countries maintained during the 20th century (Kim, 2022). Korea has utilized this historical memory and brought it into modern light to foster a better relationship with Latin America. Without the existence of the *aenikkaeng* generation, there would be no historical benevolent connection upon which the countries could establish a relationship. This diaspora offers Korea another avenue of engaging with Latin America that differentiates itself from other Asian powers like China and Japan. Though the migrants themselves are not at the forefront of diplomatic discussions between Mexico and Korea, the spirit of their diaspora is commonly cited as a reason for cooperation between the two countries.

Thus, the ROK employs soft power by achieving a stake in the region through economic agreements and diplomatic conversations. Though Korea has been slow on the global scale in the initiation of diplomatic action, the cultural wave known as *Hallyu* as well as economic achievements abroad has endowed the Republic with great soft power. The nation boasts a trading volume of over \$21 billion with Mexico, \$22 billion with Russia, and \$15 billion with Kazakhstan and Uzbekistan combined, so they are well positioned to negotiate and form agreements with other countries (Kim, 2021a). The surplus of trade with these partners is a result of the impactful Korean emigrations to these regions. These trade projects represent the past four presidential administrations in South Korea's shared goal: to establish free trade and travel zones in Europe, Asia, and Latin America (Kim, 2021a). Korea's further interests lie in possibly joining the Trans-Pacific Partnership, a multi-region trade agreement involving Mexico, Chile, and Peru, so the country benefits from continuing trade at this volume with Latin America because these states will be favored towards admitting the ROK (Mesquita, 2015). On the same level, Korea has expressed interest in improving dialogue at the bilateral level on issues like climate change and the UN Security Council, which indicates the government is extending its arm into serious multilateral affairs (Gonzales, 2021).

These advancements in global socioeconomic development owe some of their success to South Korean diplomatic efforts with Mexico. As previously mentioned, the ROK depicted the Korean Mexican migrants as solely

Korean in its commemoration of the generation, yet the migrants mostly identify themselves as Mexican now. The memory of this generation prevails as an effective strategy for South Korea to build trust with Mexico and advance its own goals in the nation, like establishing businesses. This diplomatic channel is imperative for the ROK to grasp ethnopolitics and utilize history to its advantage. By continuously narrativizing and reframing the inglorious history of the *aenikkaengs* and funding commemoration projects in Mexico, the South Korean government gains leverage in the region and the ability to sway Mexico into complying with strategic measures (Kim, 2012). The effect of this strategy on the Korean Mexican diaspora is that the people constantly float between Koreanness and Mexicanidad, despite their efforts of rooting themselves in modern Mexican society (Canal Office, 2012). Citizenship remains flexible due to the grasp of the state on Korean Mexican identity, and the *aenikkaeng* generation continues to operate on both sides of the ethnic cleavage.

CONCLUSION

By tracing the history of Korean transnational identity, we can better understand the bilateral relations between South Korea and other nations as well as Korea's stance in globalization. The story of Koreans migrating to Mexico represents a small fraction of Korean emigration, but their magnitude shapes the way relations unfold between the two countries. Emigrants to Russia and Hawaii embarked on a different path than those who went to Mexico, but they all shared the same allegiance when their homeland called for their support. Korean emigration, in all forms, highlights the complexities of transnational identity and flexibility in citizenship. Yoon (2012, p. 414) recounts that:

The sociologist Seymour Martin Lipset (1997) observed that a nation becomes comprehensible only through comparison with other nations. Likewise, to move beyond localized and descriptive knowledge, overseas Koreans in one area must be investigated not only in comparison to Koreans in other overseas locations but also with regard to how they are becoming more closely interconnected through globalization.

Nothing can be accomplished by solely analyzing the situation of Koreans in Mexico, but when we study the rallying of the Korean diaspora across the world during the Korean Independence Movement, it is evident that a transnational community can benefit a country and utilize structures in different ways. Since the early 20th century, members of the Korean diaspora abroad have latched on to pieces of the Korean identity despite being thrust into complex social dynamics that have bent to their will. The limited literature that explores Asia-Latin American relations limits our understanding of citizenship and conforms our thinking to a Western point of view. Western framework conceptualizes globalization as a condition of capitalism and emphasizes the rigidity of

cross-border flows and migration law in the neocolonial regime. The study of this generation of Koreans in Mexico embodies a fluidity that is only visible through migration. The inflection of citizenship that Koreans exercise to assert a place in society is a direct result of the manipulation that capitalism accounts for in the scheme of legal emigration. Transnational Koreans have long been pushed out of existing race-class dynamics in the population circles that they enter abroad, and thus they are compelled to gravitate toward any institutions that will view them as legitimate and include them in social protection. Flexibility in identity has long played a role in the shaping of international relations.

By understanding the liquid migration occurring across the Pacific, it becomes clear that Asian-Latin American relations are transfiguring at the rate of globalization. The complex relationships between the two regions are demonstrative of the past century of infrastructure projects, foreign investment, and multinational corporation development. This research suggests that further comparative analysis is needed to discuss how the transnational Korean identity in Mexico differs from Korea's current biggest LAC partner, Brazil. However, it is right to assume that the relationships that LAC nations maintain with Korea are sociologically different than those with the West. The anthropological study of diaspora is extremely important in analyzing contemporary relations in the global market. Without interpreting the chain of events that leads to circumstances of transnational migration and then international partnerships, we are neglecting to recognize generations of citizens that balance multiple identities on their heads. The aenikkaeng generation that trekked from Incheon to Mérida is a living ghost in Korean Mexican diplomatic history that lingers in the periphery, yet subtly influences the modern bilateral relations between countries. Their memory will live on as long as the transnational identity continues to mutate with normative structures and augment its social standing.

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Leaving the Garden: Aristotelian Ethics in the Age of *After Virtue* and Post Truth

GRACE TRUSLOW

ABSTRACT

Alasdair MacIntyre concludes *After Virtue* by arguing that the only possibility for a return to a society of shared virtues is through the manufacturing of universalism through entering like-minded communities, but the seeking out of echo chambers only compounds contemporary issues of the solidification of personalized 'truths.' In this paper, I propose that a return to Aristotelian virtue ethics with an emphasis on building empirical knowledge will create the opportunity for a more morally integrated society. Through the concept of the basis for morality being the pursuit of human flourishing both for the individual and community rather than superimposed morals, Aristotelian ethics offers the moral flexibility required in a more pluralistic and morally ambiguous postmodernist society. However, there is a risk of exploitation of this system through the redefining of 'flourishing' by power-hungry sources, defining what others should be striving towards creates a similar dilemma as when those in power seek to define what is universally 'good.' Therefore, the pursuit of empirical knowledge within this moral system grants greater control to moral agents and counters the movement toward echo chambers in a post-truth society. The pursuit of Aristotelian ethics with an emphasis on empirical knowledge will allow individuals to navigate a morally ambiguous world with greater perspective and personal autonomy.

In the contemporary age of post-postmodernism and post-truth, it is tempting to reach fatalistic conclusions on the inability of society to return to the distinct definitions of 'good' and 'evil' as the biblical myth of the Garden Eden influentially depicts them. While we may not be able to actualize the myth of objectively clear good and evil, fatalism regarding a more morally integrated society is unwarranted. Here I intend to argue that a cogent vision of moral society is possible but should not be carried out by entering into like-minded societies, as Alasdair MacIntyre suggests in *After Virtue*. I propose that a return to a virtuous society can be achieved by building an understanding of Aristotle's empirical viewpoints in the context of a moral relativist and post-truth era. Through analyzing the philosophical and historical evaluation of Aristotelian Ethics, modernist moral binaries, and postmodern relativism, it becomes clear that Aristotle presented a successful model for the contemporary age due to his encapsulation of individual autonomy, shared underlying values, and consideration of context. Aristotelian Virtue Ethics provides the opportunity for a moral system that can operate in the ambiguity of the postmodernist world while maintaining moral guideposts through the concept of telos, a

designated end goal. Accepting the overarching notion of telos pragmatically and utilizing empirical or experiential knowledge to guide oneself in the pursuit of virtue allows for the avoidance of both superimposed morality and unfettered relativism.

The post-truth era poses a particular challenge to returning to Virtue Ethics, and it is, therefore, necessary to qualify the Aristotelian view with insights from Zhuangzi's Daoism. Zhuangzi, a philosopher during the Warring States period (476-221 BCE), provided a skeptical voice that helped to distinguish between self-affirming truths of the modern day and the pursuit of flourishing. This paper does not argue that virtue ethics are a superior moral system than Daoism or other beliefs but rather shows how virtue ethics provide a helpful framework for navigating the modern world without discounting the insights of other schools of thought in the realm of relativism. An emphasis on empirical knowledge, defined as knowledge achieved through experience and experimentation rather than through superimposed dogmas, will enable moral agents to pursue the end of flourishing with greater insight and autonomy. Through the pursuit of the forbidden fruit of empirical knowledge in the post-truth era and the application of Aristotle's

Virtue Ethics in the postmodernist context, individuals and societies can promote well-being without foolishly attempting to change the inherent imperfections of life after leaving the Garden of Eden.

THE AGE OF *AFTER VIRTUE* AND THE POSTMODERN LENS

In *After Virtue*, MacIntyre makes a disquieting suggestion that through the Enlightenment project and postmodernist period, society has lost sight of cohesive moral standards (MacIntyre, 1981). Postmodernism refers to the philosophical school of thought that deconstructs social and moral systems and explores moral relativism. Moral relativism emphasizes moral ambiguity that must be navigated through contextualization. While MacIntyre reaches heavily nihilistic conclusions on the fate of a postmodern society unlike those of this paper, his analysis of the dynamics between moral binaries and morally relativistic movements is helpful in disseminating the philosophical history and pitfalls of the current postmodernist world. Through the viewpoint of moral binaries, actions are either good or bad in and of themselves.

While on the surface level, the object of MacIntyre's work is a critique of postmodernist society and a call for a return to Aristotelian philosophy at least on a microlevel, his critique heavily resides in the failures of the Enlightenment period due to the prevalence of moral binaries and the false ideal of universalism. MacIntyre shows that modern Western thinkers who thought that "what Aristotle obscured, they see" (MacIntyre, 1981, p. 81) and believed that they were moving away from the capricious nature of religious ethics. However, they were ironically curating a world in which anyone in a position of power could dictate what was universally good and bad. As caustically exposed in Johnathan Swift's *A Modest Proposal*, rational thinking does not inherently lead to moral action as the most efficient system may undermine individual protections. Thus, there is a need for ethical guideposts (Swift, 2017). Despite the Enlightenment's ideals of a universal, rational, and binary moral code detached from telos, Enlightenment thinkers were unable to produce a code that would lead to ethical action in differing social contexts. Supposed universal maxims are formed by those with their own contextual biases and dogmatic codes to morality are pragmatically limiting in a morally ambiguous world. According to Kant, this is not an issue because human rationality allows for the usage of the categorical imperative test in which to be moral, any self-proclaimed dogma must be applicable to all other actors. While in a utopian like-minded society, such a philosophy may produce a shared moral code, in practice, it is difficult to apply Kant's philosophy in more morally and socially heterogeneous societies. Further, Kant does not take into account the power disparities

and, therefore, biases that may exist in the formation of 'universal' laws (Kant, 2018).

There is a level of compatibility between MacIntyre and postmodernist thinkers in their criticisms of Enlightenment-era philosophy. There is also compatibility between the moderate moral relativism of virtue ethics and the relativism of postmodern thought. Just as Aristotle rejects Platonic moral binaries for his measures of means and extremes, postmodernists reject the moral binaries of various Enlightenment thinkers from a relativist viewpoint. The distinguishing factor between the two, albeit compatible philosophical critiques, is that for Aristotle, moral guideposts can simultaneously exist with his understanding of the moral ambiguity of the world because of the existence of an overarching goal and his belief in the universality of reason. While moral ambiguity emerges in the different situational contexts of life, in the Aristotelian framework, having an overarching telos and a sense of reason allows humans to navigate this ambiguity with clearer direction and have a litmus test to find the means between extremes. MacIntyre suggests that telos expands upon the limiting framework of equating logic and morality: "Ethics therefore in this view presupposes some account of potentiality and act, some account of the essence of man as a rational animal and above all some account of the human *telos*" (MacIntyre, 1981, p. 52). For Aristotle, the existence of an end goal is able to create an underlying 'virtuous' and 'unvirtuous' even if he expects that most actions and events exist within the gray area. This can be juxtaposed to the morality binaries of 'good' and 'bad' of Enlightenment thinkers. According to Aristotle, this gray area is bounded by the idea of eudaimonia, or the state of human flourishing. Within the postmodernist view such underlying goals do not exist universally, causing the moral disintegration of society in MacIntyre's view.

For what MacIntyre seeks to show, in what may be called his genealogical unmasking, is that despite the "rationalistic pretentious" of post-Enlightenment moral philosophy, it is nothing but a disguised expression of the emotivism which has become embodied and well-entrenched in modern society and culture (Bernstein, 2017, pp. 7-8).

Despite the prevalent view of amoral postmodernists, "Postmodern skepticism' gained ground not because it rejected norms, but precisely because people thought it could advance what amounted to a progressive, ethically motivated politics" (Storm, 2021, p. 241). Thus, despite the failures of postmodernism to present positive moral guidance instead of primarily negative critiques, "Philosophical problems were recast as problems of language, but then language itself became a problem" (Storm, 2021, p. 1), as MacIntyre himself shows, postmodernism was able to successfully disintegrate the legitimation of moral binaries from the Enlightenment

movement. The compatibility between Aristotelian virtue ethics and the postmodern critique presents the opportunity for Aristotelian ethics to be applied to an 'after virtue world.'

ARISTOTELIAN ETHICS IN THE AFTER VIRTUE AGE

The coexistence of malleability to various personalistic and circumstantial aspects of morality and of a designated end goal, telos, within Aristotle's virtue ethics allows for his philosophy to fit into a pluralistic and morally gray society. For Aristotle, the perfected state is defined through telos: "Human beings...have a specific nature; and that nature is such that they have certain aims and goals, such that they move by nature towards a specific telos. The good is defined in terms of their specific characteristics" (MacIntyre, 1981, p. 148). Thus, actions are not innately 'good' or 'evil' but rather exist on a spectrum between extremes and must face the litmus test of whether or not they bring humans closer to their end function, which Aristotle defines as happiness. In the Aristotelean framework accepted by MacIntyre, the end purpose for humans is not just Darwinian survival but a greater sense of flourishing and fulfillment that humans are capable of due to access to rational knowledge. Flourishing can be pragmatically accepted as a human end because of the desire for humans towards flourishing despite a variety of social and cultural contexts, or as Aristotle states, "Happiness, then, is apparently something complete and self-sufficient, since it is the end of the things achievable in action" (Aristotle, 1999, p. 9). Aristotle's happiness is not a state of blissful ignorance because in such a state, an individual is at the whim of extreme forces.

This flourishing allows for the autonomous navigating of moral challenges. Accepting flourishing as the human end as a heuristic point provides a strong basis for a moral system because it places fulfillment of the biological and emotional needs of humans within the power of human action. Flourishing, as will be discussed further in this paper, is not an egoist end, as individual flourishing is interconnected with community flourishing. In the Aristotelian tradition, there is no need to superimpose moral binaries on everything as long as, within a society, there is knowledge of the ideal of a flourishing person or eudaimonia. Guideposts for virtue ethics are created through the metrics of what works towards or against this end goal: "The core insight of virtue ethics is that morality is not primarily about conformity to a set of pre-established rules, but about becoming a better person...Virtue ethics...is a broad moral theory rooted in the importance of good habits and self-cultivation" (Storm, 2021, p. 262). The original Greek for 'virtue,' *arete*, translates to excellence, backing the Aristotelian idea that those seeking goodness should seek betterment (Finkelberg, 2002). In a world of post-postmodernist critiques, Aristotelian ethics provide the opportunity for

moral guideposts through telos which function within the reality of moral ambiguity.

DEFINING FUNCTION AND FLOURISHING

To implement virtue ethics as the answer to an after virtue society, the definition of eudaimonia or function is essential, as it generates the moral bounds of action, but this is a more complex task in a secular, pluralistic world. According to Aristotelian ethics, when determining whether an object is good or bad, the user will assess it based on its ability to accomplish its function. For example, a good watch is one that tells time well. In the same way, whether or not an action is ethical is dependent on if it works towards the end goal of human flourishing: "For the judgments which provide the agent's practical reasoning with premises will include judgments as to what it is good for someone like him to do and to be" (MacIntyre, 1981, p. 162). While virtue ethics may serve as a guardrail from the acceptance of superimposed binary moral codes, there still exists a pitfall for external control through ill-intended forces seeking to define what will bring about a sense of fulfillment (Evans, 2012). For example, in contemporary society, the false sense of flourishing that comes from immediate gratification such as through TikTok scrolling, gambling, or one-click shopping supports billion-dollar industries. Potentially more subversively, those in power can try to superimpose meaning onto those below them. In the office setting, a boss can convince their subordinates that the hustle culture of '#Thank God it's Monday' will bring flourishing not only to the company but to them on an individual level. A regime could use nationalist rhetoric to convince citizens that the well-being of the nation and their individual flourishing is reliant upon the pursuit of a shared future that excludes marginalized groups. However, utilizing the definition of flourishing for institutional aims or ideology is not a novelty. In Thomas Aquinas' religious interpretation of Aristotle, the end goal of man was not just happiness but to be in a state of flourishing preordained by God. Within Calvinism, the religious interpretation was taken further through predestination: "The precepts of ethics now have to be understood not only as teleological injunctions, but also as expression of a divinely ordained law...The true end of man can no longer be completely achieved in this world, but only in another" (MacIntyre, 1981, p. 53). At the whim of predestination, autonomously achieving the state of flourishing would be hopelessly inaccessible to the mortal man.

One of the failures of the Enlightenment period's use of universal truths as guideposts is that they can be easily challenged by societies in which either a self-interested monarch or mob controls the narrative of what is 'universally true.' There are various present and historical examples of tyrants seeking to validate their actions in

the name of ‘universal powers,’ such as Putin’s usage of the Church’s universal authority as justification for his invasion of Ukraine and the Nazis’ reliance on the claimed actuality of their race theory. A similar pitfall can emerge in virtue ethics if an extraction or subversive force has the power to define eudaimonia in a society. In *Nicomedian Ethics*, Aristotle emphasizes the understanding of happiness as an end and that understanding what can and cannot be quantified as eudaimonia is imperative. For example, Aristotle discusses how luck and gluttony cannot be confused with telos. To achieve eudaimonia, one must have or build knowledge of what will lead to long-term flourishing. The greater access to truth and knowledge that individuals have, the more likely they are to achieve their end function. Enlightenment thinkers objected to the idea of religious authorities dictating the image and accessibility of the flourishing person. While this does not justify a total movement away from virtue ethics, in the contemporary world, the same susceptibility exists for secular or religious forces to abuse power through superimposing ideas of human ends. Religion is not inherently incompatible with this framework, but the superimposition of dogma should be precluded. The pursuit of flourishing in the contemporary age creates an imperative of individual knowledge to prevent an outside force from seeking control through dictating what will lead to flourishing. Even if rational thinking in itself cannot form a moral code, this does not mean that it is not a part of Aristotle’s delineation of right and wrong. It is through intelligence and the inherent desire for eudaimonia that humans can become cognizant of and potentially change unconscious habitats and assumptions as first laid out by Aristotle.

AFTER TRUTH

The imperative of individual knowledge poses a particular challenge in the contemporary world with rising global trends in populism (Suiter, 2016) has been quantified by political scientists as being in a post truth era (Reyes, 2020). Trumpism has served as a signifier, at least within politically liberal circles in the US, of this post-truth period. In 2017, the Washington Post, in response to Trump’s political rhetoric, made their slogan, “Democracy Dies in Darkness,” referencing Plato’s Allegory of the Cave. The New York Times placed it blatantly with, “Truth: the Opposite is a Lie.” While in terms of virtues there has been a return to relativism, the postmodern period has seen a solidification of the identity of fact that started in the Enlightenment period, but the idea of ‘fact’ is relative to individual beliefs. For example, with the 24-hour cable news cycle or news delivered through social media, individuals are able to view current events through a context that conforms to their version of ‘truth’: “The combination of populist movements with social media is often held responsible for post-truth politics. Individuals have growing opportunities

to shape their media consumption around their own opinions and prejudices, and populist leaders are ready to encourage them” (Davies, 2016, para. 7). In the creation of echo chambers, the validity of facts is assessed on conformity to existing viewpoints: “It almost makes it attractive to commit errors. After all, something shown to be true merely confirms our expectations unless we had supposed the opposite to be the case” (Fuller, 2018, p. 152). Paradoxically, greater access to information through social media decentralization has had the impact of generating a larger playground of what fits into the realm of ‘truth’ as individuals can more easily access validation and echo chambers for their individual ‘truths.’

When using Aristotelian pluralism with the guideposts of the ultimate function of well-being as a path to greater integration of ethics in a world of ambiguity, empirical knowledge is imperative. Empirical knowledge helps both in delineating to find the mean and to understand if one is working towards their true function. In placing this in the context of the post-truth era, it is important to recognize what the current philosophical idea of truth is. In Fuller’s 2018 assessment of the relationship between philosophy and the post-truth era, *Post Truth: Knowledge as a Power Game*, he states: “Philosophy has become a formidably serious discipline dedicated to ‘The Truth,’ while rhetoric has come to be seen at best as a handmaiden of The Truth, sometimes appearing as merely ornamental while at other times outright subversive” (Fuller, 2018, pp. 28-29). However, in antiquity, truth, at least in the Sophist view, antithetical to Plato’s, was more malleable. In ancient Greece, the Sophists taught young noble Athenians rhetoric and promoted truth to be whatever wins over support. While Aristotle would not side with the Sophist view of truth being equated to popularity, his philosophy accepts a level of malleability due to his belief in the influence of circumstance, at least within the confinement of this teleological meta-narrative. Within this meta-narrative, Aristotle certainly held more stagnant views of virtue and telos in the abstract, but the practice of virtue ethics is reliant upon the understanding of virtue within the changing circumstances of different extremes. While both Plato and modern thinkers believed in transcendent or universal truths, Aristotle emphasized the practical process of working through different situations and the relativity of truth.

Zhuangzi’s work provides additional guidance on the contemporary idea of ‘truth.’ MacIntyre’s linear presentation of the movement from virtue ethics to binary virtue to a state of after virtue omits the existence of important Daoist conversations on moral ambiguity: “Efforts to characterize a life well lived (and its attendant virtues) are evident throughout the ancient world, and can be seen prominently in South and East Asian thought” (Storm, 2021, p. 256). In Zhuangzi’s Daoist view, ‘right’ and ‘wrong’ are terms that are only meaningful within their linguistic and cultural context and, in reality, exist

on a hinge of the Way, or true reality (Zhuangzi, 2003). While not equivalent, his perspective can be compared to Aristotle's view of virtue existing on a spectrum of extremes rather than through binaries. For Zhuangzi, an overarching end goal was not necessary and could also serve as a delusion of reality. Instead, he advocated for a release from the societal buzz and arbitrary constructs of morality and for people to instead try to become one with the inherent ambiguity of the Way. While not interchangeable, both theories offer flexibility for the individual to operate ethically with the recognition of moral ambiguity and the capricious nature of superimposed 'virtues.' These philosophies, particularly Zhuangzi's, are not dogma, but rather a way of living or even transformation: "Virtues are not something that one possesses full stop—rather, they represent a propensity to act in a certain way when one encounters a particular set of circumstances" (Storm, 2021, p. 262). Zhuangzi's view speaks directly to the function of 'fact' in a post-truth society. Zhuangzi described how 'right' and 'wrong' do not exist in themselves but rather exist within people's viewpoints, revealing a level of compatibility between Zhuangzi's Daoism and postmodernism (Zhuangzi, 2003). People view the truth as malleable to the extent that they can fit reality into their fixated worldviews. But both Aristotle and Zhuangzi recognize that this is not actually 'truth' but rather a form of internal validation and delusion. In the post-truth age on the individual level, the truth is fixated within worldviews, and reality is made to bend into these fixated views. If virtue ethics are an answer to a morally disintegrated society, the reality of one's flourishing cannot be defined by bending it to fit into one's existing world views, as this will only compound the dilemma of a post-truth society.

There is a similarity between the recognition of a world of post-universal virtues and a post-truth society. Both can be tied to increased pluralism within different societies and relativism. However, they are not new ideas. Zhuangzi criticized the idea of knowable 'truth.' Calling modern US politics 'post-truth,' is really a recognition of how people from different ideological sides bend their perceptions to superimposed versions of 'truth.' Returning to the NYT's Platonic assertion that, "Truth: the opposite is a lie," Zhuangzi would have disagreed with this slogan not out of support for post-truth politicians but because of his recognition of the "shaded light" that is the reality of both political discourse or any claim to knowledge. Just as letting go of moral binaries can help individuals to more accurately navigate a morally ambiguous world, letting go of fixed views of the truth is important in building knowledge: "Absolutely certain knowledge is impossible. Everything can be doubted. So we must grant the possibility of uncertain knowledge" (Storm, 2021, p. 216). This is not a radical statement given the fact that perceived truths can change with further study: "What

we think of as established facts are in constant flux (e.g. The consensus about how many plants are in the solar system, whether diamonds are nature's hardest material, the value of Planck's constant, the total population of Germany, and the exact length of a meter have all changed in recent decades)" (Storm, 2021, p. 221). It is also integral to recognize that values and facts influence each other. Values can change if one gains greater underlying knowledge: "Moreover, although value conflicts are often portrayed as intractable, people do change their values based on new understandings of facts...In sum, many of the values we hold are based on our assessment of particular evidential claims" (Storm, 2021, p. 250). While the post-truth era is a deterrent to the ability of moral agents to best determine eudaimonia, letting go of one's fixated 'truths,' may lead to more knowledge.

(EMPIRICAL) KNOWLEDGE IS POWER

When it comes to understanding eudaimonia and function, knowledge is power, but in the context of a post-truth era, knowledge can not be simply defined as 'fact' but rather, as the pursuit of empirical knowledge integrated with the concept of telos. Practicing virtue requires active personal analysis rather than simply following inclinations: "The exercise of intelligence is what makes the crucial difference between a natural disposition of a certain kind and the corresponding virtue" (MacIntyre, 1981, p. 154). While empirical knowledge has imperfections, such as the impairment of senses through subjectivity, its basis in experimentation rather than theory gives the opportunity for agents to better understand virtue within the fluctuations of a morally gray world. In contemporary society, many rhetorically associate scientific knowledge with the solidification of 'fact,' however, those more closely acquainted with the process of building scientific knowledge know that it is only through long-term experimental research that such 'facts' may be solidified. Empiricism also leaves open the possibility that as knowledge is built. These understandings of reality may shift, which is an essential framework in approaching a post-truth yet 'fact' adherent society. Some may accept empiricism as a valid form of knowledge formation in the scientific realm but believe that the realm of virtue is too subjective. However, this viewpoint of inherent subjectivity only further invalidates the potential moral binaries and the importance of gathering as much knowledge as possible to make moral assessments. While collecting quantitative data on one's personal virtues is impractical, the continuous process of learning through experimentation and knowledge formation can be applied to the development of virtue. This process of experimentation implies not a binary switch from vice or virtue but rather an ongoing process of learning and growth. Through the expansion of perspectives by leaving echo chambers and gaining

practical experience practicing virtue, the individual can assess their growth in the development of virtue. The very pitfall of empiricism being subject to personal perceptions encourages those seeking out knowledge to work towards building broader perspectives as opposed to entering into self-affirming echo chambers. As previously stated, integrating empiricism into the end goal of flourishing develops parameters for moral action without the need for superimposed definitions of 'right' and 'wrong.' Those questioning the basis of flourishing as an end goal or the definitions of flourishing prescribed by societal forces can use empirical reasoning and experimentation to autonomously build a greater understanding of their end goal.

Instead of abandoning Aristotelian ethics due to the potential for power grabs, empirical knowledge can be used to augment autonomy in discovering eudaimonia. Through empirical knowledge, individuals can assess both what will bring about their true flourishing and subsequently search for the means between extremes that will bring them towards this state of flourishing. Ambiguity in the realm of facts in the post-truth era is not a stopping point for Aristotelian ethics. Firstly, uncertainty is not a stopping point for theorizing: "But if all our experience were to be characterized exclusively in terms of this bare sensory type of description - a type of description which it is certainly useful for a variety of special purposes to restart to from time to time - we would be confronted with not only an uninterpreted, but an uninterpretable world" (MacIntyre, 1981, p. 79). Secondly, it is true to Aristotle's philosophy that if things are ambiguous, study and theory can help to bring about more light even if it is only within the given context. Aristotle's idea of empirical study can be applied to the question of flourishing and function within a pluralistic and post-truth society through gaining personal experiences and perspectives. 'Experience' formerly was used primarily to describe experimentation: "By 'experience' originally meant the act of putting something to the test or trial - a meaning that was later reserved to 'experiment' and later still involvement in some form of activity, as when we speak of 'five years experience as a carpenter'" (MacIntyre, 1981, p. 80). For Aristotle, truth is attained through gaining practical knowledge just as flourishing is attained through practicing ethics: "Practical knowledge, phronesis, is the use of reason to grasp the truth of what is good or bad for a human being in a situation that requires action" (Faure, 2013, p. 51). Phronesis is applied at the micro level of individual decisions finding the mean between two extremes, but is also used to analyze how a greater collection of these decisions work towards a state of flourishing. This does not, however, negate the role of outside expertise in the process of finding flourishing. Agents can outsource their process of phronesis to authority figures in different areas without giving up control of agency in the long-

term journey of discovering eudaimonia. For example, in seeing a therapist or dietitian, an agent can redirect some of their phronesis to experts without having their end goal redefined. This view is again compatible with Storm, "Yet by embracing impermanence, we can still make progress together. Perhaps a god's eye view comes not from a singular vision but from many eyes" (Storm, 2021, p. 20). It is also compatible with Zhuangzi's viewpoint that gaining multiple perspectives may not lead to absolute 'truth,' but it will bring one closer to the truth. Either through detachment from ingrained ideas for Zhuangzi or through building an impartial empirical understanding of situations for Aristotle, people can build a greater understanding of the world around them. Returning to the problem of external forces working to define what is considered to be 'flourishing,' the use of individual exploration and recognition of the possibility of a set image of eudaimonia being incorrect, the individual has greater autonomy in defining flourishing: "Unlike an emotion, Happiness is something you can be wrong about. You can think you are 'Happy' when you are just fleetingly 'happy.' If Happiness is experiential or empirical (with a range of significant variations and definitions), how to live your life is a question of practical knowledge" (Storm, 2021, p. 258). The personal nature of 'happiness' means that it cannot accurately be defined through an outside party: "The challenge becomes how to live a good life when we can't be certain we know what the good life is" (Storm, 2021, p. 263). Defining the good life is an ongoing personal process of growth and experimentation rather than the memorization of dogma: "Pursuit of the good cannot be handed to us and takes personal experimentation, practice, and growth" (Storm, 2021, p. 263). Failures that may occur in this process should not be justified as a means to the end of eventually finding virtue. However, the opportunity for growth helps to address the inherent imperfections of humans living in a morally ambiguous world. This viewpoint is compatible with those who view education as a process of learning to grow instead of just retaining facts: "Part of the point of education should be to facilitate self-discovery, to focus on people finding for themselves their idea of a meaningful life" (Storm, 2021, p. 260). In *Nicomachean Ethics*, Aristotle addresses the fact that while those who pursue unvirtuous ends may present the facade of pursuing flourishing, hedonistic goals, however one defines them, will not lead to true flourishing. Virtue ethics is also not a purely individualistic process because of the connection of one's flourishing to the flourishing of one's greater community, creating guardrails against egoist interpretations. However, virtue ethics can be defined as an ongoing process of personal growth in the same way that understanding one's ends are subject to transformation. Empirical understanding can then be used both to navigate the relative extrema of a morally ambiguous world and to determine eudaimonia.

THE NEED FOR GUARDRAILS

From MacIntyre's perspective, this view could be criticized as a part of the problem with postmodernism in that humans can define for themselves what flourishing is, causing perpetual conflict in society. It is significant that this moderate relativism in the process of virtue ethics and determining function is not confused with either a self-conforming version of 'truth' or the stationary, superimposed versions of morality as discussed earlier. To the former point,

Although the idea that everyone has their own truths sounds positively ecumenical, it leads toward contradictions. If everything that I believe is "true for me," then saying that something is "true for me" doesn't add anything. It is merely an emphatic statement that I believe something. Unless we think that mistaken beliefs are impossible, then everything I believe cannot be true (even for me). (Storm, 2021, p. 219)

Thus, building empirical knowledge and recognizing potential blindspots is the reaction against the idea of self-defined truth. To the point of individual-based definitions of flourishing leading to conflict, MacIntyre is correct in pointing out that this could lead to a culture of emotivism: "The doctrine that...all moral judgements are nothing but expressions of preference...insofar as they are moral and relative in character" (MacIntyre, 1981, pp. 11-12). The counter argument presented by Storm in *Metamodernism: The Future of Theory* is that compassion for the flourishing of others can serve as a guardrail against blending secularized and pluralistic virtue ethics in the post-truth era of emotivism. Storm's viewpoints are influenced by Buddhism, but they are applicable to extending an individualized usage of virtue ethics to one's wider community. While one could say that this guardrail of compassion is superimposed as a universal truth, empirical study of human behavior reveals the benefits of existing within flourishing communities, both for the individual and the community: "Our lives are deeply intertwined with others; so helping out in our community benefits not just our own life but those who are entangled with us" (Storm, 2021). For example, the strength of the social support network that one has is a social determinant of health. Given the ways connections to society influence individuals, the pursuit of flourishing cannot occur in a silo: "Succinctly put, if flourishing is truly interconnected, none of us can completely thrive in an unjust society" (Storm, 2021, p. 268). The emphasis throughout this paper on the individual's need to avoid superimposed moral binaries or false external ideas of flourishing may, on the surface level, seem to endorse a brand of virtue ethics and egoism. However, both the Daoist recognition of the need to detach from one's biases and the Buddhist recognition that individual well-being is attached to one's greater community help to supplement the usage of virtue ethics in the modern day.

Thus, Aristotelian virtues and empirical based knowledge can be applied to a pluralistic society with the guardrails of flourishing for the individual being understood in the larger community context.

THE ALLEGORY OF THE ECHO CHAMBER

Returning to MacIntyre's idea that the solution to his disquieting suggestion of the world after virtue is for the creation of enclaves of 'truth,' it is clearly antithetical to the best way for Aristotelean virtue ethics to be carried out in a post-truth world. Manufacturing universalism is not dissimilar from false universalism: "Deconstruction may have largely functioned as the self-inflicted martyrdom of a weak intelligentsia; and yet it would be an equally grave mistake to try to reverse course and retreat directly into the insincere comforts of a false universalism" (Storm, 2021, p. 2). Further, entering into like-minded communities mirrors the post-truth era phenomenon of online echo chambers. Rather than retreating to the cave or echo chamber, greater empirical knowledge can be utilized and searched for by individuals to the greatest extent possible to ensure that the actions they are taking are in line with their purpose and that the function they are pursuing is one that will cultivate their well-being. To achieve well being through the Aristotelian method in the contemporary world, knowledge is essential. Just as knowledge cannot be found in arbitrary definitions of 'right' and 'wrong,' it also cannot be found through viewing the world relative to a singular worldview. Empirically assessing what leads to flourishing and what function is fulfilling for humans in the long run will allow for a more autonomous implementation of virtue ethics in the contemporary age of TikTok consumerism, #Thank God it's Monday work culture and online echo chambers. However, the understanding of empirical flourishing should not be autonomous to the extent that it excludes those around the individual. From both the Aristotelean and metamodernism perspective, humans are political creatures. The flourishing of the individual is dependent on the quality of the community the individual is in, and thus, empathy for the flourishing of others is essential to the flourishing of the individual. This creates guardrails to the pitfalls such as emotivism that can come when flourishing is defined purely from the individualistic standpoint.

In the Catholic Aristotelian viewpoint, the original sin of man was not the indulgence in a fall fruit but rather in the symbolic idea of pride in which people believed they could determine for themselves what their function is. From MacIntyre's perspective in *After Virtue*, the negative effects of this emotivist original sin can be still seen after the exit from the Garden of Eden. In leaving the garden of a hypothetically perfect world of universal morality that exists in idealized origin stories, the ideals of Platonic forms, or the dreams of Enlightenment

thinkers, the current postmodernist age is one of fluctuating moral standards. It is clear, however, that the return to the garden of binary moral codes attempted by Enlightenment thinkers was not plausible. Thus, existing in this imperfect world, Aristotelean virtue ethics offer the opportunity to navigate moral ambiguity while pursuing human flourishing with a compassionate lens. While the Catholic standpoint emphasizes the original sin of man eating from the Tree of Knowledge of Good and Evil, in the post-truth era, building this empirical knowledge not to redefine what brings about human flourishing for instant gratification or self-validation but rather to understand one's ethics and process of flourishing are essential to the well-being both individually and for an after virtue society.

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A Legacy of Disenfranchisement: Interrogating the Displacement of the Historical Black Foggy Bottom Community

JULIA RUSSO

ABSTRACT

This paper looks at the displacement of the historical Black community in Foggy Bottom, a prominent neighborhood in Washington, D.C. Through the analysis of archival material, mainly from The George Washington University's Special Collections Research Center and University Archive, it is understood that the Black community in Foggy Bottom was destroyed by gentrifying efforts at the hands of white people, making space for Foggy Bottom to become inhabited by a plethora of governmental agencies, The George Washington University, and several wealthy private companies and individuals. The lack of research on this community's displacement is concerning as the impacts of the gentrification of Foggy Bottom, and other areas in D.C. are monumental, and are still being felt to this day. The District of Columbia became the first majority Black major city in the United States in 1957, and in the 2000 U.S. Census the population was 59% Black but by 2020 that population dropped to 41%. Not only has D.C.'s Black community dropped dramatically in recent history, but it now is the most gentrified city and has one of the highest rates of displacement in the United States.

INTRODUCTION

Prior to the emancipation of slaves, Washington D.C.'s modern-day Foggy Bottom had two plantations: one owned by Robert Peter and the other by Notley Young (Franzen, 1979). The end of the Civil War in 1865 led newly emancipated African Americans, like the ones previously owned by Peter and Young, to find housing nearby - giving rise to the historic Black community in Foggy Bottom. The neighborhood is only steps away from the National Mall, and thus is dominated by government agencies and The George Washington University (GW), a wealthy, predominantly white institution. The homes and cultures of Foggy Bottom's previous residents are nowhere to be found and under-researched.

"I could walk for blocks, and somebody knew my father, knew my mother," James Briscoe, a Foggy Bottom resident born in 1950, said at a 2012 GW event titled "Voices from Foggy Bottom's Past." "That was a big part of the community. Everyone didn't have a mom and a dad, but the community kind of took care of folks" (Donnelly-Smith, 2012). Following the Civil War, the Black community in Foggy Bottom remained an extant force. Despite the poor living conditions, people had a strong sense of community and many called the area home.

Foggy Bottom was underfunded, creating dangerous living and working conditions. Even in

the face of such hardship, many notable residents grew up in the neighborhood, including Charles Drew, Colbert I. King, and Duke Ellington. King was born in 1939 and became a Pulitzer Prize-winning Washington Post columnist. In an interview conducted by the Foggy Bottom Association, King described the Foggy Bottom "neighborhood as a close-knit and caring community, centered around the many churches in the area" (Foggy Bottom Association, 2022). However, by the 1950s, things were changing: industries in Foggy Bottom began to close down, developers evicted renters and demolished houses to build new apartment buildings, and new roadways cleared large parts of the area (Foggy Bottom Association, 2022). Developers knew the proximity of Foggy Bottom to government agencies and the National Mall would make the area lucrative if they redeveloped the real estate. King said he gradually noticed the changes to his community as people stopped showing up at church services or events. As Frank Leone writes, "With their neighbors gone and churches closed or relocated, the fiber of the neighborhood as the King family and many other African American families knew it had deteriorated. King's family moved out of Foggy Bottom in 1959" (Foggy Bottom Association, 2022). Similarly, Carolyn B. Casper, a Foggy Bottom resident who lived at 835 New Hampshire Avenue, wrote in a Letter to the Editor of the *Foggy Bottom*

News in 1978:

There was much that was seamy and unpleasant in Foggy Bottom in the 50's...However...the things that made Foggy Bottom a delightful place to live [were] the small town atmosphere; the neighborliness of the residents; the children - I miss the small stores where everyone addressed you by name and many extra services were given as a matter of course; and the quiet (except for the planes). We have come a long way, but some of the fun of living in the Bottom has disappeared in the process (Casper, 1978).

FRAMING THE DISAPPEARANCE OF THE BLACK FOGGY BOTTOM COMMUNITY

So why did the Black community in Foggy Bottom disappear? Foggy Bottom's Black community did not leave voluntarily. Rather, the community was destroyed by gentrifying efforts at the hands of white people, making space for Foggy Bottom to become inhabited by a plethora of governmental agencies, GW, and several wealthy private companies and individuals. To investigate this question with the consideration it deserves, a deeper examination of the historic Black neighborhood itself must be conducted, along with an analysis of the factors that led to its destruction.

A SHORT HISTORIOGRAPHY

There is a paucity of academic literature on the historic Black community in Foggy Bottom. While the significance of this neighborhood may appear to be trivial to academia at-large, the gentrification of the area and displacement of its Black residents exposes larger issues regarding housing inequity and the centuries of systemic racism Black people in America have endured.

A number of scholars have examined aspects of this overall question. The most relevant contributor to academia on the subject is Suzanne Berry Sherwood, who wrote her thesis, *Foggy Bottom, 1800-1975: a Study in the Uses of an Urban Neighborhood*, at GW in 1978. Though Sherwood does touch on the degradation of the Black community in Foggy Bottom, her work is a chronological history of the area, precluding deeper critical analysis of the issue. Elmer Louis Kayser, who was a student at GW in 1914 and later became a professor of European history at the school, looks at the history of GW in his book *Bricks without Straw: The Evolution of George Washington University* (1970). By the nature of Kayser's focus in *Bricks without Straw*, he explores gentrification and housing inequalities, but he places a larger focus on the Irish and German immigrants in the area rather than the prevalent Black community. Lastly, while their work transcends Foggy Bottom specifically, Chris Myers Asch and George Derek Musgrove detail the inequalities and oppressions faced by Black people in D.C. at the hands of white people and institutions in their book, *Chocolate City: A History of Race and Democracy in the Nation's Capital* (Asch &

Musgrove, 2017). *Chocolate City* is an important book to academia by virtue of its ability to expose the centuries of racial oppression that have occurred in the "nation's capital" and the ways the systems of injustice are ingrained into every fiber of D.C. to this day. This book has been influential in understanding the larger context of the displacement of Black residents in Washington, D.C. and in Foggy Bottom, as it does examine the area in a few sections of the book.

While each of these authors contribute important information to the academic conversation about Foggy Bottom and racial inequity in D.C., this research paper poses a more specific question, and potentially an answer, regarding the issue of gentrification of Foggy Bottom. Rather than trying to analyze all the displacement that occurred in Foggy Bottom during the 20th century, this paper will take a singular look at the Black community and prioritize information provided in various formats by the Black residents themselves.

A BRIEF HISTORY OF BLACK RESIDENTIAL LIFE IN FOGGY BOTTOM, POST-CIVIL WAR

Following the Civil War, D.C.'s population grew exponentially, creating the need for additional housing. Previous city plans included long narrow properties, with houses facing the streets and the rear of the property containing enough "room for kitchens, stables and dependencies, with the alleys providing access" (Leone, 2021). However, with D.C.'s population growing, many of "these properties were subdivided and alley-facing houses were built" (Leone, 2021) These alley dwellings, which can still be seen today in areas of Foggy Bottom like Snow's and Green's Courts, became the homes of many Black families. Beyond the intentional relegation of Black communities to alley homes, the conditions in the houses were inhumane. The alley houses were often made of wood and did not have indoor water, sewage, or heat. These alleys were even called 'civic plague spots' due to their primitive water and heating systems, rats, and high rates of crime (Lee & Anderson, 1978). The tight living spaces, overcrowding, and lack of sanitation made alley residents vulnerable to disease (Snows Court, n.d.). The 1944 Washington Housing Association study noted that of the 186 dwelling units, 70 received 100 or more penalty points according to the Appraisal Technique of the American Public Health Association's Committee on the Hygiene of Housing (Sherwood, n.d., p.22). These conditions made the houses some of the only ones that newly emancipated Black residents could afford, another way the city pushed them into these areas.

The living conditions in these alley houses were affected by the companies present in the area. From the mid-1800s to the early-1900s, Foggy Bottom was an industrial neighborhood that housed the Heurich Brewery, built in 1872, and the Washington Gas Light Company, in

1857. Foggy Bottom was a prime location for industries like brewing and gas because it was in a convenient and affordable location to receive grain, water, and coal. The unfavorable living conditions created by the brewery and gas companies allowed for immigrants and newly freed African Americans to find cheap housing near a place of employment. These two companies had major control over the residential demographics of Foggy Bottom, creating a dividing line along 23rd Street. Areas farther away from these factories – north of E Street and east of 23rd – became affluent, while closer areas – west of 23rd Street – were left a “slum” to be inhabited by poor Black families.

While the living conditions of Black families in these alley dwellings were putrid, the residents shaped the alleys into self-sustaining communities. The alleys had homes, as well as grocers and churches. By 1866, the growing Black community in Foggy Bottom led to architect James Renwick designing the St. Mary’s Episcopal Church, located on the west side of 23rd Street between G and H. This became a major center of community for Black residents in Foggy Bottom.

GOVERNMENTAL TRANSFORMATION PROJECTS IN FOGGY BOTTOM

Despite having built a community for themselves in very difficult circumstances, by the mid-1900s, many Black families were forced to relocate due to urban renewal efforts aiming to gentrify the area and make it more palatable to wealthier, white residents (Anderson, n.d.). The west side of Foggy Bottom became another piece of land in the city’s urban redevelopment project, once again uprooting and disregarding Black people.

The displacement of the Black community in Foggy Bottom occurred as the result of two main factors: the loss of industry in the area and the increase of government involvement. Both of Foggy Bottom’s main industries closed down in the mid-1900s. Washington Gas Light Company closed in 1948 and Heurich Brewery in 1956. Foggy Bottom was originally attractive to immigrants and other minority groups because of these job opportunities and the area’s poor conditions resulting in affordable housing. However, “with the elimination of these sources of blue-collar jobs, the area became attractive for the location of government buildings and to private investment” (Foggy Bottom News, 1999).

In the late-1800s to early-1900s, the federal government began governing housing and city safety standards, which gave government officials, and eventually private corporations and individuals, the opportunity to transform Foggy Bottom in the name of crime reduction, safety, and cleanliness. In the 1870s, the Board of Public Health urged for Foggy Bottom to be reclaimed as a result of a lack of a proper sewage system, but it was not until 1892 that Congress banned the construction of housing without sewers, water, or light on alleys less than thirty

feet wide (Sherwood, n.d., p.15).

Though Congress’s regulations appeared to be for the betterment of Foggy Bottom, additional actions indicate otherwise. In 1934, Congress passed the District of Columbia Alley Dwelling Act which created the Alley Dwelling Authority, allowing Congress to redevelop an alley square “for any purpose that served the interest of the city” (National Archives, n.d.). Yet, instead of caring for Foggy Bottom’s community, like by creating affordable housing, – “the Authority was actually eliminating what limited and inadequate housing there was. It responded to the same economic constraints of the market place as would a private developer” (Sherwood, n.d., p.22). Not only was there a lack of consideration for the Black residents of Foggy Bottom, but the increased interest in the area led to the land becoming too expensive for the government to construct low-income housing. Thus, as a result of careless planning, the Authority was not always able to replace demolished alley houses with other housing options. For example, on 24th Street and Pennsylvania Avenue, the ADA cleared a slum in 1935 and replaced it with a seven-car garage in 1936, with two of the spots reserved for cars of ADA officials (Sherwood, n.d., p.22).

