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A COMMUNITY'S COLLECTIVE COURAGE: A LOCAL FOOD COOPERATIVE'S IMPACT ON FOOD INSECURITY, COMMUNITY AND ECONOMIC DEVELOPMENT, AND LOCAL FOOD SYSTEMS

TABITHA C. BARBOUR, BUTLER UNIVERSITY
MENTOR: TERRI JETT

Abstract

I come from a long history of people who are connected to food and land as the descendants of slaves from Kentucky and Tennessee. My great-great grandparents purchased the land they sharecropped, exemplifying the importance of place, agriculture, and family history. As I grew up, I watched my grandparents on both my mother's and my father's side raise gardens of greens, tomatoes, peppers, okra, squash, string beans, and many other vegetables. I remember chasing chickens and ducks and watching the cattle chase after my grandfather's truck as we rode through the field. I did not fully realize my interest in food and the significance of my family's connection to agriculture until I went away to college.

During the summer of 2015, I participated in the Doris Duke Conservation Scholars Program at the University of Washington Seattle, where I became interested in urban gardening and local food systems. The following summer I connected with the Kheprw Institute (KI) through my participation in Butler Advance's Summer Fusion Program. I found KI and I had similar interests in food, community, and economic development. In May 2016, I began a case study of the KI Community Controlled Food Initiative (CCFI) using participatory observation. CCFI brings local, fresh produce to the Indianapolis community. KI's reach is felt throughout Indianapolis and beyond; however, this research will focus on food insecurity and impact in the 46208 zip code. This research uses Jessica Gordon Nembhard's *Collective Courage: A History of African American Cooperative Economic Thought and Practice* as a basis for understanding the cooperative model and history of community and economic development in African American communities. CCFI's work reflects the power of community through the implementation of grassroots organizing, collective economics, and supporting local food systems.

Background

In 2003, Imhotep Adisa, Pambana Usihi, and Paulette Fair founded the Kheprw Institute. KI is a non-profit, 501(c)3 organization that has served the Indianapolis community for over 13 years. It executes its programming and activities through the mantra, “Community Empowerment Through Self-Mastery” (“Our Story”). KI has grown to serve community through intergenerational learning with a focus on youth development. KI serves the community through a variety of programming opportunities rooted in its four tenets: *Empowerment, Economy, Education, and Environment* (“Our Story”). It hosts community forums on many topics, including gentrification, community development, and education. Staff and youth leaders lead annual summer and after school programs for youth and offer mentorship opportunities throughout the academic year.

KI hosts three social enterprises: KI NuMedia, Express Yourself Rain Barrels, and Scaraby’s Consulting. A social enterprise is “an organization or initiative that marries the social mission of a non-profit or government program with the market driven approach of a business” (“Social Enterprise”). Staff and youth leaders mentor interns to develop entrepreneurial skills and lead the enterprise. KI’s social entrepreneurship philosophy focuses on social capital, a term used to describe a set of practices that values relationships and connections to leverage resources to benefit all parties involved in the relationship and the community at large. The organization’s social entrepreneurship model is grounded in little to no monetary capital to start with, and a heavy emphasis on social capital.

Cooperatives are like social enterprises in that they seek to address a societal need. They seek:

to satisfy an economic or social need, to provide a quality good or service (one that the market is not adequately providing) at an affordable price, or to create an economic structure to engage in needed production or facilitate more equal distribution to compensate for market failure. (Nembhard 2)

KI’s social enterprises use cooperative strategies. They use a flat leadership model, make decisions on behalf of business as a collective, and are mission-driven through the youth development and community empowerment. These practices were influential and fundamental to the creation of CCFI as an informal cooperative. CCFI addresses the issue of food insecurity in the 46208 zip code and Indianapolis at large. It is a combination of consumer and worker-owned cooperative which functions through the support of consumers buying monthly

shares. The CCFI committee runs the cooperative, functions through a flat leadership model, and gathers feedback from consumers to better run its programming. CCFI aligns with the basis of cooperative practice and the mission of KI to empower community through food access.

On July 23, 2015, four Double 8 Foods Grocery Stores closed unexpectedly (Vinson et al.). The locally owned and operated chain had been closing stores since the 1990s; however, these closures marked the end of almost 60 years of service (Chappel) and left neighborhood residents without a grocery store to purchase produce and other necessary food items. Residents in the 46208 zip code suffered from food insecurity even before the closing of Double 8 Foods. The store closing only increased residents' inaccessibility to food. Food insecurity is a measure of "a household-level economic and social condition of limited or uncertain access to adequate food" (Coleman-Jensen et al.). Many neighborhoods in the 46208 zip code match this criteria: They have low income status coupled with low access to food because of distance from food sources and limited or no options for transportation.

The closing of Double 8 Foods is a complex issue. It was a food source for neighborhood residents; however, it often did not meet customers' expectations in produce quality and overall shopping experience. In an interview, Tysha Ahmed, 41-year-old co-organizer of the CCFI Committee, shared that the issue with Double 8 is it "often did not offer quality produce." Fred Car shared with the Indianapolis Recorder that the closing of Double 8 "was a good thing. Sanitation was not a priority" (Vinson et al.). In informal conversations, neighborhood residents complained of the stores' smell, cleanliness of the store, and quality of produce. I had the opportunity to talk with the former Double 8 Foods store owner Isaiah Kuperstein in June 2016. He reported that the stores became too much of a burden financially for his family and were not earning the profits needed to keep them open. Kuperstein believes the grocery store industry was a factor in the store closing. He commented that Double 8 Foods was a small, locally-owned franchise store and could not compete with the larger chain grocery stores' appeal like Meijer, Walmart, Kroger, and so on. Double 8 Foods closed because the costs to keep the store open were greater than the profit. This shows neighborhood residents were not supporting the Double 8 stores enough for them to be sustainable. The local chain closed for a variety of reasons which left community members reaching for local control of their food.

KI responded to the closing of Double 8 Foods through hosting a youth-led community forum at CCFI to develop community based solutions. The committee began working through its mantra of "neighbors bring fresh affordable food to their

community” (“Community Controlled”). The committee is led by Miriam Zakem, KI Equity Fellow and Indiana University Graduate (2014), and Paulette Fair, Co-Founder of the KI Institute. Zakem and Fair work with the CCFI committee and launched their programs with zero capital and the support of the community and its resources. In October 2015, CCFI launched its programming, the monthly “Good Food Feast” and bi-weekly “Soup and Salad Luncheons.” These programs focus on health education through hosting guest speakers, cooking demonstrations, and gathering community members together around fresh, healthy food.