Governmental treatment of Foggy Bottom areas was also influenced by race. The relatively few white residents of Foggy Bottom were treated more kindly; for example, when the Pan American Building was erected on the site of the white Van Ness family home, the city compensated the family for the seizure of their land (Lee, 1977). While all residents should have been compensated, only the wealthier, and white, residents were the ones who received anything from the government.

The creation of the ADA gave the government the freedom to partake in several “public works” projects, including several highways, which acted in concert with other renewal efforts throughout the area to lead to the displacement of hundreds of Black Foggy Bottom residents. Several different road projects disrupted the Foggy Bottom community throughout the 20th century: including the Whitehurst Freeway (1949), K Street (1947) and E street (1965) expressways, Rock Creek Parkway (1936), Inner Loop (1956), Potomac River Freeway (1965), and Theodore Roosevelt Bridge (1955) (Beckham, n.d.). In total, these public works projects wiped out about one-quarter of the housing on the south border of Foggy Bottom. While these projects made the area more accessible, they also made it more attractive to large-scale development that would further the destruction of Foggy Bottom’s original community (Foggy Bottom Collection, n.d.). These roads did not just displace residents, but they also resulted in an influx of noise, pollution, and traffic, driving out the remaining residents who were not evicted (Beckham, n.d.).

These projects were rarely freely and publicly

announced – let alone debated – which meant residents were not given knowledge of the construction and could not fight against it. Local news outlets often conveyed this information to Foggy Bottom residents after the fact. For example, in 1956 *The Washington Post* and *Times Herald* wrote to inform taxpayers that the District Commissioners, “with notice to no one,” declared the formation of a 38-block “Urban Renewal Area” covering part of the land south of Pennsylvania Avenue, N.W. between 19th Street and the Potomac River Parkway (*The Washington Post & Times Herald*, 1956, p.11). The designation of a Urban Renewal Area was, reportedly, to create land for George Washington University, as well as to clear slums and replace with affordable housing, “Writers of *The Washington Post* and *Times Herald* expressed concern because this designation essentially meant that the entire area had been frozen and thus “private capital will not move in this area” (*The Washington Post* and *Times Herald*, 1956, p. 11). They wrote: “Meanwhile, property values are dropping, improvements are being stopped, potential tax revenues are being lost, and Foggy Bottom becomes a desolate area, an economic “no-man’s-land” (*The Washington Post & Times Herald*, 1956, p.11).

THE GEORGE WASHINGTON UNIVERSITY’S ROLE IN GENTRIFYING FOGGY BOTTOM

The federal government also supported private institutions’ own redevelopment projects, with the biggest one being that of GW. Despite being an academic institution, GW’s behaviors in Foggy Bottom can be more closely compared to those of a real estate developer. In 1955, The National Capital Planning Commission demarcated the boundaries for the Foggy Bottom urban renewal area as H Street, 24th Street, Pennsylvania Avenue, and 27th Street & 19th west to 27th (Sherwood, n.d.). However, GW was given its own renewal area, alienating Foggy Bottom residents. An urban renewal designation allowed the Redevelopment Land Agency (RLA) to use its powers of eminent domain to assemble parcels of land, clear the land, and sell the cleared land to the University as the redeveloper (Lee, 1978). The power granted to GW by the RLA gave the University free rein over its expansion efforts, despite residents arguing the RLA should focus on slums and blighted areas (Lee, 1978).

1. GW first moved its campus to Foggy Bottom in 1912 and quickly the University became “the chief villain, in the eyes of the [Foggy Bottom] homeowners” (Beckham, n.d.). Not only did the University’s renewal efforts destroy the area’s previous historical character, but the residents were forced out of their homes (Simpson, 1987a). According to a study by the Municipal Planning Office, Foggy Bottom’s population dropped by about 25% between 1960 and 1970 and the number of housing units dropped about 29% (Simpson, 1987b). The destruction of homes coupled with an

increase in prices of existing homes led to residents either being driven out or kicked out through eminent domain. Many renters had to move out of their homes because they could no longer afford the rising rent prices, and some homeowners had to sell their houses since they could not afford to pay the taxes that rose alongside the value of their homes. These changes culminated in a steep population decrease. In 1970, Foggy Bottom had about 14,500 residents, according to the city planning office report – by 1984, the area was down to a population of about 9,100 (“Foggy Bottom’s Residents Fear Creeping Development”, n.d.).

While all of Foggy Bottom was impacted by GW’s redevelopment projects, Black residents were disproportionately affected in much harsher ways compared to their white and richer counterparts. On August 18, 1997, Letita Comerink, on behalf of The George Washington University Oral History Program, interviewed Eric Marlow, a Black man who previously lived in Foggy Bottom. Comerink asked Marlow “What were the circumstances that caused your parents or your family to leave the area?” and he replied:

It was GW, in fact. I think after a while they systematically moved all of the black families out of GW. Gee, I get a bad taste in my mouth when I said that. But I feel that that’s what happened, because even after I moved away and I would still come back to visit my white friends, they were still living in all their houses. Their houses were still intact. But all of my black friends’ houses has been torn down. I imagine it was paving the way for the Smith center and parking lots and what have you, dorms (Comerink, 1997).

Not only were white residents in Foggy Bottom more likely to be able to keep their houses, but because more white families than Black families could afford to own the house they lived in, they were given offers by GW for their land and were able to move to the suburbs. Contrastingly, Black families, who were largely renting homes, were rarely given compensation, forcing them to move somewhere else in the city they could afford (Comerink, 1997).

The changing social aspects of Foggy Bottom that Marlow felt in the mid-1950s are reflected in the U.S. Census Bureau’s Decennial Census data. The U.S. Decennial Census did not subdivide their data by tracts, (which are small subsections of a county), until 1940, but according to the data on D.C. at large, between 1910-1930, the Black population averaged at 26.9%. The impacts of gentrification efforts in Foggy Bottom specifically can be seen in the data ranging from 1940-1990. In 1950, the Black population was at its highest, with the Black residents making up 33.30% of the total population; but by 1990, the population decreased to just 6.1% of the total population (See Figure 1).

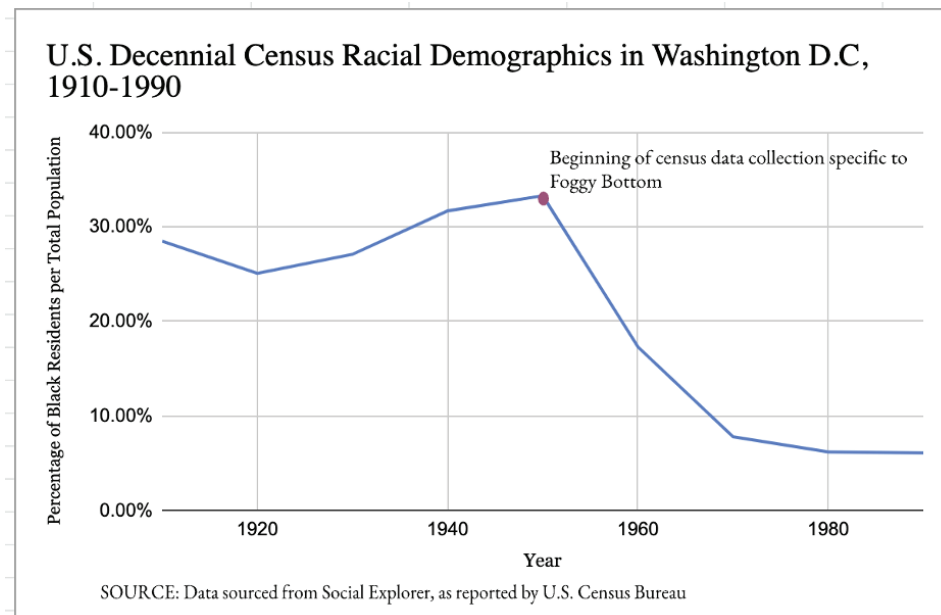


FIGURE 1. U.S. Decennial Census Racial Demographics in Washington D.C., 1910-1990.

INDIVIDUAL AND CORPORATE EXPLOITATION OF FOGGY BOTTOM

In addition to the government and GW reconstructing Foggy Bottom, some wealthy individuals and corporations also participated in urban renewal projects, which further contributed to the displacement of Foggy Bottom's Black community. In 1912, Snow's Court, an interior block bounded by 24th, 25th, I and K streets, was nearly entirely inhabited by Black residents. But by the 1950s, individuals like Joseph Robischer, a GW medical student, and his wife Jean, became interested in restoring these alleys. Joseph and Jean Robischer restored many of the houses in Snow's Court. Prior to the restoration in the 1950s, Snow's Court homes sold for about \$800; by 1954 they were worth \$5,500, and today average around \$700,000. In 10 years, from 1950 to 1960, Foggy Bottom changed from a predominantly black neighborhood to a white neighborhood. This area became very popular with urban professionals who wanted to live close to work, and Marlow mentioned in his interview with Comerink, "it's ironic to me now that I live in Suitland. I was born in this area, but I really couldn't afford to get a room in this area" (Comerink, 1977).

After the demolition of the Washington Gas Light Company in 1948, Rome-based international real estate firm Società Generale Immobiliare (SGI) purchased the 10-acre site for \$10 million. Italian architect Luigi Moretti designed the "Watergate Towne," a complex consisting of five curving towers and a retail center. D.C. officials were supportive of the project, particularly because it could

attract more wealthy, white residents who otherwise may have otherwise moved to the suburbs rather than D.C. (Watergate Complex History, 2013).

SGI envisioned The Watergate complex as "a city within a city" and was the first mixed-use development created in the district. It was intended to help define the area as a business and residential rather than industrial district. The Watergate underwent its initial construction between August 1963 and January 1971, and this luxury building, hosting notable residents ranging from Condoleezza Rice to Andy Warhol and infamous incidents like the Watergate Scandal, is starkly different from the former gas tanks in its place (Lindsay, 2005). As written in the *Washington Circle* in 1975:

The stink of the sulphur in the soft coal used to manufacture gas [and] the heavy, oily black smoke that permeated everywhere, were not conducive to the residences of the dandies who have now redecorated the old slave quarters and occupy such fashionable and notorious apartments as Watergate (the former site of the gas works) (Anderson, 1975).

The creation of "urban villages," like the Watergate, helped to create a hierarchy within the city. Such spaces in effect closed off parts of the city to only those deemed worthy of getting in – by being wealthy and white. The Watergate complex was designed to have everything one might need, including residences, retail centers, office buildings, and more. By creating a supposedly self-sufficient luxury space, the Watergate complex solidified and enforced a strict separation between those who were allowed in and those who were forced out. These decisions were intentional. In an article from *Urban Land* magazine about how to create a "safe" downtown, the

author writes:

“A downtown can be designed and developed to make visitors feel that it... is attractive and the type of place that ‘respectable people’ like themselves tend to frequent ... A core downtown area that is compact, densely developed and multifunctional, [with] offices and housing for middle- and upper-income residents ...can assure a high percentage of ‘respectable,’ law-abiding pedestrians” (Davis, 1990).

In addition to neglecting Black Foggy Bottom residents, depriving them of resources, and forcing them to relocate, entities like SGI worked with the D.C. government to build properties like the Watergate complex, which further solidified Foggy Bottom as a place for “respectable people,” which in their eyes meant wealthy whites.

CONCLUSION AND LOOKING FORWARD

The Black community in Foggy Bottom was dismantled at the hands of the federal government, GW, and private companies and individuals. While some may argue that urban redevelopment in Foggy Bottom was necessary due to the conditions of the area being so dire, research into the topic suggests that improvements to Foggy Bottom should have, and could have, been made with much more care and respect for the Black residents originally inhabiting the area.

For example, in February 1996, Maria Tyler, the Commissioner of the Advisory Neighborhood Commission 2A03, wrote about the careful redevelopment that was performed on 2521 and 2523 K Street NW in the latter half of the 1980s for the Foggy Bottom News. In her piece “New Welcome Proposal for the Cooper Houses,” Tyler says after the original tenants of the houses, the Cooper family, passed away, a developer persuaded authorities to build a nearby structure over 120-feet high that would take over the historic area. Residents protested the decision, resulting in the case going to the D.C. Court of Appeals: the residents of Foggy Bottom were ultimately able to stop the real estate developer. Then, in 1996, “a new owner decided to respect the scale of the historic houses and to develop the site with townhouses” (Tyler, 1996). Tyler said the new owner contacted her about his proposal early on in the process, allowing for community members “to be informed and respond in a favorable way” (1996). The care and respect this individual displayed for Foggy Bottom was ultimately both beneficial for him and the community - “the end result is that the community, ANC-2A and the FBA all backed the project and approval by the Historic Preservation Review Board of the conceptual design was secured without delay” (Tyler, 1996). Contrastingly, the previous developer, who had no intention of preserving the history of Foggy Bottom, was not only unsuccessful in his pursuit but later went bankrupt - as did the lending bank for his project.

While Tyler’s story about the Cooper Houses is an anecdote, it illuminates the ways in which redevelopment

in Foggy Bottom could have been handled. Pathways for accountable, sustainable, and non-destructive growth did exist. If the federal government, GW, and individuals wanted to preserve the integrity of Foggy Bottom and respect its Black residents, they could have taken actions to create better living conditions in the area without destroying its history and the lives of its inhabitants. However, they made clear through their actions that their loyalties lay with wealthy, white developers and prospective residents.

IMPLICATIONS FOR THE MODERN-DAY AND FUTURE RESEARCH

At a quick glance, it may be difficult to comprehend the connection between the destruction of the Black community in Foggy Bottom in the 20th century and modern-day D.C. However, the impacts of the gentrification of Foggy Bottom, and other areas in D.C. are monumental, and are still being felt to this day. The displacement of Black residents continues. For example, in a study conducted by Legal Aid DC, 20,000 Black residents were displaced from their homes in D.C. between 2000 and 2013 (Jacobs, 2019). A 2019 article in *The Washington Post* said low-income residents in D.C. are being pushed out of their neighborhoods at some of the highest rates in the country (Lang, 2019). Additionally, in the Navy Yard neighborhood, an area which many Black residents of D.C. have already been pushed to, about 77% of residents were identified as low income in 2000 - in 2016, that population dropped to 21% (Lang, 2019).

These statistics are alarming - Black people and low-income residents are being pushed out further and further into the shrinking margins. Poor areas are becoming poorer, while areas that have evicted their low-income residents reap the benefits of economic activity and wealth (Jacobs, 2019). This has implications for many spheres of life other than just where one lives: it also affects access to healthcare and grocery stores, the ability to generate wealth, and myriad other socioeconomic factors. The lasting effects of such displacement cannot be overstated. Considering the dearth of research on this issue, it is imperative that movements of the original Black community in Foggy Bottom be tracked and further research and analysis be done to see the ways in which the gentrification of the area has impacted the demographics and further underfunding of D.C. Without exposing the truth of this brutal history - and present - it is impossible to address it.

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Protecting Cameroon's Heritage: A Contemporary Approach

PARKER BLACKWELL

ABSTRACT

This report, through a case study of Cameroon, reviews the efficacy of traditional solutions to current threats in light of the most recent challenges facing cultural heritage preservation work. Reflecting on original interviews of select archaeologists, market stakeholders, and local representatives, I assess the challenges and possible solutions for combating threats to cultural heritage. Conclusively, the data indicates that the established methods for stopping the looting of antiquities in West Africa, as expressed in the literature, are not accurate with respect to the problem on the ground. Ultimately, this paper has two major findings. First, the people of Cameroon need opportunities to engage regional stakeholders in a constructive dialogue about heritage threats. This dialogue must be inclusive of local voices to end the exploitative cycle in Africa and create functional solutions for those affected. Once the immediate obstacles are understood, joint efforts to conceive and carry out projects must occur at the local level in order to create sustainable systems to protect Cameroon's heritage in perpetuity. Though the scope of research here was limited to Cameroon, this is a regional issue. Poor implementation in one state opens a gateway for regional crime.

INTRODUCTION

The looting and trafficking of antiquities in West Africa threatens fair trade and stable economic growth. It robs local communities of access to their cultural heritage and educational opportunities made possible through archaeological studies. Most critically, cultural racketeering endangers lives, as the illicit antiquities trade is a known financier of many terrorist organizations and organized crime across North Africa and the Middle East. As the illicit antiquities trade grows in West Africa, so too do these threats.

At the onset of this research, I intended to use expert interviews to augment solutions offered in cultural heritage literature over the last two decades. Armed with scholarly research and full of expectations of success stories interspersed with lingering challenges, I was alarmed to find that all interviewees flagged notable disparities between the literature and their lived experience. Methods to combat looting as expressed in literature are not accurate to the problem on the ground. Because of this, problems of looting and illicit trade have not improved. In fact, they've worsened.

We need to go back to the drawing board with the realities of the experiences of cultural heritage

professionals, archaeologists, and locals in mind. Based on information gathered in interviews with experts in African cultural heritage and other key stakeholders, I will convey what I perceive as critical— but missing— from the literature: the opinion of people on the ground. To this end, I surveyed the relevant issues in Cameroon as seen by experts and stakeholders. First, I gave them an open space to elaborate on these challenges. Then I asked which parties were most interested in and most capable of addressing looting and illicit trade in Cameroon. Ultimately, I find that efforts to preserve Cameroon's heritage are hindered by a number of challenges, which aid in illicit looting, theft, and destruction of cultural heritage in Cameroon. These challenges can be alleviated by implementing a series of recommendations that foreground the voices of local communities.

First, I will discuss Cameroon in the context of cultural heritage and briefly outline the experiences of cultural heritage professionals and key stakeholders. I will discuss Cameroon as a case study of the prolific issue of looting and illicit trade in West Africa. Though distinct from its geographic neighbors in many ways, Cameroon's post-colonial government and tribal cultural foundations situate the country within the regional scope of West

African cultural heritage preservation efforts.

Second, I will provide a sketch of the various roadblocks preventing effective development and implementation of policy to meet these challenges. These challenges include, but are not limited to, internal conflict, corrupt government practices, artifact authentication, decentralized authority, and high cultural and linguistic diversity. I will discuss each of these in turn with reference to testimony from interviews with key stakeholders.

Finally, I will outline policy suggestions based on expert insight on this issue. Proposed solutions will incorporate a variety of experiences by cultural heritage professionals. Moreover, insights gleaned will target the most pressing issues facing Cameroon's heritage and its people.

The long-term goals of this report are to facilitate the formation of policy, advocacy programs, or collaborative projects between Cameroon and the United States to encourage the protection of cultural heritage in Cameroon. To this end, I interviewed archaeologists, market stakeholders, and local representatives to better understand and represent the challenges facing Cameroon's people and heritage today. The aim of this report is not to criticize past efforts, but to build upon our understanding of the issue through a lens that incorporates multiple contemporary perspectives. Hopefully, by pushing the voices of those most affected to the forefront, this report will inform efforts to protect cultural heritage in Cameroon moving forward.

METHODOLOGY

West Africa is home to an incredibly rich, diverse body of cultural materials. Today, cultural objects and sites alike are threatened by looting, destruction, and theft. Though cultural racketeering is a global problem, a few common factors in the West African region prevent heritage conservation. Based on prior knowledge and initial research regarding challenges in policy implementation in the neighboring Middle Eastern and North African region, I recognized government apathy, internal conflict, and diverse cultural landscapes as limiters of effective implementation in West Africa. I selected Cameroon as a case study of common problems facing West African countries. Not all of the West African nations experience every problem, and if they do, it is often to different degrees. Cameroon experiences extreme instances of nearly all common policy roadblocks. For this reason, exploring how these challenges present in Cameroon, and contemplating potential policy suggestions is beneficial not only to the Republic of Cameroon, but to the West African region as a whole.

To the end of exploring relevant limitations to effective policy implementation as well as potential solutions, I conducted virtual, hour-long interviews with well-known individuals in the fields of cultural heritage, archaeology, and the art market. Given the rapidly changing situation

in Cameroon as well as findings from early interviews indicating that much of the literature on African Heritage preservation is non-comprehensive, these interviews played a large role in developing my findings.¹

A key takeaway of this work is that it is essential to place local voices and firsthand experiences at the forefront when addressing issues of cultural heritage. Interview candidates were selected for their proximity to and depth of experience in West Africa, specifically Cameroon. For academic perspectives, I consulted Dr. Scott Maceachern, Professor of Archaeology and Anthropology at Duke Kunshan University, an expert with over two decades of field experience in Cameroon; and Dr. Peter Schmidt, Professor of Archaeology and Anthropology at the University of Florida, who has considerable experience in African ethnoarchaeology. For the perspectives of regional cultural heritage workers, I relied on expertise from Dr. Leslye Obiora, Professor of Law at the University of Arizona, leader in Nigerian civil society initiatives in culture, economics, and humanitarianism, and former Minister of Mines and Steel Development for the Federal Republic of Nigeria; and Maha Sano, Co-Founder, and Producer of Marocopedia, a localized intangible heritage digitization platform which specializes in empowering local people to document and publicize their cultural heritage. Joris Visser, expert in African Art and Cameroonian artifact trade and independent heritage consultant with expertise in cultural transfer, dialogue, and restitution offered insight into the African Art market. Additionally, Kelly Krause, cultural heritage manager and founder of Heritage in Action, and AbdelHamid Salah, Chair of the Egyptian Heritage Rescue Foundation and trainer and consultant to the International Center for the Study of the Preservation and Restoration of Cultural Property provided perspectives on community archaeology in Africa.

Although the scope of testimony provided is limited in this research by available resources and access, the variety and quality of experts who generously contributed their time and expertise furnished a nuanced impression of the challenges facing Cameroon. Additionally, findings reflect the potential benefits of future dialogue between key West African stakeholders in cultural heritage. In my findings, I identify common solutions proposed by the experts. In many cases, the synthesis thereof yielded innovative solutions rooted in contemporary experiences.

CAMEROON "ON THE GROUND"

Post-colonial Cameroon

¹ By approved IRB protocol and for the privacy of interview subjects, only transcripts of the recorded interviews remain on file. For further information about the interview protocol and data collection, please contact the author.

Stated simply, “The phenomenon of illicit trafficking of cultural property is rooted in the history of the exploitation of Africa and its resources” (Abungu, 2021). Increasingly, archaeologists and art historians are appreciating the indelible stain 20th-century colonial intervention left on so many West African communities.² In many of these communities, cultural objects are traditionally significant for their function as ritual or prestige objects. However, following colonial intervention by European powers, individuals in West African communities realized that the objects exchanged between African rulers and European officials had an aesthetic intrigue to the Europeans. In light of European demand, African prestige objects became economic capital. In many cases, this turn was irreversible. Materials and styles of Cameroonian art became tied up in pleasing a European market. As a result of this history, issues of Cameroon’s cultural heritage are deeply rooted in its postcolonial condition.

In the first decade of the 20th century, one key event sparked the institutionalization of the exchange of cultural goods for political legitimacy. Former reports on the region record that the repatriation of the skull of King Nsangu to the Bamun “opened a field of reciprocity and recognition between the Germans and the Bamun within which objects were immediately integrated” (Loumpet, 2016, p. 70). This example demonstrates two distinct trends whose effects endure into the present. First, objects legitimate authority multilaterally. Second, the vehicle for this legitimacy is diplomatic gifting, or the exchange of material goods by empowered members of two or more groups. From his work over the years, art expert Joris Visser cited “30 different examples in which kings wanted to be seen as equal to the Imperial forces or to the German kings” according to his experience (Visser, 2021). As this exchange became institutionalized, so too, did the demand for West African goods in European markets.

Over time, European demand began to play a greater role in Cameroon object production.

Pre-existing and newly manufactured objects coexisted in the ritual and economic space simultaneously. Preoccupations with functional and spiritual continuity reigned over the physical permanence of cultural heritage. On one hand, this is indicative of a decline in the historical significance of these objects. On the other, these objects emerge as culturally central to the people living through a century of colonialist exploitation. Different styles and new systems of manufacturing are not indicative of a decline of Cameroonian art, but rather capture the lived experience of a people adapting under a colonial power. These “new” objects are both descendants of past traditions and emblematic of a cultural response to an adverse political present. This phenomenon should

² Note that this description is brief and does not encompass the vast diversity of groups in Cameroon.

be memorialized in its own right as a token of West African heritage.

Ultimately, the post-colonial condition in Cameroon creates and sustains a variety of challenges. Notably, the monetization of cultural goods at the onset of colonization persists, promoting the looting and theft of cultural objects. Moreover, the rapid and complex evolution of heritage described makes it nearly impossible to distinguish historical objects, fine art, and cultural goods. Imprecise definitions of heritage objects make policy creation nightmarish and policy implementation even more so.

The Current Regime

Following French and German control during the early 20th century, Cameroon’s new and current government, founded in 1972, emphasized unity, abandoning the federation model and settling as a one-party state with a presidential system of government. Paul Biya, originally elected in 1982, has continuously served as Cameroon’s President and was recently re-elected for another seven-year term in 2018. Simultaneously, “Fondoms,” or kingdoms, serve as unofficial local governments (Loumpet, 2016). Rulers of these kingdoms often derive their legitimacy from royal bloodlines and control over cultural objects collected and housed in Palace Museums. With a near-absent Head of Government and high geographic and ethnic diversity, these local governments are particularly influential to the lived experience of the Cameroonian people.³ Deepening the spatial and political divides, Cameroon’s infrastructural network is virtually nonexistent. With only 10% of its roads paved, Cameroon is anything but unified (Geography Now, 2021). Rather, the Cameroonian regime can best be understood as an intensely centralized federal government dredged in Western influence and corruption, counterbalanced by local kingdoms whose legitimacy is closely entwined with its cultural heritage.

Palace Kingdoms

The Palace Kingdoms within the Republic of Cameroon exist separately from but concurrently with the federal government. Rooted in royal ancestral lines of pre-colonial Cameroon’s tribes, the Palace Kingdoms found throughout Cameroon are of great importance to a consideration of policy and action protecting cultural heritage. These polities demand considerable attention and respect from the surrounding local communities in their regions. Their primary source of legitimacy is the ritual and historical objects housed within Palace Museums, which serve as the leading museum institutions in the country. Scholars in the region, such as African archaeologist Peter Schmidt, agree, “These local

³ For further discussion of the Republic of Cameroon’s current regime and its recent history, see Appendix C, Section I.

identities are very potent... because of the symbolic load that those objects carry in terms of history” (2021). Packed with historical and cultural materials, it is no surprise that the rulers of kingdoms from the 20th century to today retain sole authority to inherit, display, and authenticate cultural and ritual objects (Loumpet, 2016, p. 73).

The standards of these institutions vary widely and may leave something to be desired in the vein of western ethics; however, their importance is undeniable. Scott Maceachern notes from his time as an archaeologist in Cameroon that Palace Museums “often draw the community together and get community support in ways the national institutions don’t” (2021). Since the early 20th century, cultural heritage has been a major source of political legitimacy for Palace Museums.

Therefore, these kingdoms are among the entities most invested in the issue of preserving cultural objects. For an example, consider the major building project recently completed in Foumban, Cameroon. Sultan Ibrahim Njoya Mbombo of the Bamun tribe commissioned a monumental museum in the shape of the Bamun crest: a double-headed snake wrapped around a spider (Appendix A, Fig. 1). The architecture alone is loaded with political propaganda, but it's the content that speaks volumes about the value of cultural heritage to the Cameroon Kingdoms' legitimacy. Other kingdoms, such as Bafut, derive their legitimacy similarly (CRA Terre, 2011).

Simultaneously, Palace Museums are noteworthy sites of antiquities trade. Many museums in the region are actually galleries catering to European clientele. Joris Visser said he knows of “a German gentleman who spent close to one and a half million euros on twenty artifacts that he got from the king himself with all the literature” (2021). In this way, these cultural goods ride a fine line between commercial fine art and ritual artifacts.

Further consideration of the bounds of “cultural heritage” as it is understood by the various stakeholders, including representatives from the market, educational institutions, and local populations will follow. For now, let this be clear: palace museums speak first to the reaffirmation of cultural heritage's importance and speak last on the fate of ritual objects- new and old, manufactured or inherited. As such, understanding the pre-existing local heritage institutions and prioritizing collaboration with them, in addition to federal government entities, is essential to preserving cultural heritage in Cameroon.

Cameroon's Cultural Heritage

Cameroonian cultural objects are highly functional, readily present, and thus intrinsic to many aspects of Cameroonian culture. Visser described cultural objects of this nature:

An object that is made with ritual and historic importance is made with a function, it exceeds just its aesthetic function, it is made to call the ancestors to shake the world, it's meant to awe, or it's an object of prestige; it's an object of power; it's physical”

(2021).

In addition to material heritage, intangible cultural heritage is essential to the West African identity. Maha Sano, a North African intangible heritage documentor, distinguishes African heritage from most European heritage in that Africa's heritage is not primarily based in centuries-old manuscripts. Instead, she says, “everything is oral, which means that things are going to disappear faster than having manuscripts” (Sano, 2021). Sano has applied this approach to her work at Marocopedia, documenting and publishing videos of intangible cultural heritage. Acknowledging that the tangible and the intangible, the secular and the ritual blend together in the various Cameroonian traditions is crucial. Future policy must encompass cultural heritage in all of its forms. Failure to do so may result in the permanent loss of deeply important knowledge of historical and cultural traditions.

ROADBLOCKS TO POLICY IMPLEMENTATION

Experts identified a series of fundamental challenges that inhibit the development and implementation of effective problem-solving policy. Key among these roadblocks are internal conflict, corrupt government practices, challenges in defining African art and antiquities, and difficulty implementing national policy in a disconnected country.

Conflict

Archaeological research in Cameroon has hit a major decline in the last 20 years (Maceachern, 2021). Undeniably, a primary reason for this is the dangerous conditions created by insurgent terrorist organizations such as Boko Haram in Northern Cameroon. After two decades of excavation at a site, Maceachern noted in his interview that the site is too dangerous to conduct research or most cultural heritage work (2021). Despite this danger, some archaeologists in Cameroon attempt fieldwork, but it is ultimately not the role of the archaeologist to face life-threatening conditions to produce or conserve knowledge. Since many preservation opportunities originate from and are sustained by repeated seasons of scholarly research, the decline in scholarly research hinders anti-looting mechanisms.

Corrupt and Apathetic Government

Unanimously, those interviewed agree that contributions made by the Republic of Cameroon to issues of cultural heritage protection are inadequate. Despite this, on paper, Cameroon's government appears committed to the cause. Cameroon is a party member of the 1954 Hague Convention (Protocol 1), which defined the term “cultural property” and asserted universal detriment of cultural property destruction. Cameroon is also a member of the 1970 UNESCO World Heritage

Convention, an international convention which urges state parties to prevent illicit import, export and transfer of ownership of cultural property, as well as the 1972 World Heritage Convention, which acknowledges universally valuable world heritage sites and mandates their protection (UNESCO 2021; USCBS 2021; UNESCO 2021). Additionally, the Republic of Cameroon has passed a variety of national laws over the last fifty years to the end of promoting and protecting cultural sites and objects and, as of 2015, is a signatory to the African Union's Charter for African Cultural Renaissance (Appendix B, Section I). However, Cameroon is notably absent from recent conventions. Cameroon has not signed on to Protocol 2 of the Hague Convention or other recent conventions against corruption. The Republic of Cameroon's non-comprehensive adoption of key regulatory policy leaves its priceless heritage vulnerable to illicit trade. Thus, the Cameroonian state remains complicit in antiquities crimes at the national and regional levels.

Interview subjects consistently commented on how poor implementation of existing policy in Cameroon negatively affects efforts to protect cultural heritage. A leading recommendation during the 2021 UNESCO Convention on Africa noted that African countries need to implement international policy at the local level. Later discussion will delve into the structural barriers to implementation, but first, let's consider the more apparent barrier: apathy.

Perhaps one of the most significant hindrances to effective implementation of policy, apathy within the Cameroonian government thwarts formal initiatives affirmed in policy and feeds a system of corruption. Cameroon's long-standing government does little to check immoral activity by officials. One interview subject mentioned that the Minister of Economics himself inquired after a Cameroonian cultural object for purchase. Schmidt, a scholar who had previously partnered with figures close to or in the Cameroonian government asserted in his interview, "national institutions are completely ineffective at managing the heritage and increasingly it's only been amplified since. They can't do it. They don't want to do it. They're hostile to it" (2021). Apathy within the Cameroonian government not only prevents adequate allocation of funds and resources to cultural institutions but fosters corruption at the national and local levels.

Under an apathetic government, potentially beneficial policy remains unfunded. Cameroon gives the illusion of a healthy cultural heritage ecosystem. In reality, Maceachern remarked, "Nobody has the resources...In theory, there is legislation in these countries, including Cameroon, that should make heritage management associated with development projects possible" (2021). However, in practice, executive and ministerial oversight prevent the implementation of heritage policy, "So, the

level of resources available to cultural heritage managers in Cameroon is minimal" (Maceachern, 2021). Previously, Maceachern had commented in a 2001 article that the Cameroonian economy had hit a trough, but he was hopeful that things would turn around (Maceachern, 2001). Unfortunately, this is a distinct example where past literature was wrong.

In 2001, Cameroon's cultural institutions were still experiencing the after-effects of the 1970-80s economic crisis wherein "most of the African research institutes and monuments commissions charged with control of national heritage resources suffered from drastic decreases in available funding during this period, and several were closed, sometimes in extremely chaotic circumstances" (Maceachern, 2001). In a particularly horrific example, the closure of the Cameroonian Institut des Sciences Humaines "resulted in stored artifact collections being used to fill in potholes in the street in front of one branch bureau" (Maceachern, 2001). Speaking with Maceachern, the archaeologist and Cultural Resource specialist who noted this shift, I confirmed that in the last two decades, economic barriers to implementing cultural heritage protections have not abated. If anything, they've solidified.

Today, funding is mainly derived from academic research institutions during archaeological study or from private institutions such as the example Maceachern cited of an oil pipeline project for Exxon under World Bank auspices. Governments are incapable or unwilling to sponsor cultural heritage regulations. Therefore, cultural resource projects are not centered on the people of Cameroon and their needs regarding their cultural heritage. Reliant on Western funding, an exploitative model persists.

Drastically underfunded heritage projects indicate an obvious need for improved government action to protect cultural heritage. Some interviewees described the problem as deeper than a mere appropriations issue. Peter Schmidt called for a moral re-evaluation across Cameroonian institutions. Schmidt attested, "the walls of museums and Antiquities departments are gradually eroding to the point where they're completely ineffective" (2021). Schmidt illustrated corruption by describing an instance where a Nigerian heritage official blatantly marketed a stolen antiquity in Zurich. Maceachern further reflected that corruption at the national level had a trickle-down effect (2021). Tension builds as local governments become frustrated that their heritage is being neglected and commodified by upper-level government officials. Ultimately, moral frustration triggers a functional paradigm shift at the local level.

Thus, we see that the ultimate consequence of government apathy is corruption at every level of government where cultural heritage might be saved through policy. In response to this, Schmidt calls for a renewed national ethos. For people at any level to invest

time and resources into heritage, “People need to share those values widely” (Schmidt, 2021). Though a simple demand, the solution for an apathetic government is anything but.

Authenticity and the “Fluidity of Sacredness”

The constantly evolving and endlessly diverse definition of cultural heritage in West Africa and Cameroon poses a substantial challenge to those trying to develop and implement policy. To explore authenticity, functionality, and accepted knowledge concerning cultural objects, we must re-evaluate the scope of our definitions of each. In Cameroon, the sacredness of an object is controlled by an individual or small group. This approach is distinct from a common western perspective which asserts an intrinsic historical value, which is both unquantifiable and relatively static once established. Although I personally ascribe to this value system, present in most western literature on issues of cultural heritage in Africa, the findings from this research suggest that this approach is inconsistent with the way local people conceive of their heritage. As a result, policies made through this lens are incognizant of reality.

Western stakeholders may impart a historical or heritage value on the objects, but any institutionalized value rests in the hands of local implementing bodies. These bodies may include an apathetic national government, or it may include palace kingdoms, whose legitimacy is steeped in a living heritage system. Regardless, understanding their definitions of and needs regarding cultural resources is essential for tailoring heritage policy to reflect the demands of people in Cameroon.

Just because a cultural object serves an economic purpose, does it make the object fine art instead of an artifact? According to Visser, “there’s very little functional cultural heritage that ever came out of Africa up until the 1910s and 20s” (2021). The ritual objects native to pre-colonial Cameroon did not always appeal to European demand. Rather, the kingdoms in Cameroon adjusted the styles and materials in newly manufactured objects to serve a European buyer. An economic purpose does not negate an object’s cultural value. If compared with definitions of antiquities in the west, we could prescribe a western definition that allows non-ritual functions and uses temporal stamps to define an object’s type. However, West Africa’s cultural heritage should not be defined this way. For a consideration of the tensions between existing policy and the reality of African cultural heritage, see one example that illustrates the dynamic nature of Cameroon’s cultural heritage.

Peter Schmidt recounted in his interview how a local ruler in Cameroon perceives his heritage. To reiterate an important point, rulers of palace museums such as the one mentioned are “royalty who create, house, and maintain these objects” (Loumpet, 2016, p. 73). Through this anecdote, Schmidt elaborated on the function of

cultural objects within communities. Schmidt recalled an encounter with the King of Babungo in the Cameroonian grasslands.

The kings there are carvers, and they carve exquisite objects, most of them ritual objects, ancestral objects. Art dealers have been known to come and bid huge amounts of money. They will sell them if the price is right. I visited his gallery, which is just a big shed with a corrugated iron roof, and hanging from the rafters to that gallery were literally dozens and dozens of ceremonial masks: one that caught my eye was about a meter long in the shape of a crocodile— exquisitely carved— and I think it was by his father. I said, ‘Are these for sale?’

‘Anything’s for sale,’ he said. ‘How much would that fetch?’
‘Uhh, \$200,000... how much will you pay me?’

They were just staggering, and I noticed immediately that three of them had new beads, so after he explained some of the ancestral history, I asked, ‘Why do these figures have new beads attached?’ and he turned with a smile and said, ‘Well they’ve been replaced.’

‘What does that mean?’

‘They’ve been replaced because they’ve been sold. Of course, we can always make new ones. They are still infused with the same spiritual meaning’

So, this man was selling sacred objects out of his home store. That’s the fluidity of sacredness. Yes, he’s protecting them, but only to the degree that it’s in his self-interest. Everything has multiple values. He saw the sacred value, but he also saw the monetary value. He was prepared to monetize, so keep this in mind as a kind of a backdrop for these kinds of cultural resources.

Heritage is also a fluid concept. They don’t think of heritage necessarily in the way that we understand it in the west. Heritage as a local construct is enormously fluid, one moment to the next according to the needs of any local population or set of actors.”

This example is not emblematic of the experience of every Cameroonian community’s relationship with its heritage, however, it critically demonstrates the complexity of defining cultural heritage. The fluidity of sacredness discussed here should not be confused with the deliberate manufacturing of objects with the intent of marketing them as antique. Visser raised concerns about verifying the authenticity of cultural objects regulated by pre-existing or emergent policy. There is an undeniably strong precedent for art fraud in the West African region. Studies conducted in neighboring Mali and Nigeria found that to meet the western demand for “ancient” objects, terra cottas were artificially “aged” and marketed as

antiquities (Brent, 2001, p. 28). Visser confirmed that manufacturing of this nature is common in Cameroon to this day. The issue of authenticity further complicates defining cultural heritage. Though considered briefly here, understanding the interplay of market authenticity with local perspectives will be essential to policy development and implementation moving forward.

Regardless of an unclear distinction between authenticity and the fluidity of sacredness, this much is clear: future policy and implementation of existing policy must prioritize local Cameroonians' perceptions of their heritage. To this end, we must spotlight current practices which prioritize western definitions of art and antiquities of African objects over local perspectives, and actively counter them. Best stated by George Abungu, the heritage is ultimately theirs. All definitions and evaluations of cultural heritage fall to them. The best a western contributor can do is listen and seek to learn and collaborate where possible.

Centralized authority

Just 10% of Cameroon's roads are paved. The vast majority of the country's roads are not functional for transporting goods. Most towns have the resources flown in, not driven.

Therefore, the roadblock imposed by Cameroon's simultaneous central urban planning and diverse rural localities is more than remarkable. Based on these barriers, the challenges created by centralized authority are twofold. The first is infrastructural. Physically, local people are barred from resources. The latter challenges are more abstract, having to do with national policy's inability to represent the highly varied needs of the people of Cameroon.

Access to cultural heritage sites and collections is required for research, regulation, and preservation; infrastructure is essential to access. When discussing her intangible heritage project in Morocco, Maha Sano marked bad infrastructure as the primary blocker of heritage preservation. Sano remarked, "if the road exists, people go to it...the road is the main concern" (2021). Through these remarks, the problem of implementation becomes clear. If Cameroon is barely in a position to supply its localities with basic developmental needs, it is difficult to demand increased investment in cultural heritage, nor is it reasonable to simply suggest expanding infrastructure. Although cultural resource management can be—and often is—tied to development projects, such ventures do not work overnight. In the meantime, policy-makers must consider how infrastructural barriers may prevent the implementation of policy.

Cameroon's unified government structure reinforces geographic divides. The seat of power in Cameroon sits in Southern Cameroon in Yaounde, a city whose wealth and development contrasts starkly with the predominantly poor, agricultural lands surrounding it. Tribal divisions

underlie young political boundaries. The gap between palace kingdoms and the national government is readily apparent in the incumbent President's absence and the tribal rulers' abundance. Schmidt asserts that "Centralized power in regards to heritage does not work" (2021). Due to limited resources and disengagement from local communities, national cultural ministers in Cameroon are ineffective. Schmidt continues his discussion on national attitudes, "And more, in regards to the local community, they see them as competitors and as uninformed ignoramus and peasants" (2021). Thus, national policy is not implemented at the local level, and when it is, it rarely encapsulates the needs of distinct cultural groups across Cameroon. Such dynamics are not uncommon in West Africa.

Aware of this phenomenon, UNESCO highlighted the importance of tailoring international policy to national and local needs in its 2021 conference on Africa. At the virtual conference led by UNESCO, representative Guiomar Alonso presented a summary of curated recommendations from UNESCO to African countries for preserving their cultural heritage.

Recommendations included strengthening local frameworks based on the 1954 Hague Convention and the 1970 Geneva Convention, increasing multi-lateral and intra-national collaboration, promoting advocacy and awareness initiatives within local communities and the tourism sector, harmonizing documentation efforts such as country-wide inventories, and lastly supporting ground-level efforts financially. Cognizant of this uniquely African issue, other advocates such as George Abungu and the African Union are also working to address the issue of local implementation across the African continent.

RECOMMENDATIONS

Now, I will briefly outline a series of policy suggestions for heritage professionals and lawmakers based on recommendations supported by scholars and heritage experts. Though fully aware of the tremendous burden the aforementioned challenges place on policy implementers, both the interviewees and I were optimistic that vocalizing these roadblocks and strategically addressing each, in turn, would yield positive results. The testimonies of key heritage experts from this study were brought together to form an original series of actionable recommendations. The following recommendations to best implement heritage protections are for cultural heritage professionals and archaeologists, local Cameroonian communities, and government administrators in the Republic of Cameroon.

Enable Constructive Dialogue

Insufficient communication is a theme across the challenges Cameroon faces today.

Reflecting on this, Professor of law and Nigerian civil society activist Leslye Obiora as well as Joris Visser

supported the idea of a constructive dialogue to address the roadblocks to cultural heritage preservation in Cameroon. Obiora underscored that “indelible to the dialogue is the dissent. Constructivity, therefore, means that the dissent is also productive” (2021). Obiora explored the potential benefits of dialogue to address contrasting definitions of cultural objects in Africa.

Obiora provided insight into how we might approach the grey area between an object and an artifact. For her, a second “dimension,” though possibly foreign to a western audience, must be understood and integrated into dialogue on this issue (Obiora, 2021). This dialogue must go both ways. For local communities, Obiora posits that “There’s that aspect of the conversation as well, that some of these objects predate the commoditization of whatever they are now,” which has endangered them today (2021). She qualifies both points within the context of lived experience. Obiora goes on to say, “but you have to be careful that in the process to do that you do not demonize people who own it as well. I may have extended relatives that may want to sell it to some black market if they knew it had value... it’s just a very complicated situation” (2021). Complicated situations such as this demand nuance which is only attainable through thoughtful words and through open minds to receive them.

Obiora was not alone in her promotion of increased dialogue across the sector. Multiple interviewees agreed that the solution to the problem of preserving Cameroonian heritage hinges on communication between policymakers, academics, the market, and local communities.

Building on this, Visser noted that including the European African diaspora in these dialogues would facilitate better policy moving forward. For this to work, however, he emphasized that diversity and inclusivity are paramount. Women and young academics, especially, must be brought into the conversation.

Harness Palace Kingdoms’ Influence

African Anthropologist and heritage activist Paul Nchoji Nkwi has written extensively on the central role of the Palace Kingdoms, especially in the Cameroon Grasslands, in protecting and conserving cultural objects. While we have noted that even some of these institutions perpetuate the export of African cultural goods, Nkwi highlights the importance of restitution wherein objects retain sacredness. Nkwi asserts that employing western museum practices in Cameroon causes “demutualization of African art,” rendering it “devoid of meaning intended by the creators” (1996, p. 108). Functional symbolism is intrinsic to African cultural objects. Thus, Nkwi argues that supporting institutions that can conserve African artifacts in a ritual context may be essential to cultural heritage management in the future.

Retaining tribal involvement in the management of Cameroon heritage collections is essential. In some

regions, cultural institutions like palace museums are independent. Moreover, rulers of these institutions have a deep socio-political investment in heritage, and thus, can sustainably finance projects. Given their local ethos, political motivation to protect cultural heritage, and financial resources, incentivizing and facilitating Palace Museums to conserve heritage may be a viable means of sustaining heritage management in some parts of Cameroon. Maceachern and Schmidt both agree that in Cameroon’s current funding drought, coalitions between local rulers and scholars may facilitate ethical heritage practice and sustainable means.

Tailor International Policy For Local Levels

People’s relationships to their cultural heritage are unique at the state, community, and individual levels. As such, UNESCO was right to reaffirm the importance of tailoring international conventions to meet local needs at its 2021 conference. In some cases, this looks like bolstering pre-existing tourism industries and securing cultural heritage loans. For others, this means combating illicit trade responsible for financing internal conflict. Sano and others acknowledged that in a country where needs such as clean water and healthcare are unmet, protecting seemingly renewable cultural objects is secondary (2021). Similar to infrastructural limitations, I will discuss two possible courses of action in response to disparate perceptions of heritage within a state.

First, policymakers must write these limiters into policy. If the Cameroonian government lacks the resources to undertake projects such as country-wide inventories, the state should consider alternative paths such as non-profit contracting or partnerships with other countries. Second, the Republic of Cameroon and its localities should build policies that complement local conceptions of cultural heritage. Maha Sano emphasized that affirming the economic benefits of cultural heritage may be essential to attentive implementation. Explaining her experience in Morocco, Sano impressed, “if you explain that the cultural heritage is a lever for economic growth, it will work” (2021).

In a lecture, given in November 2021, George Abungu supported this sentiment. Based on his experience, he affirmed that one of the best ways to overcome apathy and corruption in West Africa is to convince governments that cultural heritage is a subject worth investing in (2021). Although an economic-based approach may not be the one western audiences want to hear, it may be what is ultimately needed to affect real change in Cameroon.

Prioritize Localization of Practice

Nevertheless, in the vein of seeking impassioned cultural heritage, rooted in an appreciation for the intrinsic value of cultural sites and objects, hope persists. Maceachern spoke of the people he encountered in his career in the field:

You'll get folks who are — in the smallest communities — sort of taking care of and conserving relics and artifacts. The historical impulse, you know, is universal across humanity, and man there's a lot of Cameroonian people all over the country that have that, but it's a local interest" (2021).

Maceachern described this kind of investment in cultural heritage as "intensely parochial" (2021). The critical takeaway here is that plenty of people in Cameroon are invested in their cultural heritage, but very few of them have the resources to prioritize and carry out preservation projects. Obiora agreed that national agreements and customs regulations will only go so far.

Lasting heritage management begins in the community (Obiora, 2021). Therefore, essential work in the coming years must empower local communities to safeguard their heritage.

Sano also remarked on the importance of localization. To begin her projects, Sano evaluates the space by tribal history rather than administrative provenances. Sustainable development in cultural heritage is engrained in preexisting "ancient, collaborative things that tribes made before" (Sano, 2021). Once this is done, Sano suggests connecting with the traditional leader of the space, explaining prospective work, and asking how best traditional instruments and heritage institutions might collaborate.

On one hand, localization is needed at a governmental level. The 2021 recommendations to Africa by UNESCO speak to this need exactly. Localization is essential for representing the needs of local communities as they perceive them. To carry out localized projects, certain elements are critical: capacity, expertise, funding, and accountability mechanisms. Without these, international and national policies are ineffective (UNESCO, 2021).

Given the precedent of privately driven development in Cameroon, the importance of localized policy within contracted developmental projects such as CRM is apparent. As noted, a large portion of funding allocated for heritage preservation in Cameroon comes from academic research and cultural resource management by private corporations. Cultural resource management (CRM) initiatives in Cameroon must provide the funding, tools, and expertise needed for effective groundwork. Scott Maceachern discussed his intense frustration with the disparities between expertise and capacity during his CRM projects in northern Cameroon.

Although designed to integrate locals, Maceachern commented that locals "require significant support structures, including equipment both for fieldwork and for data analysis, recording and dissemination" that he was unable to supply in the short span of the project (2021). Since the industry-consistent standards required by funding bodies are based on western protocols, localized projects— without the appropriate capacity—

building procedures— set local people up for failure. Even if a season saw success in surveying, reporting, and preserving a site, Maceachern had no guarantee that progress would be sustained long term. In a country where well-funded projects such as the one Maceachern led in the early 2000s are few and far between, sustainability is paramount.

One route to increased involvement of communities in the cultural heritage is community archaeology. As it is considered here, community archaeology includes the encouragement of physical engagement of local communities with the archaeological, curatorial, and managerial components of exploring and publicizing cultural heritage.

The community archaeology project at Quseir in Egypt is a frequently cited example of successful community archaeology in Africa. The Community Archaeology Project at Quseir began in 1999 and implemented strategies specifically adverse to the colonial model. For people to be invested in the outcome of research, they must be involved in the development of the question presented. The project at Quseir was founded upon community involvement from the outset, "with extensive 'front-end' evaluation that will result in local people playing a key role in decisions regarding the themes and forms of presentation in the centre" (Moser et al., 2002). Project leaders affirmed that state-led policy implementation is only so effective.

Like Cameroon, Egypt's internal conflict at this time threatened heritage. Consider this statement on the Republic of Egypt, immediately following the 2011 rebellion: "the physical enforcement of protection was retracted during the 2011 rebellion and all that was left was a community, in economic distress, and apathetic towards their cultural heritage" (Hassan, 2015, p. 19). Given the potentially unstable regions of African states, such as those in Cameroon, heritage projects, which exist in tandem with but are independent of national mandates, are critical to protecting cultural heritage amidst conflict.

Out of conflict, the project at Quseir affected meaningful change in the community around the archaeological site. In many ways, it is the model for cultural heritage institutions "seeking to bring about a change in the way archaeology is conducted in a country where local communities have been systematically excluded both from the process of discovering their past and in the construction of knowledge concerning their heritage" (Moser, 2002, p. 221). At the moment, no significant community archaeology projects such as this are active in Cameroon.

While I readily acknowledge that these kinds of solutions are not always feasible, I hold that implemental complexities are a worthy price for the benefits of community archaeology.

I will conclude with a final example of a project in West Africa aimed at linking communities and cultural

institutions. Recent work by the Ecole du Patrimoine Africain (EPA) is providing expertise and capacity-building resources to strengthen the network of African professionals capable of ensuring the conservation and enhancement of cultural and natural heritage. In 2021, the EPA hosted a 25-hour virtual workshop for heritage professionals about Illicit Antiquities Trade in West and Central Africa (Ecole Du Patrimoine Africain, 2021). Virtual convenings and training are key to transferring conservation skills to people on the ground. As proven, local people are best able to diagnose their problems. Through programs such as those promoted by the EPA, injured parties can begin treatment.

CONCLUSION

Speaking with field experts in West Africa, I caught a glimpse of the root causes of continued looting, theft, and destruction of cultural heritage in Cameroon. Years of colonial exploitation taint government administration. Further complicating implementation, modern politics and traditional tribal groups have opposing interests and in the north, insurgent groups violently struggle for power. The result of this in Cameroon and West Africa at large is universal sectarianism, unaddressed in policy regulations or implementation programs.

Cameroon's cultural heritage institutions are not broken, but they are injured. To begin diagnosis and healing, we need a thorough reevaluation of the injury. Since those experiencing harm are best equipped to describe its causes, we must put local voices at the forefront. These findings emphasize the importance of local voices in heritage management. With the resources available, I have presented the relevant challenges and a few possible solutions to improve cultural heritage preservation. I readily admit the limitations of my research and anticipate that future research will foreground more local Cameroonian voices. Are there other relevant problems than those identified here? In addition to my policy suggestions, what ideas do local stakeholders have about ways to better protect heritage from looting and theft? These questions and more will prompt future research initiatives.

The objective of this report is to reflect on the efficacy of past recommendations in light of contemporary challenges facing cultural heritage preservation work in West Africa. Here, I have brought together key voices of cultural heritage professionals and experts in West Africa to gauge challenges and possible solutions for combating threats to cultural heritage. By elevating local voices, the findings of this report detail favorable next steps to protect cultural heritage in Cameroon.

Experts in the region call for two things, overall. First, the people of Cameroon need opportunities to engage regional stakeholders in a constructive dialogue about this issue. Though the scope of research here was limited to Cameroon, this is a regional issue where poor

implementation in one state opens a gateway for regional crime. This dialogue must be inclusive of local voices to end the exploitative cycle in Africa and create functional solutions for those affected. Once the immediate obstacles are understood, projects must be conceived and carried out at the local level. This will require resources, patience, and courage, but it is essential in order to create sustainable systems to protect Cameroon's heritage in perpetuity.

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The Dominican Government and its Economic Control

EMELY CESPEDES

ABSTRACT

This paper discusses how the Dominican government has maintained a stronghold over the economy in a way that has limited the economic prosperity of impoverished communities. The Dominican Republic has been a rich country inhabited by a majority of poor people for years (Black 236). This is because not enough has been done to help the country continue to develop. Moreover, this lack of development is tied to the country's government and its lack of action. In transparency international's 2008 corruption perceptions index, the Dominican Republic received a score of 3 on a scale of 1 to 10, with 1 being the most corrupt (Hawthorne 138). Instances like these highlight the importance of having to explore where the country's major income goes to if not to help the areas that are crucially behind in contrast to the country's richer parts. Through the literature review, the history, economic tendencies, and social welfare in the Dominican Republic were discussed. Additionally, qualitative research was conducted to further analyze the disparities present in the Dominican Republic through the analysis of governmental documents and international reports. The data was divided into three categories pertaining to education funding, disparities in business, and treatments of migrants. This served to solidify the evidence of the large economic gaps present in the country which have hindered and continue to hinder impoverished communities from being able to prosper in the country.

INTRODUCTION

The Dominican Republic has been a developing nation with great potential to persevere as a country and in the global community. Its rich agriculture and tourism have accounted for a large majority of the country's generated wealth. These factors hold potential in helping the country excel economically in the future. Nonetheless, many of its communities, predominantly rural ones, have continued to be deeply impoverished and underdeveloped in contrast to its larger cities. These impoverished communities have struggled in providing quality education, nutrition, access to running water, and proper healthcare for the people living there. Moreover, the country has suffered from open undercompensation of its workers; in many instances laborers have not been compensated according to their level of skill or education (Hector 38). In contrast, many of the Dominican Republic's politicians have exhibited mass amounts of wealth as they live in the country's richer cities where poverty is not as prominent.

The Dominican Republic exemplifies potential for improvement of well-being for all its citizens, yet the living conditions of people living in poorer areas has not progressed throughout the years. The fact that the Dominican government has spent a minimal

portion of its budget on social programs displays an absence of political involvement in aiding the country's citizens (Hawthorne 139). Hence, this draws curiosity as to what politicians have done and intend to do in order to fix the dire issue of poverty within the country. Nonetheless, there is an absence of development plans being put into action. These issues bring into question the true intentions of many Dominican politicians.

The Dominican Republic accrues the majority of its GDP from agriculture and tourism (Lluberes 45). Yet, the nation's funds have been left in the hands of a small group of elites that have appeared to prioritize their wellbeing over that of the masses. With much of the nation's wealth being controlled by politicians, it has been difficult to note how the government has helped the impoverished population of the Dominican Republic. Interestingly, the lack of accountability has helped feed into the visible wealth gap. Wealth surrounds the Dominican government, making it an uncontrollable force difficult to stop when resources have been limited to the majority of civilians. Therefore, it is crucial to ask: how has the Dominican government maintained a stronghold over the economy in a way that has limited the economic development of impoverished communities?

LITERATURE REVIEW

History of the Dominican Republic

The current political state of the Dominican Republic was not created overnight. Years of cycles of various politicians have altered the way the country has been and continues to be operated. Throughout the years the country “has experienced a wide range of political, social and economic issues that have influenced its pace of development” (Chancellor, Duffy, Kline, & Stone 37). It is important to first gain a sense of the history of the Dominican Republic and how the development of politics throughout the years has impacted the country up to the present day. Control has been a source of enrichment for political figures and their elite supporters for decades; the actions of the government in areas like legislation, taxation, and public spending have served this purpose (Lundahl & Vedovato 42). Combined, these foundations have contributed to the current climate of Dominican politics.

In the beginning of the Dominican Republic’s history, the island was mostly only seen as a massive economic opportunity as it had great agriculture and unclaimed territory. Between 1844 and 1930 after the country’s independence, a government was established but politicians quickly came and left office, creating no sense of political stability in the country. In the past the Dominican Republic, like other Latin American countries, had suffered from the fact that only a “privileged few were in control of most of the profitable activities” (de Ferranti et. al., 2003, Qtd by Lluberes 2). The hunger for power served as a main pillar in the foundation of the Dominican Republic. This is why, “historically Dominican governments have applied policies aimed mainly at increasing the wealth of those in power” (Hector 114). This has trickled down to the present day and left wealth to only reach a certain group of individuals: the elites. Moreover, the initial fights over political power were mostly over a share of the treasury in the country (Lundahl & Vedovato 45). Additionally, there were some crucial political figures that notably established the corruption in Dominican politics in more recent history.

One particular political figure that completely transformed the Dominican government and economy was the head of the *Guarda Nacional*, Rafael Trujillo, as he claimed the presidency and established a strict period of dictatorship for the country from 1930-1961 known as the Trujillo era. His high military rank proved to be rather useful in his presidency enabling him to inflict terror onto those who “rose against the regime” he established, and they were quickly eliminated by the *Guardia* (Lundahl & Vedovato 48). In this way, Trujillo was able to transform the government and economy to his own liking. Thus, “the most evident economic result of Trujillo’s long rule was the extreme concentration of Dominican property and income in the hands of Trujillo and his family” (Hector

112). He further encouraged acts of corruption within the government by devising methods to stay in power, like, reshuffling important government officials, using spies, assassins, etc. (Lundahl & Vedovato 47). Trujillo’s actions were completely unethical and he continued to promote the imbalance of the economic distribution in the country. As a result of his actions, “Trujillo and his family took possession of the best land in the Dominican Republic and, according to various sources, controlled about 50 to 60 percent of all land” (Lundahl & Vedovato 49). Rather than focusing on the development of the country, Trujillo was focused on how to increase his own wealth and social status which fueled the unethical desires of preceding politicians in the Dominican Republic.

Economic Tendencies

The past ambitions of political figures have had a massive influence on the current economic state of the country. Thus, “the autocratic government ruling until 1961 had not carried out institutional changes that safeguarded property rights, law enforcement, and other economically beneficial structures” (Pozo, Sanchez-Fung, Santos-Paulino 389). This is why in the present day, the economic state of the Dominican Republic has been built on inequality. This has been seen in the past through agriculture and more currently with the country’s more recent main economic stream: tourism.

Tourism initially developed in predominantly rural areas, which are also the poorer areas of the country (Chancellor, Duffy, Kline, & Stone 37). Nonetheless, the issue with large tourism projects has been the lack of regulations and oversight established by the government. Once tourism was seen as a profitable industry for the country, the Dominican government established a Tourist Incentive Law, “which eliminated restrictions on foreign tourism investment and encouraged large-scale enclave tourism” (Freitag, 1994; Pozo et al., 2010; Roessingh et al., 2008, Qtd by Chancellor, Duffy, Kline, & Stone 37). This allowed foreigners to establish large projects to their own liking, with little control from the government. As a result, “most of the DR’s large-scale tourism development is characterized by foreign ownership and investment” (Sasidharan and Hall, 2012, Qtd by Chancellor, Duffy, Kline, & Stone 36). Foreign ownership has deprived the Dominican people living in these tourist destinations from achieving their own forms of economic success. They have been unable to enter the industry by opening their own tourism businesses (Brennan, 2004; Hall, 1994, Qtd by Chancellor, Duffy, Kline, & Stone 36). This has left most of the profits to individuals who are not living in the country. The lack of Dominican government intervention in economic matters has contributed to the deprivation of economic progress for ordinary citizens, while maximizing the profit for the elite portion of Dominican society.

In the majority of prosperous national industries in the Dominican Republic, like tourism, the group that has not

seen a return of investments has been the people living in impoverished communities. This is why the richest 10% held 41% of the country's gross domestic product in 2006 (Llubes 45). The massive amount of economic wealth in the hands of the Dominican elites has established the large power they hold in all the decisions concerning federal matters. This is because "members of the Santiago aristocracy have continued to be prominent in public life" (Black 240). Therefore, their influential presence has held great importance in the country. In contrast, this has also fueled the matter of why people living in impoverished communities have little say over their wellbeing. Unlike Dominican elites, oftentimes the people living in poor rural areas live in tiny houses made of mud and thatch or wood, where services and social amenities have been basically non-existent (Black 243). Wealth gaps are not only statistically prominent, but they are also visibly evident as vastly different lifestyles of different social classes can be seen throughout the country. The lack of government involvement in economic matters has only negatively affected impoverished communities.

There has been an absence of advocacy for impoverished citizens in the Dominican Republic. As a result, trust levels in governmental institutions in the Dominican Republic have remained considerably below those of industrialized countries and are even comparable to levels that have been found in post-communist countries (Espinal, Hartlyn, Kelly 204). When a government has continuously chosen to not advocate for the interests of its people it implies issues in the way the country is being operated. It is clear that, "the quality of government has a substantial impact on average happiness, the level of happiness being higher in well governed nations" (Ott 4). In the presence of economic security there is a certain level of happiness that gives an individual comfort. Development must be present to achieve this level of economic security for the large majority. Nonetheless, there have been many members of government who have abused development projects for their own gain (Hawthorne 139). They have exhibited a lack of attention to their people's needs and they have poorly represented the same people that have elected them to be in their position of power.

Social Welfare

Impoverished people are often prevented from achieving progress in their communities because of the lack of support from the government. Hence, "the economic difficulties created by corruption are exacerbated by the Dominican government's mismanagement and skewed prioritization of development projects" (Hawthorne 134). Political corruption and elitism are to blame for the absence of social welfare programs in the country. Therefore, the problem with development sponsored by the Dominican government has not been a shortage of public works projects, but rather choosing drastically expensive yet marginally beneficial projects to very few people, over basic public services (Hawthorne 139). It

is the lack of government work in trying to tend to the needs of citizens that has contributed to the current poverty in many sectors of the country. Thus, in 2004 the GDP devoted to healthcare in the Dominican Republic -1.9 percent- was below the world average, along with its expenditures on education (Hawthorne 139). The lower class has repeatedly received no means for individuals to prosper and improve their qualities of life.

There are many areas of the country where the Dominican government should allocate its focus, with incentives to improve them. Nonetheless, the people in government have chosen to gear their attention to more ways in which they could enrich themselves. In the country's capital, rolling blackouts are common and water quality often poses a public health hazard, yet millions of dollars have subsidized a subway system that only serves a tiny fraction of privileged individuals (Hawthorne 139). The only projects that the government considers to be relevant are ones that bring in a large stream of income for its politicians. Moreover, even when the country is granted money for development from international donor agencies, "the scope of action and of social impact is limited to the solvent strata of society, neglecting the neediest groups" (Fanger 20). Development is not possible in a country where politicians only allocate funds for themselves and not the lives of the people they are supposed to be representing. This is why the progress of impoverished communities has been and continues to be limited in the Dominican Republic.

METHODOLOGY

The Dominican Republic has had individuals in government who have been more focused on their personal wealth and power rather than the progression of the country. Therefore, it is crucial to conduct tangible research to pinpoint governmental plans and actions in the country. Since the main objective of this paper is to discuss how the Dominican government has maintained economic control in order to limit the progress of impoverished communities, qualitative research was determined to be the most fitting method. The following research was conducted through the collection of governmental documents as instruments for the data, particularly major governmental laws, reports, and decrees that touched on political and social rights from 2001 to present day. Additionally, reports from international organizations were used to help further analyze the effects of the governmental documents on the Dominican Republic and its citizens. This was the most effective method because the research question primarily focused on correlations between government actions and consequences rather than people's perception of governmental actions.

To provide the best form of data for this topic, I selected three different primary governmental documents to be further investigated. The first document was the

Dominican Economic Report, *Análisis del Desempeño Económico y Social de República Dominicana 2020*. This report was derived from the ministry of Economy, Planning, and Development of the Dominican Republic. It accessed government spending in different sectors such as education, quality of life, health, and the job market in 2020. The preceding document was the Dominican Law 158-01, or the *Ley de Fomento al Desarrollo Turístico* (Tourist Incentive Law), which was made to establish a relationship between the Dominican Republic, and the investors of large projects that were geared to attract tourists into the country. This document was also briefly mentioned in the literature review section of this paper under economic tendencies. Lastly, the Dominican decree 327-13 established the regularization of migrant people and the terms and exceptions of allowing a migrant individual to become a citizen in the country. For the sake of organization, these reports were coded in the analysis process as governmental documents 1, 2, and 3, pertaining to the order they were presented in this paragraph.

Additionally, I also selected three reports from different international organizations that reported on aspects of life in the Dominican Republic. The three reports used from the international organizations were the *Sustainable Development Report 2022* from the United Nations, the *2022 Index of Economic Freedom* from the Heritage foundation, and the *Country Development Cooperation Strategy* from the US Agency for International Development. The information displayed in all three international organization reports was able to describe in more detail how separate groups were affected by the implementation of governmental documents 1, 2, and 3 in the country. These international organization reports were also coded in the analysis process as international organization reports 4, 5, and 6 in the order they were previously presented.

RESULTS

I was able to gather a better understanding of how these governmental documents and international organization reports exemplified an impact on the developmental progress of the Dominican Republic by using thematic analysis as my analytical tool. The three governmental documents provided insights into the different areas of economic control of the Dominican government. Furthermore, the international organization reports gave a more defined overview of how specifically these documents have impacted the country. After having collected all the data from these governmental documents and international organization reports, I divided all the information into three separate categories and labeled them as themes.

The three main themes were classified as education funding, disparities in business, and the treatment of migrants. They each pertained to the most prominent

areas of economic control in the country. Through the first theme, education funding, I was able to further analyze the attention given by the Dominican government to education in impoverished communities. The government documents displayed a lack of attention given to education in impoverished communities and the reports from international organizations gave insight into the effects of this. Furthermore, the second theme, disparities in business was chosen to evaluate the difficulties of average citizens to make a decent living as well as the amount of government interference in big business. The information from the government documents exposed the many economic opportunities and advantages of the elites in the country. The additional information found through the international organization reports, provided emphasis on how average and impoverished citizens were negatively affected in multiple economic aspects. Lastly, through the third theme, the treatment of migrants, the goal was to investigate the restrictions faced by migrants and consider the disadvantages that migrants faced. The migrant restrictions were found within the government documents. However, the international organization reports discussed how impoverished migrants were primarily negatively affected by these restrictions. The three themes allowed for a stronger recognition as to how the Dominican government has continued to impede the progress of impoverished communities as exhibited throughout all the data that was collected.

DISCUSSION

Through conducting a further analysis of the results, all the gathered information uncovered how exactly the Dominican government has been able to establish such massive economic control in the country. Through analyzing different sections of economic control in the country, it contributed to obtaining a better understanding on the matter and the impact upon the people living in impoverished communities. Additionally, coding the three governmental documents as governmental documents 1, 2, and 3, allowed for the bigger picture of the use of these instruments to be displayed. This also applied to the three international organization reports that were used in order to conduct a more intensive and informative analysis. They were also coded, as international organization reports 4, 5, and 6.

Education Funding

Throughout the collected data, one prevalent theme was education funding. The international organization report 6, discussed how the education performance in the Dominican Republic ranked second lowest in the Latin America and the Caribbean region (PISA 15, Qtd by USAID 12). This was a direct result of the lack of importance given to education in impoverished communities. Governmental document 1, gave insight into the contrasts in quality of life for different social groups in the country,

and displayed the differences in quality of education. The document (1), reported that 82.1 percent of 15-19 year olds classified as living in extreme poverty finished primary education in 2020; however, 90.0 percent of 15-19 year olds classified as not living in poverty finished primary education in 2020 (*Análisis del Desempeño Económico y Social de República Dominicana 2020*, 113). As reported, it was more difficult for a person living in poverty to be able to fully obtain an education in contrast to a person living in wealth. Thus, poverty was the main factor that made it difficult to see progress in an individual's educational career.

Furthermore, through the international organization report 4, the Dominican Republic was classified as a country exhibiting remaining challenges in providing a quality education to its people. Hence, the next aspect inspected was the reason for labeling the Dominican Republic as having a low-quality education. These challenges were linked to the lack of enrollment in primary education and furthermore secondary education and indicated that not enough was being done to solve the issue (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). Therefore, it became clear that the lack of attention given to education in the country has ended up hurting the poor majority rather than the elites that make up a small portion of the population. This highlighted a desperate need for further development in the Dominican education system, particularly in lower class communities where primary and secondary education enrollment rates have been repeatedly lower than in non-impooverished communities. When having looked at the education system emplaced in the Dominican Republic, it was clear that it displayed many areas where improvement was necessary. The international organization reports showed the absence of government involvement in education as statistically reported through the governmental documents.

Disparities in Business

Aside from education another recurring theme was the disparities present in business in the Dominican Republic. Particularly, the many disadvantages faced by average and impooverished individuals to become financially stable and have access to economic opportunities. Governmental document 2, explained how according to Dominican law, investors of tourist attractions (hotels, golf courses, festivals, theme parks, etc.) received complete tax exemptions from import taxes, national taxes, and municipal taxes (Law 158-01). As discussed in international report 5, this has been because government policies have been created in a way to not interfere with foreign investment (Kim, Miller, Roberts, Tyrrell 175). Therefore, document (2) made investing in tourism more appealing and less restricted, particularly for foreigners and elites who were the only individuals able to afford the funding of these tourist projects. Therefore, governmental report 2 exemplified a free range for the country's neoliberal economic approaches.

The vast gray area in Dominican business regulations has continued to be a big factor in terms of the advantages encountered by the few wealthy people. Hence, there has been a lack of transparent rules that businesses have needed to follow, and the ones that have been present throughout time have only been merely enforced (Kim, Miller, Roberts, Tyrrell 175). Actions like this have established clear instances where the Dominican government has made exceptions in terms of economic matters. Nevertheless, the next aspect dissected was the treatment of average and impooverished individuals by the government in comparison to wealthy individuals in economic matters.

In contrast to the economic advantages for elite individuals exhibited in governmental document 2, international organization report 5 displayed how there have been high tax burdens for average citizens and limited access to credit by the state-controlled banking sector for years. This made it clear that rules from the government were only non-existent for individuals that had large economic potential for generating wealth to benefit politicians (Kim, Miller, Roberts, Tyrrell 174). The implementation of laws like the one described in government document 2 established the many disadvantages faced by average citizens which have impeded them from being able to prosper economically. Nevertheless, as mentioned in the international report 6, the "measured poverty and per capita GDP do not reflect the deep economic inequality that permeates nearly every aspect of life in the Dominican Republic" (USAID 12). The economic measurements of the country often leave out continuous wealth inequalities present, which aggravates the problem. This has made the wealthy in the country believe that there are no issues with the current economic system in place.

More accurate economic measurements from outside the country like the Palma Ratio, found within the international organization report 4, proved to be better at showcasing the pressing challenges that remained in terms of economic inequalities in the country. Through the results of the Palma Ratio where, "the 10% people with highest disposable income [were] divided by the share of all income received by the 40% people with the lowest disposable income," the score was 2.26 in 2018 (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). The score proved to be much higher than the standard goal of 0.9, which would have entailed little presence of income inequality in the country (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). This showcased the real disparities in wealth in the country and how much more the few Dominican elites benefit off the country's economy over the impooverished majority.

Additionally, international organization report 4 also described how the Dominican Republic had many remaining challenges in achieving decent work and economic growth. One of the reasons why this was present,

was linked to an evident decrease in aspects such as the effective enforcement of labor and collective bargaining rights (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). In a country where wealthy individuals have experienced support and economic relief from the government, average citizens have continuously encountered the opposite. Actions like these are to be blamed for the steady decline in liberal democracy and the social group equality in the Dominican Republic that ranks among the lowest globally, as reported in the international organization report 6. All the international organization reports described how people of higher income and foreigners particularly benefited by business laws and policies rather than individuals of low income. This made it clear that the country's economy was structured in a way where the rich can become richer, leaving the poor with less means to break their cycles of poverty.

Treatment of Migrants

The treatment of migrants in the Dominican Republic was the last theme analyzed. Multiple instances of limitations for migrants were showcased throughout government document 3. Moreover, document 3 included all the requirements for a migrant to become a citizen. These requirements consisted of things such as proof of education, Spanish literacy, a bank account with adequate activity, proof of employment, etc. (Decree 327-13, 14). The problem with these requirements has been how difficult they have been for migrant people living in poverty to provide. =Haitians in particular, composed the largest quantity of migrants in the country in 2013, yet they mostly inhabited the poorer living sectors in the country, as reported in the international organization report 6.

As a result of the implementation of the requirements stated in government document (3), masses of Haitian migrants have been left stateless, which has caused them to lose access to necessary social services for survival (USAID, 11). The government document (3) has allowed for less responsibility to be placed in the hands of the Dominican government in terms of providing aid to the lower class. Through demanding such strict requirements, the government has eliminated migrants that could have needed government aid to become financially stable. The requirements listed under governmental document 3 have contributed to the validation of acts of corruption within the Dominican government and have fueled discrimination in the country (USAID 11). Low income migrants have been labeled as outcasts, as they have been unable to integrate into Dominican society.

In addition, "official statistics also largely exclude migrants and vulnerable populations" (USAID 12). This has led to inaccurate data, as the poorest percentile of the population has not been accounted for, even though they have been living on Dominican land. It has allowed for the misrepresentation of the quantity of the lowest

class, therefore less aid in general has been allocated to the communities in need of social services. Actions like these are to blame for the international organization report 4 labeling the Dominican Republic as a country that has presented major challenges in achieving peace, justice, and strong institutions. This title has been related to the increasing levels of corruption in the public sector throughout the years (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). The misrepresentation of impoverished migrants is linked to the corruption that is present. Rather than focusing on fixing the issue of migrant poverty in the country, the government has chosen to ignore it. They have chosen to not help the people in the country that need the most help. The international organization reports further supported how these actions have persisted.

CONCLUSION

Through the many scholarly literature pieces I read, as well as having collected and analyzed data of my own, I answered the question of how the Dominican Republic has been able to maintain economic control in order to limit the progress of impoverished communities. All the information was able to provide a clear understanding of the economic and political state of the Dominican Republic and there were no contradicting points in the overall research.

The pieces used in the literature review validated the fact that the Dominican government has established economic control in the country. Thus, the ideologies that centered around the foundation of the country were aimed at fueling the wealth of the individuals in power (Hector, 114). This was further solidified through the actions of subsequent politicians. When looking at the economic tendencies of the government, it was evident that the country had potential to create great wealth for the vast majority with tourism as its main economic stream. Yet, the tourism industry has continued to hold incredible wealth only for foreigners and the wealthiest Dominican people, who profit off of the industry (Chancellor, Duffy, Kline, & Stone 36). Therefore, this has left no benefits for average and impoverished citizens. The lack of opportunities for people in impoverished communities has carried on to the absence of social welfare programs in the country. Hence, the issue has come with the fact that the government's budget for development projects has often been used by politicians and the elites rather than individuals needing government aid (Hawthorne 134). All these aspects proved the presence of the government's economic control in the country.

Furthermore, when looking into the data I collected, the information that I gathered matched many of the same conclusions drawn from the literature review. My data helped bring to light an even more important aspect of the topic. It explained how exactly the Dominican

government has established such massive economic control. This dire issue has affected the quality of education able to be attained in the country (Fuller, Kroll, Lafortune, Sachs, Woelm, 24). By the same token, people living in impoverished communities have been the most affected. The disparities in economic opportunities were also prevalent, and the country's neoliberal approaches proved to only benefit the elites. These approaches have left a large gray area in terms of restrictions in business for wealthy individuals, while in contrast average citizens have continued to suffer from high tax burdens imposed by the government (Kim, Miller, Roberts, Tyrrell 174).

The government has been able to pick and choose which individuals benefit from the economy, while impoverished individuals in the country have experienced disadvantages in all aspects. This further included the treatment of migrants and the many requirements placed for a migrant to become a citizen, as they proved to be difficult for migrants living in poverty to provide (USAID 6). Therefore, these requirements have restricted impoverished migrants from being able to become Dominican citizens and obtain social services.

This paper has displayed the massive economic control held by the government of the Dominican Republic which has negatively affected the majority of the country for decades. Government actions have been centered around wanting to benefit political individuals rather than the masses. Moreover, this has led to an absence of government support in helping impoverished communities progress and massive income inequality (Llubes 30). This paper evaluated the dangers of an excessive neoliberal economy and how it is centered around benefiting the elites.

To propose ways to solve the large economic gaps present within the country, more research must be conducted aimed at finding solutions to diminish the massive economic control by the government in the country. Thus, to further the impact of this research more must be done to hold Dominican politicians accountable for their actions. Their selfish actions have primarily negatively impacted impoverished individuals that make up the larger majority of people in the country. Part of understanding this research is understanding the hidden potential of the Dominican Republic as an economic force and realizing that most of the country's wealth is held by few individuals. If there was a larger spread of the wealth in the country, impoverished communities would be able to progress. The weak rule of law in the Dominican Republic has opened a gateway for greed to take over Dominican politics. This is what has continued to impede the country from prospering. When greed is in control it blinds individuals of what is deemed to be ethically correct, erasing empathy and equality. Understanding the inner workings of the Dominican government can help weed out unethical practices and shape the country for a prosperous future.

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APPENDIX

This appendix includes the citations of the international organization reports 4, 5, and 6, that were used in the discussion section to conduct a further analysis of the information found in the governmental documents 1, 2 and 3.

1. Fuller, G., Kroll, C., Lafortune, G., Sachs, J., Woelm, F. (2022). *Sustainable Development Report 2022*. <https://doi.org/10.1017/9781009210058>.
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About the Author

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Mentor Details

Dan Whitman, now teaching African Studies at the Elliott School, comes from a foreign service background. He was embassy spokesperson in Haiti 1999-2001, and visited the Dominican Republic various times during that period. His book "A Haiti Chronicle" describes a period of tension and challenge on the island both countries share.

KEYWORDS: Emotional branding, consumer experience, storytelling, sensory branding, e-commerce, luxury, branding, fashion, premium, growth, digital, omnichannel, internationalization, e-business, sensory goods, WebSphere, internet
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The Impact of COVID-19 on the Fashion Luxury Industry

ATHINA HOSTELET

ABSTRACT

Prior to the outbreak of COVID-19, the luxury fashion industry thrived in brick-and-mortar stores, primarily in-store experiences. As a result of the pandemic, the industry is rapidly reshuffling and readjusting by adapting to new consumer priorities and using digital platforms to generate revenue and future growth. Overall, this study found that luxury fashion brands can expand their growth by utilizing strategic partnerships, focusing on digital marketing and e-commerce, and targeting emerging markets with high potential. Digital marketing and e-commerce are particularly effective with luxury fashion brands as they offer a wider reach, allow for targeted advertising, and provide a seamless shopping experience for customers. With most companies struggling to turn a profit, strategies for growth will be an essential priority for the years to come.

BACKGROUND/LITERATURE REVIEW

Given the emerging trend of digitalization and technology, this study aims to give organizations and researchers an understanding of how the variables of retail animation, digital experience, customer engagement, and e-commerce interact with engagement with luxury brands and likelihood of purchase. It is our hope that the results of this investigation will help researchers and leaders in the industry understand how best to implement such techniques in their respective organizations to continue to drive growth in today's climate.

Since the outbreak of Covid-19, the retail fashion luxury industry has leaned towards a digital client communication framework with an emphasis on e-commerce. Before the pandemic, clients were becoming more technologically savvy with the ubiquitous use of multiple devices and digital platforms. The outbreak of Covid-19 increased the demand for additional digital means of communication. Very few luxury brands, however, have implemented robust digital transformations. Making the step into the digital future a topic of great importance for luxury brands since it takes careful strategy to learn how to cope with the technological advancements and adopt innovative digital marketing strategies to maintain customer

engagement.

Luxury brand goods are high-end products that are associated with premium quality, superior craftsmanship, exclusivity, and prestige, and are often characterized by a high price point, sophisticated design, and a strong brand identity (Weber et al., 2019). Customers are no longer regarded as decision-makers only interested in the functional and financial characteristics and benefits of a product. A satisfied consumer does not imply loyalty, increased revenue, or a higher market share. However, in order to enhance customer loyalty and advocacy, luxury brands must consider continually providing good and differentiated customer experience (Weber et al., 2019). So, companies have started investing in online brand communities with the goal of establishing and deepening relationships with their customers while also encouraging brand engagement on various online platforms (Oetomo et al., 2021).

Current research has primarily focused on non-luxury brands shifting towards digital transformations within the industry's operating systems to address structural changes associated with Covid-19 (Bertola, 2018; Blaszczyk, Wubz, 2018). Additional research provides insight into future changes within shopping behavior and perceptions

of the luxury fashion industry (Watanabe et al., 2021).

These correlations have been modeled through empirical comparisons of alternate models in an e-commerce brand community exercise (Bhardwaj, 2019). The study identifies the importance of inducing active participation, trust, and community in building a company for success. All of which demonstrate the positive relationship between e-commerce in relation to brand engagement and purchase intention. With regards to digital transformation, past studies have explored how commercial intent expressed in tweets correlates with external events (Wang, 2013).

Similarly, as the pandemic plateaus, luxury brands have transformed their internal organizations through digital innovations and technology, which no firm can afford to ignore. In both developed and emerging nations, online sales, as well as the influence of mobile and social media on offline sales, will continue to increase significantly (L. Dauriz, 2014). The most forward-thinking businesses are putting digital opportunities to the test across their entire organization, closely monitoring their impact, and fast scaling successful strategies. All other luxury brands should follow their lead or risk of falling behind (Watanabe et al., 2021). This is a crucial step that luxury fashion brands have taken towards building a prosperous future for the company given the digital day and age.

Brands and retailers are increasingly using artificial intelligence and machine learning to evaluate consumer data points to optimize every aspect of the supply chain (DeAcetis, 2020). Through the digital strategy of cloud computing, brands can analyze past purchasing behaviors, demographics, locale, and shopping patterns to forecast consumer desires, which results in effective marketing. 85 percent of luxury brands sales come from customers registered in their database (Jain, Bernal, 2021). Big data analytics enables luxury brands to identify and connect with affluent consumers, understand their lifestyle and purchasing behaviors, whilst nevertheless building long-term engagement. Luxury brands have the resources to deliver personalized content and connect their consumers as a result of insights generated by big data (Jain, Bernal, 2021). To provide exclusivity with a delightful experience through the use of data analytics gives competitive advantage to brands who have incorporated it into their marketing strategies. By segmenting high-net-worth consumers based on their purchasing behaviors, luxury brands can identify new opportunities to connect and engage with customers.

Homophily is the tendency of people to associate with others who share similar attributes or characteristics, such as interests, values, or demographics (Kooti, 2016). Homophily is found to have significant impact on the purchasing intent: i.e. users are most likely to purchase products that are most similar to products purchased by their friends due to the word-of-mouth and domino effect (Kooti, 2016).

This phenomenon is essential for e-commerce and has been studied in detail over the past decade, which also influences in-store customer engagement and in-store retail animation. In order to become more competitive, fashion retailers employ emotional branding as a way to engage their customers, addressing the growing trend of consumers' seeking an emotional relationship with the brand (Kim, 2019). Emotional branding has established itself as a critical factor in developing brand loyalty, which has been conceptualized as a long-term strategy to characterize consumer-brand bonds (Fournier, 1998). Loyalty is increased by emotional branding and leads to higher sales. For instance, it has been proven that emotional responses to television advertising content are three times as likely to result in purchasing intentions than when emotional responses are not present (Hong, 2016).

Retail animation is defined as the means that bring the brand and its products to life for the consumer at the point of sale through three-dimensional marketing concepts. For instance, successful lighting design, which is an example of retail animation, can boost consumers' approach intention and buying desire by attracting their attention to the item, influencing their emotions, and increasing their in-store shopping satisfaction (Lin & Yoon, 2015). In addition, it is vital to investigate the interaction between retail animation and shoppers - those of a younger age in particular - in order to successfully establish an appealing atmosphere and shopping experience for luxury brands (Lin & Yoon, 2015).

Many luxury brands, nowadays, are cooperating with different online retailers to engage and influence consumers at every stage of their decision journey (L. Dauriz, 2014). Hence, it is vital for luxury brands to have a defined mobile and social media strategy, but not sufficient to capture the whole digital impact. Companies must hone in on the most significant performance indicators and decide the activities that will make the greatest difference in accomplishing their digital objectives to establish and sustain digital leadership in the luxury industry—and thus, to ensure that they allocate their digital investments appropriately (L. Dauriz, 2014). The digital era we are currently experiencing necessitates attempts to improve consumer satisfaction by improving the quality of technological tools as the consumer's digital experience affects one's digital engagement. Advances in augmented reality and virtual reality, backed by dependable artificial intelligence, are expected to transform a company's or organization's digital marketing tools for addressing customer demands more effectively (Oetomo et al., 2021).

Due to digitalization, retail is rapidly changing, and news publications have claimed that the danger of online shopping is causing a crisis among brick-and-mortar retailers. Despite these unfavorable reviews, studies show that such stores are nevertheless important.

Because customers seek value from exciting in-store experiences, merchants can focus on delivering such experiences in their physical stores, in addition to utilitarian experiences, when digitizing to improve the entire consumer experience (Högberg et al., 2019).

This study's research questions are curated through an in-depth analysis of a compilation of academic scholarly articles and media-based articles. The need for further research in the four predictor variables (Retail Animation, Digital Experience, Customer Engagement, and E-Commerce) are existential to determining the future of the fashion luxury retail industry. The research will collect a set of quantitative data derived from a survey that is sent out to members of Generation Z (18 years to 24 years) and Generation Y (25 years to 40 years), and the results will be run through a correlation analysis to inform experts about current trends in e-commerce.

STUDY APPROACH

Research Question: At this point in the pandemic, what are Generation Z and Generation Y's experiences, both in-store and online, in terms of e-commerce, customer experience, retail animation, and digital transformation, associated with their brand engagement and likelihood of purchase?

Sub-Research Question: What are the trends of future luxury brand stores with emerging use of e-commerce and implemented digital transformations?

Hypotheses:

It is predicted that –

- an individual's experience with e-commerce is positively correlated with luxury brand engagement (H1) and likelihood of purchase (H2).
- digital experience with luxury fashion brands is positively correlated with luxury brand engagement (H3) and likelihood of purchase (H4).
- in-store customer engagement with luxury fashion brands is positively correlated with luxury brand engagement (H5) and likelihood of purchase (H6).
- in-store retail animation with luxury fashion brands is positively correlated with luxury brand engagement (H7) and likelihood of purchase (H8).

Additional Hypotheses: Customer engagement online (H9) and in-store retail animation (H10) remain an integral selling point for luxury fashion brands.

METHOD

Participants

To participate in the study, respondents had to be at least 18 years of age, members of Generation Z (9 - 24 years) or Generation Y (25 - 40 years), at least sometimes engage with luxury fashion brands, and currently living in the United States. Participants of the present study were recruited through Amazon's Mechanical Turk (MTurk). This is a convenience sample, and 100 survey responses

were collected.

Materials & Measures

The predictor variables of the correlational study are: retail animation, digital experience, customer engagement, and e-commerce. The outcome variables of the study are: engagement with luxury brand and likelihood of purchase. The survey was conducted using Qualtrics software. Survey questions were developed through contextual research of past studies who have also analyzed consumer behavior and engagement with products. We also collected information on demographics including the participants' gender, age, country of origin, ethnicity, time spent in country of origin, highest level of education completed, and annual income. These demographics hold importance in the present study as they helped provide context for correlations made between the variables in the study.

Digital Experience

A digital experience refers to the interaction between a user and a digital interface, such as a website, app, or social media platform. To assess the digital experience of participants when browsing fashion luxury brands online, questions about the regularity and time-frame spent on social media and online websites were asked. A sample question is the length of time (in minutes and hours) spent on social media and online fashion luxury updates and products a day. These questions were created with the intention of placing the participant on a spectrum, to then find out the degree of customer engagement when participants interact with digital platforms to purchase luxury fashion brands online.

Retail Animation

Retail animation refers to the use of creative visual merchandising and interactive displays to enhance the in-store shopping experience and attract customers. We measured retail animation through a list of statements detailing purchasing behavior in a luxury fashion retail store environment. The five-point Likert-type scale used for this variable is "1 = not at all", "5 = to a great extent". The participants rating of each statement will factor into deriving purchasing habits of consumers. For instance, the question: "In your perception, how smoothly and seamlessly do the digital functions of the brand's website operate?" will demonstrate the importance of the use of retail animation in luxury fashion brand website operation.

Customer Engagement

Customer engagement refers to the process of building and maintaining a relationship between a business and its customers by actively involving and interacting with them through various touchpoints and channels. We measured customer engagement by asking participants the frequency of social media use and the time spent on

luxury fashion brand websites. Participants rated their agreements using two different five-point Likert-type scales. Some statements will use the “1 = not at all”, “5 = to a great extent” Likert-type scale. Other statements will use a “1 = definitely not”, “5 = definitely” Likert-type scale. A sample statement concerning in-store purchases in this section is: “When I visit a luxurious brand store, I care more about in-store experience and service rather than the product itself.” The participant’s response to the statement will speak to how much the participant engages with luxury fashion brands both in-person and online.

E-commerce

The term “e-commerce” refers to the buying and selling of goods and services over the internet, typically through a website or mobile application. We measured e-commerce through a scale of “1 = definitely not” to “5 = definitely” with a list of statements asking participants about their purchasing behavior online, and interaction with online platforms. A sample statement in this section is: “I think that I save time shopping through my mobile phone and prefer making online purchases as a better alternative to visiting the store.” The response to this question will give insight as to the motive behind the participant’s fashion luxury brand purchase and consumers’ preferred methods of shopping when purchasing luxury items.

Engagement with luxury brands

Engagement with luxury brands involves building emotional connections and creating meaningful experiences that align with the values and aspirations of the target audience, often through exclusive events, personalized services, and storytelling. We measured engagement with luxury brands through a list of statements asking participants how emotionally connected they are to a brand. This was done through a combination of short answer questions, and question rated responses. The five-point Likert-type scale used for this variable goes from “1 = not at all” to “5 = a great deal”. A sample short answer question concerns the participant’s favorite luxury brand. This question is asked at the start of the section and will determine the subject of the participant’s responses for the rest of the questions. A sample non-short answer question in this section is: “How much do you currently engage with your favorite luxury brands?”

Likelihood of purchase

Likelihood of purchase refers to the probability that a customer will make a purchase based on their past behavior, preferences, and demographic information. The likelihood of purchase was measured through a series of questions about the proportion of annual income dedicated to luxury brands and the frequency that the participant interacts with luxury brands both in-

store and online. A question regarding the proportion of income dedicated to luxury fashion brands is included. In addition to the question, there are question rated scales created from “1 = Never” and “5 = Almost always”. A sample question asked for this section using the scale is: “How often do you make an online luxury brand purchase?”

Procedure

The study followed a correlational survey design created on Qualtrics that was distributed on Amazon’s Mechanical Turk. MTurkers who received the Human Intelligence Task (HIT), a question that needs an answer, were directed to the study using an anonymous link to the Qualtrics survey. Once directed to the survey, participants filled out an informed consent form. Then, participants took the survey, which took approximately 25 minutes to complete. Lastly, participants were debriefed, thanked, and compensated for their participation. Each participant received \$3.00 through Amazon Mechanical Turk upon completion of the study. Subjects were able to withdraw from the study at any time without penalty. Data were collected and analyzed in December 2021.

The survey was completely anonymous. Researchers were blind to participants’ responses despite the demographic information collected. Participants’ names were not collected and participants were assigned random ID numbers. No record was kept of which participant was assigned which ID number. Furthermore, participants were provided with instructions at the start of the survey to answer questions as honestly and accurately as possible. Before giving informed consent, participants were notified that participation was voluntary and that they could end their participation whenever they pleased.

RESULTS

Demographic Characteristics

Our sample consisted of 54.3% males and 45.7% females, more than 50% of participants reported spending 20% or more of their annual income on luxury brand goods, and 38.3% have annual incomes between \$0 and \$50,000. Respondents had an average age of 20 years. Furthermore, 53% of respondents were White/Caucasian, 11.10% were Asian, 11.10% were Black, 11.10% were Hispanic, 6.2% were Middle Eastern, 5% were Native American, 2.5% were more than one or mixed race.

Computing Indices for Key Variables (Predictors & Outcomes)

The following indices were computed from the raw data to represent each of the predictor and outcome variables (see appendix A).

- Retail Animation = $(RA1 + RA2 + RA3)/3$
- Digital Experience = $(DE1 + DE2)/2$
- Customer Engagement = $(CE1 + CE2 + CE3 + CE4 + CE5 + CE6 + CE7 + CE8)/8$
- E-commerce = $(EC1 + EC2 + EC3 + EC4 + EC5 + EC6$

- + EC7 + EC8)/8
- Brand Engagement = (BE1 + BE2 + BE3 + BE4 + BE5 + BE6 + BE7 + BE8)/8
- Likelihood of Purchase = (LP1 + LP2 + LP3 + LP4)/4

Computing Cronbach Alpha Reliabilities

Cronbach Alpha Reliabilities play an integral role in showing the strength of internal correlations between each question for every index. We used them in the current study to check the reliability among the items within each of the indices. They were as follows: Retail Animation ($\alpha = 0.436$), Digital Experience ($\alpha = 0.957$), Customer Engagement ($\alpha = 0.530$), E-commerce ($\alpha = 0.515$), Brand Engagement ($\alpha = 0.790$), Likelihood of Purchase ($\alpha = 0.800$).

The present study displays both high Cronbach alpha reliability values, such as for digital experience (0.957) and lower values, such as for customer engagement (0.530) and e-commerce (0.515). This is because some of the questions did not use numerical response scales, and therefore could not be included in the reliability calculations for those variables (see appendix B).