The CCFI committee researched many cooperative projects addressing food insecurity. The organization’s community-focused approach is based on the Fresh Stop Program in Louisville, Kentucky. Fresh Stop operates multiple food cooperative sites in Louisville, where community members can pool together their resources to provide fresh, affordable food (Moskowitz 23). CCFI built on this model through combining the food cooperative model with their food education programming. The food distribution and the Good Food Feast, which occurs on every second Saturday of the month, provide residents with their food shares and teach them how to prepare the produce they have purchased.

CCFI meets twice a week to prepare for its monthly distribution days. The supporters of the program provide funding for the cooperative through purchasing a share or seasonal share packages in the cooperative in exchange for a monthly opportunity to bring fresh produce into their community. The price of the food shares are \$12 with SNAP/EBT or \$25 for a variety of produce. Customers receive the same amount of produce and buy into the program not knowing what items they will receive. The two prices allow neighbors with more capital to subsidize the cost for others with less. Shares for the upcoming distribution must be purchased at least a week in advance of the distribution day; distribution occurs every second Saturday. Once the funds are collected, the CCFI team contacts local farmers to wholesale purchase produce. The farmers deliver the purchase to the KI Institute, and then a team of volunteers create equal shares from a variety of produce for customers. On June 11, 2016, CCFI launched their first food distribution day accompanied by the Good Food Feast. CCFI supported 36 families on their first distribution day and had in attendance around 35 people at the good food feast.

Literature Review

Food insecurity is defined as “the uncertainty of having, or unable to acquire enough food to meet the needs of all their (household) members because they have insufficient money or other resources for food” (Coleman-Jensen et al.). Per the

USDA's Food Security Status of U.S. Households in 2015, researchers state 15.8 million households have experienced food insecurity at some point during the year (out of approximately 124 million households in the United States). In Indiana, more than one million people (out of 6.62 million total population) are food insecure (Feeding America Report 2014). Hoosiers suffer from food insecurity with rates as high as 19.2% of Marion County's population ("Map the Meal Gap"). With the state's high rates of food insecurity, state and local governments, non-profit and for-profit organizations, and citizens are engaged in finding solutions to address food insecurity. Although the definition of food insecurity is limited to those who have access to a place of residence, it helps locate areas experiencing high rates of poverty, low food access, and limited opportunity for economic mobility. These communities are typically, but not always, labeled as "food deserts," which describes areas that have low or limited access to fresh, healthy foods due to transportation or other economic barriers.

Food banks/pantries, farmer's markets, and new grocery stores are a few of the many ways in which people attempt to increase food access in their communities. In recent years, national, state, and local governments have supported initiatives surrounding food, including the USDA allocating funding in 2011 for Farmer's Market Promotion Program Grants. This program's purpose was to "help increase availability of local agricultural products in communities throughout the country" (Coleman-Jensen et al.). In Indiana, State Representatives Arnold L. Moed and Judy Shackelford introduced House Bill No. 1248 on February 13, 2015. This bill advocated for the Indiana's Department of Agriculture to "develop and promote programs in support of urban farming, food cooperatives, and farmer's markets" (1). Although the bill was not enacted into law, it showed lawmakers are engaged in the government's responsibility to address inequity in our society.

Many other cities are looking at policy to address food access from an intersectional approach. Food is a vastly complex issue that requires people to look at race, class, gender, geography, and other factors of power and privilege. Per a William and Mary Environmental Law and Policy Review, communities in the city of Detroit and Baltimore are using urban farming to address both food insecurity and the housing crisis (Buzby 479). Indianapolis faces a similar housing crisis with 31.8% of all its housing foreclosed and vacant, per a USA Today 2013 report (Sauter). Housing is an important issue for food insecurity because foreclosure and vacancy are signs of economic degradation. Vacant lots are potential sites to address food insecurity, because neighborhood residents could raise local gardens or farms. Keith Buzby proposed urban farming as a solution to address both the

housing crisis and food insecurity, writing, “Urban farms could be set up throughout the city, providing access to fresh fruits and vegetables that currently does not exist” (498). KI holds similar interests to Buzby’s research, where they partnered with the City of Indianapolis to secure vacant lots for urban farming. Kheprw launched the KI Collective Courage Urban Farm last year to put more urban agriculture education into practice. They named their urban agriculture project after Jessica Gordon Nembhard’s work to celebrate both KI’s and the author’s connection to cooperative development.

There has been a movement on the local level to move away from traditional corporate models and embrace methods that empower communities facing food insecurity issues. One of the ways people are embracing new solutions is through community organizing approaches inspired and operated by those who at the frontlines of these issues. Karyn Moskowitz, Executive Director of the Fresh Stop Program, wrote in “The Fresh Stop Project: An Oasis in a Food Desert of Louisville” that community organizing “generate[s] durable power for an organization representing the community, allowing it to influence key decision-makers on a range of issues over time” (24). The Fresh Stop Project is like Community Supported Agriculture (CSA) programs, but it is geared toward people with low income who live in food insecure communities (Moskowitz 24). There are multiple Fresh Stop locations around Louisville which are independently operated by community members who live near the stop. They operate on a weekly, bi-weekly, or monthly basis depending on how often the workers and consumers want produce delivered.

Fresh Stop offers two prices consumers pay in advance on a sliding scale, allowing community members to subsidize those with less economic resources and without telling consumers what they will receive in their share. These non-traditional models do more than just bring fresh produce to the community; they build leaders who “are passionate, encouraging children to eat fresh produce, reinventing soul food with healthier, fresh ingredients, learning how to negotiate with farmers and are spearheading policy campaigns” (Moskowitz 23). CCFI and Fresh Stop are two of the many examples of the growing movement for community-controlled agriculture and access to food. The programs engage neighborhood residents to reimagine their communities and to find power in themselves and their community in bringing fresh produce to where they live.

The cooperative model is one way people are investing and reimagining the landscape of their communities. It is a long tradition of people coming together to address a need in their community or society through a communal business

structure. In *Collective Courage: A History of African American Cooperative Economic Thought and Practice*, cooperatives are defined as companies and organizations owned by the people who use their service (Nembhard 2). This business model is noted for allowing people to work and manage a business together, develop consistent employment, and share profits (Nembhard 3). Cooperative business models are widely used around the globe. On October 10, 2014, the International Co-operative Alliance published a press release titled “Co-operative sector announces global turnover of 2.2 trillion USD for top 300 co-ops, and employment figures of at least 250 million worldwide” (ICA). Cooperatives are widely successful on the macro and micro level. The UN declared 2011 as the International Year of Cooperatives “to raise awareness of the invaluable contributions of cooperative enterprises to poverty reduction, employment generation and social integration” (Nembhard 3).