Multiple Regression Analyses & Correlation Coefficient Matrices

Once all the predictor, moderator and outcome variable indices were created, a multiple regression analysis was conducted. Using Excel to analyze the data, a singular outcome variable (e.g. Likelihood of Purchase) was recognized as the “dependent variable,” while all other predictor and moderator variables were listed as “independent variables.” A linear regression, using the Forced Entry Option, whereby Excel enters all of the specified variables simultaneously (regardless of their significance levels), was then run, in order to ascertain the adjusted R^2 values and Standardized Coefficient Beta weights. This process was subsequently repeated for the second outcome variable, “Engagement with Luxury Brand.” The adjusted R^2 values, alternatively known as “effect size,” served to represent the proportion of variance in the outcome variable(s) accounted for by all other variables in the model. The multiple regression analysis utilized in this study revealed that 60% of the variance in “Likelihood of Purchase” can be explained by the predictor variables Retail Animation, Digital Experience, Customer Engagement, and E-Commerce. Results also indicated that 54% of the variance in the second outcome variable “Engagement with Luxury Brand” can be explained by the predictor variables (Retail Animation, Digital Experience, Customer Engagement, and E-Commerce).

The Standardized Coefficient Beta weights are as follows:

$$\text{Likelihood of Purchase} = -0.555 + 0.006 (\text{Retail Animation}) + 0.085 (\text{Digital Experience}) - 0.275 (\text{Customer Engagement}) +$$

$$0.748 (\text{E-Commerce}) + \text{error}$$

The Coefficient Beta Weights for the outcome variable “Likelihood of Purchase,” ordered from strongest to weakest in effect size, are as follows:

E-Commerce (0.748), **Digital Experience** (0.085), **Customer Engagement** (- 0.275), and **Retail Animation** (0.0063).

Due to the presence and innovation of online platforms, customers are more likely to purchase luxury brands compared to situations where brick-and-mortar stores are the only ones abundant. After running an ANOVA regression analysis, on the Likelihood of Purchase (LP) and Customer Engagement (CE) indices, the coefficient of CE was 0.0064. Thus, as the CE index increases by 10%, the likelihood to purchase the product will increase by 0.06%. A negative coefficient in the above correlation can be tracked to the effect of other variables including e-commerce and digital experience on the customer engagement (online or in brick-and-mortar stores).

In addition to the R^2 values and the Coefficient Beta weights, the multiple regression analyses also generated correlation-coefficient matrices for all of the predictor and outcome variables.

The data of particular interest from these aforementioned correlation-coefficient matrices include the R-values (correlation-coefficients), multiple R: .78, R^2 : .60, adjusted R^2 : .58, standard error: .87, F-value: 28.597, and the significant p -value $< .01$ ($p = .000000000000166622$).

$$\text{Engagement with Luxury Brand} = -0.067 + 0.434 (\text{Retail Animation}) + 0.015 (\text{Digital Experience}) + 0.030 (\text{Customer Engagement}) + 0.592 (\text{E-Commerce}) + \text{error}$$

The Coefficient Beta Weights for the outcome variable “Engagement with Luxury Brand,” ordered from strongest to weakest in effect size, are as follows: E-Commerce (0.592), Retail Animation (0.434), Digital Experience (0.015), and Customer Engagement (0.030).

The retail animation variable coefficient in the present study confirms that fashion luxury brands can predict the purchasing behavior of customers. Through the use of augmented reality, physical retail stores elevate the shopping experience of clients through engagement both in-store and online experiences. Augmented reality can be improved in luxury fashion stores by providing interactive virtual try-on experiences, integrating personalized styling recommendations and product information, and leveraging data analytics to track customer preferences and behaviors, as well as optimizing the technology for mobile devices and social media channels. As the study shows, e-commerce (EC) and retail animation (RA) are the most significant variables affecting the engagement with luxury brands, as a 10% increase in EC elevates the engagement with luxury brands outcome variable by 6%.

In addition to the R^2 values and the Coefficient Beta

weights, the multiple regression analyses also generated correlation-coefficient matrices for the study's predictor and outcome variables. The data of particular interest from these aforementioned correlation-coefficient matrices include: the R-values (correlation-coefficients), multiple R: .74, R²: .54, adjusted R²: .52 and the standard error: .58, the F-value: 22.317, and a significant *p*-value < .01 (*p* = 0.0000000000326).

Addressing the Results Related to each Hypothesis:

Inconsistent with Hypothesis 1, as retail animation increases, likelihood of in-store purchase ($\beta = .006$, $p = .97$) is partially supporting Hypothesis 1. The adjusted R² is .17 between retail animation and likelihood of in-store purchase.

Consistent with Hypothesis 2, as retail animation increases, so does brand engagement ($\beta = .43$, $p = .001$), indicating a significant positive relationship. The adjusted R² is .34 between retail animation and brand engagement.

Consistent with Hypothesis 3, as digital experience increases, so does likelihood of in-store purchase ($\beta = .0085$, $p = .01$), indicating a significant positive relationship. The adjusted R² is .16 between digital experience and likelihood of in-store purchase.

Inconsistent with Hypothesis 4, as digital experience increases, brand engagement ($\beta = .015$, $p = .49$) does not significantly change. The adjusted R² is .08 between digital experience and brand engagement.

Inconsistent with Hypothesis 5, as in-store customer engagement increases, likelihood of in-store purchase increases ($\beta = .0064$, $p = .98$) does not significantly change. The adjusted R² is -.012 between customer engagement and likelihood of in-store purchase.

Inconsistent with Hypothesis 6, as in-store customer engagement increases, brand engagement does not change ($\beta = .03$, $p = .80$) does not significantly change. The adjusted R² is -.009 between customer engagement and brand engagement.

Consistent with Hypothesis 7, as e-commerce increases, so does likelihood of in-store purchase ($\beta = .748$, $p = .0000000003$). The adjusted R² is .55 between e-commerce and likelihood of in-store purchase.

Consistent with Hypothesis 8, as e-commerce increases, so does brand engagement ($\beta = .60$, $p = .05$), fully supporting Hypothesis 8 based on our preestablished level of $\alpha = .05$. The adjusted R² is .46 between e-commerce and brand engagement.

For all values of the *p* - value less than or equal to .05; the correlation is said to be statistically significant (see appendix C). To examine whether in-store retail animation, digital experience, and customer engagement remain integral selling points for luxury fashion brands, I ran descriptive statistics on the outcome variables.

DISCUSSION

Summary and Explanation of Results

According to the results of this study, some effects were significant. Four out of the eight findings were consistent with their hypotheses. However, four correlations within the analysis were statistically nonsignificant when considering future research and study implications.

The correlation between digital experience and likelihood of purchase is significant. The results read: ($r = .396$, $p = .01$), 15.7% of the variability in likelihood of purchase can be explained by digital experience. These results suggest that there is a positive correlational relationship between digital experience and likelihood of purchase. Therefore, as the amount of digital experience offered by the fashion luxury brand increases, the client's likelihood of purchase increases. The present study demonstrates that clients who enjoy shopping for luxury brands online tend to purchase more items. The digital experience plays an integral part in the tendency of the consumers to purchase luxury brands. Retail animation is a component within the digital experience, which similarly presents a positive correlation to likelihood of purchase, as customers who interact with in-store retail animation as part of the digital experience provided are usually more dynamically engaged with the brand.

The analysis illustrates that there is also a significant correlation between retail animation and the engagement with luxury brands. The results read that ($r = .59$, $p = .001$) 35% of the variance in engagement with luxury brands can be explained by retail animation. The results imply that there is a positive relationship between the level of in-store retail animation experienced by the client and their engagement with luxury brands. Therefore, as retail animation increases so does the client's brand engagement. This could be due to clients searching for a personalized and new experience when shopping at their favorite luxury stores. The pandemic accelerated the growth of the technology and use of retail animation, which has driven clients to seek out these interactive events. In the current economic climate, where companies are struggling to turn a profit, strategies for growth optimization are essential. The steps that luxury fashion companies are taking to improve retail animation will likely lead to an enhancement in the digital experience, which will increase client brand engagement and purchasing intentions.

The analyses indicated that there is a marginally significant relationship between e-commerce, and both likelihood of purchase and brand engagement. The results read between e-commerce and likelihood of purchase: ($r = .74$, $p = < .01$), 55% of the variance in likelihood of purchase can be explained by e-commerce. Additionally, the results between e-commerce and engagement with luxury brands show that: ($r = .67$, $p = < .01$), 45.7% of the variance in engagement with luxury brands can be explained by e-commerce. This relationship may have been heightened if more data had been collected. If the sample size was larger, the relationship between

e-commerce, and both the likelihood of purchase and brand engagement could have been stronger and more pronounced.

An observation in the present study displayed a significant correlation between annual income and likelihood of purchase (see appendix I). The results read ($r = .33, p = .001$), 10.7% of the variance in the likelihood of purchase can be explained by annual income. Luxury fashion products are the center of the study, thus the majority of the population may not consider this a necessity and purchase largely depends on the customer's annual income.

Limitations

Due to certain limitations, developing and executing a successful and meaningful study is difficult to accomplish. There are certain design limitations that could have affected the results of the study and design changes that make the results more accurate.

One of the largest limitations with this study was obtaining enough completed responses. Although the study was sent out through M-Turk, and targeted both Generation-Z and Millennials, certain respondents may choose to not fully complete the survey, and either stop mid-way or choose not to answer the questions. The selection bias of M-Turk refers to the non-representative sample of participants who are predominantly younger, more educated, and more tech-savvy than the general population, which can limit the generalizability of research findings. The Snowball sampling technique is a non-probability sampling method that involves using initial participants to recruit additional participants from their social networks. The incorporation of a Snowball Sampling technique may have contributed to the large number of millennials who were unable to retain attention until the completion of the survey. Furthermore, the niche market space of clients who often interact with luxury fashion brands was very difficult to reach due to the small number of Generation-Z and Millennials who engage with luxury products on a regular basis.

After checking for possible gender differences on likelihood of purchase, it turns out that males ($M = 3.6, SD = .804$) are not significantly different from females ($M = 3.7, SD = .805$), ($t(df = 78) = .119, p = .905$). An unexpected finding was the effect of likelihood of purchase on ethnicity; displaying that survey respondents of "white/Caucasian" ethnicity ($M = 3.78, SD = .201$), ($t(df = 78) = .238, p = .813$) were more likely to purchase fashion luxury brands.

An additional limitation of the study was by only using M-Turk, a database that targets a certain sector of Amazon clients, to gather quantitative data. In addition to only reaching certain populations and measuring them quantitatively, the study could have also explored qualitative measures. By including more qualitative, open-ended questions, it would have allowed for more

descriptive data to detect trends, or more individualized and personal feedback, which could have enabled a deeper understanding of the luxury fashion industry. If a qualitative study was to be conducted, questions about the individuals' purchasing behaviors when walking around a store should be asked, as such details can affect the embedded marketing techniques. Additionally, for a more in-depth study, qualitative focus group interviews could have been conducted where individuals are asked about the impact of the brand's history and story on their purchasing behaviors. This could have impacted the present study when analyzing emotional branding, and customers attachment to certain brands and their products. Researchers have found that consumers' emotional attachment to the brand plays a very significant differentiating factor in the engagement with the luxury brand.

Another limitation to the study was the actual research design, specifically the scale that was used to measure each of the variables. Additional variables that could have been introduced in the study are the cultural appropriation aspects of each luxury fashion brand. Each segment of society views fashion through varying lenses and taking such viewpoints into consideration through an additional variable in the study could have made the results collected more thorough. A brand's sustainability targets are increasingly becoming a deciding factor when clients engage with the brand. Thus, adding a sustainability variable (as a moderator) may have given us a more insightful and holistic understanding as to why consumers purchase certain fashion luxury brands as opposed to others. Using the five-point Likert response scale to measure both the predictor and outcome variables of the study, with different conversion rates, may have also introduced a restriction of range or limited participants in reporting their true opinions regarding each item. Another improvement to the quantitative phase would have been to create a personalized scale based on past published articles in a similar discipline, rather than using one comprehensive scale to evaluate the survey responses. Moreover, when evaluating the open-ended questions in the survey, a systematic method for evaluation could have been incorporated.

An ethical consideration that may have affected customer responses is if the products align with sustainable values and approaches, as Generation-Z and Millennial shoppers have been shown to be more conscious of their consumption. Furthermore, cultural appropriation has played a significant role in influencing consumer behavior and attitude towards the fashion luxury industry, hence highlighting the importance of inclusive and culturally considerate retailing.

Practical Implications

The Covid-19 pandemic has prompted luxury brands to implement various elements of technology to enhance

the customers' engagement, interactions and activities to improve customer purchasing behavior. Unexpectedly, the study found that the less aware a customer is of e-commerce platforms, the less likely they will make a brick-and-mortar purchase. Thus, capturing the attention of customers through retail animation engagement in-store is essential, despite the efforts that companies are placing on their virtual presence. As an effect of these digital transformations, customers will be more likely to purchase luxury products. In addition, these changes have a ripple effect and initiate extraordinary growth over shorter periods of time, just as observed in the findings of a McKinsey quarter report stating that in 2020 alone, e-commerce in the United States has achieved an astonishing growth of ten years worth of advancements in a three-month period (McKinsey Quarterly, 2022).

Theoretical Implications

The findings of this research confirm the theory of shifting the luxury brand stores to e-commerce. The research is based on the theory of merging classical communication to digital communication through omni-channel communication. Omni-channel communication refers to a seamless and integrated approach to communication across all available channels and devices, ensuring a consistent customer experience. The research aims to challenge current assumptions concerning e-commerce and its relation to the luxury fashion industry. It supports the integration of e-commerce with luxury fashion unlike the classical methods. The findings of this research will help luxury fashion boutiques adopt new strategies and make concrete changes to their current methods of communication. It will provide readers with a deeper insight into improving their current marketing strategy to exponentially grow profit.

Future Research

After conducting in-depth analysis of the research, the study brought the conclusions that it is recommended that more effort should be dispensed in the investment of mobile optimized websites. Considering the current socio-economic circumstances, this research addresses a gap that was created by the Covid-19 pandemic, whereby the nature of data within the fashion luxury industry has changed, placing emphasis on how technology can serve the customer when interacting with different aspects of the fashion luxury industry. Since augmented reality was a part of the digital experience umbrella, it warrants investigation into the extent as to which augmented reality itself can drive brick-and-mortar purchasing.

By conducting future research on digital optimization, researchers and organizations will not only enhance the customer digital experience in an omnichannel customer interactive hemisphere, but also discover new ways to ensure that customers feel valued and understood irrespective of the platform that they are interacting with. Further studies can be performed by future researchers

to optimize key performance indicators to ensure that technology is up to the same level across different digital platforms. Due to the uncertainty that is placed around the future of the fashion luxury industry, luxury fashion brands should place more importance on collecting data, which will in return allow them to give every customer the experience he/she desires. A future study could use customer feedback in real-time while they exit the store, so that luxury fashion brands can develop in-store retail animation technology to further enhance customer engagement in and out of the store. Many luxury brands were hesitant to go on social media believing that it would make them appear less exclusive or sought out. However, since the pandemic, this has been the first step that most companies have taken (Wieners, 2017). Luxury brands harness the power of social media as a part of this project, they will not only see great results in terms of the marketing strategies, in addition to engaging with customers. Luxury brands should focus more and benefit from the power of smartphones because it is the primary tool that connects the client to the brand. As a result, more effort should be spent to invest in mobile optimized websites. A future study could investigate the ways in which customers can utilize their smartphone devices whilst in the physical store to bridge the gap between in-store and online digital experiences.

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The Divestment Problem: Investigating GW's Complicity in Apartheid South Africa

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ABSTRACT

During the 1980s, there were massive protests against George Washington University's financial involvement in South Africa—under Apartheid. The coalition of students, faculty, and staff members from the GW community who led these protests came to be known as GW Voices for a Free South Africa. A major aim of the group was its campaign for divestment from the Apartheid-torn country. Through the research of archival materials from the university, this paper explores the university's choice to not divest from South Africa, making GWU the only school in the Washington D.C.-area to remain invested in South Africa during this time. Such conversations often raised increasing tensions between university administration and community members; these tensions still linger to this day.

During the 1980s, as the world grappled with the Apartheid crisis in South Africa, universities across the United States became important actors in divesting from South Africa. With hundreds of American universities invested in South African banks, businesses, and other institutions, students from said universities began to protest any involvement that could be seen as supporting a pro-Apartheid government. Specifically, many schools, including George Washington University, were involved with Commonfund, an American asset management firm. Commonfund managed customized investment programs for endowments, foundations, public pension funds, and other “mission-driven” institutions ((Idzelis, 2018). In the spring of 1985, George Washington University students organized GW Voices for a Free South Africa: a coalition of students, faculty, and staff who hoped to “educate the... community concerning the system of apartheid in South Africa.” (GW Voices for a Free South Africa) They were specifically concerned with divesting from Commonfund and creating a South Africa-free investment portfolio for the university. The group hoped to establish a committee on campus to help guide university leadership toward an ethical investment strategy. Founding such a morally-sound strategy proved to be harder than anticipated, and began a years-long battle between the GW student body and leadership to pull GW investments out of South Africa. GW

would ultimately not divest from South Africa, a decision that would stain GW's legacy.

This work will investigate student, faculty, and staff protests at George Washington University, and the administration's response. Differing from other scholarly work on this topic, this essay will use copious amounts of communications from leading organizations on campus, as well as student newspaper articles. Public statements and correspondence between protestors and school administrators from these years have been compiled to build a timeline of events that culminate in GW's decision to remain invested in securities that supported the Apartheid government. There are not many scholarly works on this topic, with just one publication by an assistant professor at George Mason University. This paper covers both GW's divestment protests and protests that took place across the nation, more broadly. This work is limited by restricted access to records from key players in the movement, such as the President, the Board of Trustees, and the Provost. GW has a long history of staying invested in causes that often do not reflect the will of the GW community itself. This paper aims to show one of the first instances of this happening.

DISCONTENT: GW VOICES AND COMMONFUND

GW Voices was a rare group, as it consisted not only of students, but also faculty members

of the university. They believed that GW could have a meaningful impact in helping to end the “abhorrent system of Apartheid.” (GW Voices for a Free South Africa) In an open letter distributed throughout campus, the group stated that the divestment movement was underway across the country, with American universities at the forefront. They argued that the South African government was growing more violent, with President P. W. Botha being “insensitive to international criticism.” GW Voices called on the school to take action, stating that criticism was not enough, as South Africa had already withstood years of it. The letter claimed the only solution, therefore, was immediate divestment. Along with an action list, GW Voices requested the creation of a divestment committee with an equal number of students, faculty, and administration. Another suggested action was to openly condemn Apartheid by supporting speakers and forums to spread Apartheid awareness on the GW campus. GW Voices also urged the university to work with other schools across the country to end racial discrimination and oppression in South Africa. (GW Voices for a Free South Africa n.d.)

The university’s divestment problem almost entirely lay with the involvement of Commonfund. Commonfund invested as much as \$102 million by June 30, 1985 (adjusted for inflation, \$281 million in 2022) for GW. A report from GWU Provost William Johnson in 1986 showed that this figure represented 21.3% of all GW assets at the time. (Mentzinger, 1986) Commonfund took these assets, mainly endowment funds, and invested them in securities of companies from around the world, including companies that operated in South Africa. In a 1986 phone call, Commonfund President George R. Keane had refused to disclose to student reporters how much of GW’s money was actually invested in South Africa. He did, however, say that there was a “meaningful amount” of money involved. Keane explained to *The Hatchet* that about 300 schools were invested with Commonfund. Their money would be pooled together into a common fund, which afforded member institutions considerably more diversification and investment power than if each were to invest their money separately. (Mentzinger, 1986) Of these 300 universities, only a small amount were invested in South Africa-free portfolios, which excluded investment in companies doing business with the country. This South Africa-free portfolio, managed by Commonfund, was described by Keane and GW officials as “volatile” and untrustworthy. Keane defended GW’s investment in the South Africa fund, stating that “when a university or other organization divests, it ‘eliminates about 150 major U.S. companies’ from its portfolio, including most in the oil, automobile, and business machine industries.” (Mentzinger, 1986) Further, GW held a 3% stake in Commonfund, which gave them the ability to choose which funds the school was invested in, but they had no input on the securities in which the funds

chose to invest.

Divestment became one of the most significant issues on which GW Voices focused due to South Africa’s reliance on foreign investments. The country relied almost solely on the U.S. and other Western countries to supply oil and technology for their mining industry. The United States was South Africa’s largest trading partner, with \$14 billion in direct investments, bank loans, and shareholdings. While university funds were not directly supplying South Africa with physical resources for their oil and mining, they were investing in such industries that supplied said resources. By divesting from these companies, South African businesses and industries would suffer, which would result in financial pressure to end Apartheid. (U.S. Business in South Africa: Voices for Withdrawal 1985)

In the early 1970s, Reverend Leon Sullivan established the Sullivan Principles, which were guidelines for companies to uphold the rights of Black South Africans in the workplace and denounce Apartheid. In 1978, The GW Board of Trustees voted to only do business with companies that followed these guidelines. GWU was one of the first universities to do so. (Clarke, 1986) This appeared to be a strong first step by GW towards condemning Apartheid and the South African government. Beginning in the fall of 1985, GW administrators started looking into South Africa-free portfolios after mounting pressure from students and faculty alike. In mid-September, GW President Lloyd Elliott, Vice-President/Treasurer Charles Diehl, and Vice-President William Smith called a meeting with student representatives and active members of GW Voices to discuss GW’s effective response to Apartheid. In attendance were GW Student Association President Ira Gubernick, GWUSA Executive Vice-President Tom Fitzpatrick, four African Student Organization members, Faculty Senate President William Griffith, and Board of Chaplains members Rev. Bill Crawford and Rabbi Gerald Serotta (Clarke & Prasso, 1985). At this meeting, Diehl stated that GW desired a South Africa-free portfolio, and a tentative timetable for divestment was discussed among the attendants. Diehl met with Commonfund representatives in late September to discuss this option. However, GW officials’ movement towards divestment would slow after this meeting, as Commonfund representatives pushed GW to reconsider due to the alleged volatility of a South Africa-free portfolio. According to Commonfund representatives, the South Africa-free portfolio would have fewer managers on it, which would cause it to be less stable. In November, the GW administration stated that the issue of divestment would be put off until Commonfund actually created a South Africa-free portfolio, which would ultimately not be created until 1986.

PROTEST AND ACTION

Throughout the 1980s, GW’s campus experienced a

multitude of well-organized protests that expanded well beyond Foggy Bottom and into the heart of D.C.. In 1984 and 1985, free buses were provided to any GW community member who wished to protest in front of the South African embassy (A Day of Recommitment: A March to the South African Embassy 1985), black armbands were distributed for students to wear until Nelson Mandela was freed from prison, and alternate vending was established for various commodities on campus. GW Voices reiterated in letters to administrators that “criticism was not enough” and that divestment by American universities was one of the big-ticket issues for anti-Apartheid support (GW Voices for a Free South Africa). During the fall of 1985, Reverend Jesse Jackson gave an electric speech at Lisner Auditorium at GWU, calling “for divestment, an end to student apathy, and for an escalation of protests against apartheid in D.C. and across the nation.”(Moffett, 1985) He appealed to uninvolved students in his speech: “I ask you to lend your voices and hands and anger and compassion to ensure the safety of basic human liberties throughout the world.”(Washington, DC: Office of News & Public Affairs, 1985) Jackson also notably stated the character of the GW administration and student body was on trial in front of the whole world. For Jackson, South African blood was on the hands of those who ate subsidized food in their dorms as well as those who won scholarships from the school (Moffett, 1985). The GW Report, a weekly newsletter distributed by the university, reported on Jackson’s speech, but unsurprisingly did not mention his calls for divestment. Following Jackson’s claims, GW Voices compiled a list of tactics during the spring of 1986, which would show their commitment to the fight against Apartheid. It included setting up a coffee stand outside the present-day University Student Center, that would serve coffee from countries such as Nicaragua and Angola – countries that refused to do business with South Africa (List of Ways to Show Dedication to GW Voices for a Free South Africa).

Another action item was the creation of a task force that would facilitate immediate withdrawal from any contracts with Shell Oil Company, which continued to conduct business with South Africa despite an oil embargo. GW Voices also mailed a demands list to The Hatchet which included deadlines for administrative response. GW Voices raised awareness of pass laws in South Africa, which were designed to segregate the country’s population (Pass laws in South Africa 1800-1994) Members of GW Voices would create mock “checkpoints,” where they would stop students on the street to ask for their passes (List of Ways to Show Dedication to GW Voices for a Free South Africa) Pass laws were used in South Africa on any Black person 16 or older. They worked similarly to passports, and such identification could be asked for at anytime (Michigan State University, Pass laws) GW Voices hosted candlelight vigils throughout the school 1985-86 school year. Vigils were held every Friday

evening that spring outside the library quad (now known as Kogan Plaza), with the intent of guiltting students who were rushing from the library to get ready for a night out, and to pay respects to those under Apartheid. During the lead-up to one fall semester vigil, GW Voices sent a letter to faculty requesting signatures of support, quoting former South African Prime Minister John Vorster: “Each trade agreement, each bank loan, each new investment is another brick in the wall of our continued existence.” The letter emphasized that GW’s ties to a white minority regime must be abolished by any means necessary (Goldstein, 1985). The African Students Organization sent an open letter to GW administrators in October of 1985 which specifically noted that, as tuition-paying students, they were deeply unhappy with GW’s lack of support for South Africa. The letter also addressed that, as a campus with a multi-racial, international status, the university had a “responsibility to the World Community.” As a symbolic action, GW Voices proposed a burning of the university’s investment principles (African Student Organization, 1985). Other actions of support addressed included the demand to create a scholarship specifically for Black South African students who were banned from higher education in their home country; President Elliot would later confirm one student did receive such a scholarship (Clarke, 1986). Speaking at the same rally as Reverend Jackson, GW African Students Organization President George Mvenge said “In coming to GW... one feels one is joining an international community which has international responsibilities... when this is over, blacks in South Africa are going to remember who their friends were. One hopes GW will be counted among friends and not among enemies.”(Washington, DC: Office of News & Public Affairs, 1985) In a fall-1985 letter to an unnamed Board of Trustees member, GW Voices asked,

“For what business do America’s institutions of higher learning, which expound the universal rights of equality, justice, and freedom and hold them as truths self evident, have reaping profit from an exploitative economic system which rests upon denying those same universal rights to its own people? We find this moral contradiction disturbing; we have failed to practice what we preach.” (GW Voices for a Free South Africa, n.d.)

The Board of Trustees was set to meet in October, and GW Voices urged the member to discuss withdrawing from Commonfund. The letter bluntly stated that, while it is clear Commonfund’s investments have been fruitful for GW, the contributions were “tainted with the blood and sweat of South African blacks, who are treated as if they are no more than beasts of burden in their own land.” (GW Voices for a Free South Africa) GW Voices proposed dual action, with further calls to divest and create a South Africa-free portfolio. According to financial experts of their own, GW Voices claimed that neither divestment nor reinvestment in a South Africa-free portfolio would result in major revenue losses for GWU.

Members of the movement on campus included prominent religious leaders, such as Protestant Chaplain Reverend William “Bill” Crawford and Rabbi Gerald “Gerry” Serrotta. Both were among those from the GW community who were arrested during the protests at the South African embassy. In a letter to administrators, Crawford listed multiple action items, such as awarding Desmond Tutu with an honorary degree and opening a special scholarship and grant for South African students. He most importantly wanted to reconvene a joint administration-student-faculty committee on university investment policy, similar to the one assembled in 1985 (Crawford, n.d.) During the spring of 1986, Reverend Crawford helped organize candlelight vigils and proposals for infamous “shanty towns” that were meant to replicate and pay respects to those killed and injured in the Sharpeville Massacre (Crawford, 1986) Shanty towns were one of the most visible symbols of Apartheid, after South African law enforcement opened fire on a group of Black peaceful protestors in the shantytown of Sharpeville in 1960. This is perhaps his most famous venture with the movement, as the vigil itself was approved by Provost Johnson, but not the freestanding shanty town structure. Instead, a non-freestanding structure that resembled a shanty town was brought in as an attempt to get around Johnson’s ruling that no freestanding structure could be used. This non-freestanding structure caused security to intervene in the vigil. Students sat inside this shanty town through a fourteen-degree Fahrenheit night in protest of GW policies. Crawford praised the student body for their support, stating that the only problems encountered that night were from the administration. GW Voices member Keks Irani gave the school the following ultimatum - “either support the abolishment of apartheid and divest from all companies doing business in South Africa or support the system of apartheid and the University reaps the profits of the blood and toil of working blacks in South Africa,”(Rothfarb, 1986) This altercation caused widespread backlash against the Provost from the GW community. The Provost was also accused of not properly communicating with university security the night of the protest (Novak, 2020). In response, Provost Johnson wrote a letter to GW Voices stating that “The request for use of the Gelman Quad for the vigil and my response were clear - at least in my opinion. Since I was not asked for clarification, I assumed others found them clear as well.” Continuing, he wrote that he was at a loss on how to work together with GW Voices, implying there was nothing he could do to come to an agreement with the group (Johnson, 1986).

On April 3, 1986, about 40 protestors with GW Voices held a rally for divestment where they planned to enter Rice Hall, an administrative building. The goal was to speak with officials regarding the university’s position on divestment, as chatter on the issue had died down. They were subsequently barred from entering the building,

causing outrage from the protesters. From the outside, they demanded a final decision on whether or not the school would divest and reinvest the South Africa-free portfolio. As the university had stated in November of 1985, the school would not make a decision until Commonfund completed the South Africa-free portfolio. The portfolio was finalized in February of 1986, but GW was yet to make a statement in the weeks following the completion. No member of the administration met with GW Voices outside of Rice Hall that day, forcing the group to attempt to go inside and schedule a meeting with the president. However, this effort was met with resistance from security, who stated that only two students would be allowed to enter. This led to extreme backlash from the group, which stated that, as registered students, they reserved the right to enter the building, regardless of the number in attendance. The group proceeded to sit on the steps of Rice Hall in protest, until an administrator spoke with them. The students continued to be barred from entering the building. The only individual who was allowed entrance was Rabbi Gerry Serotta, who spoke with Provost Johnson. They came to an agreement that two members of GW Voices would be permitted to enter the building with a list of the names of all who were waiting outside. Eventually, a meeting between GW Voices and the administration was scheduled for the following week to discuss divestment (Setter, 1986). The administration held a public question-and-answer session as promised, and within two weeks of this initial protest, GW had opted to stay invested with the South Africa fund.

THE FINAL DECISION

With increasing support for divestment in South Africa, the reason as to why GW did not pull its questionable investments in South Africa remains convoluted. It must be noted that GW was not the only university that chose not to divest. Most universities stayed involved with the South Africa portfolio, opting for other actions of support towards ending Apartheid. GW did not make many efforts to participate in ending Apartheid; the most initiative that GW took was the extension of scholarships for some Black South African students. GW leadership, and certain economists, claimed that it was not easy to simply divest, and commit to the South Africa-free fund. Then-president of the University of Miami Edward T. Foote II wrote in the New York Times that divestment from South Africa would have little impact on Apartheid outlawing, even if many American universities divested. He thought that divesting would hurt the universities more claiming that “Depending on the size and mix of a university’s endowment and pension fund, the economic impact of divestiture could be proportionally greater on the university than on South Africa,” (Foote, 1985) GW President Lloyd Hartman Elliott considered divestment as early as the summer of 1985, meeting with the Student Association, Board of Trustees, and other prominent

officials to establish a “dialogue” on how to best proceed with South African investments (Novak) However, by the spring of 1986, Elliott confirmed that divestment was not an option, as it was too risky for the institution. Elliott also believed that divestment would hurt GW’s business partners in South Africa, as they needed a steady economic influx after Apartheid was outlawed (Novak). Interestingly, it was unclear at this time when Apartheid would end - or if it would ever end.

Many of these claims about the South Africa-free portfolio being risky were disputed by divestment supporters. In August of 1985, a poll reported in *The New York Times* found that 77% of Black South Africans supported sanctions and international divestments (AP, 1985). Anti-Apartheid leaders such as Reverend Desmond Tutu and labor leader Cyril Ramaphosa, both of whom were South African, disagreed with Elliott’s claims, and continued to call for divestment. Ramaphosa even stated that “Our people are suffering now and the withdrawal of foreign investments wouldn’t make any difference.” In a telephone interview, he stressed that American investments were not doing anything to help Black South Africans’ plight, and instead, were actually doing the opposite (Makotsi, 1985). While closer to home, Jesse Jackson and university students pleaded with leadership to move their holdings to an anti-South Africa fund (GW Voices for a Free South Africa, n.d.). While many institutions claimed that Black South Africans needed their American business, it was evidently pointed out by economists that divestment would not hurt the Black population any more than they were already suffering (Makotsi) Lawyer Randall Robinson told the *New York Times* in 1985 that investments in South Africa had little more than a trickle-down effect on Black South Africans (*New York Times*, 1985). In his speech at Lisner Auditorium, Jackson urged policymakers not to consider “Is it expedient?” and “Is it profitable?” and instead ask, “Is it right?” (Moffett) Jackson continued, saying that, while divestment from South Africa was long overdue, there “is no statute of limitations on justice” (Cohen, 1985) In their open letter to the administration, GW’s African Students Organization agreed, writing that “investment can not hurt blacks - it will merely accelerate the disintegration of the last vestiges of the primitive system of Apartheid.” They also stated that they found the suggestion of divestment being unhelpful towards ending Apartheid “objectionable and provocative” (The African Students Organization, 1985)

Despite all these efforts, President Elliot officially closed the door to divestment in the spring of 1986, publically announcing to about 50 students that divestment from the South Africa fund would “have no effect on social, political, or economic change in South Africa, in my opinion, other than to make us feel good for a fleeting moment.” (Clarke, 1985) Elliot lamented that while he agreed Apartheid was wrong, there was

a disagreement on “how to deal with it.” When asked if there was any possibility of GW entering the South Africa-free portfolio within Commonfund, Elliot replied that the university would be waiting about three to five years to see how the fund performs before such a move could be considered. Furthermore, the Board of Trustees, as well as the university, risked legal action if any of its investments lost money due to a change in policy (Clarke). A committee to consider divestment was also off the table after this announcement. Elliot referenced legal responsibilities to the school and to investors, stating that “No matter what his or her personal feelings or desires must be, the [legal] constraints are very real,” (Cohen, 1986) The President also used University of California, Los Angeles as an example, reminding students that UCLA had voted to divest, and was met with accusations of being irresponsible by their donors. The accusations were closely followed by a court case. He claimed that the university’s biggest responsibility lay with managing GW’s funds, and failing to “meet its fiduciary duty as prescribed by the University’s charter would be a betrayal of the governing board,” (Cohen) Ultimately, GW was one of the only schools in the District-Maryland-Virginia area to keep its investments in South Africa (Novak). Georgetown University, University of Maryland, College Park, and American University divested, with AU Black Student Alliance president claiming that these university divestments were possibly directly responsible for the release of Nelson Mandela (Erlich, 1990). It is worth noting that neither Georgetown University nor American University experienced the financial troubles that worried GW administrators. They experienced virtually no change to their universities.

THE CONTINUED FIGHT

Student protest continued after the spring announcement, with students immediately holding an all-night vigil the day of Elliot’s announcement. In October of 1986, student reporters pointed out that multinational companies such as General Motors, IBM, and Honeywell were all invested in South Africa-free portfolios; meaning these portfolios clearly were not as risky and unprofitable as the GWU Board of Trustees may have been making them out to be (Clarke, 1986). In the same *Hatchet* issue that observed these successful companies divesting from South Africa, it was also found that some of GW’s investments did not truly uphold the Sullivan Principles - something Elliot had touted just months before when he closed the door on divestment. During the 1986 fiscal year, the school invested in eight companies that did not comply with the Sullivan Principles. Through investigative work from student reporters, it was found that GW indirectly invested over \$280,000 (adjusted for inflation, \$758,268) with non-Sullivan-Principles-complying U.S. companies that had operations in South Africa. These investments were made through Commonfund (Mentzinger, 1987). No

GW officials or administrators ever responded to these claims, and in time, these investments were swept under the rug. In late March of 1987, GW Voices opted to write a letter to Reverend Sullivan in hopes that he could change Elliot's mind on divestment; a request to send a personal letter from Sullivan's office to Elliot was made. The letter would ask Elliot to divest by May of 1987 (Nissenbaum).

In January 1988, GW decided to honor the late Dr. Martin Luther King Jr. with a medal that would be presented in his name. The medal would be awarded to a person who exemplified "the ideals associated with Dr. King's life and work." (Nissenbaum, 1988) This was met with great backlash from GW community members who had not forgotten Elliot's decision to remain invested in Commonfund's South Africa portfolio. In the days leading up to The King Medal ceremony, *The Hatchet* published an opinion that reminded readers of Dr. King's stance on South Africa: "The tragedy of South Africa is not simply in its own policy; it is the fact that the racist government of South Africa is virtually made possible by the economic policies of the United States and Great Britain, two countries which profess to be moral bastions of our western world." King, 23 years prior to this article, had called for a "massive economic boycott" of the regime (Nissenbaum). Criticizing the event, columnist Dion Nissenbaum writes that all too often at GW, ideals are thrown aside in favor of "annual, one-shot publicity events," and that Dr. King would not be content with his name being used at an institution that contributed to South Africa's government. The article ends scathingly - stating that until GW takes stronger steps in ending racial inequality, both at home and abroad, the university awarding a medal in Dr. King's name was "as hypocritical as South African President P.W. Botha handing out a medal in the name of Steven Biko - the South African journalist killed while in police custody." (Nissenbaum)

President Elliott retired at the end of June of 1988, never having divested from South Africa. Speaking to the Board of Trustees after this announcement, Chairman Everett W. Bellows stated that "The Elliot-era has been one of unparalleled academic growth and achievement and we are now enjoying the fruits of years of diligence and hard work by the President and his associates." (Lingo, 1987) The tensions surrounding South Africa and Elliott's decisions were not mentioned, despite being a large part of his time at GW. He was succeeded by Stephen Joel Trachtenberg, who inherited the divestment problem. As late as October of 1990, students were still campaigning to the president for divestment. A member of the Progressive Student Union sent Trachtenberg a letter in August 1990 and followed up again in early October after never having received a reply. This student's inquiry was questioning why GW was still invested in South Africa, considering the fact that Reverend Sullivan rejected his own principles years before, in the late 1980s, for not being enough (ChristianityToday.com, 2001). The

letter also posed the question of why the school had not followed President George H. W. Bush's administration in supporting economic sanctions on South Africa. It also singled out Trachtenberg, asking why, with his emphasis on public relations, Trachtenberg had not thought divestment would be good for the university's image. Calling on former-President Elliot's claims about the success of the South Africa-free portfolio, the student posed the question of whether there was a risk, in 1990, in entering this portfolio. The student wrote that they found it shameful that, despite continued protests at GW on a matter from the 1985-1986 school year, the university had made virtually no changes in the new decade (Sigal, 1990). Ending his October follow up letter, the student wrote "I would appreciate a response on this matter, as it is my tuition money that is being invested against my will in companies in South Africa." (Sigal, 1990) This statement called back to student protests in the 80s, which constantly reminded the administration where their money to invest was truly coming from. Trachtenberg ultimately did not choose to divest either, leaving GW invested in South African companies throughout the tumultuous 1990s.

A LEGACY OF GW PROTEST

In 1985, students carved "Free Mandela" into a drying portion of concrete on campus near a loading dock at Lisner Auditorium. It is officially known as the Nelson Mandela Historic Sidewalk Slab, and represents GW students' "passion for justice." In 1999, President Trachtenberg preserved the slab and moved it to the newly transformed Kogan Plaza, "citing it as a symbol of the student body's commitment to political and social justice." Today, this is one of the most notable relics from this era in GW history. In 2012, Assistant Vice President for District of Columbia Relations and professor of African-American history Bernard Demczuk said, "This wasn't just a bunch of long-haired, crazy GW students deciding to get arrested or deciding to write something in the cement, this was an international crisis for the South African government," (Rens, 2012) GW TODAY, the university's official online news source, mentioned student protests against South Africa, but made no mention of the fight for divestment, instead publishing on the website shortly after Nelson Mandela's death, "From 1984 to 1986, hundreds of Americans—including GW students—held political demonstrations at the South African Embassy in Northwest Washington, D.C., urging Congress to pass a sanctions bill that would cease trade relations with the country..." (GW Today, 2013)

GW's reluctance and ultimate unwillingness to divest from South Africa can be characterized by administrators as a financial decision that protected the institution from economic hardship. That is the story the university would like to tell. Instead, it is a stain on the legacy of GW that paints it as an institution that was too concerned with making trustees happier, rather than defending people

and protecting morals. This legacy of investments in questionable businesses continues to this day, with the school still being one of the only universities in the nation to still contribute large sums of money to the fossil fuel industry, even as the climate changes. The decision to not leave Commonfund is used as an example today by students protesting other GW investments. In 2017, Students for Justice in Palestine called for the university to divest from businesses that profited from the occupation of Palestine. The group called back to the 1980s, citing the following release: "In the 1980s, GW failed to heed humanitarian calls to divest from apartheid South Africa. Now GW has the opportunity to avoid repeating the mistake of supporting an apartheid regime by divesting from corporations that profit off of the occupation of Palestine, which prevents Palestinians from accessing basic necessities and strips them of their rights." (Roaten et al., 2017) As much as GW leadership would like to forget the movement led by GW Voices and other anti-Apartheid supporters, student and faculty protests defined the 1980s for GW, with their efforts resulting in scholarships for South African students, successful protests at the South African embassy, and, most visibly, a Free Mandela memorial in Kogan Plaza.

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Tennessee Promise Effect on Retention Rates at Tennessee Community Colleges

TOLY SIOPSIS

ABSTRACT

The Tennessee Promise is the first state-wide, low barrier entry scholarship that covers full tuition costs for any in-state public 2-year institution. This novel program has increased attendance to in-state institutions dramatically, but researchers have still not answered whether these students have been successful in college as measured by their persistence. This paper aims to address the gap by using a difference-in-difference estimator and a dynamic multilevel latent factor model to examine the effect the Tennessee Promise had on retention rates of in-state public 2-year institutions. The models find a 5.87% and 5.41% effect respectively which translate to an increased loss by between 295-590 students per year per college. To reach the Drive to 55 programs goals, this finding may be an important red flag to the Tennessee government indicating a need for greater support to community colleges.

INTRODUCTION

Increased educational attainment is correlated with all sorts of positive economic metrics. A person with more education earns more, lives a longer and healthier life, and is less likely to divorce, for example (Aughinbaugh et. al., 2013; Lovenheim, 2011; Roy, 2020). Further, education can be a method to exit the generational poverty cycle, something of chief concern to national development (Lovenheim, 2011). Nonetheless, the benefits of education come to a select few in the United States thereby stunting the progress of the US economy and the personal wellbeing of its citizens. This paper focuses on a novel program, the Tennessee Promise, that attempts to change the human capital considerations of attending higher education institutions. Ultimately, the study uses two different models which estimate an average 5.5% decrease in retention per school due to the Tennessee Promise. Although retention does not necessarily mean a decrease in degree holders, it is an important indicator for possible future trends.

Internationally, literacy rates have grown from 42% in 1960 to 87% in 2022 (Buchholz 2022). Citizens in the US during 1960 were immensely more productive than their international counterparts due to education levels being so low abroad. Therefore, even those with a basic US high school education garnered high wages at manufacturing jobs. As the education level rose in other countries, firms decided to move to areas in the world with a greatly cheaper yet similarly productive workforce. The number of jobs for less educated workers has

grown smaller since, especially in the manufacturing sector. Tennessee understood this problem, and Governor Bill Haslam implemented his vision, which began when he was the mayor of Knoxville, of providing zero cost higher education up to the associate's level. His program, Knox Achieves, was a city-wide scholarship program that was successful in increasing the number of high schoolers from Knoxville who chose to go to college. Given this initial success, Haslam pushed for a state-wide program of the same type.

The Tennessee Promise (TNP) scholarship, implemented in 2015, is a state-wide last dollar scholarship that is part of Tennessee's "Drive to 55". The Drive to 55 program's goal is to get at least an associate degree or technical certificate into the hands of 55% of the population of Tennessee by 2025. On the Drive to 55 Alliance website, they state their mission to be one not just "for higher education, but a mission for Tennessee's future workforce and economic development" (driveto55.org). To do this, the TNP provides funding for students to attend any two-year public institution or technical college within Tennessee for free, provided they meet some simple requirements. Students must apply before the first year anniversary of their graduation, be under 19 years old, fill out the TNP application form, submit a Free Application for Federal Student Aid (FAFSA), attend a mandatory meeting at their high school where they will be given a mentor, complete 8 hours of community service, and apply to an eligible institution. There are no GPA or testing requirements to receive the scholarship.

To maintain scholarship eligibility through the course of their studies, students need to maintain a 2.0 GPA and complete 8 hours of community service per semester of award (TN Promise).

The TNP's low barrier to entry expanded the demographic that considered post-secondary education a viable investment. Human capital theory on education tells us that individuals have an internal discount rate (or return on investment) to education. Factors such as the ability to pay tuition and perceived ability to succeed socially and academically in college alter this internal discount rate. We may think about how the average yearly tuition of a 4-year public institution has grown from around \$7,800 in 1963 to around \$19,400 in 2020 in the US in 2020 dollars, while real hourly wages have grown by from \$20 to \$22 from 1964 to 2018 in 2018 dollars (NCES, 2020; DeSilver, 2020). Because of the increased tuition without a proportional increase in wages, even with a high return on investment of education, the opportunity cost of lost wages while studying overshadow this return due to the exorbitant loans students must take on. Even though the average return on investment for an associate degree is 98% over 10 years according to the Education Data Initiative (2021), students may not be aware of this information or have been influenced by their peer group to estimate a lower Return on Investment (ROI) regardless of the data. Thus, prospective students from lower income strata do not choose to invest in their education. The TNP changed considerations by removing monetary costs from investment considerations. Indeed, Nguyen (2020) finds that average first-year full-time enrollment after the TNP implementation rose by around 40% or about 500 students per community college. Considering these colleges have an average total enrollment of 5,000-10,000 students, this increase is extremely significant.

Alleviating monetary costs does not necessarily alleviate all costs, particularly, social and academic ones. As direct monetary costs disappear upon receiving the scholarship, we may expect that other considerations become more salient. However, because monetary considerations are so salient in the current psyche of Americans, the elimination of tuition costs obscures upcoming aptitude considerations due to the extremely high return on educational investment. Two examples help here. Firstly, a student who did not perform well in high school may see the lack of GPA or test score requirements to the scholarship as a ticket to get into college for free, improving their life circumstances. Therefore, their academic aptitude considerations in personal discount rate calculations fall to the wayside. On the other hand, a first-generation student may underestimate the academic and social support they might require to feel they belong at their chosen institution. Both students may reconsider their investment after the end of their first year of schooling because of misestimated difficulty or insufficient support.

The onus of alleviating academic and social stress cannot fall solely on the student, though. Schools also can and should support their students if they struggle, no matter the background. Yet, community colleges, in general, are not geared to providing extra support because of their historical enrollment record. The TNP shocked the Tennessee community college system with a more diverse, academically weaker, and younger student body (Littlepage et. al., 2016). Under-resourced schools may see more of their students reconsidering their investment because of the information gap of expectations and needs between administrators and students.

This paper examines the human capital decisions of students after they started attending schools by analyzing retention rates before and after the TNP across all 13 community colleges of Tennessee.

I choose to study retention rates because an increase in enrollment may be overshadowed by a decrease in retention rate. The full-time retention rate is calculated as the percent of students from the previous fall semester that reenrolled as either full-time or part-time in the following fall. If less students are not staying to complete their studies, then that could mean a slower progress towards the Drive to 55 goals. However, progress towards these goals would be better measured by the amount of degree-holders in Tennessee, as increased enrollment may outpace a decrease in retention. Unfortunately, educational attainment data by state is only released for those over 25 years old. The first possible graduating year of students receiving the TNP is 2017 and their average age is about 20. That cohort turned 25 this year, so there is no available data for them. It is then important to look at retention rates, because it could be an early indicator of inefficiencies in the program.

To determine causal effect, two models are presented, a differences-in-differences (DID) model and a dynamic multilevel latent factor model (DM-LFM), a type of synthetic control method which uses Bayesian calculations to obtain model predictions (Pang, 2021). These methods attempt to estimate a causal effect by comparing the observed outcomes to the unobserved untreated outcome. Therefore, these models, at their core, are chiefly concerned with constructing counterfactual information. The DID method accomplishes this using frequentist statistics whereas the DM-LFM uses Bayesian methods.

The main assumption of DID models is that, before the intervention, the treated and control groups follow similar trends. However, this assumption is not mathematically testable. The data do suggest that the data has a weak common trend, but DID models are known to overestimate in these conditions. The DM-LFM bypasses this assumption allowing for more robust analysis. The main assumption for the DM-LFM is latent ignorability of the data, a more easily met assumption. Other than

assumptions, the DM-LFM warns against having less than 20 pretreatment periods, but because of the large ratio of control units to treated units, I show later in the paper that this constraint is also not important.

A further benefit of using the DM-LFM specifically, rather than other synthetic control methods, is the interpretation. Because the DM-LFM uses Bayesian methods, we calculate a credibility interval rather than a confidence interval. In this way, we can be certain about the causal effect of the TNP. Both frameworks find similar, significant effects of the TNP with estimates very near each other. The DID estimates a 5.87% decrease and the DM-LFM a 5.41% decrease.

Yet, the relative similarity in treatment effect does not translate to similarity in significant covariates. The DID model estimates that nearly every covariate is significant. However, the DM-LFM finds no covariates significant but does estimate that there are at least 5 significant unknown factors.

Though we cannot draw conclusions on what is driving the decrease, it is certain the TNP decreased retention. In terms of students, a 5.9% decrease in retention at an average sized Tennessee school translates to a 295 to 590 student decrease per school per year. This result is troubling but may simply be a red flag rather than a sign that the program is ineffective.

LITERATURE REVIEW

Human Capital in Education

There is substantial literature on how and why students choose to go to college. The main theory that many papers draw upon is Rational Choice Theory (Homans 1961). Rational behavior states that there are reasons to individuals' actions whether or not the behavior is on the surface irrational. The main pillar of this theory is that individuals seek to maximize their own utility and will conduct a cost-benefit analysis to determine what action to take. The applicability of this theory is extremely broad as the theory attempts to describe decisions. Therefore, any decision can be analyzed.

George (1998) posits three steps that individuals go through to determine their benefit. Individuals must first consider the expected benefit from making the decision. Then, individuals consider the direct costs of making the decision. Finally, individuals must consider the opportunity cost of their investment or how much benefit they could have attained by taking a different decision. Extending this framework to education, choosing to invest in college requires individuals to think about, primarily, how much the investment would increase their earnings over their lifetime. Then, they must calculate the direct costs of tuition, books, room and board, etc. Finally, they must take into account their foregone earnings from not entering the workforce immediately.

Classically, this model concerns itself mainly with

calculable monetary costs associated with the decision, inherently limiting our analysis of individual behaviors. Nonetheless, human capital researchers have also expanded what cost considerations include. Townsend and Wilson (2009) examine what factors affect persistence in community college students who transfer to 4-year institutions. They find that persistence depends not just on cost but also on academic preparedness, educational aspirations, academic support, and social integration. Therefore, even in the face of high monetary costs, students still consider non-monetary costs. These findings are important in the construction of my own model as it should also include non-monetary constraints.

Tennessee Promise

The literature on scholarship program's impact on enrollment, persistence, and outcomes is quite large. However, existing literature mainly focuses on scholarship programs that are privately funded; meanwhile, if they are publicly funded, the programs are restricted to a city or county. Further, many programs restrict entry on the basis of merit and or financial need. One simple reason for this focus is that statewide, publicly funded, low barrier entry programs are extremely new. The TNP instituted in 2015 was in fact the first program of this kind in the US. Since then, a few other states have implemented similar programs (Helhoski, 2022). Now, research on Promise programs is building as more and more effects can be observed the older the programs become.

Research on scholarship programs also mainly focuses on four-year institutions; yet, in 2019, 49% of employed college graduates in America attended community college (Milan 2021). The small literature on two-year institutions is driving researchers to fill the gap, especially given the novelty of the Promise program which is specifically for two-year degrees. There is now a small literature on the TNP program as well as the 6 other state programs. Nguyen (2020), for example, is the first to examine enrollment response to the TNP program.

In his paper, Nguyen investigates whether the TNP program increased full-time first-time undergraduate enrollment at Tennessee community colleges. Nguyen obtains his data from the Integrated Postsecondary Education Data System (IPEDS) from the National Center for Education Statistics (NCES). This database contains information on all higher education institutions in the US. After obtaining the data, Nguyen applies two different statistical methods to determine causality. First, he uses differences in differences (DID) and then uses a more modern generalized synthetic control estimation (GSC) to bypass the common trends assumption. Using DID, Nguyen finds a 40% increase in enrollment at Tennessee's community colleges or about 500 extra students per college. The GSC estimation yields similar results.

Nguyen's finding is important since such an influx of students can put a strain on school resources such as

student support. In their paper, Ben Littlepage et. al. (2016) interviewed three administrators from unnamed community colleges in Tennessee to illuminate challenges brought on by the TNP. There were two rounds of interviews, one before TNP was implemented and one after. In the second round of interviews, 6 months after orientation, administrators reflect on the accuracies of their predictions. Indeed, they saw some of the largest, youngest, and most diverse classes ever. However, they misestimated the amount of learning support needed by students. All three interviewees stress how much strain the academic needs of the new students put on both their infrastructure and budget. As a result, they were faced with a shortage of instructors, tutors, and classroom space for their new students. These academic shortfalls could surely affect retention rates, because if a student does not receive proper support, that student may reevaluate their return on investment for education. Administrators recognize this and are working to implement better academic support programs. Consequently, at the onset of the Promise we should observe a decrease in retention followed by an increase to normal levels as administrators implement better support programs.

Further than academic support, administrators also observed a greater than estimated demand for social services. The administrators did not anticipate the demand due to older commuter students being the historical majority of enrollees. For students out of high school, it makes sense that they would seek greater social integration since high school is highly socially integrated. However, if they are not able to find that - again, they may rethink their investment in education, as friends do not only offer a means of relaxing or having fun, but they can also act as a support network when a student is struggling emotionally or academically. We may anticipate that colleges with greater socially integrative programs will have higher retention rates due to this.

Now that we have established that the increase in students at community colleges was statistically significant and placed a strain on academic resources, we may turn to retention rates. There is a research gap on this topic as there have been only dissertations written on retention and persistence due to the TNP. In her dissertation, Dawn Englert (2021) gathers data from three community colleges to discern the enrollment, retention, and persistence effects of the TNP. She collects her data from the Tennessee Board of Regents which collects semester to semester data on enrollment and retention. I focus, in this paper, on her analysis of retention, because it is of importance to the paper's topic. She uses a test of proportions to analyze retention to compare the retention rate of the year pre-launch to both the launch year and the post-launch year as well as launch to post-launch year. Her limited scope of time is one of the weaknesses of the study, as she points out. At the three colleges she surveys she finds mixed results. Some schools increased,

while others decreased or remained stagnant.

Her mixed bag of results combined with her simplistic statistical method demonstrates a need for more detailed and robust modeling. She does not investigate what makes these schools different, for example. However, it is clear different colleges have different situations and outcomes, so the model below includes many different control variables. Further, the test of proportions does not allow for control variables. As a result, her model may not capture the true effect of the TNP.

We have now shown how the TN Promise has led to a statistically significant increase in enrollment. This large enrollment has put a strain on administrators of community colleges, especially with regards to social integration and academic remediation. Because each school's administration confronts the influx differently, we also see in Englert's (2021) paper how different retention outcomes are for different schools. Unfortunately, her analysis does not go deeper into the factors of each college that may affect the retention rate. Therefore, it is important to bridge this research gap, so all schools may adopt the best practices of others increasing their retention rate.

DATA DESCRIPTIONS

Institutional Data

Institution level data for this empirical analysis was collected from the Integrated Postsecondary Education Data System (IPEDS) maintained by the National Center for Education Statistics (NCES). The main variable of interest is full-time first-time undergraduate retention rate at degree-granting public two-year colleges during the fall semesters of 2005-2019. There are concerns in other papers about the continuity of data because of some changes to the data collection process in 2008 (Nguyen, 2020). However, the variables chosen for this model were not affected by these changes. The time-varying controls from this database are: percent of core expenditures on student services, academic support, and instruction; student-to-faculty ratio; institution size; and degree of urbanization of the surrounding area.

These institutional controls are chosen because of their potential effect on retention. The spending on student services, academic support, and instruction, as stated before, are all reasons that students may rethink their investment in education. A student who does not feel supported academically, mentally, or emotionally will most likely leave the institution. In the same vein, the student-to-faculty ratio can also be an indicator of how much individualized support a student may receive. It follows that if schools spend more on supporting the needs of their students, students will feel more comfortable and persist longer.

Institution size, on the other hand, could work in different ways. For example, a large institution offers many

opportunities for students to connect in different ways socially i.e. a large variety of clubs available to participate in. However, large institutions could also feel faceless and difficult to navigate, thus we may expect a mixed effect on retention. Similarly, the degree of urbanization of the surrounding area can work in different ways. Those in a more urbanized area may stay at their school because of the urban amenities but also may leave because of exposure to opportunities elsewhere. Conversely, those in less urban areas may not have many other schools nearby which may cause them to stay while the lack of amenities in less urban areas could push others to seek schooling elsewhere.

For the control institutions, I select all degree granting, two-year public institutions from the surrounding states. I use bordering states because these states are more likely to experience similar factors to what Tennessee schools' face. Those states are Virginia, North Carolina, Georgia, Alabama, Mississippi, Arkansas, and Missouri, and Kentucky. Above, it was noted that Tennessee was the first state to implement a scholarship program of this kind. However, Kentucky enacted its own version of the Promise scholarship, and therefore, institutions there were excluded from analysis. There are, in total, 180 control institutions and 13 treated institutions.

ECONOMIC DATA

Quarterly Census on Employment and Wages

This model also includes annual average wage data from the National Bureau of Labor Statistics Quarterly Census on Employment and Wages (QCEW) in order to capture opportunity costs students incorporate into their educational investment decision. I disaggregate the data on North American Industry Classification System codes to the 4 digit level and the county the institution is located in. I include all sectors except the mining sector due to missing data. The sectors are as follows: construction, manufacturing, financial activities, information, trade, professional services, education and health services, and leisure and hospitality.

It is useful to look at wages because they can capture some part of the opportunity cost of education. Opportunity costs play a role in every decision, so it is important that the model captures at least some factors. Further, wages are something visible to students looking for alternatives. They are easily found through job sites or asking friends in the business. Therefore, if wages in a sector with low educational requirements, such as construction, increase dramatically, we may expect that some students will raise their personal discount rate because the perceived loss of current income grows relative to the perceived return on investment of education. With sufficient growth of opportunity costs students will drop out to pursue a career in those fields. Conversely, when wages rise in a sector with high

educational requirements, such as information, students should perceive a higher return on their education and persist through school.

The second assumption may hold for traditional 4-year institutions, but it must adjust to account for 2-year institutions. Because there are some degrees that require 4 or more years of schooling, such as health and education, a rise in the wages could result in students leaving 2-year institutions for 4-year ones. Nonetheless, other students may plan for this from the beginning, choosing to pay more expensive 4-year tuition for only two years.

Federal Reserve Economic Data

Finally, the model includes unemployment data by educational attainment from the Federal Reserve Economic Data (FRED) website because it captures an aspect of return on investment. For example, when the unemployment for an associate degree rises, students may use job security as a reason to raise their personal discount rate. A student may reason that if associate degrees do not grant job security, institutions whose primary degree is an associate do not grant a high enough return on investment. Students may change tracks to a four-year degree and transfer from the school as a result.

Descriptive Statistics

Full descriptive statistics for variables used in the model can be found in Table 1 and 2. Table 1 contains in-state data and Table 2 out-of-state.

Locale is measured as the degree of urbanization of the surrounding campus as measured on a scale of 1-4 where 1 is a city, 2 is a suburb, 3 is a town, and 4 is rural. According to the NCES, the US Census Bureau developed the methodology to assign these values. TN schools are on average located in suburbs since the mean of the locale variable is 2.3. Out-of-state schools are more urban with a mean of 2.9.

Institution size is on a scale of 1-5 where 1 is an institution of under 1,000 students and 5 is an institution with 20,000 or more students. This includes any student enrolled for credit. The TN school sample is mainly composed of medium institutions of between 5,000-10,000 students. Therefore, the student change caused by a percentage change in retention rate is best interpreted in terms of this average. The control group is, on average, smaller with average enrollment at 1,000-5,000. This correlates with average student-faculty ratios well. TN schools have on average higher enrollment and, hence, higher student-faculty ratio considering how similar spending on instruction is across schools.

Our main variable of interest, retention rate, has extreme variability and values at our control group institutions. The minimum retention rate in our dataset is 8% at Pamlico Community College in 2006, while Cape Girardeau Career and Technology Center managed to

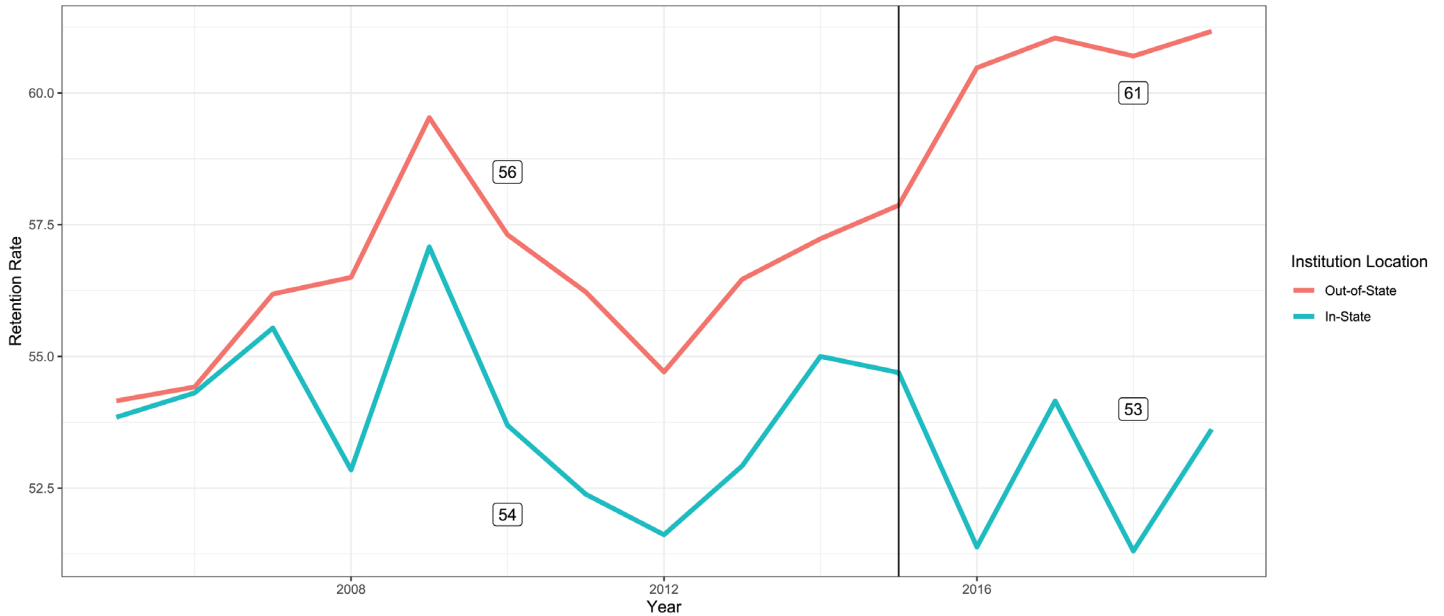
Statistic	N	Min	Mean	Max St.	Dev.
Locale	195	1	2.3	4	1.3
Institution Size	195	2	2.9	4	0.6
Retention Rate	195	42	53.6	82	4.9
Student-Faculty Ratio	195	7	18.5	32	5.1
% of Student Services	195	1	10.0	20	2.4
% of Academic Support	195	2	8.1	15	3.1
% of Instruction	195	29	44.1	55	5.5

TABLE 1. | *Tennessee Institutions Descriptive Statistics*

Statistic	N	Min	Mean	Max	St. Dev.
Locale	2,666	1	2.9	4	1.1
Institution Size	2,666	1	2.3	5	0.7
Retention Rate	2,666	8	57.5	98	9.1
Student-Faculty Ratio	2,666	2	15.7	43	5.7
% of Student Services	2,666	1	9.4	43	4.0
% of Academic Support	2,666	1	8.2	32	3.7
% Instruction	2,666	14	45.0	69	7.2
Construction Wage	2,666	0	38,119.6	87,606	12,023.2
Manufacturing Wage	2,666	0	45,250.1	120,644	14,316.6
Trade Wage	2,666	16,330	31,667.4	95,611	7065.2
Information Wage	2,666	0	42,016.2	151,653	19,428.8
Finance Wage	2,666	0	43,659.0	126,877	15,575.0
Professional Wage	2,666	0	38,766.0	135,431	15,012.3
Education Wage	2,666	17,011	36,006.1	66,148	8,582.6
Leisure Wage	2,666	0	14,139.1	52,967	4,041.2
Other	2,666	0	25,207.8	54,376	7,821.1

TABLE 2. | *Out-of-State Descriptive Statistics*

Figure 1: Average Retention Rate by Institution Location



retain 98% of its students in the same year. The mean is 57.5%. The variability is less extreme for the treated schools and they have a lower mean of 53.6%. To get a better understanding of what the data looks like, a line graph is helpful. Figure 1 shows the average retention rate of the treatment and control groups before and after the TNP shock. As we can see from the graph, out-of-state schools had an average retention of 56% before the shock and 61% after whereas in-state schools had averages of 54% and 53% respectively. We may conclude, then, there seems to already be a systemic difference between in-state schools and out-of-state schools.

This line graph also helps to support our common trends assumption. The two lines loosely follow each other until 2015. Then, Tennessee schools’ retention sharply drops whereas the control group’s rises. The differences between the two means reveal this trend as well. Before 2015, the difference in means was 2%, but after, it is 8%.

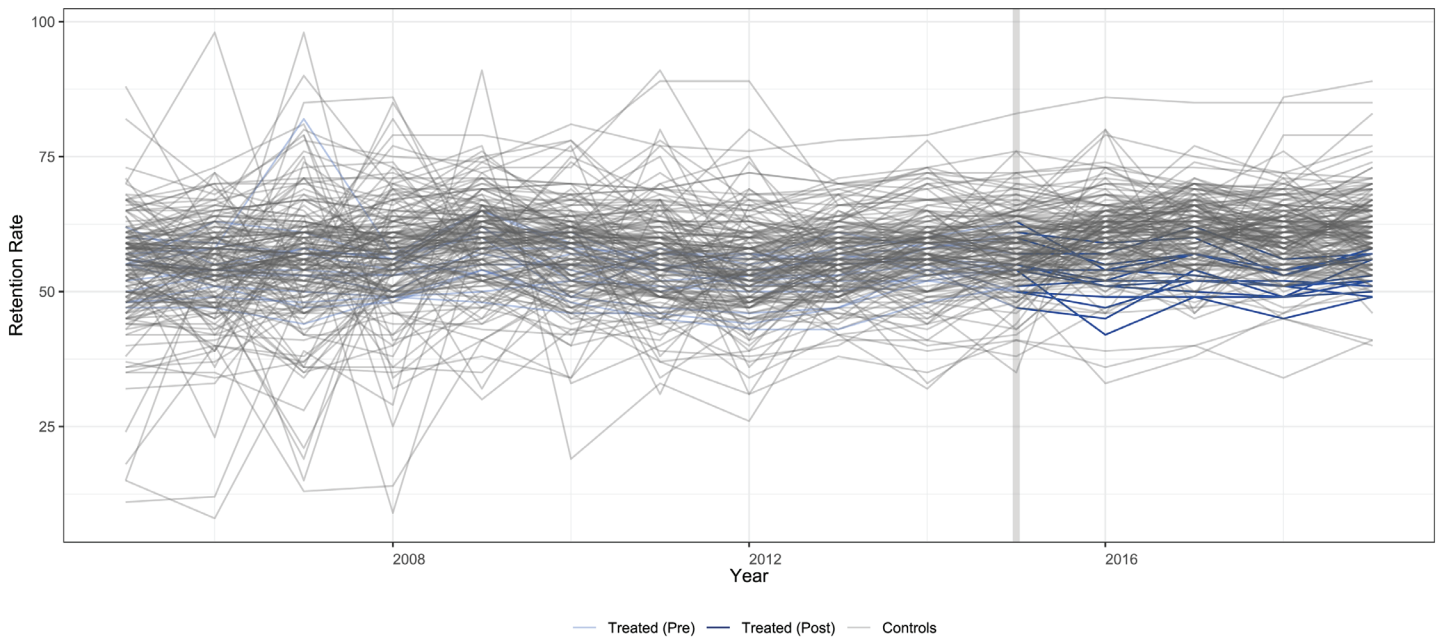
The trend is reason to believe that there is at least some evidence towards confirming the common trends assumption as well as a TNP effect. However, a closer look at the raw data shows how different the outcomes within groups are. Figure 2 shows the sporadic nature of each institution’s retention rate with the control group in gray and the treated in blue. This is a reason why the DM-LFM estimator may be a better predictor.

The percent of core expenses spent on student services,

academic support, and instruction are interrelated. The core expense of each school is the sum of its spending on instruction, research, public service, academic support, student services, institutional support, scholarships and fellowships, and other expenses and deductions. Figures 3, 4, and 5 summarize these three variables in the same way as above with in-state and out-of-state averages plotted separately over time. The graphs show that both locations follow similar trends through time, and further that average spending does not change drastically between the two time periods. We can see that spending on instruction is highest with mean 42.9% whereas average spending on academic support is the lowest at 8.2%. Average spending on student services is 9.5%.

Wages in all sectors of the Tennessee economy average higher than those in the surrounding states. Interestingly, the manufacturing and financial services have the largest gap between the two groups. Manufacturers in Tennessee earn on average \$7,000 more per year and people in financial services (banking and real estate services) earn approximately \$8000 more per year.

National data for unemployment by education is summarized in Figure 6. It shows the negative correlation between education level and unemployment rate: as education level increases, unemployment decreases. Further, the more the education, the less of a gap between unemployment rates. For example, the difference between high school educated unemployment

Figure 2: Retention Rate Over Time Raw Data

rate and associate degree holder rate is much larger than the difference between bachelor degrees and master's degrees. This trend suggests that people who are unemployment averse will not drop out of an associate program to go straight to the workforce, but they may transfer to a 4-year institution for lower unemployment in the future.

METHODS

This paper uses two different methods to calculate the effect of the TNP. The first method is a simple DID estimator framework. This method is chosen for several reasons. Ideally, we would compare Tennessee institutions' actual retention to what they could have achieved without the program. However, because the program is ubiquitous across schools, this is impossible. We may decide, then, to use a difference in means, yet this method would suffer from potential bias. Each state has its own set of circumstances that affects retention rate even before the TNP, something a difference in means would not account for. Therefore, we use a DID estimator. The DM-LFM method supplements the DID in two ways. First, we bypass the common trends assumption and substitute it for the latent ignorability assumption, a less stringent assumption. Second, Bayesian model estimation provides highly robust results, especially when the available data and number of simulations are high. In our case, we have over 2500 data points that the method can use and we run 100,000 simulations. This should provide very robust results.

DID estimation

The main model is as follows:

$$Y_{ist} = \beta_1 \pi_i + \beta_2 Year_t + \beta_3 TN_{is} + \beta_4 YR16_t + \beta_5 (TN_{is} * YR16_t) + \beta_n x_{ist} + \varepsilon_{ist}$$

where Y_{ist} is the retention rate at college i in state s in the year t . TN_{is} is a binary indicator of whether the college is located in Tennessee which takes on a value of 1 if this is true. $YR16_t$ is the second binary indicator indicating years after 2016, our treatment period. The use of 2016 rather than 2015 as the start of the treatment period is opted for, because 2015 retention rates reflect the decisions of the 2014 cohort which were not subject to the TNP shock. π_i and $Year_t$ capture the college and time fixed effects which account for time-invariant institution-specific unobservable effects and macro-level time trends that might influence the outcome. x_{ist} is the vector of observed time-varying and invariant covariates. The main coefficient of interest is β_5 which captures the average retention rate effect of the TNP on public colleges in the state.

Critical to this framework is the common-trends assumption. This assumption requires the treatment and control population follow similar trends leading up to the treatment. Although there is no set analytical way to calculate common trends, visualizations can help. Figure 1 shows the averages of the treatment and control groups before and after the TNP shock. As we can see from the graph, out-of-state schools had an average retention of 56% before the shock and 61% after whereas in-state schools had averages of 54% and 53% respectively.

Figure 3: Average Spent on Student Services as a % of Core Expenses by Institution Location

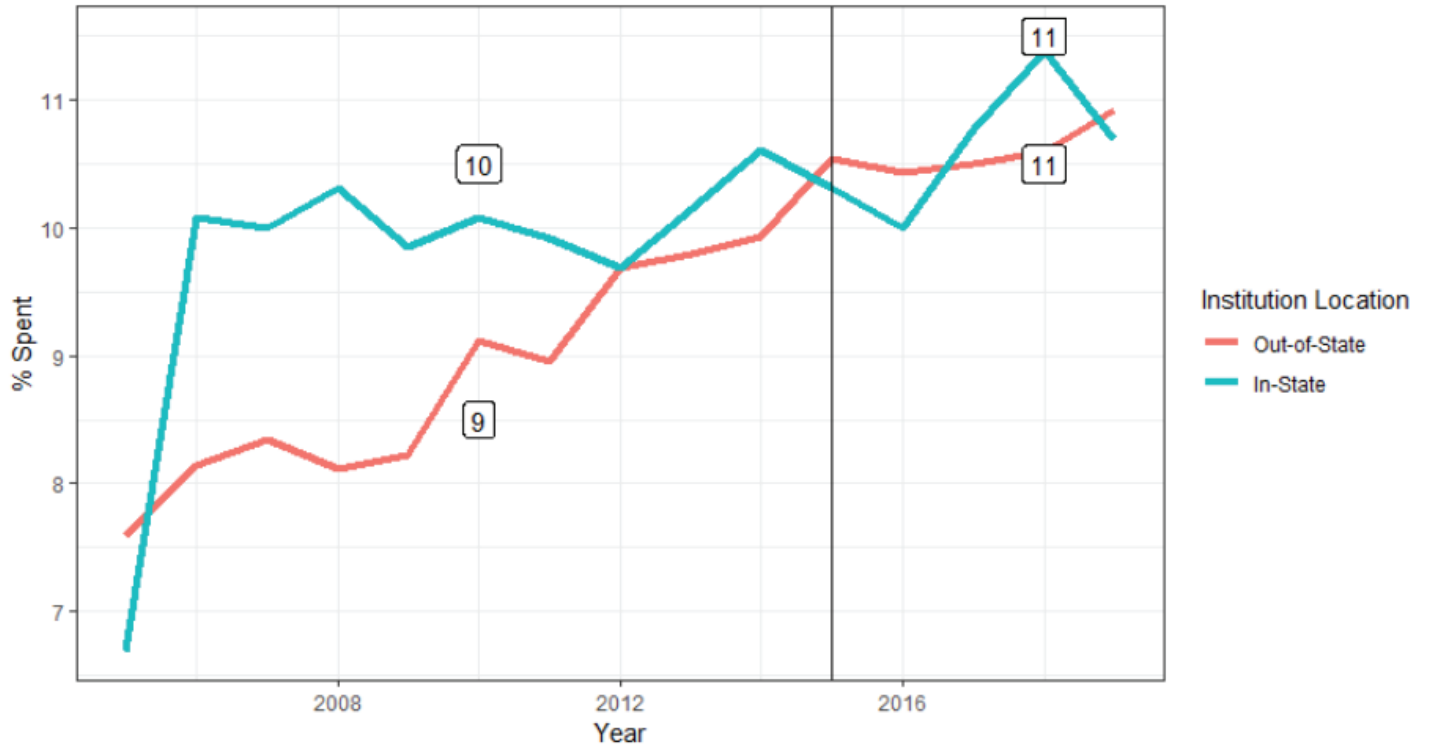


Figure 4: Average Spent on Academic Support as a % of Core Expenses by Institution Location

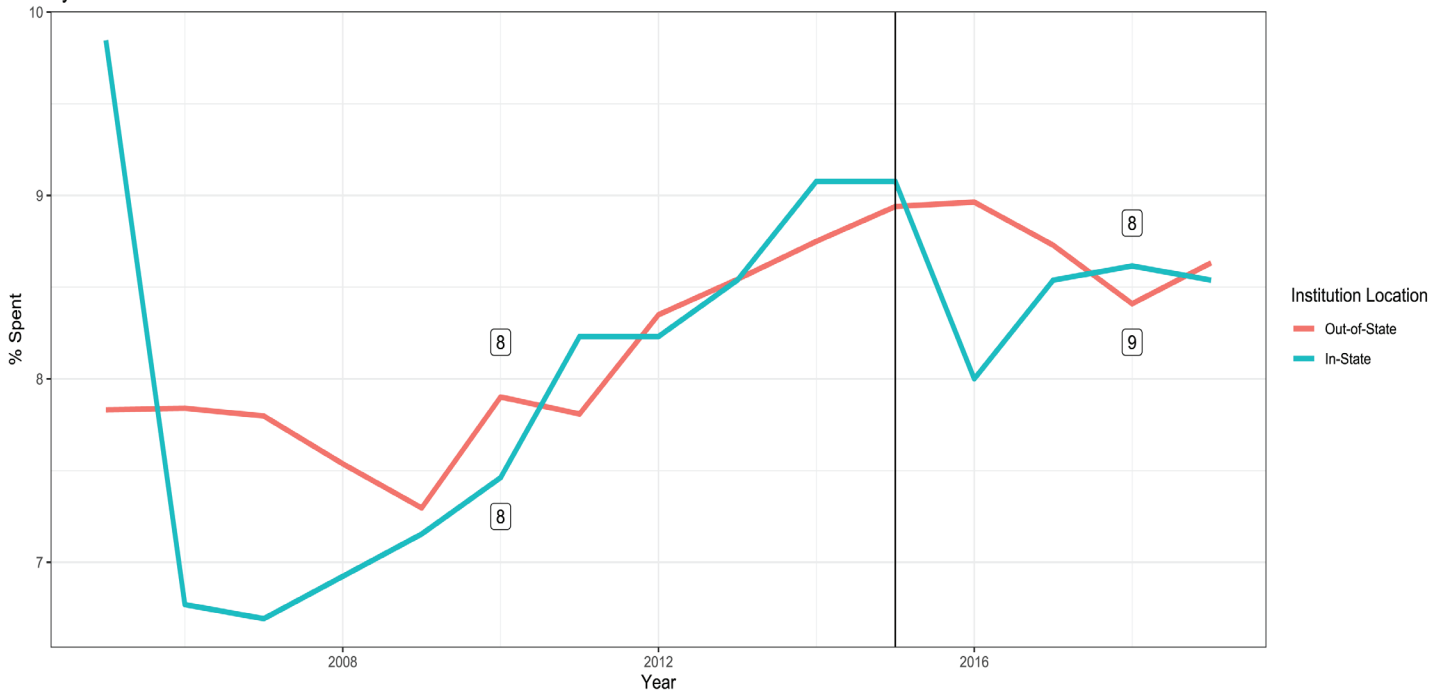


Figure 5: Average Spent on Instruction as a % of Core Expenses by Institution Location

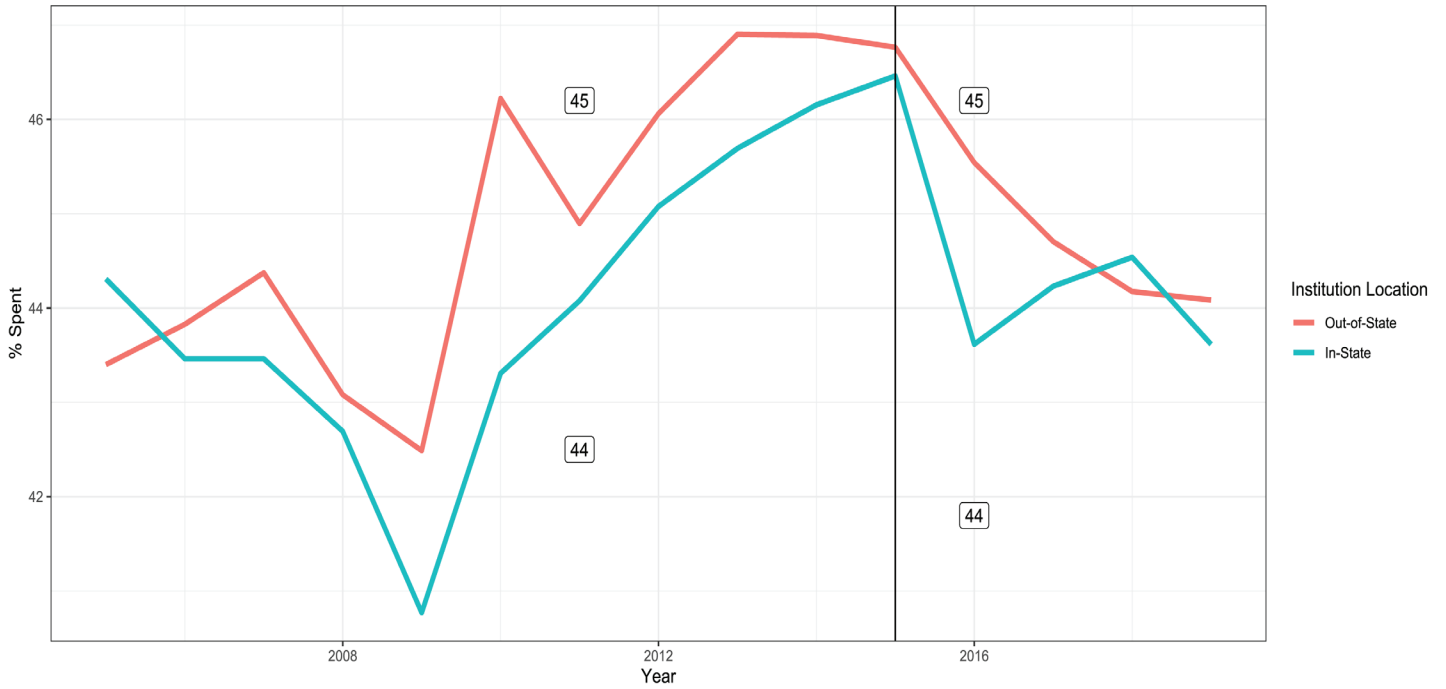
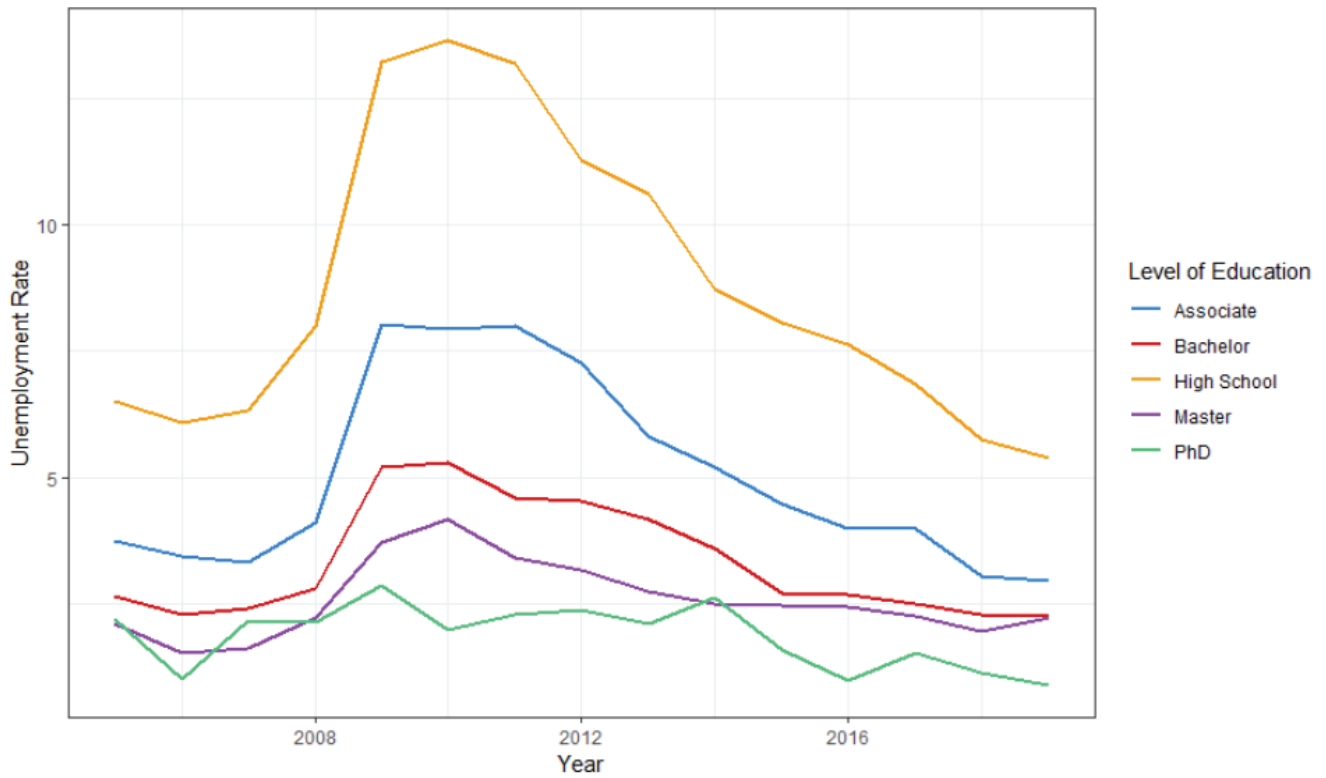


Figure 6: National Unemployment Rate by Educational Attainment by Year



Comparing the lines closely, we can see that there seems to be a weak common trend between the two groups before 2015. After 2015, there is a sharp rise in the out-of-state retention with a similarly sharp fall in the in-state retention.

DM-LFM method

I then use a Bayesian alternative to the synthetic control method proposed by Pang et. al. (2021). At their core, Bayesian methods take prior distributions of known data and output posterior distributions of unknown data using prior probability distributions. Prior probabilities can either be completely neutral or have assumptions built in. I use a completely neutral prior probability for all covariates: a normal distribution with mean 0.001. The posterior probabilities resulting from the Bayesian equation are then recirculated through the process to obtain more and more posterior distributions. The more times the posterior distributions are used as priors and the more data available, the more likely the model will converge on the true mean effect.

There are two main advantages to this method over synthetic control methods according to Pang et. al. (2021). The first is that Bayesian uncertainty measures are easy to interpret. Rather than a frequentist confidence interval, this approach yields a credibility interval the interpretation of which changes “confidence” to “certainty”. This is possible because Bayesian probability statements are conditional on observed data and an assumed model. The second is that Bayesian methods can reduce model dependency and model uncertainties. Pang et. al. (2021) stress how this method views the issue of counterfactuals as a missing data problem. Therefore, all available data is used to train the model.

Synthetic control methods (SCM) attempt to construct counterfactuals and then compare them to the observed effect on treated units. They are popularly used to analyze large panel data. However, there are many limitations on these kinds of models because of the large number of possible models due to varying effects of covariates over time.

Calculation

The benefit of this method over other synthetic control methods is the flexibility. The original SCM can only test one treated unit. The DM-LFM can handle any amount of treated units. The DM-LFM also allows for any type of covariate from unit specific, time specific, neither, or both. SCMs like the generalized synthetic coefficient are limited to covariates that vary by both unit and time.

To estimate the causal effect, Pang et. al. (2021) take the difference between observed outcomes and estimated counterfactuals. The basic form is as follows:

$$\delta_{it} = y_{it}(a_i) - y_{it}(c), \text{ for } a_i \leq t \leq T$$

where $y_{it}(a_i)$ is the observed outcome, $y_{it}(c)$ the counterfactual, and a_i is the treatment time t that is before the final period, T . The ATT for units under the treatment for a duration of p periods can then be written as

$$\delta_p = \frac{1}{N_{tr,p}} \sum_{i:T-p+1 \leq a_i \leq T} \delta_{i,a_i+p-1}$$

where $N_{tr,p}$ is the number of treated units per time period.

Of course, $y_{it}(c)$ is unobserved for treated units. To construct the counterfactuals the method first requires a dynamic multilevel latent factor model of the matrix form:

$$y_i(c) = X_i\beta + Z_i\alpha_i + A_i\xi + F\gamma_i + \varepsilon_{it}$$

Where $y_i(c)$ is the outcome after the treatment of a control unit and the counterfactual outcome of a treated unit. z_i are the covariates with unit-specific slopes, and A_i are the covariates that have time-specific slopes. Both of these are subsets of X_i . Finally, F is a $(T \times r)$ factor matrix of unobserved covariates which I limit to 10 possible values.

Pang et. al. (2021) note here that the large number of specification options poses a challenge to model selection, so they apply Bayesian stochastic model searching to pick the best one. This model searching simultaneously incorporates model uncertainty. Here, a shrinking algorithm chooses which covariates are included, whether its coefficient varies by time or across units, and how many latent factors are considered. These parameters are chosen based on the posterior distribution of the data. If the posterior distribution is unimodal around 0, then the parameter is excluded. If it is bimodal, the parameter is included in the model. Finally, if the posterior distribution has three or more modes, it indicates that the data do not provide decisive information on if the parameter should be included. Parameters with this distribution are included when they escape the shrinking algorithm because models that include them only help to provide more robust analysis as they are averaged out by other models.

After obtaining the shrunken posterior distributions of

each parameter, draws of counterfactual $y_{it}(c)$ missing for each treated unit are generated which are based on the mixture of models caused by the shrinking algorithm. The causal effect, it, is finally calculated using the equation written previously.

Assumptions and Limits

The most important assumption that must hold, according to Pang et. al. (2021), is the latent ignorability assumption. They describe it as an extension of the strict exogeneity assumption. In effect, this assumption means Tennessee schools can't be influenced by each other to adopt the TN Promise. Considering the program is ubiquitous in the state, this assumption is clearly met.

The next assumption, cross-sectional stable unit treatment value assumption (SUTVA), rules out cross-sectional spillover effects and reduces the number of potential outcome trajectories. In terms of the TNP, surrounding state institutions' retention rates cannot be affected by the TNP. It is reasonable to assume that this holds as the scholarship is only available to new, in-state graduates.

The no anticipation assumption means that current untreated potential outcome does not depend on whether the unit gets the treatment in the future. In practice, retention rate cannot anticipate the TNP. Theoretically, students in college cannot have changed their educational preferences as a result of learning about the TNP program in a year before it was implemented. Practically, students already in school would be ineligible for the TNP and therefore should not change their educational investment decision. Of course, there may be those who believe their school will fundamentally change in an unfavorable way for them and decide to leave. It is reasonable to assume a negligible proportion of students would react this way.

The final assumption that must hold is called individualistic assignment and positivity assumption. This assumption is important to justify using the control group. The former half means the adoption time of each unit does not depend on covariates or potential outcomes of other units or their time of adoption. The TNP is a statewide program that was not adopted in a staggered manner, so the assumption holds. The latter half means that all units have a nonzero chance of getting treated. Any state may enact a similar program to the TNP, so this part of the assumption also holds.

The authors warn against using the method when pretreatment time periods are less than 20 and the ratio of treatment units to control units is large. In the supplementary materials of their paper, Pang et. al. (2021) run 500 simulated samples with varying pretreatment times and treated unit ratios. They find that when the ratio is 1:5 a decrease from 20 to 10 pretreatment periods results in a 0.01 increase in model bias and a 0.03 decrease in the model cover. Already, the change is not very large,

but combined with the fact that my treated unit ratio is 8:100, the concern diminishes even more. I also run 100,000 simulations with a 25,000 simulation burnoff to give adequate time for the posterior distribution to even out.

RESULTS

DID Estimation

Table 2 summarizes the findings from three DID frameworks. One is without time-varying control, the other is with controls. All models include unit, time, and location fixed effects. The DID estimator term is captured by the TNP variable, and all models share similar values for this variable. Our DID models find a significant negative effect on retention rate of 5.55% ($p < 0.01$) in the model with no controls and a -5.87% effect in the model with controls. Both models have standard errors for the effect of around 1.4%.

The model with only time-varying controls finds all control variables except the student-to-faculty ratio, construction wage, trade wage, professional service wage, leisure and hospitality wage, and bachelor unemployment rate. Consistent with Figure 1, the locational identifier variable for Tennessee is significantly negative. In-state schools have a systemically 2.5% lower retention rate than out-of-state schools. Unexpectedly, the percent of revenue spent on academic support and student services work in the opposite direction of what theory may suggest. A percent increase in academic support decreases retention by 0.10% while a percent increase in student services results in a 0.25% decrease. It seems that community college students, in general, do not only demand less social integration and academic support but also are averse to it. Nonetheless, spending misses a key factor: quality in implementation. It could be that increased spending does not translate to more effective support, so when a student interacts with the support system, they realize that they are not a good fit there. Spending on instruction, on the other hand, is positively correlated with retention rates. This suggests that those who interact the most with students - instructors - are effective at keeping students in school.

Interestingly, institution size and locale both play a similar role in retention according to this model. As institution size increases so does retention rate, and as institutions are in more rural areas, their retention rate is also positively affected. We may theorize, then, that larger schools offer more opportunities for students to find their interests and pursue them. Conversely, students attending more rural schools may be presented with less alternative options when they arrive in school than their urban counterparts, increasing their persistence.