Cooperative movements serve as a space for advocacy and activism. *Collective Courage* displays the history of African-American cooperative strategy toward community and economic development and organizing for social and political mobility. Nembhard’s work details history from the late 1800s to the present and discusses the organizations led by W.E.B DuBois, Booker T. Washington, Ella Baker, George Schuyler and others. African-American cooperative history was based in intergenerational and women’s leadership. KI holds similar commitments as past leaders of promoting cross-cultural and intergenerational learning with an emphasis on youth development. George Schuyler and other cooperative leaders believed in order to build sustainable economic power for African-Americans young people needed to embrace cooperative economics (Nembhard 113). KI centers its initiatives on youth development to mentor the next generation of equity leaders.

Methodology

This research is a case study of CCFI’s impact on addressing food insecurity, community and economic development, and local food systems in the face of climate change from June 2016 to April 2017. I define climate change as global, environmental phenomena representing a shift of weather patterns over an extended period due to excess amounts of CO₂ exhaust in the atmosphere due to overproduction (“What Are Climate”). The three focal points of this paper are deeply connected through the lens of food insecurity as a constructed circumstance that disproportionately effects people of color and people who are poor as a product

of environmental racism and degradation. I will discuss each of these pillars as connected ideas as I present my findings.

I completed this research through participatory observation and conducting open-ended interviews with CCFI committee members, KI Staff, and neighborhood residents. I used participatory observation as my method of field research because this method allowed to become a member of the cooperative and gain a greater familiarity with the strengths and challenges of the community. I chose the method of unstructured interviews and open-ended questions to create a conversational atmosphere and give room for follow-up questions to the interviewees' experiences (Malici and Smith 68). I began my research through regularly attending CCFI planning meetings during the months of June and July. I accompanied the co-chairs of the CCFI to farmer's markets throughout Indianapolis and Marion County to find farmers who would be willing to supply the program and attract additional customers. To secure farmers for the program, I collected contact information from local growers and collected data on crop specialty, pricing, and farm location. I promoted the food cooperative launch through social media and passed out flyers to neighborhood residents and throughout the city.

On June 8, 2016, I shadowed the CCFI team on a visit to Hoosier Harvest Market, a medium-sized food cooperative serving Hamilton, Hancock, Marion, Johnson, and Henry counties. They offer locations throughout the counties for customers to pick up their orders. In preparation for the first food distribution day, I assisted in: collecting customer orders; taking photographs; and posting to social media. On June 11, 2016, CCFI held their first food distribution and Good Food Feast at KI. The CCFI committee went out to collect the orders from farmers and volunteers created 32 equal shares for customers. On June 23, I attended the Indiana Healthy Food Access Policy Forum, where I had the opportunity to hear from mainstream, traditional approaches to food access. This included heavy reliance on governments and institutions to provide grant funding and programs. This gave me a comparison point to CCFI's cooperative model, which empowers communities to make decisions, utilize collective and individual knowledge, and build economic opportunity for local farmers and others in the community.

In July 2016, I attended CCFI committee meetings with Indiana University Health (IU Health) Outreach and Indy Food Taskforce. I worked with Scaraby's Consulting to submit an IU Health's Healthy Food Access Grant and received a \$10,000 grant to help fund CCFI. I also met with the long-time owner of Double 8 Foods, Isaiah Kuperstein, for an informal conversation on the history of Double 8 and Indianapolis and the grocery store industry. This conversation corroborated

evidence from my interviews with neighborhood residents and helped to reveal a fuller image of the complexities of the community's relationship with Double 8 and the grocery store model.

In August and September of 2016, I continued to attend CCFI meetings and distribution days and collected research on urban gardens and food systems. On October 20, 2016, I attended the Cooperatives and People of Color Conference at the Indianapolis Farmers Bureau, where Nembhard served as featured speaker on her ongoing efforts to collect African-American cooperative history. I attended a reception in her honor following the conference at KI and had an informal conversation with her about her work and my research. In January 2017, KI, in partnership with Spirit and Place Festival, launched their Equity in Action discussion series on every third Sunday of the month at KI. On March 26, 2017, Equity in Action hosted the discussion "Community Grown Food Solutions," which featured a panel of local and national speakers and provided an opportunity for community members to network and collaborate on projects within Indianapolis. In the same month, I applied for Institutional Review Board Approval for this research and received full approval on April 8, 2017.

Following IRB approval, I interviewed members of the CCFI team and neighborhood residents to understand the personal impacts of food insecurity and uphold the grassroots effort of the food movement. I completed a total of six interviews and used the information to describe the experiences of community empowerment and food insecurity. Therefore, I present these findings to the best of my ability to depict a most accurate understanding of CCFI's efforts to address food insecurity, community and economic development, and CCFI's impact on local food systems in the face of climate change.

Addressing Food Insecurity

The food equity issues in the 46208 zip code are reflective of the issues Indianapolis at large faces (see Figure 1). "Equity" is the term used to describe the just and equal access to resources and opportunity. This issue exists inside racial and socioeconomic influence, where the 46208 zip code has a high percentage of African-American and Latino population with high rates of poverty. The community CCFI serves is facing low food security, where there is a presence of reduced quality and variety of food and limited reports of hunger (Coleman-Jensen et al.). CCFI team leader Miriam Zakem shared with me another term circulating in food circles: "food swamp," which she defined "as saturation of unhealthy food in community...It's the convenience stores, gas stations, and fast food that you see

in our community.” The community CCFI serves has access to food in their community through food pantries, fast food restaurants, gas stations, and so on, but there is little to no fresh, healthy food available to neighborhood residents unless one travels to a grocery store outside of the community.

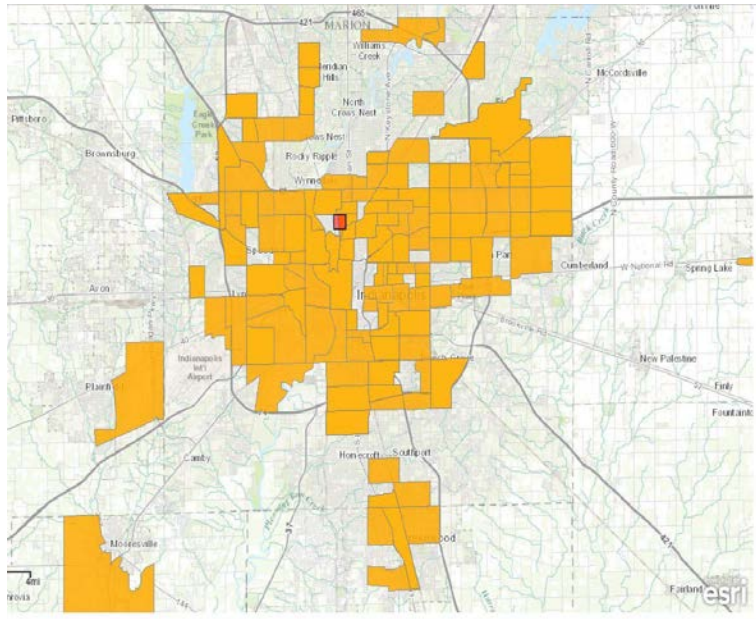


Figure 1. USDA Food Access Research Atlas. Portion of map with low income and low access of at ½ and 10 miles layer of Indianapolis from “Food Access Research Atlas”; *USDA*; www.ers.usda.gov/data-products/food-access-research-atlas. Accessed 23 Mar 17.

CCFI has made significant gains in addressing food insecurity. It successfully launched the food distribution, made connections with local farmers, and empowered neighborhood residents to bring fresh food to their community. As of April 2017, the CCFI program has supported approximately 40 families monthly with fresh, local fruits, vegetables, and dairy products from organic farmers (see Figure 2). It has handled over 3,000 lbs. of food, placing this food into the hands of neighborhood residents from June 2016 to March 2017 (see Figure 3). This is

substantial impact in communities which otherwise would not have had access to fresh produce.

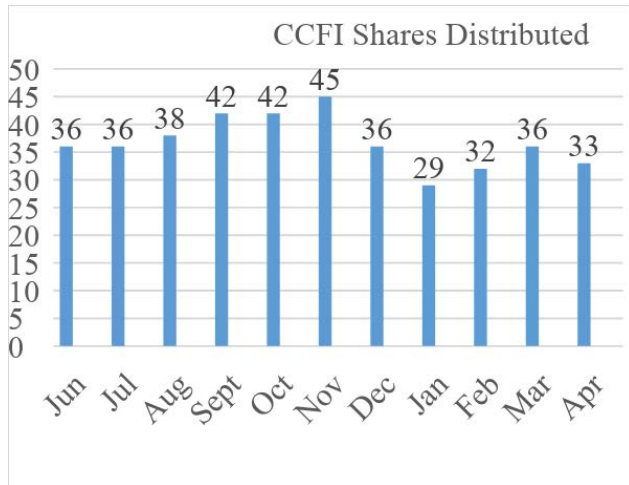


Figure 2. CCFI Shares Distributed.

This chart shows the number of shares purchased by consumers and distributed by CCFI during their monthly food distribution.

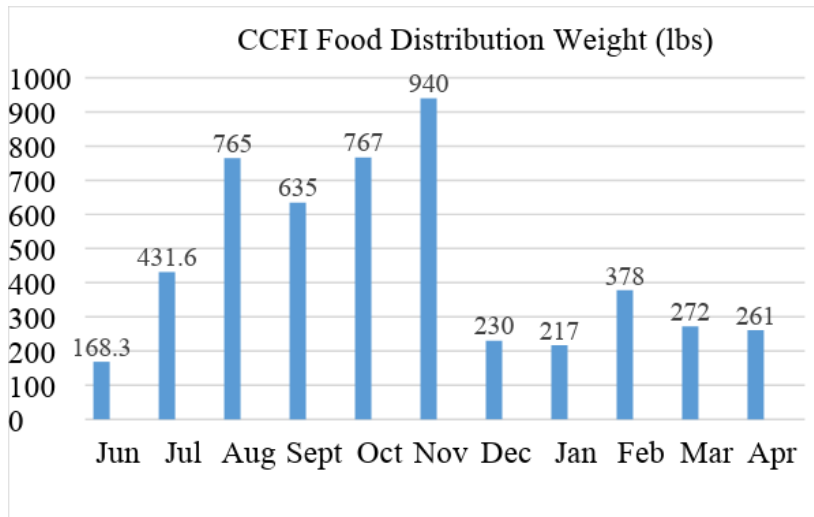


Figure 3. CCFI Food Distribution Weight (lbs).

This chart shows the pounds of food CCFI distributed in the community by pounds from June to February.

One reason CCFI was able to achieve such great success in its first year is continued community conversations. Community conversation is an important way CCFI addresses food insecurity. KI and the CCFI committee create spaces to engage community in collective learning and strategy building. KI Staff and community members created CCFI as a result of a community forum after the closing of Double 8 Foods. Nembhard argues education and knowledge sharing is an important cooperative practices when she writes, “Education continues to be an essential element to the development and success of the cooperatives that form” (85). Education is a core tenant of KI. KI staff and the CCFI committee uses a “Knowledge by Inquiry” and a “Grassroots/From the Bottom Up” approach as a means to value individual and collective knowledge in community. KI upholds community as the primary knowledge source. It seeks information and resources within its community first, using conversation, and often good food, to build relationships with individuals and groups and gather knowledge. This holds the people who are facing the food insecurity at the center of problem identification and solution creation to ensure their needs are served. KI and CCFI use these approaches to generate solutions and build community during the Good Food Feast, Soup and Salad Luncheons, the Food Assembly, and the “From the Ground Up” community discussion series in partnership with Spirit and Place Festival. Conversation is a significant strategy to addressing food insecurity, because it centers communities facing the problems as the essential knowledge source and problem solver.

KI Staff and CCFI committee members analyze economic models in order to address food security. In an interview, Imhotep Adisa, Executive Director of KI, critiqued issues surrounding food access, saying, “I don’t adhere to the term food desert...We live in an economic desert” (“Food Desert”). Per U.S. Census data, approximately 21.3% of people live in poverty in Indianapolis with a per capita income of \$24, 280 in the past 12 months. Poverty is the result of low economic opportunity and the label of food desert or food insecurity fails to capture the entire picture of the inequity of race, class, gender legal status, and so on working in society. The image of poverty is visible through the limited economic opportunity in the community, vacant and abandoned properties, homelessness, and limited to no access to fresh, healthy food in the 46208 zip code.

When asked to reflect on the current food economy of her community, Miriam Zakem replied,

The traditional model puts profit and dollars as the goal...and our agricultural system is very tied up in global corporate capitalism...If you drive around, people who have money have grocery stores and good food, people who don't have dollars don't have grocery stores and good food.

Despite the loss of the grocery store in the community, the economic inequities are deeper than lack of grocery stores. They are reflective of a capitalist society focused on the exploitation of people and planet. A year after the closing of Double 8 Foods, Marsh, a national grocery store chain, closed their locations everywhere. This signifies the failing of the grocery store model as a sustainable business and means to address food insecurity.

If one talks to the CCFI team, you will hear them say, "We don't need another grocery store" (Zakem). After experiencing both the local and national chain closing, it is evident persons everywhere are vulnerable to food insecurity, because the current system is reliant on grocery stores under an economic model that places profit over people in a fluctuating economic climate. Thus CCFI's goal is to address food insecurity by providing fresh produce, education, and activism, and building economic models that empower community.