All wage data coefficients are exceedingly small, so there is some question as to their validity. Information sector and education and health sector wages are

Table 3: DID Models

	<i>Dependent variable:</i>	
	Retention Rate	
	No controls (1)	GSC Controls (2)
TN	-2.93*** (0.75)	-2.38*** (0.74)
TNP	-5.55*** (1.45)	-5.87*** (1.38)
% Student Services		-0.24*** (0.04)
% Academic Support		-0.10** (0.04)
% Instruction		0.18*** (0.02)
Institution Size		2.26*** (0.28)
Locale		0.79*** (0.18)
Student-Faculty Ratio		-0.01 (0.04)
Information Wage		0.0000*** (0.0000)
Construction Wage		-0.0000 (0.0000)
Manufacturing Wage		-0.0000*** (0.0000)
Trade Wage		0.0000 (0.0000)
Financial Services Wage		-0.0001*** (0.0000)
Professional Services Wage		-0.0000 (0.0000)
Education and Health Wage		0.0000 (0.0000)
Leisure and Hospitality Wage		0.0000 (0.0001)
Other Wage		-0.0001*** (0.0000)
High School Unemployment		0.86** (0.44)
Associate Unemployment		-1.52** (0.62)
Bachelor Unemployment		-1.05 (0.85)
Master Unemployment		1.94** (0.88)
PhD Unemployment		1.29*** (0.45)
Observations	2,861	2,856
R ²	0.07	0.16
Adjusted R ²	0.07	0.15
Residual Std. Error	8.62 (df = 2855)	8.21 (df = 2830)
F Statistic	41.50*** (df = 5; 2855)	21.67*** (df = 25; 2830)

Note: *p<0.1; **p<0.05; ***p<0.01

Figure 7: ATT Across Time

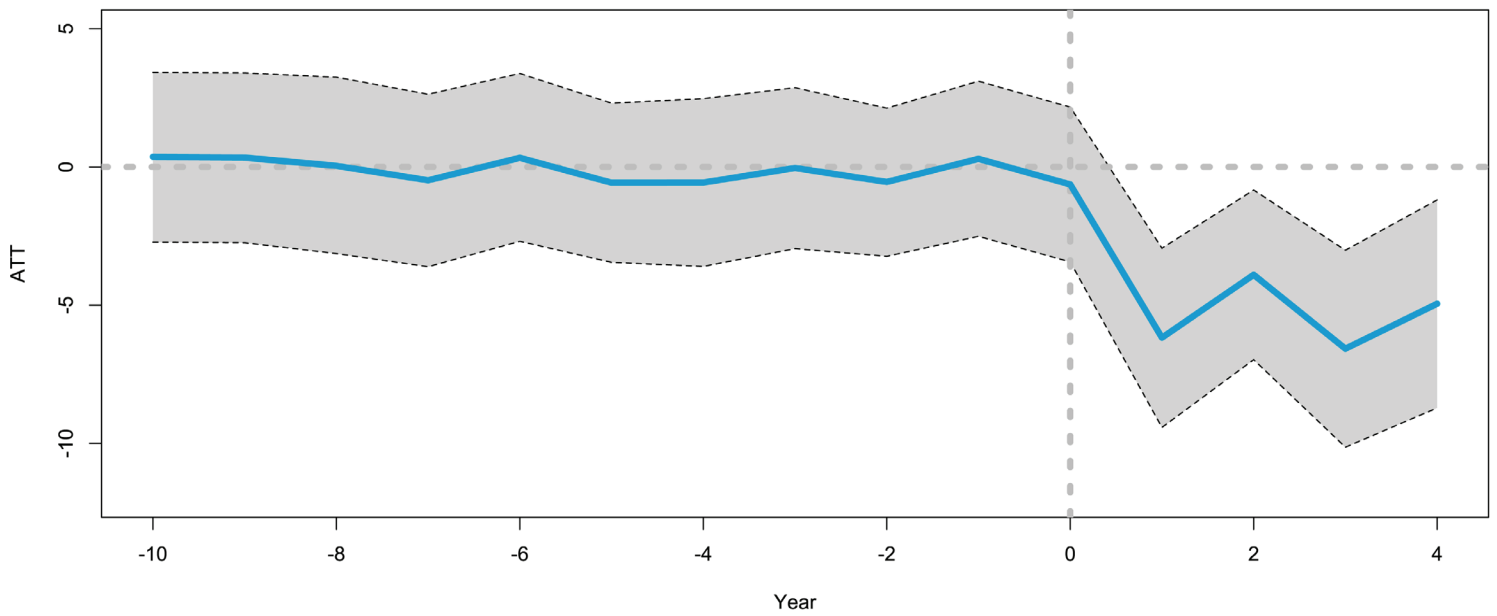


Figure 8: Estimated Counterfactuals

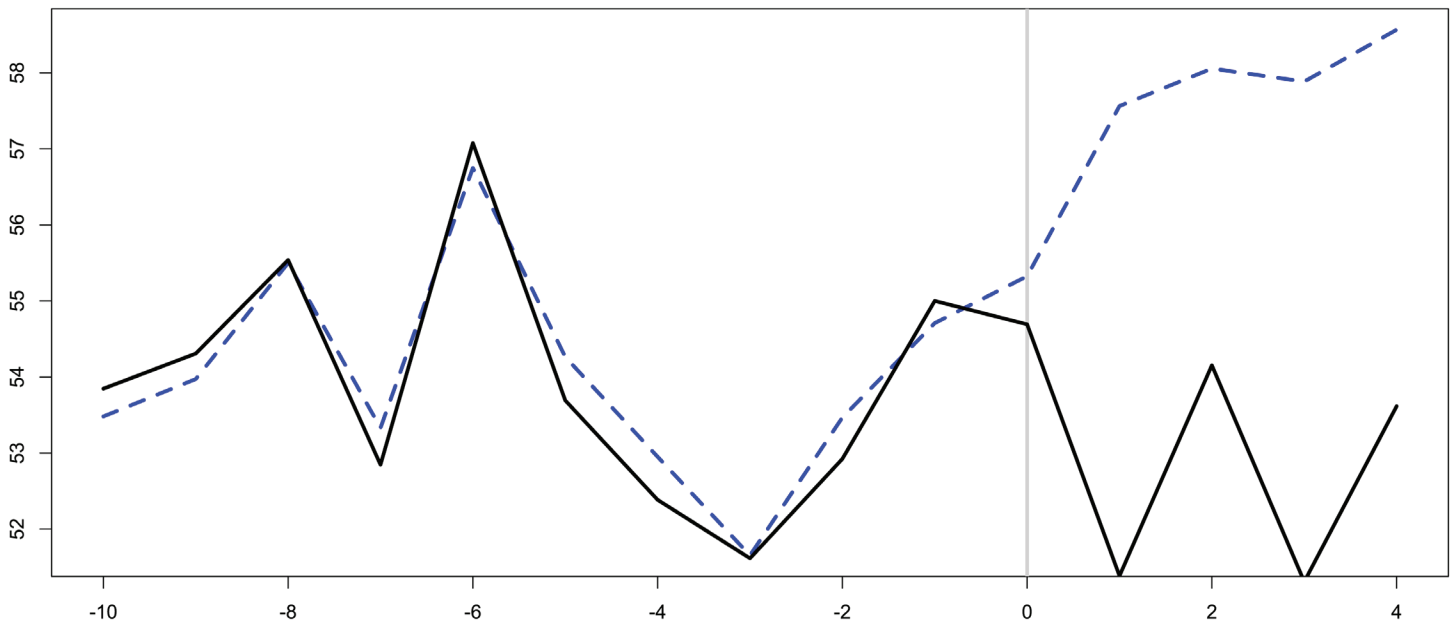
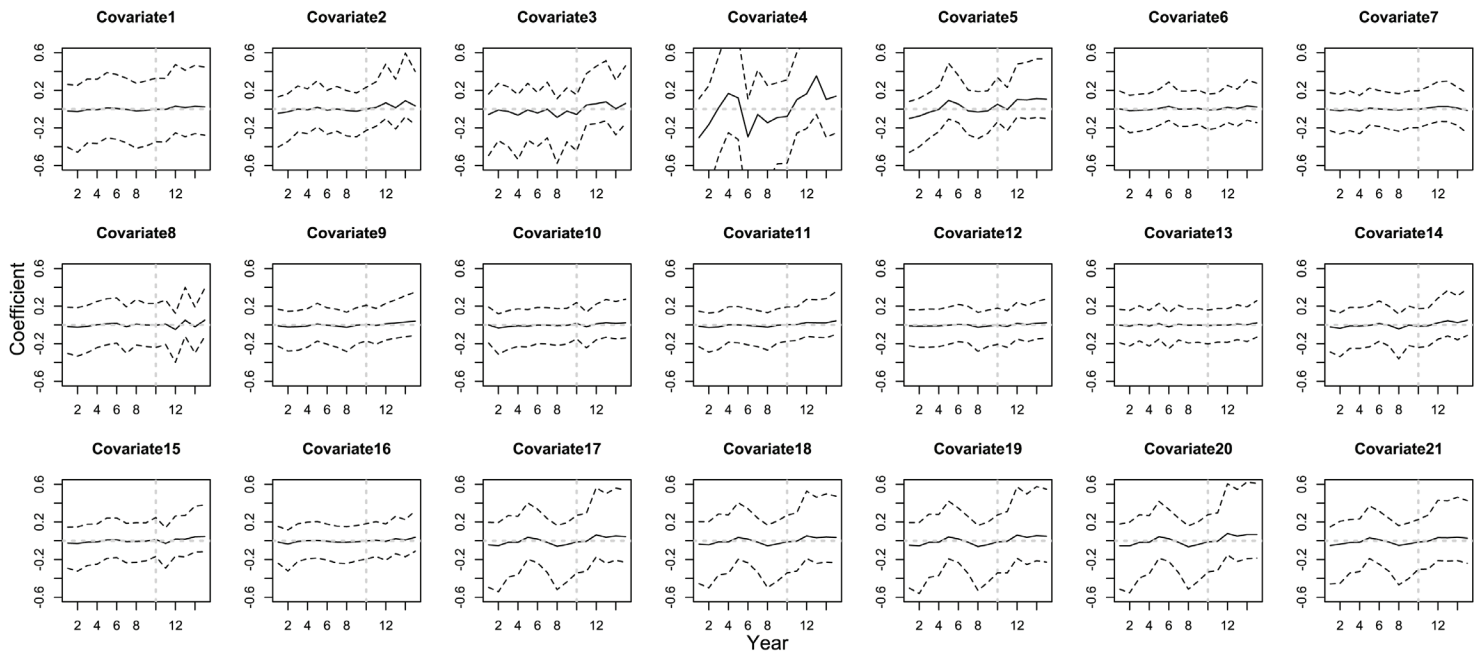


Figure 9: Estimated Covariate Coefficients Over Time



positively correlated with retention while manufacturing and financial services wages are negatively correlated. Other than financial services, other sectors move as expected. Upon further investigation of the financial services sector, it includes real estate which does not require a degree, so it is reasonable that students change their behavior in response to these wages.

As for unemployment rates, these also move as expected. An increase in high school unemployment, master unemployment, or PhD unemployment increases retention rates whereas an increase in associate unemployment is associated with a negative effect on retention. Students, in fact, seem to be most responsive to differences in unemployment rate.

DM-LFM

This method finds an ATT of -5.40% and with 95% certainty concludes that the true effect of the TNP is between -7.87% and -2.94%. Since DID is known to overestimate, it is encouraging that the estimated effect in this model is close and lower. Figure 7 plots the ATT from the DM-LFM where the blue line is the mean effect and the shaded area represents the 95% credibility interval. We can see how the line hovers about zero before sharply dropping after the treatment period. The ATT should also be evaluated by how well the model fits counterfactuals to the data. Figure 8 plots the counterfactuals in blue and the observed outcome in black. We can see how well the model has captured the pretreatment trends, lending

further validity to the results.

In regards to covariates and unknown factors, the model finds no covariates significant through time. The corresponding plots of these covariates over the data period are in Figure 9. The solid black line is the mean, and the dashed lines bound the 95% credibility interval. As we can see, the plots hover around zero. However, the model suggests that at least 5 unknown factors are significant. Figure 10 shows the probability density distributions of the ten factors. The solid black line denotes the 0.05 cutoff. If the density of the posterior distribution has a probability of less than 0.05 chance of containing 0, then that factor is significant. Since 5 factors fall below this cutoff, then there are certainly 5 significant unknown factors. However, because trimodal densities mean uncertain effects, potentially all factors are significant. To know for certain one would have to run more simulations or feed the model more control data.

CAVEATS

The biggest limitation of the study is that it cannot analyze the outcomes of TNP recipients because of data availability. Ideally, we could compare students not on scholarship to those who are rather than across institutions. However, student-level data is not made publicly available.

Another limitation of the study is the short time periods before and after the shock. In the preceding section, I show why this should not be a particularly salient issue,

but it is still something to consider. The model could also benefit from more observable covariates, but that would necessitate shortening the available pre-treatment years. For example, adding racial and gender demographics may be useful in our analysis because those students' needs may be more specialized.

Finally, the study does not examine the increase in the amount of people with associate degrees. Again, the issue lies in data availability. The US Census Bureau does collect data by state on educational achievement. However, only those 25 and over are asked. The TNP is not old enough for any of its recipients to be 25 yet. Therefore, it would not be helpful yet to analyze this data.

CONCLUSION

Tennessee may have accomplished part of its public education goal by significantly increasing enrollment at public 2-year institutions; however, the institutions suffered a persistence decrease as a result. Generally, our DID and DM-LFM frameworks agree that the Tennessee Promise scholarship had a significant average negative 5.4-5.9% effect on retention rates at Tennessee 2-year public institutions. This is equivalent to 295 to 590 students per year per school. At the upper bound, the decrease in students is greater than the estimated increase in enrollment found by Nguyen (2020). If Tennessee wishes to increase the productivity of their workers, then this could be a troubling first sign that the program is not working as intended.

Our two models do disagree on significant covariates, though. The first model finds almost all covariates significant, while the second finds no variables significant. However, the DM-LFM model suggests that there are at least 5 unknown factors that are affecting retention. Therefore, policy recommendations are difficult to make.

I recommend, however, that our model be run again after a few more years to see if the drop in retention rates is persistent. Further, qualitative research of the kind found in Ben Littlepage et. al. (2016) interviewing school administrators on their experiences is needed. Students should also be surveyed to gain a deeper insight into why they would consider leaving their school. It is important to gain a holistic view of what challenges students and administrators face to create cooperative solutions. Finally, research should also be done after the first few cohorts reach the age of 25 when data for them will become available. The first cohort just turned 25 in 2022. Overall, the Tennessee government should continue to evolve their strategies to ensure the successful fulfillment of the Drive to 55 goals.

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About the Author

Toly graduated from GW in December 2022 with a bachelor's of science in economics and with minors in statistics and political science. He is keenly interested in how statistical models can reveal population's reasoning and what that reasoning means for society at large. Further than economics research, Toly also aided Professor Andrew Thompson's research on US demographic change's impact on the future of US democracy.

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The Supreme Court's Legitimacy Problem: A Blockchain-based Proposal for Distributed Judicial Selection

JUAN CARLOS MORA

ABSTRACT

Nowhere is the politicization of the American judiciary more glaring than confirmation hearings for nominees to the Supreme Court. While both politicians and scholars agree that the politicization of the Supreme Court is corrosive to the legitimacy of the judiciary, few scholarly proposals have received serious consideration in the political arena. This paper offers the conceptual principles underlying blockchain technology as a heuristic tool for explaining the legitimacy problems of the American judicial selection process. This paper also argues for a prescriptive framework grounded in the principles of decentralization and transparency and integrates existing proposals from the judicial selection literature into a unified proposal termed Distributed Judicial Selection.

Transparency and decentralization are core features of blockchain technology, as outlined by Satoshi Nakamoto's famous bitcoin white paper (Nakamoto 2008). Its best applications have been seen in the advancement of financial technology innovation and establishment of user trust (Shin & Bianco, 2020). In brief, blockchain technology is a ledger system that distributes its transaction data for authentication across a peer-to-peer network and maintains an open-source interface for public facing access (The Economist Briefing: Blockchains, 2015). The success of blockchain technology has led some to characterize it as a paradigm revolution in how humans interact with one another, much like the introduction of the internet itself. In fact, historians have referred to blockchain technology as Web3, a successor to Web2 and Web1. Web1 refers to the early static HTML pages of the internet, and Web2 refers to the dynamic internet platforms we now use that allow for user-created content. If blockchain technology should be considered revolutionary, however, it is important to understand the events that led to its inception.

The work responsible for Bitcoin was well under development before 2008, but the unveiling and popularization of blockchain technology occurred as global financial markets took a turn for the worse in what is now known as the Great Recession. Far from a coincidence, this co-occurrence was a significant impetus for the rise of modern-day cryptocurrencies, for the Great Recession provided a glaring example of the systemic risk involved with

underregulated and over-centralized institutions (Reiff, 2021). Although the exact chain of events that resulted in the Great Recession remains contested, former Acting Chairman of the Commodity Futures Trading Commission noted at a 2009 congressional hearing that "[to avoid] repeating the mistakes of the past, we must strive to increase the transparency of [credit default swap] transactions to mitigate ... systemic risk" (Lukken, 2008; Dures & Fulop 2015). These credit default swaps became emblematic of the American financial sector's tendency to exploit their centralized structure and regulatory ambiguity for risky transactions. However, what matters here is not what credit default swaps are, but the background conditions that allowed for their use: financial hegemony transacted in high-risk assets because little to no transparency measures existed to check their use, and the few that existed were severely centralized. In the case of the Great Recession, the Commodity Futures Trading Commission failed to collaborate with the Securities and Exchange Commission to mitigate high-risk transactions. These dubious transactions sharply contrast with transactions based on blockchain technology, which was built on the principles of transparency and decentralization.

As we live through the Blockchain Revolution, the role of centralized financial institutions as inscrutable black boxes--complicated devices whose internal mechanism is usually hidden and mysterious--continues to be challenged. But finance is far from the only area where the principles of blockchain

technology could be useful. Supreme Court confirmation hearings are some of the United States Senate's most widely reported proceedings, yet the underlying issues that result in its dysfunction do not normally dominate cable news headlines. Much like pre-2008 finance institutions, the Supreme Court confirmation process has become a black box of its own kind.

Similar to how blockchain technology introduced transparency and decentralization to the financial sector, the conceptual principles of blockchain technology may be used as a heuristic tool for explaining the politicization, and thus legitimization, of Supreme Court confirmations as a natural permutation of its opaqueness and centralization. It is worth noting that utilizing heuristic reasoning for broaching political or philosophical issues, such as legitimacy, is not unusual. In Thomas Hobbes' (1651) seminal work, *Leviathan*, he posited a state of nature not as a real state of affairs, but as a thought experiment to understand the political conditions under which a state could be legitimate. This form of reasoning dates back to Plato, whose notion of utopia demonstrated what follows from it and not necessarily as something to be pursued. Karl Popper has argued that "the use of imaginary experiments in critical argumentation is, undoubtedly, legitimate: it amounts to an attempt to show that certain possibilities were overlooked by the author of a theory" (Popper, 2002, p. 466). Heuristic reasoning, put formally, means using an entity X to enable understanding and knowledge concerning some other entity Y. In this paper, the principles of blockchain technology acts as an entity that enables understanding of the Supreme Court's legitimacy problems, especially for the purpose of demonstrating that previous analyses of its problems have not adequately grasped their mutually dependent nature. This term is different from cognitive psychology's use of the term heuristic, which describes a cognitive process that allows people to solve problems with quick and often passive judgements. Philosophical heuristics are a type of thought experiment that requires active and critical reasoning to draw a connection between two seemingly disparate concepts.

This paper then makes two positive proposals for reforming the judicial selection process. First, the Senate Judiciary Committee should vote on nominees using a cumulative voting scheme. Although this proposal would require the President to make three nominations rather than the historical single nomination, it would incentivize bipartisanship and make outright sinking nominations more costly. Second, to reduce the informational asymmetry between the executive and legislative branches, the Senate should establish a Judicial Selection Commission to review nominees according to the profession's prevailing standards. The members of the commission would consist of circuit judges selected through sortition.

An important clarification must be made before

wading too deep into the descriptive parallels between the problems that exist within the Supreme Court's judicial selection process and the problems that the conceptual principles of blockchain technology seek to solve. While blockchain technology is an example of the saliency of the decentralization and transparency principles, these principles were neither created by blockchain technology nor are they exclusive to blockchain technology; this paper does not seek to defend such assertion. The extensive application of these principles in philosophical discourse predates blockchain technology, including arguments on separation of powers and federalism (Wilson et al., 2008, pp. 1-37). This paper only acknowledges the principles' heuristic power and advances them as compelling for descriptive and prescriptive analyses of the judicial selection process. However, far from a mere red herring, the contribution which this paper seeks to make by invoking blockchain technology is its utilization of these respected principles as a modest proof of concept and, thus, an explanatory heuristic in describing problems and prescribing solutions within the judicial selection process. In other words, it takes the form of a V-shaped meta-analysis (Figure 1). The efficacy of blockchain technology is offered first as a concrete example of a self-legitimizing device, and then abstract this to the principles of decentralization and transparency. The paper then transitions out of abstraction by applying the principles to a concrete solution to the judicial selection problem of legitimacy. If successful, this paper will have leveraged the principles of blockchain technology to explain the problems of judicial selection, and ultimately sketched a solution that integrates this novel explanation.

THE DEMOCRACY PROBLEM

The common genealogy of the politicization of Supreme Court confirmations often begins with President Ronald Reagan's nomination of Circuit Judge Robert Bork for Associate Justice to the Supreme Court. Shortly after the nomination of Circuit Judge Bork, former Senator Ted Kennedy of Massachusetts took to the floor of the Senate and publicly condemned the judge for his perceived conservative judicial philosophy (Reston, 1987). Confirmation hearings have since been filled with political competition for ideological allies on the Court, and the literature on judicial selection has subsequently identified objections to this political strategy on the normative grounds of democracy.

Democracy objections to the politicization of the Supreme Court have come to the fore in recent political discourse, as highlighted by President Joe Biden's formation of the Presidential Commission on the Supreme Court of the United States (Bauer & Rodríguez, 2021). So-called "democracy objections" characterize the politicization of the Supreme Court as a consequence of the Supreme Court's anti-democratic structure (Doerfler & Moyn, 2021, p. 1706). Those who invoke these concerns

FIGURE 1.

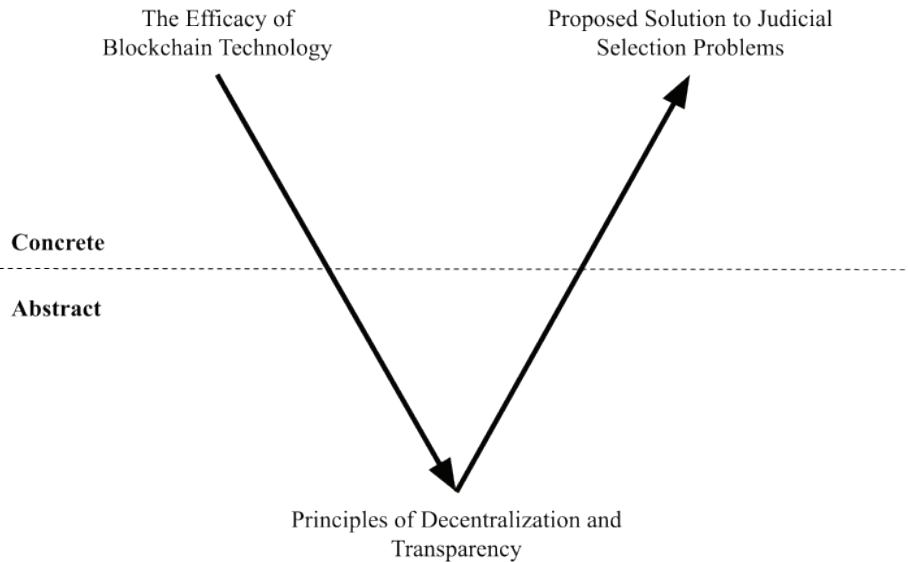


FIGURE 1. |

cite some of the Supreme Court's culturally controversial decisions, exemplified in *Roe v. Wade* (1973) and *Citizens United v. Federal Elections Commission* (2010), or the structure of the Supreme Court itself (Khanna & Sherry, 2022). Members of the Court have rebuked this characterization. In his 2017 confirmation hearing, current Justice Neil Gorsuch told the Senate Judiciary Committee that judges are not "politicians in robes" (Ruger, 2017). Chief Justice John Roberts made similar statements in response to President Donald Trump, expressing the Supreme Court does not have "Obama judges or Trump judges, Bush judges or Clinton judges" (Sherman, 2018).

As well intentioned as these responses are, espousing claims of neutrality ultimately fail to resolve the primary objection: judges are perceived by the public as political pawns of their appointing president's ideology, and these judges are designedly not elected. This is not to say that an appointing president's ideology is, in fact, an adequate predictor of a judge's decisions. Rather, the public itself perceives these judges as politically committed jurists. Polling data revealed the number of Americans who say the Supreme Court is more conservative increased from 30 percent to 38 percent since 2020. Another 84 percent believe Supreme Court justices should not bring personal political views into the cases they decide, despite 16 percent saying they do an excellent job of keeping their

views out of their decisions (Pew Research Center, 2022). These concerns are not new. In 1832, Mississippi became the first state to implement judicial elections to respond to the expanded power of the courts after the Supreme Court's decision in *Marbury v. Madison* (1803), a decision which arguably elevated the judicial branch's power on par with that of the legislative and executive. However, if politicization of the Supreme Court is the primary concern, then politicizing them further in elections is intuitively not the answer. The answer to those who object to the Supreme Court's perceived anti-democratic practices cuts much deeper. If the concern supporting electing judges is that judges are perceived as politicians in robes, then the answer should be to change this view. A similar response is owed to proponents of court expansion, as these proposals do not resolve the perceived politicization of judges. Without an appropriate and reliable limiting principle, court expansion would more likely relegate the Supreme Court to the status of a third chamber of Congress rather than the serious judicial body the Constitution intended it to be. As will be explored in the next section, the Supreme Court need not be democratic to be legitimate; legitimacy can be generated elsewhere. At their core, democracy objections are objections to the perceived illegitimacy of the Supreme Court. Therefore, by answering legitimacy

objections, democracy objections will be as well.

THE LEGITIMACY PROBLEM

Legitimacy objections are the most salient objections to entertain in the discourse over the politicization of the Supreme Court. For the court's currency is legitimacy, and it has no alternative enforcement mechanism to legitimacy. As Alexander Hamilton noted in *Federalist* 78, the Supreme Court's power derives from "neither force nor will, but merely judgment" (Hamilton, 1788, p. 401). The meaning of legitimacy in the context of a liberal democracy like the United States, as defined by scholars of legitimacy theory, is that a legitimate institution enjoys support even when the public disagrees with the institution's specific acts (Deegan, 2019). In the American judiciary, this comes in the form of accepting judicial rulings even when one does not individually agree with them. Conversely, illegitimacy is the lack of public support for an institution, either generally or due to its specific acts. While this characterization is mostly accurate, it does not adequately address the role played by secondary institutions in the legitimacy of the court, such as the executive and legislative branches which play intimate roles in the Supreme Court confirmation process. While the Supreme Court may render decisions that cheapen its legitimacy, the Senate and White House also contribute to delegitimization. Delegitimizing vectors need not be endogenous, as the court is tied to the executive and legislative branches through the mechanisms populating its bench: nomination and confirmation. When the president makes a nomination or the Senate partakes in a confirmation process, and either is perceived as partisan by the public, then the delegitimizing effect of partisanship can spread to the Supreme Court precisely because the court is judged against its expectation to be nonpartisan. Thus, to understand the legitimacy problem of the Supreme Court, this critical analysis must extend to the specific acts of the legislative and executive branches. There are three specific acts by secondary institutions which this paper will analyze as problems for the court's legitimacy: The Filibuster Problem, The Evaluation Problem, and the Information Problem.

The Filibuster Problem

One such example is the Senate's rules for debate during judicial nominations. Senate Rule 22, known as the filibuster, dates back to 1917, and requires a 60-vote threshold to end debate on questions before the Senate, known as invoking cloture. Minority parties have often used this rule to delay legislation and nominees, sometimes indefinitely to force compromise. However, in November 2013, the Senate invoked cloture on all judicial nominees beneath the Supreme Court--like circuit and district judges--by only a simple majority vote. This has been colloquially referred to as the "nuclear option"

(Heitschusen & Beth, 2017, pp. 9–11). In retaliation, the same parliamentary maneuver was invoked again for the nomination of Justice Neil Gorsuch to the Supreme Court in 2017, after then Senate Majority Leader Mitch McConnell had refused to consider President Obama's nominee, Merrick Garland. All these actions put the legitimacy of the Supreme Court on a collision course with politicization precisely because the actions were viewed as political, and the judges as fruits of the partisan process (Capehart, 2016). Furthermore, although a hotly debated rule, especially due to its Jim Crow legacy, the filibuster functions as a countermajoritarian device in the Senate, protecting the interests of minority parties and prompting collaboration with majority parties. Thus, abandonment of the filibuster incentivizes the minority to make their objections in alternative ways, such as walking out in the middle of Justice Brett Kavanaugh's confirmation (Zhou, 2018).

The Evaluation Problem

Another example of delegitimizing activity is the American Bar Association's Standing Committee on the Federal Judiciary (hereinafter "FJC") review of judicial nominees. The FJC is tasked with providing a nonpartisan evaluation of the professional qualifications of nominees to the Supreme Court (American Bar Association, 2020, pp. 1–3). Critics of the FJC have cited its increasingly partisan evaluation outcomes. For example, although the FJC unanimously approved Judge Robert Bork with the highest ranking possible for his nomination to the District of Columbia Circuit Court, the FJC retracted this evaluation and determined him to be "unqualified" when he was nominated to the Supreme Court by President Ronald Reagan (Frazier & Thorpe, 2020, p. 258; Taylor 1987). Empirical research conducted on this issue focused on the FJC's evaluation of 108 circuit Court judges, during the presidencies of Bill Clinton and George H.W. Bush, and potential partisan influence. It found circuit court judges nominated by President Clinton, a Democrat, were 9.7 to 15.9 times more likely to receive a "highly qualified" rating from the FJC than those nominated by President Bush, a Republican (Lingengreen, 2001, p. 9). What matters here is not that the FJC's evaluation is, in fact, partisan, or whether party affiliation is causally significant in FJC evaluations. It could turn out that Democratic appointees are, indeed, more qualified than Republican appointees. However, since legitimacy is generated from the public's attitude on institutional actions, the FJC's evaluations need only appear as partisan to detract from its legitimacy. Importantly, if the public does not perceive the FJC's evaluation as legitimate, then the legitimacy of the Supreme Court is implicated by association in the public's own lights. Instead of being perceived as an independent and nonpartisan peer review committee, the FJC is instead viewed as another political piece in the game of Supreme Court confirmations.

The Information Problem

The issue of information is another key factor in the politicization of the Supreme Court. In the most recent confirmation spectacle before the Senate, Justice Ketanji Brown Jackson--nominated to the Supreme Court by President Joe Biden--was met with a barrage of misleading questions regarding her sentencing record in child sexual abuse cases. Senator Josh Hawley of Missouri alleged that the justice had a "long record" of letting child sexual abuse offenders "off the hook" during sentencing (Qiu, 2022). Although the claims have been refuted by journalists, Senator Hawley was not the only member of the Senate Judiciary Committee to make misleading assertions; in fact, he was joined by many of his colleagues in casting these aspersions. Though far from equivalent, an analogous situation occurred during the confirmation of Justice Neil Gorsuch. Democratic senators argued the justice favored corporate interests and lacked the empathy necessary to be a justice due to his dissent in *TransAm Trucking Inc. v. Administrative Review Board, U.S. Department of Labor* (2016). The common thread between these confirmation hearings is that the President and Senate were from the same party at the time of the confirmations. While it may seem like an insignificant point, this executive-legislative relation contributes to the convenient restriction of information on nominees. In fact, scholars on judicial selection have found a significant correlation between information patterns and the party affiliation of the executive and legislative party (Sen & Spaniel, 2016, p. 35). When the President and Senate majority are affiliated with the same party, the President is incentivized to keep information on nominees opaque during the confirmation process. This is said to shield the President and Senate majority from suffering reputation costs for nominating ideological allies to the Supreme Court (Sen & Spaniel, 2016, p. 24). For example, Justice Ketanji Brown Jackson frequently repeated during her nomination that she had no judicial philosophy and instead relied on a judicial methodology for deciding cases (McQuade, 2022). This language is intentional. Since the President and Senate majority share the same political affiliation, and the minority party is hostile toward the majority party's preferred judicial philosophy, Justice Brown evaded questions on her judicial philosophy and chose the politically neutral term of judicial methodology. As politically clever as this tactic may be, the result is the delegitimization of the Supreme Court through rhetoric like that of Senator Josh Hawley in the Jackson hearings and the Democratic senators in the Gorsuch hearings. While this paper does not claim to advance a solution that will eliminate rhetoric akin to Senator Hawley, it does aim to make this kind of rhetoric a bug rather than a feature.

A BLOCKCHAIN ANALYSIS OF LEGITIMACY PROBLEMS

These three kinds of politicization constitute the proverbial black box of the judicial selection process, and they have serious delegitimizing effects on the Supreme Court. Fortunately, these problems are neither foreign nor intractable. Recall that the regulatory opaqueness of financial institutions and over-centralization of regulators were largely responsible for the Great Recession. These issues of opaqueness and centralization also seem to surface in the legitimacy problems of the Supreme Court's judicial selection process. However, if the conceptual principles of blockchain technology are meant to offer any kind of solution, it is necessary to first establish a heuristic link between the legitimacy problems of the present judicial selection process and conceptual principles of blockchain technology. Therefore, we must revisit each of the three politicization phenomena and test whether a blockchain analysis can provide a salient explanation of their legitimacy problems.

The first politicization phenomenon considered involves the abolition of the filibuster for the judicial nominees. Two key issues to consider in this case include abolition itself and the function of abolition. Abolition itself of filibuster plainly delegitimizes in the case of judicial nominations, since the standard for illegitimacy is lack of public support for an institution, either generally or due to its specific acts. The "nuclear" option under the leadership of Senator Harry Reid of Nevada was used to break partisan stalemates, which benefited the Democratic majority at the time and motivated the next Republican majority to expand the nuclear option to Supreme Court nominees (Everett & Kim, 2013). The deeper problem, though, is not the abolition itself but the function of abolition. In addition to incentivizing the minority party to seek higher-stakes methods of voicing their opposition, it centralizes the confirmation process into the confines to the will of the majority party. This centralization is not conducive to meritorious, nonpartisan judicial nominees, since parties receive long-term benefit from confirming ideological allies to the Supreme Court with lifetime tenure, such as favorable decisions on culturally contentious issues that would otherwise be decided by the legislature. The majority is given free reign to politicize the process by either favoring riskier nominees, such as those to whom the minority will zealously object, or rejecting a nominee outright if they were nominated by a President from a different party. This junction of centralization and legitimacy is where the conceptual principles of blockchain become salient.

Blockchain technology prides itself on its distributed ledger system, which distributes the power of transaction verification from the typical central financial institution to individual users. In digital currency applications of blockchain, individual users are rewarded for participating

in the distributed process. Since the filibuster, similar to the distribution of centralized transaction power, distributes decision-making power, it can be assessed as a centralization problem. The filibuster, in judicial selection, functions as a distribution of decision-making power among a peer-to-peer network of Senators. Each Senator is tasked with evaluating the qualifications of a given nominee, and then rewarded by being granted a functional veto over the nominee. However, there are two caveats. First, it does not follow from this explanation that the filibuster is the best way to distribute decision-making power. In fact, scholars who favor abolishing the filibuster compellingly argue that the filibuster undermines the right of the majority party to rule, and empirical evidence on legislative obstruction demonstrates this (Reynolds, 2022). Second, the filibuster's Jim Crow legacy alone is sufficient to give pause over its use (cf. Sullum, 2020, p. 16). However, the point of this heuristic is to demonstrate that the filibuster's legitimacy problem is explainable in more fundamental terms than a mere parliamentary procedure.

The second politicization phenomenon considered involves the politicization of the American Bar Association FJC's judicial evaluations. Since empirical evidence demonstrated that the FJC's evaluation outcomes favored judicial nominees appointed by democratic presidents, Justice Ketanji Brown Jackson's recent confirmation hearings resurrected these concerns among Republican senators. Senator John Cornyn of Texas noted at the hearing that he was troubled with the American Bar Association's political advocacy activities, referencing the organization's support for temporary protected status for Ukrainian refugees, opposition to a series of parental rights in education policy, and support for counsel for migrants seeking asylum. Senate Judiciary Ranking Member Chuck Grassley of Iowa echoed the same concerns (Durbin, 2022). When asked about this perceived partisan activity, the FJC responded that their substantive interactions with the American Bar Association, despite being one of their subsidiaries, was limited to their appointment by the organization's president (Durbin, 2022). The problem, again, is in the perception of FJC as partisan, altering the legitimacy of their judicial evaluation which should otherwise be grounded in neutrality. Blockchain's conceptual principles are especially apt for explaining the legitimacy problem here.

The role of the FJC includes decentralizing the judicial evaluation responsibility from the Senate Judiciary Committee, and placing it in the hands of individuals familiar with the field's prevailing professional standards. In this sense, the FJC should satisfy the blockchain's principle of decentralization, but the issue of perceived partisanship prevents this. While it is true that the FJC is distributed in the sense that it is structurally separate from the Senate Judiciary Committee, its perceived partisanship relegates it into functional equivalence to

the Senate Judiciary Committee's Democrats; it is seen as rubber-stamping judicial nominees supported by Democrats. Some digital currency firms suffer from this flaw as well. Many digital currencies using blockchain technology require that consumers use a digital wallet, usually in the form of custodial or non-custodial wallets. While non-custodial wallets give a person sole control of the "keys" that access their digital currency, custodial wallets, offered by centralized businesses, keep the "keys" in exchange for offering users more convenience and less responsibility. Whereas the non-custodial wallets give you sole control of the "keys" that access your digital currency, custodial wallets are offered by centralized businesses, which keep your "keys" in exchange for offering users more convenience and less responsibility. In a similar way, the FJC has assumed the role of a custodial wallet. Although senators have equal access to the FJC's judicial evaluations and testimony, the FJC portrays itself as functionally centralized to the whims of Democratic politics. It is important to qualify this argument, however: it is perfectly possible that the association between the FJC's judicial evaluations and democratic politics is strictly correlative. It could be the case that the FJC's reasons for giving Democratic nominees higher ratings are not grounded in their support for Democrats. The facts, however, have little to do with the construction of legitimacy. So long as the FJC is tied to the American Bar Association and produces skewed evaluations, it will continue to suffer from the same centralization problem.

A third and final politicization phenomenon to consider involves the informational asymmetry between the executive and legislative branches. It was previously argued that one politicizing activity that delegitimizes the judicial selection process is the President's incentive to make the judicial selection process opaque when their party rules the Senate. Strikingly the FJC should be able to function as a third party to prevent information disparities between the majority and minority parties. If we accept the analysis that the FJC has failed to fulfill its role because it has been functionally centralized to democratic politics, then a further explanation by blockchain can offer insight on the information asymmetry too. In addition to decentralization, blockchain is also founded on the principle of transparency. This is accomplished through its open-source interface for public facing access, which allows anyone with internet access to participate in its peer-to-peer ledger system. The principle of transparency seeks to reduce the accumulation of systemic risk. Oddly enough, the structure of the present judicial selection system accounted for this. The FJC was meant to serve as a disinterested, third party that would increase transparency by testifying on a judicial nominees' record at their confirmation hearing. As a result of the FJC's partisan perception, however, senators of the minority party argue in confirmation hearings that they are disadvantaged because they cannot trust the

source of information. Although some senators now say they cannot trust the FJC, it does not necessarily diminish its credibility. Their concerns do seem reified by the fact that senators of the minority party are placed into a context of epistemic dependence on the FJC to muster thorough evidence on the nominee's qualifications and judicial philosophy. For example, minority parties often lack the subpoena power possessed by majority parties to obtain additional information of interest to them (Slayton, 2021). Therefore, the fundamental problem here is a transparency problem. This problem will also persist without reforming the third-party judicial evaluation process or providing a Republican analogue to the FJC while Republicans are the minority party.

REVIEW OF JUDICIAL SELECTION PROPOSALS

The first half of this paper was devoted to correctly identifying the problems of the Supreme Court's judicial selection process, using the principles of blockchain technology as a handy tool for this task. As Carl Jung once remarked, "to ask the right question is already half the solution of a problem" (Jung, 1981, p. 23). Having reviewed three problems of legitimacy in the judicial selection process and their relation to the principles of decentralization and transparency, we now have a descriptive framework within which a positive proposal can be crafted. There are now several potential prescriptions to the legitimacy problem available for our consideration in the judicial selection literature. This paper will review four proposals: (1) Merit Based Selection; (2) Sortition Selection; (3) Cumulative Selection; and (4) a Judicial Council. Each proposal will be considered individually in light of the three problems which were identified.

Merit-based Selection

Article II of the United States Constitution empowers the president, with the advice and consent of the Senate, to nominate justices of the Supreme Court. Notably, there exists no formal list of qualifications for nominees. In fact, Justice James Byrnes was appointed to the Supreme Court and served from 1941 to 1942 without having attended law school. Though not commonplace for appointees to the high court, some scholars propose a merit-based selection process as a potential solution to the Supreme Court's legitimacy problems. For instance, Justice Sandra Day O'Connor argued that the merit of justices was inextricably linked to the legitimacy of the Supreme Court: "The judicial power lies in the force of reason and the willingness of others to listen to that reason" (O'Connor, 2009, p. 489). Adopted by Missouri in 1940, the Missouri Plan was one such proposal that sought to imbue legitimacy to its state Courts through merit-based selection. Under the Missouri Plan, a judicial commission selects judges and the governor then nominates them. After 12 months of service, the judges face a retention election and must receive a majority vote

to retain their office. This proposal is attractive, but does not answer the question of legitimacy for the Supreme Court. Regarding democracy objections, putting judicial selection in the electoral process plainly does not reduce the politicization of the court, even if just retention. Even if it were the case that the judges standing for retention were highly-qualified, qualification alone would fall secondary to political advantage. Consider, for instance, that Justice Ketanji Brown Jackson was celebrated as one of the most qualified nominees to the Supreme Court--possessing experience in public defense, a Supreme Court clerkship, service on the United State Sentencing Commission, and posts at both district and circuit Courts--but her nomination was still rejected by nearly all members of the Senate's minority party. Scholars of judicial selection have also found that, in states where merit-based selection methods were implemented, the public did not perceive the judges are more legitimate (Bonneau & Hall, 2009, p. 132). For example, adoption of the Missouri Plan in Rhode Island resulted in more racial and gender diversity in its state Courts but not any more legitimacy than before its implementation (Klein, 2018, p. 296; cf. Yelnosky, 2010, pp. 649-659). Another reason this proposal cannot resolve the problem of legitimacy for the Supreme Court is that the body used by the Senate Judiciary Committee to determine qualification is the FJC. Justice Ketanji Brown Jackson was given a unanimous rating of "well qualified," which sits above the typical rating of "qualified" (Williams, 2022). While merit-based selection does seek to decentralize determinations of merit from the political process and make merit determinations transparent for the public, the legitimacy problem will persist among the public without meaningful reform of the body responsible for determining merit.

Sortition Selection

Some scholars have argued that we should look for systems within liberal democracies that already work to imbue legitimacy. One such proposal is sortition selection. Sortition is a classical method of distributing scarce goods and burdens in a fair and impartial manner. Its application to judicial selection proposes selecting judges at random, through a lottery system analogous to jury selection. Although the set of judges from which the lottery would draw needs to be settled, the principle of the proposal remains the same: by removing selection itself from the hands of partisan agents and placing it into the whims of chance, judges will not be tainted by the delegitimizing forces of the current judicial selection process for the Supreme Court (Sonnert, 2020, p. 42). This proposal is intriguing and seems to strike at the core of the legitimacy problem. It decentralizes selection from the President and Senate to a presumably unbiased selection algorithm, and by virtue of the algorithm's mathematical basis it eliminates the haziness of the political process. It also seems more likely to ensure that the Supreme Court better reflects the diversity of the

country, which is certainly desirable. However, sortition selection runs into two serious problems. The selection of judges in the United States is placed squarely within the purview of the President and the Senate. Two things follow from this observation: (1) either the algorithm will put forward an individual, within the present constitutional appointment scheme, but the President or Senate may decide against appointing the individual; or (2) the Constitution requires amending to make space for totally divorcing judicial selection from the President and Senate. If (1) is true, then we have not eliminated the legitimacy problem at all. Sortition may tend to produce more diverse and less ideologically extreme candidates, but the background conditions that politicize the present judicial selection process would still fester. The President may reject the individual provided by sortition because their ideologies do not align, and this is especially crucial when the discourse surrounding the Supreme Court is reduced to liberal judges and conservative judges. However, even if the President chooses to nominate the individual, the Senate's centralization and transparency problems will persist. The Senate majority party will continue to restrict information on the nominees if it is advantageous for them to do so. That is, when the President and the majority are of the same party, and the minority will continue to politicize nominees so long as they are unable to meaningfully influence the process by their own lights. If (2) is true, then the political factions of Washington would need to agree to disarmament in the judicial selection process. While this is possible, it is not likely. Since the present composition of the court, in partisan terms, is skewed toward a conservative majority, Democrats would risk surrendering their ability to change the ideological composition of the court indefinitely. On the other hand, Republicans would need to abandon their long-developed strategy to fill the American judiciary with conservative judges (Boghani, 2020). Neither of these scenarios seem likely in today's increasingly partisan, zero-sum politics. It must be conceded that this objection does not challenge the internal consistency of the proposal, but any serious judicial selection proposal ought to acknowledge the disposition of the political system it seeks to reform.

Cumulative Selection

The proposals reviewed thus far have focused on nominees without much mention of the role played by the United States Senate, and specifically the Senate Judiciary Committee. Since the legitimacy problems considered stem from the politicization of the Supreme Court, it is worth exploring a solution that engages with the role of individual senators. Cumulative selection does precisely this, as it concerns problems generated by political disagreements between the Senate majority and minority parties. It proposes allowing senators to freely allocate votes across a slate of judicial nominees (Casella et al., 2016, p. 248). Once a sufficient threshold

of individuals have been nominated by the President to fill district and circuit vacancies, whatever that may be, the Senate is tasked with voting to confirm this slate of judicial nominees. Senators are entitled to the sum of votes equal to the number of nominees: for X number of nominees, senators will be entitled to X number of votes. Rather than voting on the slate as a whole or considering each nominee individually, senators may distribute their X number of votes according to their priorities, allowing them to receive eight votes for a slate of eight nominees, but allocate four "yes" votes for one nominee of particular importance and four "no" votes for another especially concerning nominee. There are three upshots to this proposal. First, rather than taking the politics out of an inherently political institution, this proposal redistributes the politicizing forces of judicial selection across several nominees to minimize its delegitimizing effects. Second, by allowing senators to concentrate their votes on nominees that correspond to their priorities, cumulative selection gives individual senators more flexibility in exercising their influence over nominees. One could imagine a scenario where the minority party begins to negotiate their allocations of votes with the majority party, in exchange for certain concessions on other political issues. Additionally, this method allows the minority party to win some judicial nominations. Casella et al. (2016) predicts a minority party of 45 senators could win 20% of judicial nominations when the majority party controls the presidency, and 40–60% when the minority party controls the presidency (Casella et al., 2016, pp. 256–258). Third, by distinguishing between a majority of voters and votes in judicial nominations, cumulative selection makes sinking one nominee more costly than cooperating across many nominees. For example, if a member of the minority party seriously objected to one of eight nominees, then allocating all eight of their votes against one nominee would prevent them from influencing other nominees to which they could have otherwise objected. This proposal is by far the most compelling solution to the Supreme Court's current legitimacy problems, except for the fact that Supreme Court vacancies typically only permit the President to nominate one nominee. However, this flaw is not fatal, and its application to the Supreme Court will be explored later. If this flaw is overcome, it solves the legitimacy problem generated from the elimination of the filibuster by decentralizing the judicial selection process from the majority and distributing it between the majority and minority parties: it would provide the minority party with access to some influence and maintain the majority party's right to rule.

Judicial Council

The last proposal I will consider is not necessarily a judicial selection method but rather an interesting reform of the FJC's role as a third-party evaluator. This is the Judicial Council proposal, and it calls for the establishment of an independent, non-partisan council

that would fulfill the role of the FJC as an impartial third-party evaluator without any of the American Bar Association's political baggage. The Judicial Council would be a panel of either the chief judges from each federal circuit court or a representative chosen from each circuit court by a majority vote of that circuit's judges. This panel would work to provide the Senate with an objective, analytical report on a nominee's previous judicial decisions, litigation record, legal writings, and public service experience. Importantly, the Judicial Council would not provide a formal recommendation in favor or against the nominee's confirmation, but rather a formal commentary on the nominee's previous legal analyses (Frazier & Thrope, 2020, pp. 253–254). This takes seriously the problems generated from the FJC's perceived partisanship, and correctly views the task of evaluation as something that should be done by peers. If the Judicial Committee is successful, then the Senate's information asymmetry can be resolved. However, the proposal fails to consider just how far delegitimizing politicization has reached. If the Judicial Council is to be composed of the chief justices of each federal circuit court, or an elected representative thereof, then it matters whether these individuals will be perceived as legitimate arbiters of merit or another example of politicians in robes. Regrettably for this proposal, it would seem likely that the latter would be true. American media outlets and politicians, both of whom have an outsized influence on the public's perceptions, have characterized circuit courts as liberal or conservative (Pratt School of Information's Visual First Amendment, 2023). Infamously, for example, the Ninth Circuit Court of Appeals has been labeled as one of the country's most liberal circuit courts. Some research by political scientists supports this conclusion (Epstein et al., 2007, p. 312). On the other hand, the Fifth Circuit Court of Appeals is seen as one of the country's most conservative circuit courts (Platoff, 2018). Since legitimacy is generated from the public's attitude, courts themselves do not necessarily determine legitimacy. If the public perceives circuit courts as another extension of the federal government's partisanship, then it is unlikely that judicial selection facilitated by circuit court judges would be sufficient to resolve the legitimacy problem of the Supreme Court without amendments to this proposal.