Community and Economic Development

When asked to define community, Zakem said, "Community is people who come together and care about one another. My role in the community is to learn from others and contribute whatever I have to offer." Community is vital to the success of CCFI and is managed by a committee of neighbors who want to bring fresh produce to their community. When reflecting on how she became a part of the CCFI team, Zakem said, "I did not plan on starting a project...I had just moved here." Zakem, originally from Cincinnati, moved to Indianapolis a few years after graduating from IU. She found herself working and learning as a white woman in a predominantly African American community. She quickly became involved in the continued conversation around food, then the facilitator of CCFI team meetings and a project leader. She emphasizes CCFI is truly a team effort; she relies on the mentorship of others on the team and KI staff to manage the project. She works closely with Tysha Ahmed, 41, and Paulette Fair, 73, on the daily operations of the CCFI project.

Ahmed reflected on what community means to her, asking, "How can I be happy if others in my community are not?" She sees her role in the community

centered on food issues and helping others. Fair uses the term “neighborliness” to describe the significance of her role in the community. This means having “the concern for our common environment, issues, and resources.”

The women on this committee represent three generations of ideas and experiences. CCFI reflects the community development principles of KI, one of those being intergenerational learning where people both young and young at heart work together. Mentorship works as a space where older members of the community share with younger members while also remaining open to all that young people have to offer to the community as future leaders.

One of the strategies CCFI uses to influence community and economic development is social capital. The cooperative is able to run its food initiatives through the resources and connections members of the committee have built with other people. In one example of this, every Good Food Feast features a cooking demonstration and guest speaker. These persons donate their time to the program because of the relationship they have with members of the cooperative. Another example is CCFI’s employment of youth interns to assist with marketing, social media, and videography during the programs. CCFI has access to youth with these skills because of the cooperative’s relationship with KI.

Social capital as discussed earlier in this research was instrumental in the formation of CCFI. Members of the committee like to emphasize the fact that CCFI started with zero initial monetary capital and relied instead on support of neighbors pulling resources together to launch the program. CCFI is unique in that it did not start with a donation or grant like many other community-based food cooperatives. They problematize this model, because most cooperatives which begin this way struggle with sustainability and end after a few years of operation. The CCFI team believes for marginalized populations, community driven approaches lead to long term sustainability and community empowerment.

When asked about the future of CCFI, Zakem talked about seeing the project become a formal cooperative and providing economic opportunity for community members to run the program. All members of the CCFI committee are volunteers. They invest their time to organize the program and connect residents with farm fresh food. With increased capacity and residents buying more shares, there is a potential for the program to offer paid positions. CCFI’s goal is to double capacity and have the support of approximately 70 shareholders each month. This will allow the program to hire a part-time program coordinator to lead this initiative.

Local Food Systems and Climate Change

CCFI's impact on climate change focuses on influencing local food systems. A local food system is "a collaborative network that integrates sustainable food production, processing, distribution, consumption, and waste management in order to enhance the environmental, economic, and social health" ("Local Food Systems"). This level of impact is important to CCFI, because they know their community has the knowledge and resources to control their food system. The cooperative also seeks to influence the environmental, economic, and overall health and wellbeing of members in their community. CCFI invests in local food systems through supporting local agriculture and building a community of local farmers, helping community members connect to farmers and food.

Supporting local agriculture is an important part of CCFI. There are many local farmers who support the program, including Johnnie Raber Farms, Street Beats, Lawrence Community Gardens, and others. CCFI has also established a relationship with Purdue Extension Farm Incubator, which provides land and materials for people who want to learn how to be urban farmers. Zakem helps coordinate the Farm Incubator and assisted in building the relationship between KI and Purdue Extension. Farmers in the incubator have provided produce for the cooperative and benefited from having a customer base from their own community of neighbors. This has empowered the farmers to learn how to grow crops and has spurred entrepreneurship.

For instance, Sybil Satterfield, one of the Purdue Incubator Farmers, supplied produce to CCFI in her first year of operating Street Beats Urban Farm. Street Beats is located in the Riverside Community in Indianapolis, where Satterfield grows a variety of produce, including greens, squash, tomatoes, Swiss Chards, and, of course, her specialty crop beats, on a plot next to her home. Satterfield hopes to expand Street Beats through purchasing more land, saying "There are several lots in the area to grow food on...I hope to have 1 acre of land to grow." When I asked her what motivates her to grow food, she answered, "I got to have some skin in the game, whether it's a foot, a hand, or an ear. This helps me feel engaged in the community, because I am a part of what's going on." Satterfield's commitment to community wellness goes beyond food, as she plans to expand her farm and sell both food and wellness products from her own home store. Thus, the partnership with Purdue Extension Farm Incubator has allowed community members like Satterfield to gain access to urban farming skills. These skills in turn help support the larger work of the KI through entrepreneurship with an environmental focus.

Moreover, the traditional model's emphasis on a global corporate capitalism has had multiple effects on the environment. The transportation of food is a large environmental issue, where it is "estimated that the average American meal travels 1500 miles from farm to plate" ("How Far"). The amount of travel uses thousands of gallons of fossil fuels to power trucks, planes, boats, and so forth, which bring the food to dinner tables across the United States and the world. The use of fossil fuels is harmful to the environment, as they pollute the air, soil, and water sources. Large scale farming also produces a large amount of pollutants due to the use of large equipment and pesticides, whereas small scale farmers tend to use less heavy equipment and pesticides. CCFI sources organic produce from local and urban farmers, which drastically reduces the amount of fossil fuels used and miles traveled from farm to plate – a reduction of up to 25 times.

Eating seasonally is another important aspect of local food systems. Seasonal eating is good for the environment because it reduces the year-round demand for imports of certain products that can be grown locally for only a few months. The grocery store industry helped commercialized the common perception of produce as available all year long, because it is available in their local grocery store. This perception is harmful to the environment, because consumers do not know about the heavy impact the agriculture industry has on the environment and the amount of labor it takes to raise produce and livestock. The transition from an agricultural to an industrialized economy shifted the relationship people had with their food from one in which people actively participated in the production of their food to one in which it seems normal to have what seems like instantaneous access to food through grocery stores, fast food restaurants, and so on. Working with local farmers allows consumers to build relationships with their local farmer and to understand what produce is grown in their local ecosystem as well as the labor put into growing food.