DISTRIBUTED JUDICIAL SELECTION

Although no proposal from the judicial selection literature stood out as an exhaustively compelling solution to the legitimacy problems in the Supreme Court's judicial selection process, their combined merit may achieve our objective. It is often quipped in policy debates that some problems require an "all-of-government" or "all-of-the-above" approach. This appears to be the case with judicial selection. This positive proposal is largely a reappropriation of existing proposals, with its original contribution being their application to the contemporary

political climate's relation to the Supreme Court. The positive proposal, termed as Distributed Judicial Selection, mirrors the paper's goal of implementing the principles of decentralization and transparency, and it will advance in three movements: (1) the establishment of an impartial Judicial Selection Commission; (2) modification of presidential nominations to Supreme Court such that three nominations are made for any one vacancy; and (3) incorporation of cumulative voting in the Senate's judicial nomination confirmations. This paper will consider (1) individually and (2) and (3) together.

Perhaps one of the most straightforward contributions of Distributed Judicial Selection is its reformulation of previous proposals for a third-party evaluator of judicial nominations. Information is key when it comes to how an agent decides they will act. A classic example of this phenomenon in game theory is the Prisoner's Dilemma. This game (Tucker, 1983, pp. 228–229) goes as follows:

Prisoner A and Prisoner B are arrested for committing some crime, and they are held in separate detention areas. They cannot communicate with each other. Prosecutors are determining how to charge the prisoners. If A and B each betray the other, each of them serves two years in prison. If A betrays B but B remains silent, A will be set free and B will serve three years in prison. If A remains silent but B betrays A, A will serve three years in prison and B will be set free. If A and B both remain silent, both will serve only one year in prison.

Although in the best interest of both prisoners to not betray each other, the individuals may be unsure of what the other prisoner will do. This kind of self-destructive behavior, though on an institutional level, is typical of Supreme Court confirmation hearings. Since the Senate's minority party does not have access to the same subpoena power for information as the majority party, the minority party cannot filibuster judicial nominees, and the majority party is incentivized to keep information on the judicial nominee opaque, the minority party reacts by resorting to delegitimizing activity. This activity is not delegitimizing in itself, but delegitimizing once the public associates the subject of the minority's reaction as partisan. Much like the Prisoner's Dilemma example, the majority and minority parties are left worse off by not establishing information parity. However, this information problem is not intractable. Though the FJC's perceived partisanship has delegitimized its evaluations of nominees, it remains possible to develop a new third party evaluator with institutional safeguards against politicization.

The Judicial Selection Commission is thus proposed as an institutional safeguard. This entity would serve the Senate in a similar manner to the FJC, but with two important revisions. First, the Judicial Selection Commission would consist of circuit Court judges, and selection for membership on this commission would be distributed to a randomized sortition mechanism. This

would address the problem of centralization, wherein the FJC is perceived as an extension of the Democratic Party. In contrast to a proposal by Frazier and Thorpe (2020), neither chief judges nor elected representatives would be given preference for the population from which the random selection would occur. This incorporates Sonnert's (2020) sortition logic, but refrains from applying it to nominees. In much the same way that juries are selected by sortition as fact finders in trial courts, circuit court judges would also be chosen for the Judicial Selection Commission. Although district court judges could be included in the sortition population, circuit court judges would be best positioned to engage in peer evaluation of a nominee to the Supreme Court. Circuit court judges are tasked with jobs that offer a better parallel to the jobs of Supreme Court justices--such as hearing appeals on questions of federal law--and nearly all cases before the Supreme Court have first been litigated before one of the nation's several circuit courts. Second, the Judicial Selection Commission would not offer formal performance evaluations, but rather work as an expert fact finder for the Senate Judiciary Committee's majority and minority parties. This would include providing detailed commentaries on nominees' previous legal decisions and experience. While it may seem counterintuitive for a judicial evaluator to not issue formal decisions on a nominee's qualifications, these FJC-like decisions are not necessary to resolve the transparency problem. What members of the minority party need to know is whether a nominee is partial or prone to making decisions outside the prevailing norms of the judicial profession. However, solving the issue of transparency alone will not settle the problem of legitimacy.

Another source of legitimacy problems considered is the minority party's inability to exercise institutional influence over the judicial selection process. As previously discussed, this results in politicizing activity (e.g., walking out of hearings, misrepresenting a nominee's decisions, and rhetoric that characterizes legal decisions as purely political) that ultimately undermines the legitimacy of the Supreme Court. Two solutions arise to this problem. First, the President should nominate three individuals to the Supreme Court for each vacancy. This proposal sets up the second solution, but there are a few effects that should be noted. Whenever vacancies arise at the Supreme Court, presidents are endowed with the unenviable but important responsibility of nominating a replacement. Though this has been characterized by presidents as one of their most consequential duties, it also thrusts them into politically risky judicial confirmation battles. Presidents often must make hard decisions between extremely qualified candidates. For example, the most recent nomination by President Joe Biden was preceded by a shortlist that reportedly included Circuit Judge J. Michelle Childs (Totenberg, 2022). She was scorned by progressive partisans for her perceived anti-union

record but lauded by conservatives like Senator Lindsey Graham and liberals like Representative James Clyburn as a bipartisan candidate. If President Biden was provided with the ability to make three nominations, he may well have been able to nominate Judge Childs and shield himself from the progressive wing of the Democratic Party. In other words, the President would be afforded a minimalist decentralization function that yields significant political benefit--a desirable feature, if the goal is to reduce partisanship in the judicial selection process. It could be the case that the President nominates three candidates perceived as extreme ideological allies to the President. While this would likely exact high costs on the President, such as a decline in approval ratings, or alienating moderates in their party, this proposal does not claim to eliminate all politicization, as this is practically not possible in an inherently political institution. What this paper does claim to do is reduce the excess politicization that consequently delegitimizes the Supreme Court. Second, the Senate should conduct competitive hearings for Supreme Court nominees and vote using cumulative voting. It is here that Casella et al.'s (2016) cumulative voting scheme is advanced, but in its application to the Supreme Court. Cumulative voting offers the minority the ability to wield institutional influence over nominations by distributing votes according to each senator's priority, but it maintains the majority's right to rule by making the sinking of any single nominee more costly. In a practical application, senators would be allotted three votes to distribute freely across three nominees. Through a simple amendment to the Senate's internal rules, the nominee that receives the most net-votes is confirmed by the Senate as a justice to the Supreme Court. It is important to stress the level of competition desired for this process. Since there are three nominees vying for one position, this process would encourage nominees to present themselves as the most meritorious and nonpartisan in order to receive the most votes. This is not to say that the opposite could not be true. However, since the cumulative voting method incentivizes senators to cooperate in judicial selection, nominees could not reliably count on offering partisan views in hopes of receiving a party-line vote from the majority party.

Scholars of judicial selection and political science have scrupulously analyzed the Supreme Court and its legitimacy problem. While individual proposals have made significant strides toward answering the court's legitimacy problem, an approach that acknowledged the inextricable connection between the court's legitimacy and the actions of the President, Senate, and FJC together seemed absent from the literature. Any serious solution to the Supreme Court's legitimacy problem has good reason to include these relationships in their analyses and proposals. Information dodging by the President foments politicization in the Senate, but it is

also exacerbated by the inefficacy of the FJC to maintain a nonpartisan reputation. The over-centralization of power by the majority party over judicial selection encourages delegitimizing protest by the minority party, but the FJC's perceived partisanship has played a key role in over-centralization. The Distributed Judicial Selection proposal seeks to fill the gap in the literature by acknowledging that judicial selection is not an assembly line but a distributed network of agents and information.

CONCLUSION

This paper explored the manner in which the revolution of blockchain technology was built on the principles of decentralization and transparency, and then identified the Supreme Court's legitimacy problems in its judicial selection process with the problems that blockchain technology sought to resolve within financial markets. The paper then proceeded to use the principles of decentralization and transparency to analyze the parallels between blockchain technology and the judicial selection process. Having stated the problems in the current judicial selection process, the principles of decentralization and transparency illuminated a new path to solve the Supreme Court's legitimacy problem. The paper reviewed Merit-based Selection, Sortition Selection, Cumulative Selection, and the Judicial Council proposal. The paper identified the strengths of each of these proposals and integrated them into a unified proposal termed Distributed Judicial Selection.

The legitimacy of the Supreme Court has, rightly, been called into question by politicians and scholars alike. The high court remains a pillar of American liberal democracy, and yet an obsessive target for partisans. If democracy is the experiment we say it is, and if democracy is as valuable as we believe it is, then experiment we must. Distributed Judicial Selection offers such an experimental hypothesis, a hail mary to save the court from an irreversible and vexious tumble into the depths of illegitimacy.

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KEYWORDS: *Apis mellifera*, Honey bee, insecticide, agrochemical, Iprodione, Methoxyfenozide, Pyrethrin, Permethrin, Colony Collapse Disorder

DOI:

The Synergistic Effects of Insecticides with a Fungicide on *Apis mellifera* in California's Almond Plantations

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ABSTRACT

Colony Collapse Disorder (CCD) is the driving cause behind the global decline of *Apis mellifera* (honey bee) populations that have become indispensable for modern, plantation-like agricultural operations. However, the very same type of large-scale farming heavily relies on multiple applications of pesticides. Many agrochemicals, evaluated singly, are considered safe for pollinators by the Environmental Protection Agency (EPA) despite a clear lack of understanding of their combined effects. Here, the synergistic effects of insecticides such as methoxyfenozide, pyrethrin, and permethrin, as well as fungicides like iprodione are examined as a possible cause of CCD. Agrochemicals, on the other hand, find their way to a wide majority of honey bee food sources. Although the EPA has done research on individual chemicals, the data of the synergistic effects of certain combinations of chemicals is lacking. To better understand the effects of modern agricultural practices on honey bee cognitive function, proboscis extension reflex (PER) is used as a measure of chemical toxicity introduced by insecticides and fungicides. The goal of this study is to test the synergistic effects on the honey bee that may prevent remembrance of key survival mechanisms such as the location of the hive and food sources.

INTRODUCTION

Colony Collapse Disorder (CCD) is a leading cause of the decline of habitable *Apis mellifera* honey bee hives (Sagili et al., 2015, Sobkowich, 2022). CCD refers to the sudden and detrimental loss of many worker honey bees. The significant loss of worker honey bees from a colony leaves the queen and remaining adolescent honey bees incapable of survival, thus leading to hive death. Since the first identification of CCD in 2006, winter losses of honey bee hives in the United States have averaged around 30%. Although a single cause of CCD has not been explicitly identified despite extensive research efforts, it has been narrowed down to one of two initiators: pesticides or the parasitic Varroa mite (Hristov et al., 2020, Lu et al., 2014). A continuation of research to establish the primary cause of this rapid decline in honey bee populations remains a necessity for the health of honey bee hives (Woodford et al., 2022).

Investigation done by large government-funded agencies, such as the Environmental Protection Agency (EPA), showcase Varroa mites as the primary cause of CCD (US EPA, OCSPP, 2015, Pollinator Protection, 2021), and pay little to no attention

to the pesticides' effects on the pollinators. The Varroa mite is seen as a significant threat due its establishment in all continents except for Australia, specifically reaching the United States in 1987 (The Hive and the Honey Bee, 1120, Reid, 2004). If left untreated, these mites can rapidly decline a hive's health due to the loss of the immunologically active fat bodies and microbial invasions (Ramsey et al., 2019). This is especially dangerous due to the fact that colonies suffering from this often go unnoticed since the untrained eye has difficulty identifying a mite-infested hive because of their small size and dark color (Bila Dubaić et al., 2021).

While these mites may play a role in the prevalence of CCD, many researchers have derived alternative theories where the phenomena may be caused by factors either independent from or in conjunction with the Varroa mite (Barroso-Arévalo et al., 2019, Schwartz, 2020). For instance, a recent study on the synergistic effects of Varroa mites and sublethal doses of pesticides demonstrated that exposure to imidacloprid combined with the mites proved more significant than the Varroa mites alone (Abbo et al., 2016). In response to findings such as

these, the National Research Council calls for the EPA to assess the risks produced by the different mixtures of pesticide products (Sprinkle & Payne-Sturges, 2021, US EPA, OCSPP, 2015). Data on commonly used mixtures is available yet not easily attained since there is no current law requiring farmers to give this information out to researchers. Identification of these chemicals would allow the EPA to assess those mixtures and determine whether they pose a greater risk than the ones posed by individual pesticides alone (Office, 2015).

In order to investigate these claims, the present study focuses on chemicals used during almond production in California of the United States as this state produces and exports approximately 80% of the world's almonds (Cavigli et al. 2015). Every year, over 70% of U.S. commercial honey bee colonies are transported to aid in such pollination (Armstrong, 2022; Aizen, M. A. et al., 2019). Resultantly, there is special concern that the chemicals used in this area could play a significant role in the decline of honey bee populations. Investigating the effects of the different chemicals that almond farmers use and as well as finding the synergistic effects of pesticides combined with fungicides could take us a step closer to deriving the true cause of CCD. This is important due to the fact that more than 95% of insecticide applications on almond plantations are applied simultaneously with fungicides (Wade et al. 2019).

From 2013 to 2015, the most frequently used insecticide in California was methoxyfenozide, a so-called reduced risk pesticide by the EPA because of its alleged low impact on honey bees (Meikle et al., 2019). Although this chemical was marketed as safe for pollinators, a 2018 study showed that field-relevant spray applications have been found to reduce adult worker bee survival over a ten day period (Wade et al. 2019). While methoxyfenozide exhibits a relatively low acute toxicity when consumed orally by honey bees, the effects of the chemical may pose a greater risk for cognitive damage (Arena et al., 2017).

Iprodione, like methoxyfenozide, is known for its low impact on adult honey bees and was the most common fungicide used in California almond plantations between the years 2007 and 2015 (Wade et al. 2019). While iprodione has been shown to cause some negative effects on larval honey bees, they are generally said to be safe for adult honey bees (Wade et al. 2019, Mussen et al. 2004). However it is important to note that sterol-biosynthesis-inhibiting fungicides, like iprodione, increase toxicity to honey bees alongside pyrethroid, neonicotinoid, organophosphate insecticides, or the natural toxin quercetin found in pollen (Thompson et al. 2003, Iwasa et al. 2003, Johnson et al. 2010, Mao et al. 2017). Thus, when this chemical is consumed alongside another, the effects may prove lethal to the honey bee populations.

Previous studies have illustrated that the treatment of larvae with methoxyfenozide alone did not result in a significant decrease in adult emergence (61.4%) compared

to the control (73.8%). Additionally, the treatment of larvae with only iprodione showcased no dramatic effect on adult emergence (63.3%). However, when methoxyfenozide and iprodione were combined, there was a significant drop in the adult emergence (39.7%), which is greater than the sum of the effects that each chemical showed individually (Wade et al., 2019). It can be hypothesized that testing the combined effects of methoxyfenozide and iprodione will exhibit increased toxicity at sub-lethal levels, amplifying the negative cognitive effect on honey bees.

Along with the previously mentioned chemicals, two other pyrethroid compounds were tested in conjugation with iprodione in this study— pyrethrin and permethrin. Pyrethrin is a natural compound often used in combination with other chemicals for pest-control purposes. Permethrin is a synthetically created pyrethroid and has a similar molecular structure to pyrethrin, but is more stable and thus does not degrade as rapidly in sunlight compared to the natural pyrethrins. This prolonged effect and decreased degradation is what makes permethrin a threat for honey bees in agro-ecosystems (Boffetta & Vimi, 2018).

A method frequently used to examine the cognitive functioning of honey bees is the olfactory classical conditioning effect of the proboscis extension reflex (PER) (Gronenberg, 2015). PER is the action of the honey bee extending its proboscis (tongue-like extension) in an effort to eat. This method utilizes a biological stimulus paired with an olfactory stimulus. A reflex to this olfactory stimulus will be indicative of cognitive function in the honey bees. If a honey bee is successfully conditioned to the olfactory stimulus but loses the conditioned response after ingestion of the chemical(s), it can be inferred that a cognitive deficit has occurred because of the consumed chemical(s).

The present study aims to determine if the agrochemicals marketed as safe for honey bees cause any negative cognitive effects. Exploration of the effects of various agrochemicals on the cognitive function of honey bees is tested alongside their possible synergistic effects. Using PER as a measure for cognitive function, the study will look at the change in honey bee conditioning rates after ingestion. Resultantly, a lower conditioning rate of these combined chemicals would illustrate increased synergistic toxicity.

METHODS

The acute oral LD-50 for each chemical used in this study was determined by searching previous literature (Pesticides & Bee Toxicity, 2022, Meikle, 2019, Ladurner, 2005, Sanchez-Bayo, 2014). The LD-50 marks the lethal dose which would cause death among 50% of the population. We used a small fraction of the lethal dose to ensure that the quantity fed would not likely cause death to the experimental groups.

The honey bees were collected from the apiary at the

Chemical	Methoxyfenozide	Iprodione	Pyrethrin	Permethrin
Oral LD-50	100µg	125µg	0.15µg	0.13µg
Toxicity	low	low	high	high

FIGURE 1. | Oral LD-50 values for used chemicals administered to honey bees.

George Washington University and were sequentially placed and cooled for approximately 5 minutes at -2°C . Each honey bee was independently harnessed into modified Eppendorf tubes secured with a small piece of cotton placed behind their abdomen so that the head was free to move and their proboscis were available to react to later conditioning.

The honey bees were placed on numerically labeled localities across the lab bench after being carefully secured in the Eppendorf tubes in order to facilitate proper identification and recording of collected data. Honey bees were then allowed ten minutes to acclimate to their new surroundings. Researchers then dipped toothpicks in sucrose water and rotated the rod around the honey bees' antennae for 15 seconds or until PER was exhibited (Img. 1). Once a honey bee displayed PER, lemongrass puffs were administered with a transfer pipette containing a cotton-ball soaked with lemongrass oil to classically condition the bee to associate sucrose water with the lemongrass scent. This process was repeated 3 times with a five minute interval between each round (Img. 2). Any honey bee failing to exhibit PER at any time during this conditioning stage was not administered lemongrass and was removed from any further trials.

Following a successful three-round conditioning phase, the remainder of the honeybees were evenly divided into a control and an experimental group. All control bees were fed 5µL of 2:1 sucrose water. However, experimental bees received traces of a respective pesticide, significantly below the LD-50, combined with the 5µL of a 2:1 sucrose water. Specifically, the following concentrations of particular chemicals were compared with the control group and/or other chemicals. Control 1, methoxyfenozide 10%, Iprodione 10%, and Iprodione 10% + Methoxyfenozide 10% all had 200 honey bees in

each group. The rest of the groups had 100 honey bees in each group (Fig. 2.). Control 1, methoxyfenozide 10%, Iprodione 10%, and Iprodione 10% + Methoxyfenozide 10% experiments were run simultaneously, and control 2, Pyrethrin 1%, Permethrin 1%, Iprodione 1%, Iprodione 1% + Pyrethrin 1%, and Iprodione 1% + Permethrin 1% were run simultaneously later on in the summer. Two controls were taken in order to rule out data changes from the beginning of the summer when compared to the end.

After 30 minutes of retention, all control and experimental bees were tested for their ability to respond to lemongrass infused air, an indication of whether they have retained PER after the initial rounds of classical conditioning. If bees failed to exhibit PER in the experimental groups, their cognitive abilities would be considered to be impaired by the chemical exposure.

Alternatively, bees continuing to exhibit PER would not appear to show a decline in their cognitive abilities.

RESULTS

PER retention rates are dependent on the particular insecticide or fungicide of interest. The fungicide iprodione and the insecticide methoxyfenozide were fed to the honey bees independently, as well as combined, at 10% of their respective LD-50 values. The goal of this study was to test if the chemicals had a negative effect on the retention rate of the honeybees post-feeding as well as to test if these chemicals had a negative synergistic effect on the retention rate. It should be noted that a negative effect of the retention rate of the honey bees following feeding marks a negative impact on the honey bees' cognitive/short-term memory skills as a result of the consumption of the chemicals. All groups marked a statistically significant decline from the control group (Fig. 3, Fig. 5). These results are indicative that the

Group 1	Group 2
Control 1	Control 2
Control 1	Iprodione 10%
Control 1	Methoxyfenozide 10%
Control 1	Iprodione 10% + Methoxyfenozide 10%
Control 2	Pyrethrin 1%
Control 2	Permethrin 1%
Control 2	Iprodione 1%
Control 2	Iprodione 1% + Pyrethrin 1%
Control 2	Iprodione 1% + Permethrin 1%
Iprodione 10%	Iprodione 10% + Methoxyfenozide 10%
Methoxyfenozide 10%	Iprodione 10% + Methoxyfenozide 10%
Iprodione 1%	Iprodione 1% + Pyrethrin 1%
Iprodione 1%	Iprodione 1% + Permethrin 1%
Pyrethrin 1%	Iprodione 1% + Pyrethrin 1%
Permethrin 1%	Iprodione 1% + Permethrin 1%

FIGURE 2. | Experimental groups and control groups compared to each other.

chemicals have a negative effect on the retention rate of the honey bees post-feeding.

Analysis was then done in order to determine if the combination of the two pesticides had a synergistic effect or not, if compared to their individual doses, respectively. The combination of the chemicals showed to only be significantly different from iprodione 10% but not from methoxyfenozide (Fig. 5). This data implies that the combination of chemicals does in fact have a negative synergistic effect when compared to the effects of just iprodione 10%. However, when comparing the combination of chemicals with just methoxyfenozide 10% there was not a significant difference.

Similar to the analysis performed above, the same tests were performed using two new chemicals: permethrin and pyrethrin at 1% LD-50 concentration. These chemicals were then mixed with iprodione to see if they had a similar negative synergistic effect that was found with the combination of iprodione and methoxyfenozide. When we compared experimental groups to the control groups when testing these new chemicals, all experimental groups were significantly lower than the control group

(Fig. 4, Fig. 5). These results illustrate the negative effect on retention rate following chemical feeding of the honey bees. More analysis was then performed to find if the experimental groups were significantly different from one another. Data found for these groups implied that each mixture of chemicals were significantly lower than the individual chemicals, implying that there is a statistically significant negative effect on the honey bees when these chemicals are combined (Fig. 5).

DISCUSSION

Previous studies aimed to establish the association between CCD and varroa mites, emerging diseases, or inadequate nutrients within the colony and surrounding environment (Neov et al., 2019). With this in mind, the experimental study began by comparing iprodione and methoxyfenozide, which are two agrochemicals that have been shown to have synergistic effects on the larvae of honeybee when applied together without the varroa mite present (Wade et. al., 2019). The study then looked at pyrethroids, namely pyrethrin and permethrin in combination with iprodione, to see if the results were

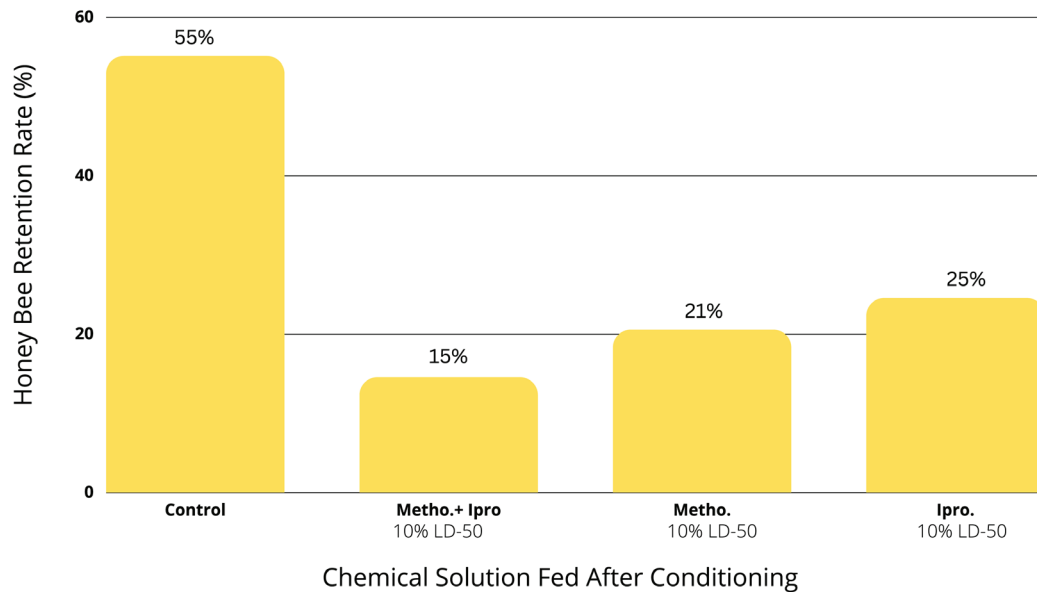


FIGURE 3. | PER Retention Rates when fed iprodione and methoxyfenozide. At a 10% LD-50 concentration methoxyfenozide and iprodione independently, and the two chemicals mixed together, were fed to the treatment bees. Control bees were given sucrose water. The percentage of classically conditioned honey bees in each group that retained the PER to the lemongrass scent after subsequent feeding is shown.

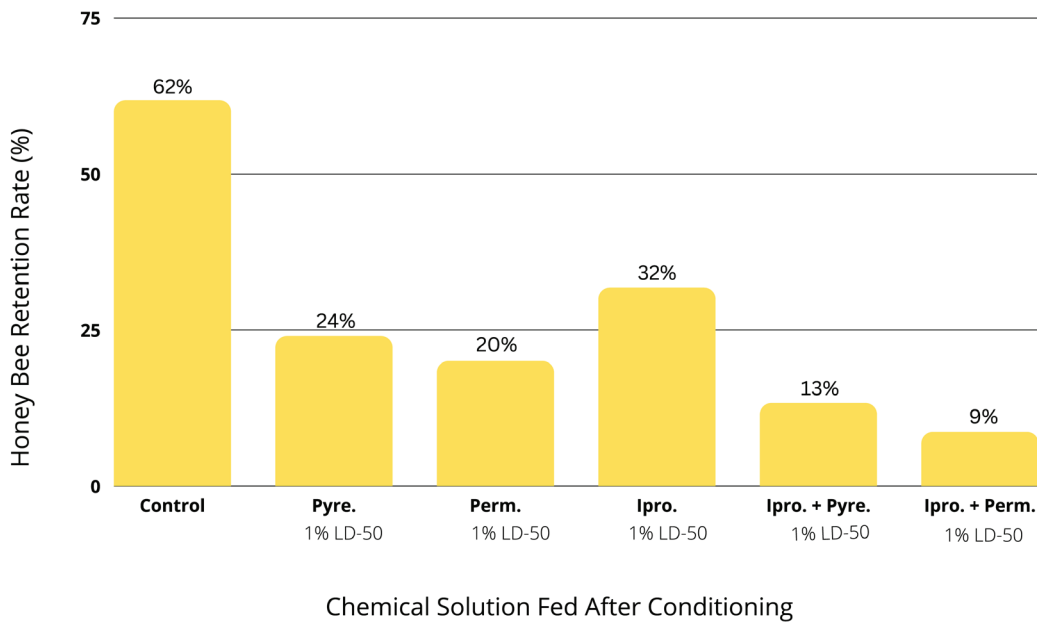


FIGURE 4. | PER retention rates when fed iprodione, permethrin, and pyrethrin. At a 1% LD-50 concentration, pyrethrin and permethrin were fed respectively to honey bees independently or synergistically with iprodione, also at a 1% LD-50 level. A control group of honey bees was fed sucrose water. The percentage of honey bees in each group that retained the PER to the lemongrass scent after the respective chemical feeding is shown in this figure.

	n	df	X ²	p	P<0.05?
All Groups	1,400	9	191.5	< 0.0001****	yes
Control #1 - Control #2	300	1	1.154	0.2828	no
Control #1 - Ipro. 10%	400	1	40.04	<0.0001****	yes
Control #1 - Metho. 10%	400	1	51.99	<0.0001****	yes
Control #1 - Ipro. 10%+ Metho. 10%	400	1	67.93	<0.0001****	yes
Control #2 - Pyre. 1%	200	1	29.46	<0.0001****	yes
Control #2 - Perm. 1%	200	1	36.46	<0.0001****	yes
Control #2 - Ipro. 1%	200	1	19.31	<0.0001****	yes
Control #2 - Ipro. 1%+ Pyre. 1%	200	1	51.22	<0.0001****	yes
Control #2 - Ipro. 1%+ Perm. 1%	200	1	63.93	<0.0001****	yes
Ipro. + Metho. 10% - Ipro. 10%	400	1	4.474	0.0344*	yes
Ipro. + Metho. 10% - Metho 10%	400	1	1.357	0.2440	no
Ipro. + Pyre. 1% - Ipro. 1%	200	1	9.441	0.0021**	yes
Ipro. + Pyre. 1% - Pyre. 1%	200	1	4.013	0.0452*	yes
Ipro. + Perm. 1% - Ipro. 1%	200	1	18.71	<0.0001****	yes
Ipro. + Perm. 1% - Perm. 1%	200	1	7.236	0.0071**	yes

FIGURE 5.

consistent with a broader scope of chemicals.

Each respective chemical was fed at a dosage significantly lower than the lethal point commonly associated with the chemical of interest to better determine whether or not the chemicals, when combined, cause greater memory loss than one chemical alone. If this holds true, it is shown that the chemicals combined are having a synergistic effect on the honey bees short-term memory retention. A popular technique, PER, was used to test the cognitive effect of each solution.

The PER conditioning test involves classically conditioning each honey bee to the scent of lemongrass, followed by a retention test after a thirty minute period. If a honey bee exhibited PER to the olfactory stimulus, where tongue was clearly visible, it was said the honey bee “passed” whereas the honey bees that failed to retain prior conditioning after the retention period and did

not stick their tongues out were labeled as “failed”. It was hypothesized that all honey bees fed agrochemicals would have a decreased passing rate and that honey bees fed both of the agrochemicals would have a significantly greater decreased passing rate as compared to the remaining experimental and control groups.

This synergistic effect is most reasonably due to the depletion of cytochrome p450 monooxygenase (p450) in honey bees upon exposure to iprodione. P450 in honey bees is involved in critical detoxification pathways, and without them the effects of insecticides are readily amplified, making non-toxic doses deadly (Wade et. al., 2019). This could suggest that the depletion of p450 that iprodione causes negatively impacts the honey bees’ ability to detox their bodies of harmful pesticides, thus amplifying the effects of other chemicals that the honey



IMAGE 1. | Honey bee exhibiting PER as a reflex to the olfactory stimulus.

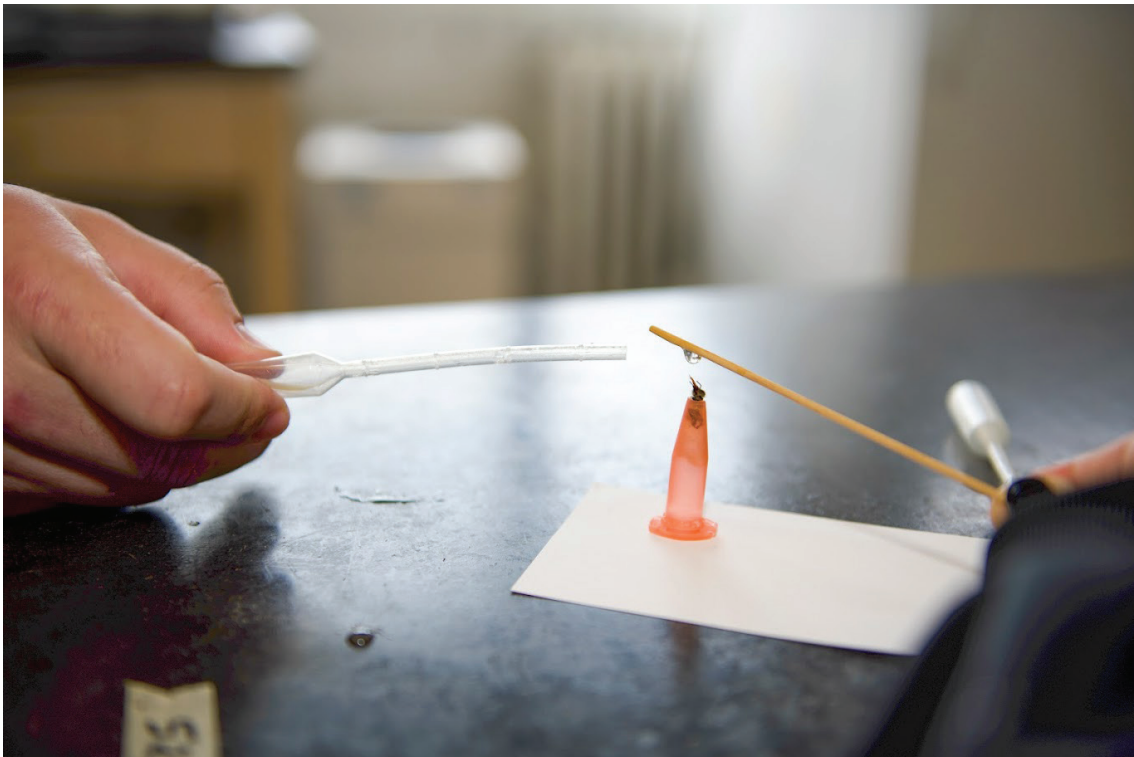


IMAGE 2. | Honey bee exhibiting PER to sugar-water and conditioning the response to the olfactory stimulus.

bees are exposed to.

The findings of this study were in support of what was originally hypothesized. Both control groups were significantly higher than the experimental groups, and when the chemicals were

combined, the effects of each chemical were amplified. With no chemical present to inhibit the PER reaction, the found response rates to the controlled sucrose water solution illustrate stability within honeybee cognitive function (Fig. 3, Fig. 4). When the same methods were performed on honeybees consuming the agrochemicals, each retention rate declined significantly. Chi-square analysis verified that each group, in relation to the control groups, were statistically significantly lower (Fig. 5), supporting the hypothesis that each application of a pesticide, or combination thereof, has a significant negative effect on the memory retention of honeybees when compared to the memory retention of the control bees.

When two separate pesticides were combined, for all but one group—iprodisone + methoxyfenozide 10% vs. methoxyfenozide 10%, a statistically significant decline in the retention rate when compared to the groups where only one chemical was fed became evident. This suggests a synergistic effect is a likely occurrence with varying effects that are dependent on the specific chemicals being combined. Although chemicals may have been marketed as “safe” for honey bees, they can in turn affect the honey bee’s cognitive abilities when exposed to sub-lethal levels. Further, when two chemicals are mixed together, as they often are in numerous agricultural plants, the effect can be even worse than when just one chemical is applied.

Although the findings were significant, further research is needed to come to a clear conclusion on which chemicals are safe for commercial use and which ones are not. A clear limitation of this study is that knowing how much chemical honey bees pick up in the field is very difficult, thus the numbers we used, although very reasonable, could be too high or too small based on varying concentrations applied in the field and various other environmental factors. The numbers used in this study were very conservative because of this uncertainty. The fact that significant results were found even at these low concentrations is concerning and should be taken into account when banning the use of pesticides used in this study. Another limitation of this study was that this study was performed in Washington, DC in the summertime, while many chemicals will be applied in different seasons and the honey bees could have less foraging time as a result of the weather conditions and this could change the effects of the chemicals. Further research should be done on a wider variety of chemicals, during a much wider range of time. Further research should also be done to test how much chemical makes its way into the honey/pollen within the hive and how this can affect maturing larvae as well as the queen.

CONCLUSION

A decline in cognitive functioning and short-term memory retention in *Apis mellifera* decreased stepwise with respective chemical exposure. Honey bees fed sucrose water (control group) passed at a rate as great as three times compared to the passing rate of the honey bees that were administered any given chemical. Thus, the exposure of the chemicals showed detrimental effects to the honey bee’s cognitive abilities. The lost ability for a honey bee to retain memory will not allow honey bees to find their way back to the hive and remember other skills and important patterns that are necessary for a hive’s success (Hristov, 2020, Neov et. al., 2019). Thus, the synergistic effects of the insecticides and fungicides are detrimental to the health of both the individual honey bee and the hive as a whole. Subsequent studies involving varying mixtures of agrochemicals should be performed in order to have a better understanding of the way that various chemical mixtures affect honey bees.

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KEYWORDS: *Apis mellifera* L., honeybees, dicamba, herbicide, cognition, colony collapse disorder
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Effect of sublethal doses of dicamba on honeybee cognition

CAMILLE LEONI

ABSTRACT

Following the widespread weed resistance to glyphosate-based herbicides, farmers have begun to more heavily depend on alternative herbicides, such as dicamba, as substitutes for weed control. Despite extensive studies detailing the effects of pesticide exposure on the neurological functions of honeybees, no research has been conducted to investigate the effects of modern formulations of dicamba on the cognitive health of honeybees. This experiment tested the effect of sublethal doses of dicamba pesticide on the cognitive and neurological health of *Apis mellifera* L. honeybees. The procedure involved classically conditioning the honeybees' Proboscis Extension Response (PER) to the scent of lemongrass. Following conditioning, experimental honeybees were exposed to sublethal levels of dicamba while control bees were exposed to pure sucrose water. Significantly fewer experimental honeybees retained their ability to display PER than control bees. Additionally, sublethal doses of dicamba negatively impacted the motor functions of the experimental honeybees as evidenced by their distinctly slowed and lethargic activity. The observed impairment of the cognitive and motor abilities of individual honeybees may have far reaching consequences at the colony level especially considering the increasing incidence of colony collapse disorder (CCD), a worldwide phenomenon that has contributed to the rapid decline of honeybee populations.

INTRODUCTION

Herbicides, or chemicals used to control vegetation, are often erroneously misconstrued as being harmless to insects, mammals, and other non-plant species. However, countless studies have demonstrated that popular herbicides, such as glyphosate, the active ingredient of Roundup, alter the behavior and threaten the survival of honeybees and other nontarget insects (Balbuena et al., 2015; Farina et al., 2019; Luo et al., 2021; Zhu et al., in prep). Following the widespread weed resistance to glyphosate-based herbicides, farmers have begun to more heavily depend on alternative herbicides such as dicamba, an herbicide in the chlorophenoxy family of chemicals (Figure 1). According to the National Pesticide Information Center, dicamba is present in over 1,100 herbicide products sold in the United States (National Pesticide Information Center [NPIC], 2012). As a result, it is of utmost importance to investigate the effects of this herbicide on the neurological functions of honeybees.

Dicamba (3,6-dichloro-2-methoxybenzoic acid) was first registered in 1967 but has since made a resurgence as a prominent broad-spectrum herbicide following the EPA's approval of new formulas in 2016. Dicamba, which is similar to the growth-regulating hormone auxin naturally found in plants, kills plants

by stimulating excessive cell growth in order to essentially clog the phloem system (Caux et al., 1993; Kelley & Riechers, 2007; NPIC, 2012). Dicamba poses a particularly dangerous threat to off-target plants and pollinators due to its high volatility, which allows it to drift great distances from the location of its original application (Behrens & Lueschen, 1979). In fact, a 2018 study from the University of Missouri attributes the damage of over a million acres of US crops to dicamba drift (Bradley, 2018). In addition to contaminating the pollen and nectar of neighboring plants (Krupke et al., 2012; Greatti et al., 2006), pesticide drift, specifically resulting from spray application (Siebers et al., 2003), can pollute water sources. This consequence is particularly troubling considering dicamba readily contaminates groundwater and surface water (Grover et al., 1997). For example, approximately 25% of national urban streams the United States Geological Survey (USGS) sampled were contaminated with dicamba (Larson et al., 1997). Thus, while the EPA appears to downplay the risk of dicamba drift to honeybees (Wagman et al., 2020), these essential pollinators are routinely ingesting this synthetic-auxin herbicide through their water, pollen, and nectar sources (Samson-Robert et al., 2014).

Other than a recent study linking dicamba to restricted pollinator visitation as a result of the

herbicide's role in severely reducing plant diversity (Bohnenblust et al., 2016), dicamba is generally considered to be nontoxic to honeybees at all concentrations (Morton et al., 1972b; NPIC, 2012) and harmless to honeybee brood development at concentrations as high as 1000 ppm (Morton et al., 1972a). However, while these studies propose that dicamba is not especially lethal to honeybees, no investigations have been launched to assess the potential physiological, behavioral, or neurological effect of sublethal levels of dicamba on exposed species. Honeybees exposed to other popular broad-spectrum herbicides, such as glyphosate, have displayed deteriorations in their learning, memory, and behavioral functions (Balbuena et al., 2015; Farina et al., 2019; Luo et al., 2021; Zhu et al., in prep). Furthermore, previous studies have demonstrated the negative effects of indirect exposure to dicamba on the performance and physiological function of some lepidopteran species (Bohnenblust et al., 2013). These observations are mirrored in the selective death of male lady beetle larvae exposed to commercial formulations of dicamba (Freydier & Lundgren, 2016). Such cognitive and physiological consequences may similarly be displayed in honeybees exposed to dicamba.

The results of this study will illuminate the nonfatal effects of sublethal levels of dicamba on the cognitive health and associative learning capabilities of honeybees. In this experiment, honeybees' associative learning capacities will be exemplified through the classical conditioning of their Proboscis Extension Response (PER). Honeybees extend their proboscises, or display proboscis extension responses, when they contact a food source. This unconditioned response has been paired with conditioned stimulus in numerous laboratory settings (Bitterman et al., 1983; Giurfa & Sandoz, 2012), a process that demonstrates the associative learning process of honeybees. Thus, experimenters monitor changes in honeybees' PER as representations of alterations in this species' cognition abilities. Associative learning is paramount for honeybee survival as it enables a worker bee to execute her central place foraging behavior and dance communication (Hammer & Menzel, 1995). Impairments of these two essential behaviors, as a result of disruptions in the neurological processes of honeybees, may be correlated with population-level declines of the species (Williamson et al., 2013). The present experimental study will use classical conditioning to explore the effects of sublethal doses of dicamba on the cognitive acuity and memory of honeybees. Specifically, it is hypothesized that honeybees being subjected to sublethal levels of dicamba will display impaired olfactory learning and memory formation; in an experimental setting, such exposed bees will fail to display PER following classical conditioning.

MATERIALS AND METHODS

This experiment tested the effects of sublethal doses of dicamba pesticide on the cognitive and neurological health of *Apis mellifera* L. honeybees. The procedure involved classically conditioning the honeybees' PER to the scent of lemongrass. Studies have shown that PER is triggered when sucrose water is introduced to a honeybee antenna (Bitterman et al., 1983; Felsenberg et al., 2011; Giurfa & Sandoz, 2012; Matsumoto et al., 2012; Menzel & Müller, 1996). In this setting, the unconditioned stimulus was the 2:1 sucrose : water solution and the conditioned stimulus was the lemongrass essential oil (Giurfa & Sandoz, 2012). The PER, which was initially the unconditioned response, became the conditioned response following conditioning.

The dependent variable was the honeybees' PER retention while the independent variable was the type of solution the bees ingested—either the sucrose water solution or the dicamba solution. The concentration of the dicamba experimental solution was 0.48 µg/bee. This is 13.3% of the acute oral LD50 of dicamba for honeybees (3.6 µg/bee) detailed in the literature (Environmental Protection Agency [EPA], 2000), or the amount of a material that terminates 50% of a group of tested specimens. Previous studies conducted concerning the effects of glyphosate and imidacloprid on the cognitive behavior of honeybees have demonstrated promising results using experimental solutions containing 10% of each pesticide's respective LD50 (Zhu et al., in prep).

Capture of Bees

The honeybee foragers were captured using a net and an aspirator from the hives located in The George Washington University's apiary. The role of the foragers is to collect pollen and nectar from the surrounding environment; thus, foragers were the target honeybees of this experiment since they are most likely to be exposed to herbicides. The honeybees were captured around three o'clock p.m. before each trial since foragers are most active during the heat of the day. The captured honeybees were transferred into individual glass vials for transport.

PER Preparation

To anesthetize the captured honeybees, the vials were briefly (one to two minutes) placed in a freezer (-10°C). The honeybees were individually harnessed in modified Eppendorf microcentrifuge tubes to permit access to their mouths and antennas (Figure 2). The bottoms of the microcentrifuge tubes were cut so the honeybees' heads protruded through the openings. The honeybees were restricted in their positions using cotton placed behind their abdomens. To initially assess for PER elicitation, the antennas of the harnessed honeybees were touched with a Q-tip soaked in the 2:1 sucrose : water solution for three seconds (Figure 3). The honeybees that displayed

PER were kept for classical conditioning, while those that did not demonstrate PER were eliminated from the study.

PER Conditioning

Using classical conditioning techniques, honeybees were conditioned to display PER when exposed to a lemongrass scent. Specifically, the antennae of the harnessed honeybees were touched with a Q-tip soaked in the 2:1 sucrose : water solution (unconditioned stimulus) for three seconds. After PER was elicited, the honeybees were spritzed with a lemongrass scent (neutral stimulus) for five seconds using a cotton ball in a transfer pipette. Each honeybee underwent four consecutive rounds of conditioning with a five-minute break between each trial. Following the completion of the fourth trial, the conditioned honeybees were fed either 10 μL of the 2:1 sucrose : water solution (control, $n = 223$) or 10 μL of the 0.48 $\mu\text{g}/\text{bee}$ dicamba solution (experimental, $n = 217$). The honeybees remained in a 16°C room for one hour following feeding (Figure 4). Honeybees that did not initially display PER were eliminated from the trial (Scheiner et al., 2013).

PER Retention

Following the one-hour rest period, the honeybees' PER retention was tested by spraying the lemongrass scent on them for five seconds (Figure 5). The bees' olfactory learning and memory formation capabilities were assessed by their ability to perform PER upon exposure to the scent of lemongrass following successful conditioning. Demonstration of PER signified learning and memory retention, while failure to display PER signified a lack of retention. The honeybees' subsequent ability or inability to display PER was used to calculate the failure ratios (number of total bees captured : number of bees with PER observed) of the control and experimental groups. This value of comparison was analyzed through a chi-square test.

Trial Attrition

The average attrition was determined as the average number of honeybees that were eliminated during the trials due to their failure to display PER or that died anytime during trials. The attritions were calculated to determine whether acute exposure to sublethal doses of dicamba increased the mortality of honeybees, a consequence that would affect the failure ratios. A one-way ANOVA test was used to compare the average attritions of the control and experimental groups.

Testing the Lethality of the Experimental Solution

To confirm the experimental condition (the ingestion of 10 μL of the 0.48 $\mu\text{g}/\text{bee}$ dicamba solution) was not lethal to honeybees, four trials were performed to compare the lifespan of honeybees that ingested

the control solution (10 μL of the 2:1 sucrose : water solution) to the life expectancy of bees that ingested the experimental solution. Using the same procedure described previously (see "Capture of Bees"), honeybees were captured, harnessed, and fed either the control ($n = 40$) or experimental ($n = 41$) solution. They were then placed in separate plastic containers (6 inches x 6 inches x 3 inches) that each contained a small sponge soaked in the sucrose water solution and sealed with a piece of saran wrap punctured with numerous air holes (Figure 6). The containers were kept under the same environmental conditions (16°C) as the PER experiments. The total number of bees alive each day following the initial containment was recorded. A one-way ANOVA test was performed to determine whether the life expectancies of honeybees exposed to either the control condition or the experiment condition were significantly different.

Testing the Acute Oral LD50 of Dicamba per Bee

An acute oral LD50 of 3.6 $\mu\text{g}/\text{bee}$ (EPA, 2000) was used as a reference in this experiment. The validity of this concentration was assessed through the execution of six trials to experimentally determine the acute oral LD50 of dicamba per bee. Using the same procedure described previously (see "Capture of Bees"), honeybees were captured, harnessed, and fed 10 μL of a 240 $\mu\text{g}/\text{bee}$ dicamba solution ($n = 11$), 10 μL of a 160 $\mu\text{g}/\text{bee}$ dicamba solution ($n = 17$), or 10 μL of a 120 $\mu\text{g}/\text{bee}$ dicamba solution ($n = 7$). They were then placed in separate plastic containers (6 inches x 6 inches x 3 inches) that each contained a small sponge soaked in the sucrose water solution and sealed with a piece of saran wrap punctured with numerous air holes (Figure 6). The containers were kept under the same environmental conditions (16°C) as the PER experiments. The total number of bees alive after 24 hours was recorded.

RESULTS

Assessment of Learning and Memory through the Proboscis Extension Response

The failure ratio (number of total bees captured : number of bees with PER retention) of the experimental group (87.71 : 1) was significantly larger than that of the control group (28.08 : 1) (Figure 7). This statistically significant difference, $\chi^2(1, N = 440) = 94.566$, $p < 0.001$ (Table 1), indicates that the learning ability and memory retention of the control bees were significantly stronger than those of the experimental bees.

Trial Attrition

The average trial attrition (the average number of honeybees that died during the trials or were removed due to the cessation of PER) of the experimental bees (0.43 bees per trial) was higher than that of the control

bees (0.14 bees per trial) (Figure 8). However, while the difference between the average trial attritions was not statistically significant [$F(1, 40) = 1.739, p = 0.195$] (Table 2), the behaviors displayed by the control and experimental bees during and after the trials differed. Following exposure to dicamba, the experimental bees moved their arms and abdomens less than the control bees that ingested sucrose water. Additionally, behavioral differences were observed between the control and experimental bees when they were released from their harnesses. The control bees immediately flew out of their harnesses after the lids were opened. They were able to leave the harnesses and fly away without assistance. In contrast, the experimental bees needed help exiting the harnesses despite the lids being opened. Approximately one half to two-thirds of the experimental bees needed to be removed from their harnesses with tweezers. Once they were removed, most of them flew away; only a handful were unable to fly and instead crawled on the surface. Overall, the experimental bees were more inactive and lethargic than the control bees.

Lethality of the Experimental Solution

On average, half of the honeybees that ingested the control solution died after 3.6 days in the container. Additionally, half of the bees that received the experimental solution died after 3.1 days. The difference between these averages was not statistically significant [$F(1, 6) = 0.253, p = 0.633$] (Table 3), thereby revealing that the experimental solution did not shorten the lifespan of the honeybees. These results are represented in Figures 9, 10, 11, and 12 which display the similar mortality rates of the control and experimental honeybees.

Acute Oral LD50 of Dicamba per Bee

After ingesting 10 μL of a 240 $\mu\text{g}/\text{bee}$ dicamba solution, five of the six honeybees from trial #1 and four of the five honeybees from trial #2 died within 24 hours (Figure 13). Similarly, within 24 hours of being fed 10 μL of a 160 $\mu\text{g}/\text{bee}$ dicamba solution, all four of the bees from trial #1, six of the seven bees from trial #2, and five of the six bees from trial #3 died (Figure 14). In contrast, only two of the seven honeybees that ingested 10 μL of a 120 $\mu\text{g}/\text{bee}$ dicamba solution died within 24 hours (Figure 15). Thus, the acute oral LD50 of dicamba per bee was experimentally estimated between 120 $\mu\text{g}/\text{bee}$ - 160 $\mu\text{g}/\text{bee}$. This estimated concentration was significantly larger than the acute oral LD50 (3.6 $\mu\text{g}/\text{bee}$) that was detailed in the literature (EPA, 2000). Due to the time restraint of the study and the seasonal changes in the honeybees' activity that occurred at the end of the experiment, only six trials were performed. More trials will need to be conducted in the future to experimentally confirm the acute oral LD50 of dicamba for honeybees.

DISCUSSION

This experimental study demonstrated that sublethal doses of dicamba impaired the olfactory learning and memory formation of honeybees, an outcome evidenced by the experimental bees' failure to display retention of PER following classical conditioning and subsequent exposure to a lemongrass scent. Thus, the hypothesis was supported by the results of this study.

Proboscis Extension Response

The larger failure ratio of the experimental group indicates that fewer experimental bees than control bees displayed PER retention (Figure 7; Table 1). The statistically significant difference between the control and experimental bees' olfactory learning and memory formation abilities shows that the cognitive acuity and PER retention of honeybees are affected by exposure to dicamba. These neurological malfunctions suggest that sublethal doses of dicamba affect the honeybees' mushroom bodies, a consequence that has been documented in honeybees exposed to cholinergic pesticides (Palmer et al., 2013). Future research will aim to identify the specific regions of the honeybee brain that are affected by dicamba exposure.

As a result of the restrictions associated with the COVID-19 pandemic, the timeline of the experiment was restricted to the month of October in 2020. Thus, the timing of this study neared the conclusion of the honeybees' foraging season, a period hallmarked by cooling temperatures and the emergence of "winter" or diutinus bees (Remolina & Hughes, 2008). In addition to their distinguishing physiological characteristics, winter bees may display a different neurological profile than summer bees. Studies have suggested that the long-term memory formation of olfactory information in winter bees is slightly impaired (Behrends & Scheiner, 2010). However, the subjects of this experimental study were forager bees captured outside their hives during the warm days of early October and thus were likely summer bees. Therefore, the results of this experiment were not affected by the emergence of winter bees.

Trial Attrition

A one-way ANOVA test revealed that there was no significant difference between the trial attrition, or the average number of honeybees that died during the trials or were removed due to the cessation of PER, of the control and experimental groups (Figure 8; Table 2). However, there were noticeable differences between the subsequent behaviors of the honeybees that were fed the diluted dicamba solution and those that ingested the sucrose solution. Specifically, the activity of the experimental bees was distinctly more slowed

and lethargic than that of the control bees (personal observation). These anecdotal findings suggest that sublethal doses of dicamba may also negatively impact the motor functions of honeybees. A limitation of the experiment was the lack of proper tools to quantify the changes in the honeybees' movements. However, similar changes in physical behavior and instances of inhibited movement have been detected in honeybees exposed to imidacloprid, ethion, and glyphosate (Delkash-Roudsari et al., 2020). Future studies will be conducted to quantify the consequences of dicamba exposure on honeybee motility and flight patterns.

Possible Correlation Between Dicamba Usage and Colony Collapse Disorder

Colony Collapse Disorder (CCD), a phenomenon characterized by the disappearance of worker bees from their hives (Williams et al., 2010), is a significant contributor to the decline of managed honeybee colonies in the United States (Ellis et al., 2010). Forager bees depend immensely on spatial learning and memory formation to remember key landmarks on their path to and from their hives; foragers' inability to return to their colonies after collecting resources in the field is consistent with CCD (Farooqui, 2013). Thus, alterations in the honeybees' memory capacities as a result of dicamba exposure may imply a correlation between this synthetic-auxin herbicide and CCD. In addition to parasites and diseases, pesticide usage is perceived to be related to the increasing prevalence of CCD (Maini et al., 2010).

Experimentally Determined Acute Oral LD50 of Dicamba per Bee

The acute oral LD50 of dicamba per bee identified from literature and used as a reference in this study was 3.6 $\mu\text{g}/\text{bee}$ (EPA, 2000). This concentration was significantly smaller than the experimentally determined acute oral LD50 (120-160 $\mu\text{g}/\text{bee}$). There were numerous factors that may have contributed to the divergence of these values. Due to resource limitations, the bees were contained within small plastic vessels; the restricted space, and thus restricted air supply, may have increased the mortality of the honeybees. As mentioned previously, only six trials (35 bees total) were performed on account of the time restraint of the study and the seasonal changes in the honeybees' activity that occurred at the end of the experiment. More trials will need to be conducted in the future to properly assess the acute oral LD50 of dicamba per bee. However, the disparity between the experimentally determined and literary acute oral LD50 of dicamba for honeybees does not detract from the significance of this experiment's results - specifically that honeybees were cognitively impaired after ingesting an extremely diluted dicamba solution. As a reference, the

stock solution's dicamba concentration (480 $\mu\text{g}/\text{bee}$) was approximately 1000 times greater than the concentration of the dicamba solution used in the experiment (0.48 $\mu\text{g}/\text{bee}$). Thus, the results of this study should evoke alarm among the conservation community as they reveal that honeybees are harmed by concentrations of dicamba that are exceptionally lower than those that are applied in their habitats.

Upgrading the EPA's Pesticide Risk Assessment Process

In combination with the innumerable studies detailing the indirect effects of herbicides on nontarget insects, this study may incentivize the Environmental Protection Agency (EPA) to update their pesticide risk assessment process to include evaluations of the non-lethal effects of pesticides. In their report on the risks associated with dicamba application on soybean and cotton fields, the EPA estimates the effects of contact, dietary, and oral exposure to dicamba on honeybees of different developmental stages (Wagman et al., 2020). However, while the EPA considers the volatility of dicamba by assessing honeybees' exposure to the herbicide on both treated and untreated, adjacent fields, the Agency ignores the herbicide's nonfatal consequences on nontarget organisms and instead only estimates its lethality (Wagman et al., 2020). For example, they report that "a screen of newly submitted acute oral data for adult and larval honeybees found that ... there are no acute risks of concern for adult and larval bees" (Wagman et al., 2020, p. 43). The results of this present experiment, which showcase that honeybees' cognitive and neurological functions are impaired by acute exposure to sublethal levels of dicamba, directly contradict the EPA's findings and highlight the shortcomings of the Agency's outdated pesticide risk assessment and approval processes. Ultimately, this study, in combination with countless others with similar outcomes (Balbuena et al., 2015; Farina et al., 2019; Farooqui, 2013; Matsumoto, 2013; Luo et al., 2021; Schwartz et al., 2020; Zhu et al., in prep), reinforces the notion that the nonfatal consequences of sublethal doses of pesticides on nontarget insects must be investigated before a pesticide is approved for widespread agricultural and urban use.

CONCLUSION

Although dicamba is aggrandized for its minimal lethality on nontarget insects, this study clearly documents that even minute, sublethal doses of this synthetic-auxin herbicide are detrimental to the cognitive and neurological health of *Apis mellifera* L. honeybees. These findings have broader implications considering the connection between honeybees' defective cognitive abilities and the increasing use of pesticides and incidence of CCD (Maini et al., 2010). The rise of CCD from the synergism of climate change, pesticide usage, and disease

(vanEngelsdorp et al., 2009 & 2010) demands public attention and scientific exploration as the prosperity of our ecosystems and agriculture industry depends upon the existence of honeybees. Furthermore, scientific investigations into the effects of dicamba have never been more paramount considering both the alarming rate at which the herbicide's prevalence and application is mounting worldwide and the scarce scholarship currently dedicated to this topic. The unrecognized dangers of dicamba on honeybees and other non-targeted organisms have been thoughtlessly disregarded, as reflected by the EPA's recent renewal of three dicamba products (EPA, 2020). Ultimately, this experimental study highlights the existential threats facing honeybees and stresses the need for their protection as essential keystone and indicator species of both the world's agroecosystems and natural ecosystems.

FIGURES

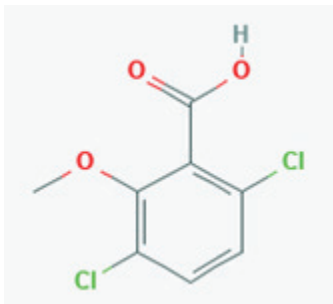


FIGURE 1. The structural formula of dicamba. (Natural Library of Medicine - PubChem: <https://pubchem.ncbi.nlm.nih.gov/compound/Dicamba>)



FIGURE 2. A honeybee harnessed in a modified Eppendorf microcentrifuge tube to permit access to its mouth and antennae. The bottoms of the microcentrifuge tubes were cut so the honeybees' heads protruded through the openings. The honeybees were restricted in this position using cotton placed behind their abdomens.

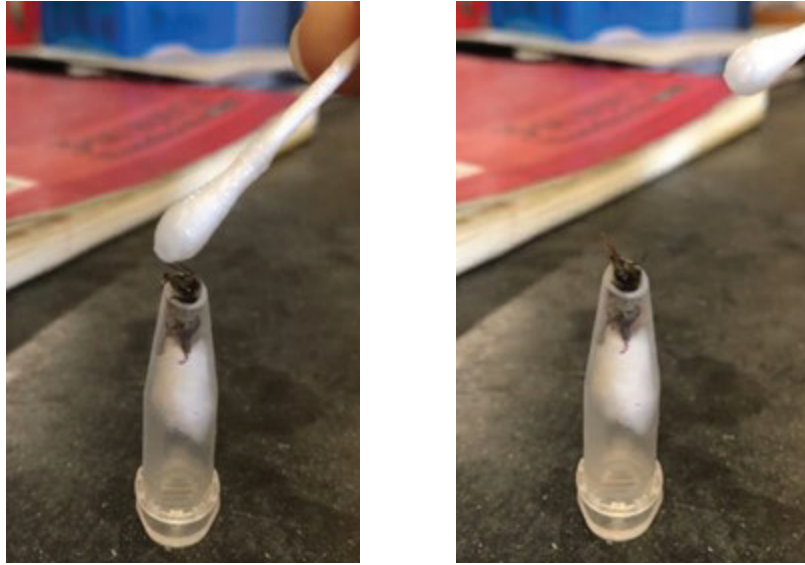


FIGURE 3. | A bee harnessed in a modified Eppendorf microcentrifuge tube and demonstrating PER after its antennas were touched with a Q-tip soaked in a 2:1 sucrose : water solution. (Pictures courtesy of Kayla Schwartz.)



FIGURE 4. | Following the completion of the fourth trial, the honeybees were fed either the control solution or the experimental solution. The honeybees remained in a 16°C room for one hour after feeding.



FIGURE 5. | A bee harnessed in a modified Eppendorf microcentrifuge tube and demonstrating PER retention after being sprayed with a lemongrass scent for five seconds.

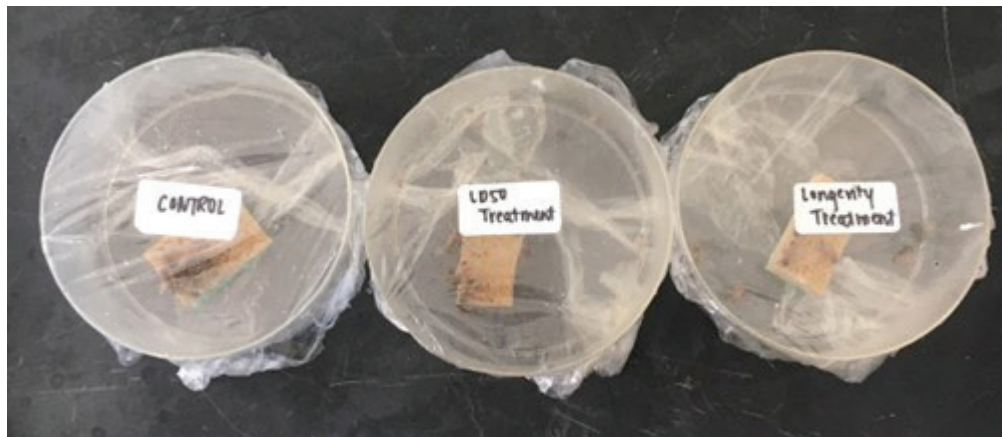


FIGURE 6. | The three plastic containers (6 inches x 6 inches x 3 inches) used during two of the experiment's procedural sections: "Testing the Lethality of the Experimental Solution" and "Testing the Acute Oral LD50 of Dicamba per Bee."

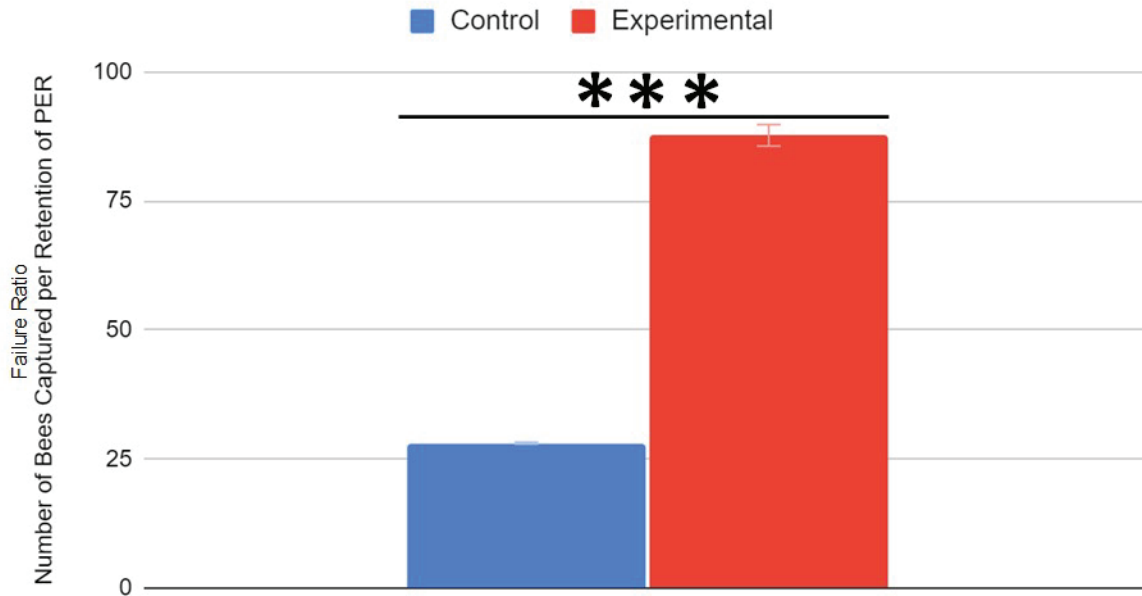


FIGURE 7. | This graph displays the failure ratios (number of total bees captured : number of bees with PER retention) of the control group (28.08 : 1) and the experimental group (87.71 : 1). The failure ratio of the control group was significantly smaller than that of the experimental group (** $p < 0.001$), thereby indicating that the learning ability and memory retention of the control bees were significantly stronger than those of the bees exposed to dicamba. The bars represent standard deviation.

	n	df	Test Statistic	Critical Value	p
Control - Experimental	440	1	94.566	3.841	<0.001***

TABLE 1. | This table shows the results of the chi-square analysis used to compare the failure ratio of the control group (28.08 : 1) to that of the experimental group (87.71 : 1). The failure ratios of the control and experimental groups were significantly different (** $p < 0.001$).

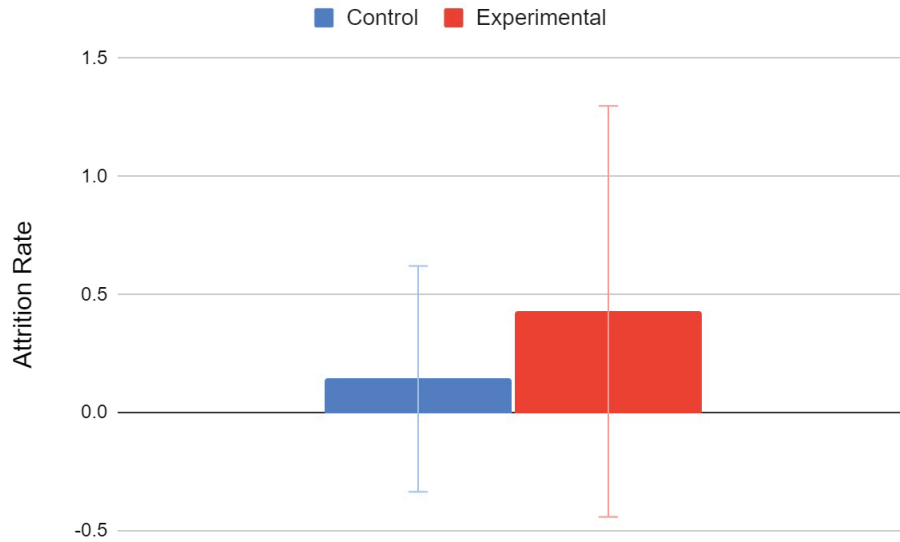


FIGURE 8. This graph displays that the average attrition (the average number of honeybees that died during the trials or were removed due to the cessation of PER) of the experimental bees (0.43 bees per trial) was higher than the control bees (0.14 bees per trial). While there was no statistical significance between the average attritions ($p > 0.05$), the behaviors displayed by the control and experimental bees during and after the trials differed. The bars represent standard deviation.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Control - Days Until Half Died	4	14.5	3.625	1.72916667		
Experimental - Days Until Half Died	4	12.5	3.125	2.22916667		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.5	1	0.5	1.73913044	0.19474983	4.08474565
Within Groups	11.87	6	1.97916667			
TOTAL	12.375	7				

TABLE 3. To confirm the experimental condition was not lethal to honeybees, four trials were performed to compare the lifespan of honeybees that ingested the control solution ($n = 40$) to the life expectancy of bees that ingested the experimental solution ($n = 41$). On average, half of the honeybees that ingested the control solution died after 3.6 days in the container. Additionally, half of the bees that received the experimental solution died after 3.1 days. This table displays the results of the one-way ANOVA test used to assess the difference between the averages. The difference was not statistically significant ($p > 0.05$), thereby revealing that the experimental solution did not decrease the life expectancy of the honeybees.

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Control Attrition	21	3	0.14285714	0.22857143		
Dicamba Attrition	21	9	0.42857143	0.75714286		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.857142857	1	0.85714286	1.73913044	0.19474983	4.08474565
Within Groups	19.71428571	40	0.49285714			
TOTAL	20.57142857	41				

TABLE 3. To confirm the experimental condition was not lethal to honeybees, four trials were performed to compare the lifespan of honeybees that ingested the control solution (n = 40) to the life expectancy of bees that ingested the experimental solution (n = 41). On average, half of the honeybees that ingested the control solution died after 3.6 days in the container. Additionally, half of the bees that received the experimental solution died after 3.1 days. This table displays the results of the one-way ANOVA test used to assess the difference between the averages. The difference was not statistically significant ($p > 0.05$), thereby revealing that the experimental solution did not decrease the life expectancy of the honeybees.

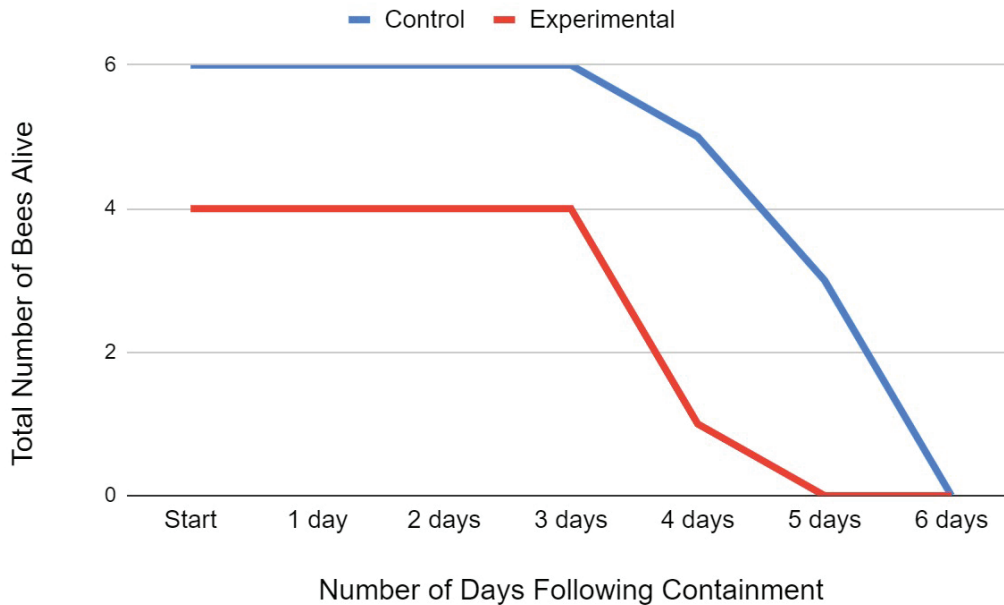


FIGURE 9. This graph depicts the total number of bees that were alive in the days following their ingestion of either the control or experimental solution during trial #1. Half of the control bees (blue) died after five days and half of the experimental bees (red) died after 3.5 days. However, the difference between the average number of days that half of the control and experimental bees died was not statistically significant ($p > 0.05$), thereby revealing that the experimental solution did not affect the lifespan of the honeybees.

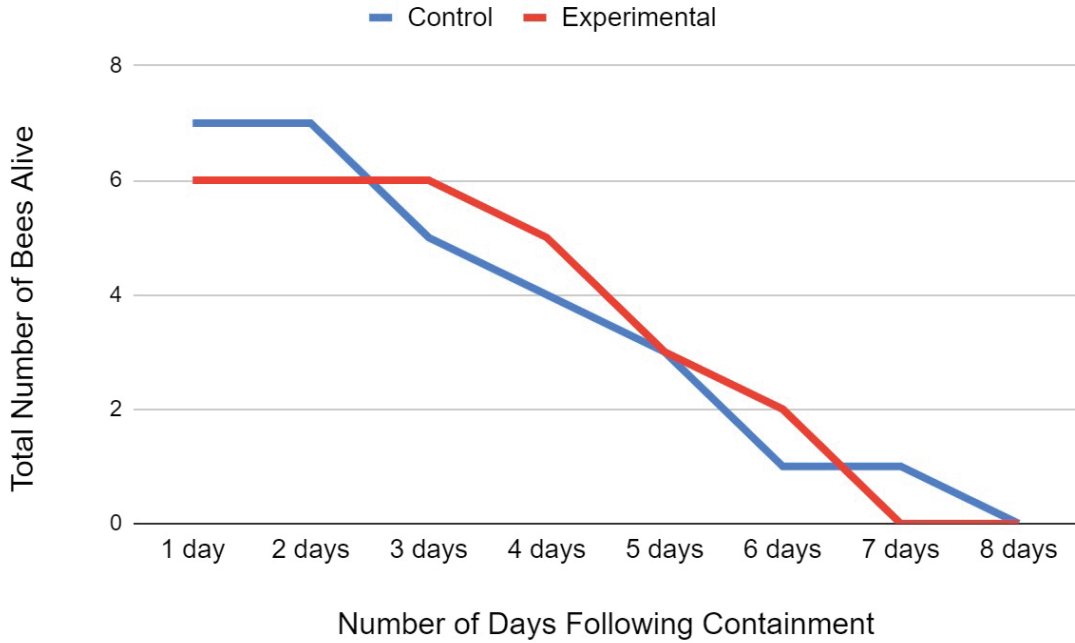


FIGURE 10. | This graph depicts the total number of bees that were alive in the days following their ingestion of either the control or experimental solution during trial #2. Half of both the control (blue) and experimental (red) honeybees died after 4.5 days.

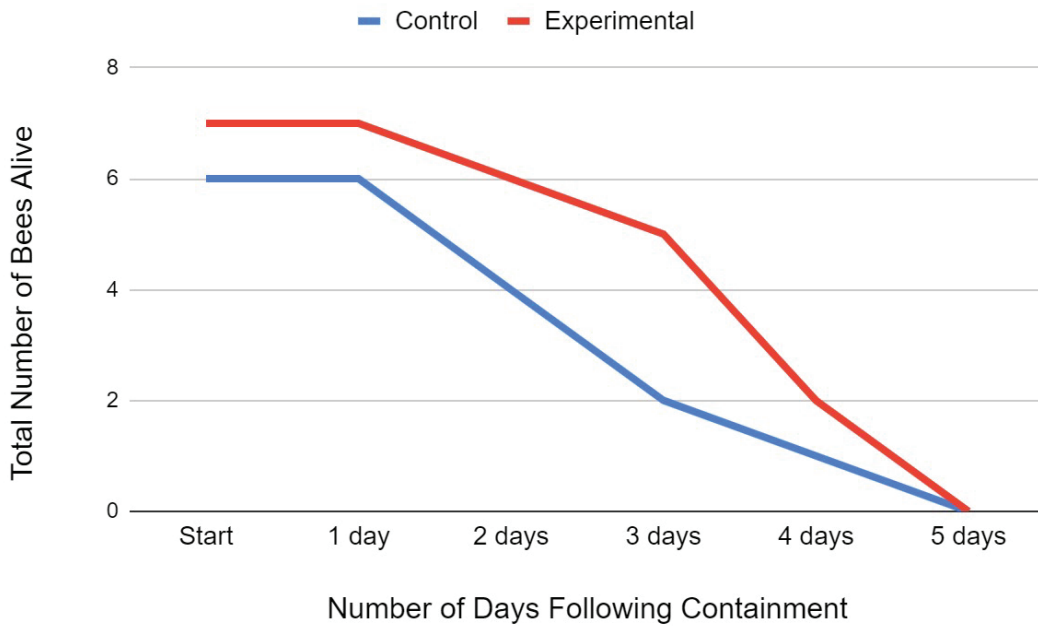


FIGURE 11. | This graph depicts the total number of bees that were alive in the days following their ingestion of either the control or experimental solution during trial #3. Half of the control bees (blue) died after 2.5 days and half of the experimental bees (red) died after 3.5 days.

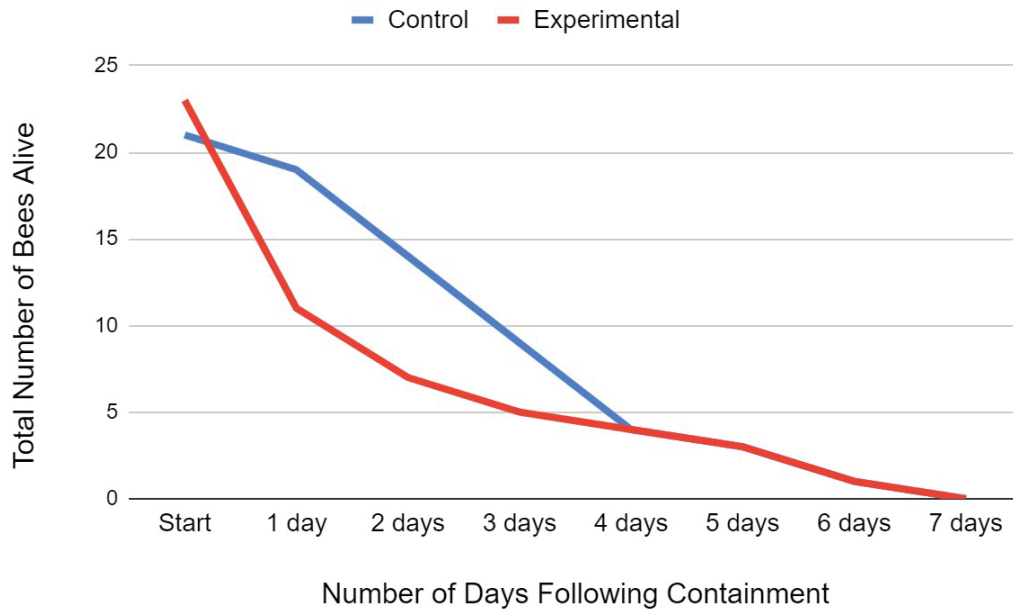


FIGURE 12. This graph depicts the total number of bees that were alive in the days following their ingestion of either the control or experimental solution during trial #4. Half of the control bees (blue) died after 2.5 days and half of the experimental bees (red) died after one day. It is likely that the bees of trial #4 died noticeably faster than those of the previous trials because the number of bees enclosed in each of the two containers was roughly triple that of the previous trials.

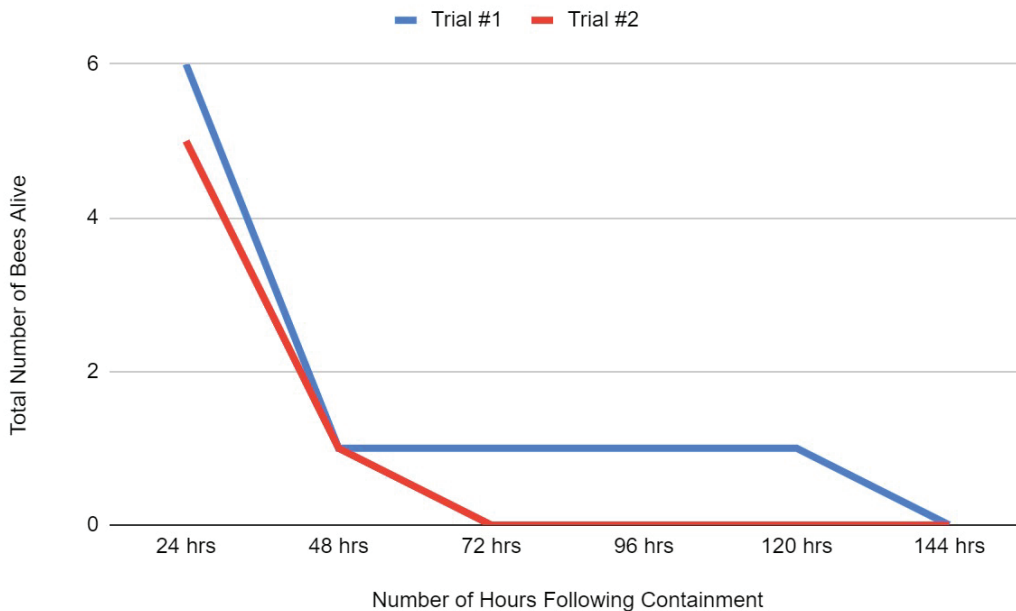


FIGURE 13. Six trials were performed to experimentally determine the acute oral LD50 of dicamba per bee. This graph depicts the total number of bees that were alive in the hours following their ingestion of a diluted solution of dicamba. After ingesting 10 μ L of a 240 μ g/bee dicamba solution, five of the six honeybees from trial #1 and four of the five honeybees from trial #2 died within 24 hours. Since more than half of the bees from both trials died within 24 hours, the acute oral LD50 was estimated to be less than 240 μ g/bee.

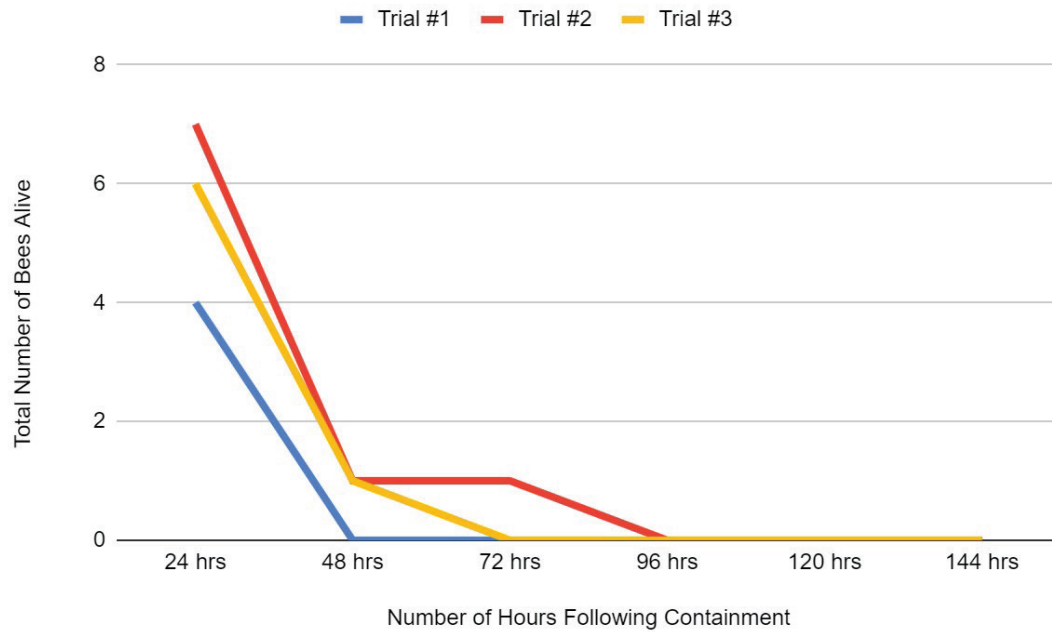


FIGURE 14. This graph depicts the total number of bees that were alive in the hours following their ingestion of a diluted solution of dicamba. After ingesting 10 μL of a 160 $\mu\text{g}/\text{bee}$ dicamba solution, all four of the honeybees from trial #1, six of the seven bees from trial #2, and five of the six honeybees from trial #3 died within 24 hours. Since more than half of the bees from all three trials died within 24 hours, the acute oral LD50 was estimated to be less than 160 $\mu\text{g}/\text{bee}$.

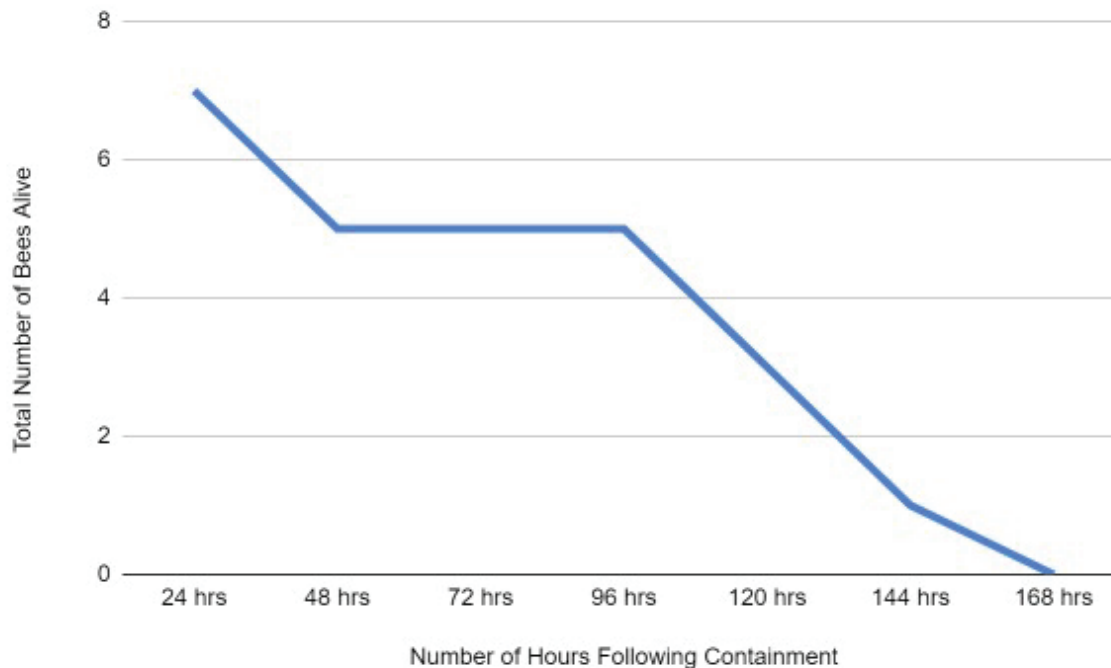


FIGURE 15. This graph depicts the total number of bees that were alive in the hours following their ingestion of a diluted solution of dicamba. After ingesting 10 μL of a 120 $\mu\text{g}/\text{bee}$ dicamba solution, only two of the seven honeybees died within 24 hours. Since less than half of the bees died within 24 hours, the acute oral LD50 was estimated to be more than 120 $\mu\text{g}/\text{bee}$. Thus, the acute oral LD50 of dicamba per bee was experimentally estimated between 120 $\mu\text{g}/\text{bee}$ - 160 $\mu\text{g}/\text{bee}$.

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MEET THE STAFF

Eleanor Ball (Co-Editor-in-Chief)

Eleanor Ball graduated from GW in December 2022 with a B.S. in Public Health and English. During her senior year, she researched gendered violence in *The Lais of Marie de France*. She is currently an incoming student in the University of Iowa's M.A. in Library and Information Sciences program, where she plans to specialize in academic librarianship.

Jaylee Davis (Co-Editor-in-Chief & Layout Manager)

Jaylee Davis is a junior from Atlanta, Georgia, majoring in English. She is a member of the University Honors Program and currently works in the Himmelfarb Health Sciences Library as a Circulation Desk Assistant. Previously, she worked for Dr. Randi Kristensen in the University Writing Program as Research Assistant on the theoretical discourses of disaster capitalism. She has recently been admitted to the Honors in English program where she will work with Dr. Robert McRuer on her senior thesis.

Jenna Ahart (Lead Natural Sciences Editor)

Jenna is a sophomore from West Chester, Pennsylvania who majors in Journalism and Mass Communications with a minor in Astronomy and Astrophysics. She is a member of the University Honors Program and currently works in communications for an aviation engineering firm. This summer, Jenna will work with the astrophysics communications team at NASA's Goddard Space Flight Center

Meghan Flanagan (Events Manager)

Meghan, originally from Houston, Texas, is a second-year studying political science and history at GW. She is currently serving as a Senate Senior Intern, and is also involved with Phi Alpha Delta, the Pre-Law Fraternity, on campus. Outside of her academic pursuits, Meghan enjoys exploring all that DC has to offer!

Elisabeth Reznikov (Lead Social Sciences Editor)

Elisabeth is a sophomore from Northern Virginia, double-majoring in International Affairs and Russian Language and Literature. She is a Communications Assistant at the Institute for European, Russian, and Eurasian Studies as well as Vice President of the Ukrainian-American Student Association. Elisabeth has interned at United Help Ukraine, the Caspian Policy Center, and Progres(s) Foundation.

Jasmine Slusser (Lead Humanities Editor)

Jasmine is a senior from Pennsylvania studying Public Health with a minor in Sustainability. In addition to GWUR, Jasmine is the President of Students for One Health, the Co-Director of the American Medical Physiology Club's Mentorship Program, and a Milken Mentor. Jasmine hopes to combine her interests in Environmental Health by pursuing a career in medicine after she completes her MPH degree in Environmental Health Science and Policy.

EDITORIAL BOARD

Lillian Berger

Lillian Berger is a first-year student from Portland, Oregon, majoring in biology and minoring in data science. She is a member of the University Honors Program. Lillian has also assisted with research on next-generation sequencing at the Oregon Health and Science University.

Simar Kaur

Simar is a second-year student from Queens, NY, majoring in Neuroscience and minoring in Sociology. She is also a member and Peer Advisor in the University Honors Program. Aside from her role as a social sciences editor to the GW Undergraduate Review, Simar is also a member of the Sikh Student Association and a volunteer tutor for elementary and middle school kids.

Liz Leiser

Elizabeth is a sophomore from Kutztown, Pennsylvania majoring in Public Health with a minor in Law & Society. She is a member of the University Honors Program, currently serves as President of the National Residence Hall Honorary, and is a panelist on the Academic Integrity and Conduct Council. In her free time, she does community service with underserved children and works in community health promotion!

Karly Martinez

Karly Martinez is a second-year student from Racine, Wisconsin double majoring in English and International Affairs with a concentration in Conflict Resolution. Karly is a humanities editor for the GW Undergraduate Review and is the financial advisor for GW's art club, Art n Soul. Outside of academics, she enjoys being with animals; she volunteered for the Wisconsin Humane Society for several years. She is also a member of GW Club Boxing.

Annie McDonnell

Annie is a sophomore from Colorado majoring in sociology and pursuing minors in public policy and WGSS. Previously she has conducted research to analyze the linkage between contraceptive sabotage and intimate partner violence, as well as offer policy solutions to contraceptive and reproductive coercion. Annie works for the Slave Wrecks Project, an anthropological research collaboration between GWU and the Smithsonian, and works for the International Rescue Committee in their Anti-Trafficking Division.

Henrik Mecinski

Hailing from South Orange, New Jersey, Henrik Mecinski is a second-year student majoring in International Affairs and minoring in Law and Society and Political Science. Aside from GW Undergraduate Review, Henrik is involved in the GW Undergraduate Law Review, Phi Alpha Delta Pre-Law Fraternity, and GW chapter of the Onero Institute. Currently, he is interning at a boutique law firm specializing in political fundraising and campaign advisory with the ambition to one day attend law school.

Esha Mukherjee

Esha Mukherjee is a senior from Chelmsford, Massachusetts majoring in International Affairs and Arabic Studies. In addition to the GW Undergraduate Review, she is involved in the Phi Sigma Pi Honor Fraternity and is a member of the University Honors Program. This fall, Esha will be pursuing her M.S. in Sociolinguistics at Georgetown University, and is currently conducting research on language variation among Arabic heritage learners for her senior thesis.

Nick Perkins

Nick is a second-year student studying Political Science and Journalism from New Haven, CT. In addition to his role as a humanities editor for the GW Undergraduate Review, Nick is the sports director for WRGW, the campus radio station, and a culture editor at the Hatchet, the university's newspaper. He has previously interned at the Senate.

Matteo Sanchez-Dahl**Sanjana Sharma**

Sanjana is a junior from Malibu, California, majoring in International Affairs, with a concentration in International Politics, and Economics. In addition to being an editor, she is also conducting research into the relationship between regime-type and religious nationalism, examining India and Myanmar as case studies. She is also an active member of the GW Badminton Club.



Editorial Research Feature: GW Undergraduate Apiary and Honey Bee Laboratory

JENNA AHART

How did you initially get involved with GW's bee lab? Which professors have you worked with?

Alexis Carmine: Throughout high school, I was extremely passionate about honeybees as well as many other animals. I had a beehive and wrote an educational blog about honeybees on a website I had designed and published. When I began at GWU, my main goal was to learn as much as I could about research and really hone my skills when it comes to writing manuscripts. One of the first lectures I attended was Professor Doebel's introduction to biology course. When he mentioned the bee lab, I knew in an instant that I had to be involved, so I reached out to Professor Doebel and told him of my prior experience and why I wanted to be involved in his lab. During my first semester of college, I worked with him editing past papers and writing my very own proposal for the Undergraduate Research Award which I was awarded during my second semester. This proposal is what led to the manuscript that I have published here. Since then, I have worked as the head beekeeper at the bee lab and currently do work with Professor Zderic in the biomedical engineering department, working towards my senior thesis.

Camille Leoni: I was introduced to GW's bee lab through Dr. Hartmut Doebel, who was my freshman general biology professor. Having never worked with honeybees before, I was eager to learn about these keystone species and preserve their existence on our college campus.

How has bee research differed from scientific research you have conducted in the past?

AC: The honey bee research that I completed here was really my first experience doing a real research project. In professor Zderic's lab, I have recently been introduced

to doing research on rat pineal glands with ultrasound devices which is extremely different from honey bee research for a plethora of reasons. When not working with live-specimens, the preparation of experiments becomes far easier and the experiment becomes more routine in that you do not have to be on the lookout for honey bees escaping.

CL: Before beginning research in the bee lab, I had only conducted environmental quality surveys on the ecosystems of my hometown in California. My undergraduate research experience allowed me to thoroughly explore how certain environmental conditions impact the survival and prosperity of honeybees.

How has bee research impacted your larger view of environmental research?

AC: The research that I have done at the bee lab has really shown me why environmental research is so important. When no one does this sort of research, it can become very easy for companies to use unsafe pesticides on crops, and this can lead to detrimental effects for the environment and the species inhabiting it.

CL: My time researching honeybees reinforced my belief that the success of our ecosystem and agriculture industry depends on environmental research. We need to question our current environmental practices and conduct experiments to introduce more sustainable tactics that will protect the Earth's biodiversity.

What research questions do you still have after experimenting in the bee lab?

AC: There are many questions that still remain unanswered, such as how could these chemicals affect

the hive as a whole as well as what other chemicals are currently being used in high quantities that could potentially harm the honey bees. I would also like to see if marked honey bees would be able to find their way back to their hive after ingesting chemicals such as the ones discussed in the manuscript. If they are unable to do so, this could further support the conclusion found in our experiments.

CL: I believe one of the most pressing concerns weighing on the minds of those who investigate honeybees is the increasing prevalence of Colony Collapse Disorder (CCD), a worldwide phenomenon that has contributed to the rapid decline of honeybee populations.

What was the most rewarding aspect of working in the bee lab for you?

AC: The most rewarding part of working in the bee lab and with Professor Doebel was the little family that the members of the lab had. We all became good friends by the end of the summer, and these are friends that I will probably have my entire life. Not to mention, I got to take care of hundreds of thousands of honey bees—an insect I deeply love and respect. I also learned so much about leadership and my research skills improved more than I ever could have imagined. I will forever be grateful for the experiences and opportunities that the bee lab gave me.

CL: The most rewarding aspect of being a beekeeper at the GWU apiary was introducing students and community members to the intricate world of honeybees and working to promote this species' prosperity on our campus.