Local food systems help to build communities that are more independent of the traditional economic model. Community control of food allows neighborhood residents to have choice of what food enters their community and at what cost. CCFI members have relationships with farmers and know their produce is treated with little to no pesticides. Customers have given the feedback that they can even taste the difference in the food they buy in the grocery store versus the CCFI shares. When I asked Aghilah Nadaraj if CCFI has affected her views on supporting local agriculture, she said, "Yes, it has! The environmental movements I have been in have told me to support local agriculture, but CCFI gives me a practical opportunity." Nadaraj sees the potential for CCFI to be replicated in multiple parts

of the city and says “it could create a demand for more local agriculture.” Recently, KI launched the Kheprw Agricultural Science Project, via which they are preparing vacant lots, allotted to them for free by the city of Indianapolis, for urban farming (Fair). These lots are available for neighborhood residents to grow food for the community. Fair has been working with Ahmed to prepare these lots. She spoke about the lot located on 26th and Harding, saying, “We loved the book so much we named our farm after it. We call it *Collective Courage* Community Farm.” CCFI’s team is invested in the service of local farmers, providing fresh food to the community, and providing opportunities for residents to learn how to grow their own food.

Conclusion

CCFI has been serving the 46208 zip code and greater Indianapolis community for over a year and shows no signs of stopping. The important aspects of CCFI’s work are addressing food insecurity, enhancing community and economic development, and investing in local food systems. The cooperative model allows the program to build community and create economic opportunity. Ahmed reflects on the importance of collective economics, saying, “Collectivism has already been done. Co-ops is [sic] something that’s not new, but has been something that always been done. I think it’s good that we are getting back to that.” CCFI aligns with the history of cooperation that Nembhard outlines in her book, where people come together to address a need in their community. KI uses *Collective Courage* as one of many texts to inform their understanding of cooperative development, organizing strategy, and advocacy for community development. Nembhard’s work is instrumental to this research, because she provides an historical perspective on the role of African American participation and activism through the cooperative model. This helps bridge the old and the new of cooperative work and allows the leaders of CCFI to stand on the shoulders of cooperative leaders before them.

The future of CCFI is shaped around creating opportunity and sustainability. The CCFI team set a goal to increase capacity to 70 shares each month to fund a part-time coordinator for the program. The team also wants to support others who wish to replicate their cooperative model and programming. CCFI received the Bicentennial Green Legacy Hall of Fame Award from Earth Charter Indiana at the organization’s 2016 Sustainable Awards. CCFI also developed a broad network of food access organizations, including partnerships with the Indy Food Council, Purdue Extension Farm Incubator, Office of Sustainability, Jump in for Healthy Kids, IU Health, Food Assembly, Community

Innovate, and the City of Indianapolis Department of Public Safety through a relationship with the Indianapolis Food Czar, Shelly Shuttles.

I have been truly impacted by the mission of the Kheprw Institute and CCFI. They have an organic way of building community and made me feel welcomed. This work helped me feel more connected to my ancestry as a descendent of sharecroppers and slaves on tobacco plantations. I rest this research on my ancestor's labor and legacy in alignment to Kheprw's and Nembhard's commitment to African American cooperative history. CCFI created a space to connect me with the Indianapolis community and inspired me to visualize a sustainable, equitable, and better world.

About the Author

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ALLOPATHIC MEDICINE'S INFLUENCE ON INDIGENOUS PEOPLES IN THE KUMAON REGION

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Abstract

“Much suffering has been man-made.” —Ivan Illich

This paper focuses on the use of western medicine in the Kumaon region of Uttarakhand, India. The goal of this research is to understand which healing practices are preferable in rural villages. Semi-structured interviews were conducted with 53 participants, including two spiritual healers, two doctors, and one pharmacist. Results indicate that allopathic medicine, otherwise known as modern medicine or western medicine, has become the go-to remedy for even the most remote people in India. Nearly all participants use allopathic medicine, but less than half of the participants experiment with other forms of healing, such as Ayurveda, homeopathy, meditation, and yoga. This study explores the problems that result from becoming too dependent on Western medicine; these issues stem from a lack of knowledge patients have about the dosage and intensity of the drugs they take. It is important to educate rural villagers about the dangers that various medicines can cause, as well as to establish more medical facilities that promote alternative treatments alongside modern medicine.

Introduction

In the winter of 2016, I travelled to the Himalayas to study the health-seeking behavior of indigenous peoples living throughout the Kumaon region. Upon arrival, I was surprised to learn that nearly the entire population relied on allopathic medicine, which is also known as modern medicine. India is the birthplace of Ayurveda, yoga, and other natural remedies that focus on healing the entire body. It was surprising to see that allopathic medicine, a system that has many regulations in the West, had disrupted these ancient practices. Women rationed the daily dosages that they could afford, and older men asked villagers to bring back painkillers from the nearest towns, sometimes 10 kilometers away. The community seemed to be running on a schedule determined by a medical regimen.

After interviewing a total of 53 villagers, including spiritual priests, doctors, and a pharmacist, I became aware of three facts:

1. Allopathic medicine, especially various forms of painkillers, is a widely available and trusted form of medicine in the Kumaon region.
2. While other forms of medicine are still being practiced, they do not provide the same level of relief as allopathic remedies, and, therefore, are not as popular.
3. Individuals have lost a certain amount of control over their own health by surrendering to a larger, modern, medical system.

This study examines the impact of modern medicine on villagers in the Kumaon region. It also recommends actions that will create a well-rounded medical system and benefit patients in northern India.

Literature Review and Background

There is no such thing as a perfect medical system. Although allopathic medicine is used around the world, it has many more side effects than natural remedies or spiritual practices.

Some scholars argue that the modern medical system is harmful to humans. In *Limits to Medicine*, Ivan Illich writes about the damage that has been caused by 21st-century medicine and the social organizations surrounding it. Illich claims, "The medical establishment has become a major threat to health. The disabling impact of professional control over medicine has reached the proportions of an epidemic" (Illich 1997: 3). As the concept of health has evolved, it has become the norm to visit doctors' offices and seek medication at the first sign of pain. But this habit is not natural or healthy. Routine drugs may cause side effects that might further impair recovering bodies. When too many drugs are taken over a period of time, an individual's tolerance may recalibrate, and the medication's desired effect will be deficient. This creates a need for more medication; an endless cycle begins.

More than being a disruptive force in society, the medical system, as Illich argues, limits the control people have over their own bodies. Humans become patients as they enter into a system that uses language, medicine, and bio-medical technologies that surpass the average person's comprehension of care. Thus, the patient is at the mercy of the medical care provider. Illich notes that even death, a natural process, has become an aspect of a medical procedure. This is a relatively new idea. Before hospitals were accepted as institutions, the sick would die in the

comfort and privacy of their own homes; death was an intimate thing. Illich draws attention to the fact that now “[s]ocially approved death happens when man has become useless not only as a producer but also as a consumer” (Illich 1997: 206). Illich notes that the allopathic medical system works to prolong life. Patients are valuable to doctors when they can purchase and ingest medicine. Now, doctors view death purely as a last resort, when the patient has lost the ability to contribute to the medical institution.

Illich reminds his readers that for most of history, there was no global system catering to health. He writes, “Man has not only evolved with the ability to *suffer* his pain, but also with the skills to manage it” (Illich 1997: 144). Despite the widespread acceptance of allopathic medicine, it is still a novel system; humans had adapted alternative methods of healing prior to the increase of technology. Illich urges his readers to dream of a time when individuals could conquer their own illnesses without the assistance of physicians.

Michel Foucault, a twentieth-century French philosopher, also confronts the idea of bio-power in a postmodernist age. Foucault argues that power is created simply through classifying sex, sanity, and health. In *The History of Sexuality*, Foucault articulates that in a postmodern era, scholars have the ability to control bodies and populations; he argues that power has become “the taking charge of life, more than the threat of death” (Foucault 1984: 143). But institutions cannot exist if every person has an equal amount of power. Inequalities derive from certain people, such as doctors, having knowledge that others do not.

The role of the doctor was developed in the eighteenth century. Foucault believes that this profession dehumanized the patient. In one of his earlier publications, *The Birth of the Clinic*, Foucault writes that doctors look at their patients through “a medical gaze.” The patients lose their personhood and become nothing more than a series of symptoms: “The patient is the rediscovered portrait of the disease; he is the disease itself, with shadow and relief, modulations, nuances, depth” (Foucault 1963: 15). With the rise of medicine, doctors have gained the power to declare a person healthy or unhealthy—normal or not normal. This authority has further caused sick individuals to lose themselves and take on the identity of a patient.

There is an argument that can be made in favor of modern medicine. Western medicine widely established itself in India throughout the nineteenth century. The British introduced the first vaccination to India in 1802 during the smallpox outbreak. The vaccine was intended to shield the British from the disease, but it also had the effect of saving many Indian lives. Despite its protective abilities,

it is unclear whether the administration of medicine was necessary, ethical, or justified. When the virus first reached India, many native people believed smallpox was associated with the Hindu goddess Sitala. Her presence lay within the disease's symptoms. The vaccines were believed to be ungodly, and the act of transmitting fluids between people was seen as crude (Arnold 2000: 73-4). Despite refusals of the vaccine, by 1877 4.5 million Indian people had been vaccinated, and by 1890, annual vaccinations reached nearly 8 million people. The number of people who died from smallpox was significantly reduced. David Arnold, a historian who specializes in Asian and Global History, expresses the destabilizing effect that the medicine had:

[A]lthough the transfer of technology argument duly highlights the importance of exogenous innovation and the role of technology as a 'tool of empire', it can easily become an excessively one-dimensional idea, stressing the dynamism of the West but ignoring the context in which new technologies were employed. (Arnold 2000: 92)

The smallpox virus is only one example of how Western medicine preserved lives while destroying spiritual practices. This example can be applied to numerous other forms of technology that came into contact with illnesses and epidemics.

Despite the theoretical arguments for refusing modern medicine, India has become one of the biggest suppliers of drugs, both locally and internationally. There is a surplus of regulated and unregulated medicine flowing throughout the country. Even with drug regulation policies, Indian consumers are still able to freely purchase ample amounts of drugs in varying dosages.

In 1940, India adapted its Drugs and Cosmetics Act to regulate medication within the country. There have been a number of amendments to this act over the years, but the restriction of drugs is still not very effective. One major concern is the production of Fixed Dose Combination (FDC) drugs, or drugs made from combining two or more drugs into a single dosage. Research published in "Use of Fixed Dose Combination (FDC) Drugs in India: Central Regulatory Approval and Sales of FDCs Containing Non-Steroidal Anti-Inflammatory Drugs (NSAIDs), Metformin, or Psychotropic Drugs" from May 12, 2015, found that an alarming quantity of FDC drugs were unregulated. Out of the FDCs that are Non-Steroidal Anti-Inflammatory Drugs (NSAID), 27% were approved by the Central Drugs Standard Control Organization (CDSCO), while 73% were not approved. When looking at Anti-Depressants/Benzodiazepine FDC drugs, researchers found that 19% were approved by CDSCO, while 81% were not approved. Of Anti-Psychotic

FDC drugs, 30% had been approved by CDSCO, while 70% were not approved. The only FDC that was widely approved by the CDSCO was Metformin, used to control diabetes. Out of the Metformin formulations being generated, 80% were approved and 20% were unapproved by the CDSCO.

The culmination of this data shows that a large majority of FDCs on the market have not been screened, and could potentially be unsafe or harmful to consumers. Retailers and customers of such drugs may unknowingly be trading dangerous prescriptions on a regular basis. The same study also found that the majority of all FDC formulations available in India could not be found in the US or the UK (McGettigan P., et al. 2015).

Women's Health

Women in India face additional health burdens. Girls are discriminated against immediately after they are born. Female mortality rates are significantly higher than male mortality rates. In 2016, the mortality rate for girls under five years old was 44.2, a considerably higher number than the mortality rate of males, 41.9 (UNICEF 2017). It is important to note that these deaths are directly a result of women being discriminated against. The infant mortality rate for females is 34.6, which is very close to that of boys, which is 34.5 (UNICEF 2017). In the first years of their lives, girls experience neglect in ways that their male counterparts do not. This mistreatment leads to an increased mortality rate. Girls as young as six-years-old are expected to do farm work, fetch water, and care for other siblings. They are much less likely to go to school than boys; out of the 50 million children who are not enrolled in schools, 75% are girls (Desai & Krishnaraj 1990: 202).

Women, especially rural women, are valued in their ability to bear children; Indian culture only prioritizes female health when it is related to reproduction. As a result, healthcare is less accessible for women than it is for men. In hospitals, there are fewer female doctors; there are also fewer beds reserved for female patients (Desai & Krishnaraj 1990: 229). Even though there is less medical attention given to women, the female population is more likely to suffer from medical conditions, including HIV/AIDS or other STDs, and heart disease (Pal 2009). Due to their biology, social roles, socioeconomic status, and physical barriers to accessing doctors (such as a lack of transportation or a need to stay at home with children), it is more likely for women to get sick and remain sick. Additionally, the stigma of sexually transmitted diseases or other defects of the body keep women from seeking medical attention. Women are also less likely to access medical treatments due to their educational and financial status (Pal 2009). Because it is not

common for women to seek care for various health problems, it is hard to accurately measure how many women are suffering from any given disease or ailment.

The Kumaon Region

The Kumaon region is located in Uttarakhand, a state in the North comprised of small villages. The people residing in these villages rely heavily on natural resources and their work is mostly centered on agriculture. Many men also leave the region to find jobs in more populated areas while their wives maintain their house and farm. Schools and medical facilities are scattered throughout the mountains and are difficult to access. Although the literacy rate of the state is above average in comparison to the rest of the country, a majority (62%) of the population remains illiterate. There is a high incidence of poverty in these regions, and nutrition is poor. Hygiene and sanitation are common problems for villagers. Access to clean water is scarce, and there is little health education provided (Capila 2004).

Women in these small villages take on a large workload. For the most part, married women are primarily responsible for domestic chores and the daily upkeep of the household. Men are primarily in charge of making decisions for the family. Most women marry young, and it is common for girls between the ages of 15-19 to start bearing children (Capila 2004).

Uttarakhand is also known as the “Land of the Gods.” Families and communities participate in habitual worship. Many residents of the state feel as if living in this state keeps them safe and protected from evil spirits.

Methodology

A total of 53 people participated in semi-structured interviews conducted throughout rural villages in the Kumaon region of Uttarakhand, India. Spiritual practices, worship, and sacrifices are routinely performed throughout the region. The religious significance of the location helps to contrast spiritual healing practices with modern medical techniques. No social mapping or stratification was done in order to qualitatively extract stories about individuals’ experience with health and medicine.

Interview questions were created before the interview process, although during the interviews many of the questions were altered slightly and tailored to the individual’s circumstances (see Appendix A).

Participants were randomly selected from a total of five villages: Berinag, Chacharet, Digoli, Simgadi, and Sukna. These locations ranged from a small town with a hospital (Berinog) to a rural village four kilometers from the nearest road (Digoli). Villages were selected based on where Avani, a nonprofit organization located throughout the Kumaon region, had established trustworthy connections with community members. The majority of interviewees were selected based on their availability and location between the hours of 10:00am-6:00pm during the weekdays. All of the people asked to participate in the study, with the exception of one person, agreed to do so.

Ten young adults who were in school to become teachers were interviewed during the school day. These students chose to excuse themselves from their classes for 30 minutes each to contribute to this study. Students were between the ages of 22-27 and helped broaden the age range of the study.

Limitations

A Hindi translator was present during all interviews. The majority of participants did not speak English, and nearly every interview was entirely translated. As a result, subtle ideas and nuanced thoughts may have been lost in translation: the researcher, the translator, or the participant could have misinterpreted questions and responses. All interviews were conducted in Hindi. However, many villagers speak Hindi as a second language, after their own local dialect, so there were often questions that participants could not answer. The language barrier resulted in removing certain questions from occasional interviews, but additional inquiries were added in order to ensure that every individual's story was fully represented.

The sample size excludes all villagers who worked and attended school during the weekdays and were not at home to participate in this study. As a result, more interviews were conducted with unemployed parents and grandparents.

Because 10 of the 14 youngest participants were interviewed in an academic setting, it is important to recognize the biases the students may have. The individuals who were interviewed during their educator-training program were highly motivated young adults. These ten pupils may not be representative of their generation at large.

Lastly, due to the small number of people interviewed, it is not possible to make any generalizations about the health status of the people in the Kumaon region on the basis of this study alone. This report is intended to serve as a compellation

of narratives, as well as a reflection of how medicine can be interpreted and used in remote villages.

Results

Out of 53 participants, 48 different families were represented. Two of the interviewees were pujaris, or Hindu priests. Two doctors were interviewed, one allopathic doctor and one homeopathic doctor, as well as one pharmacist. The remaining 47 participants were villagers. In total, 25 participants were male and 28 were female. The age range can be divided into three groups: 14 youth (ages 22-29), 25 parents (ages 30-55), and 14 elder community members (ages 56+).

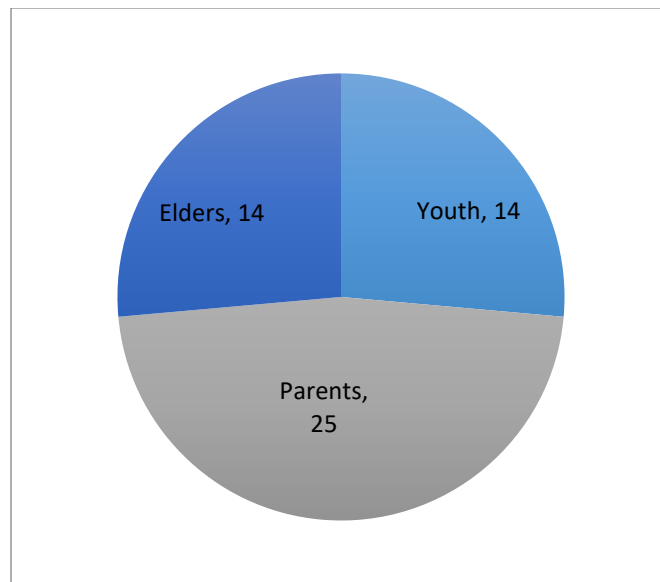


Figure 1. Divide of age groups interviewed in this study.

Severity of Disease

The illnesses mentioned throughout the interviews can be identified as either a routine sickness or a severe medical condition. Severe medical conditions qualify as any problem that prevents a person from carrying out daily tasks, including malaria, typhoid, chronic fever, and loss of mobility. Routine sicknesses are defined as ailments that affect a person's lifestyle but still allow the individual to carry on

with daily work. These sicknesses include cough, body pain, tooth pain, anemia, and small operations that only impair the individual for a few days.

Of 77 injuries and complaints recorded, 25 are considered to be severe medical conditions that are disruptive to an individual’s lifestyle. The remaining 52 complaints represent routine illnesses that allow the individual to carry out vital, day-to-day tasks. Of the participants who complained of severe injuries, all have used allopathic medicine.

Table 1. List of sicknesses mentioned throughout the interviews

Disease	Number of Complaints	Female	Male
Healthy (with the exception of small, routine, sicknesses)	20	10	10
Joint & body pain	12	9	3
Loss of mobility in legs and other body parts	5	0	5
Loss of eyesight	5	3	2
Routine headaches	5	4	1
Chronic fever	4	4	0
Sickness due to age	4	2	2
Kidney & gall bladder stone	4	3	1
Toothache	3	2	1
Typhoid	3	3	0
Pneumonia	3	1	2
Minor Operations	3	2	1
Pain in abdomen	3	2	1
Gas & indigestion	3	2	1
Injury to body part	2	1	1
High cholesterol	2	1	1
High blood pressure	2	2	0

Jaundice	2	2	0
Diabetes	2	0	2
Asthma	2	0	2
Acidity	1	0	1
Malaria	1	1	0
Cough	1	1	0
Chikungunya	1	0	1
Stress	1	1	0
Heart disease	1	1	0
Depression	1	1	0
Anemia	1	1	0
Total:	97	59	38

Allopathic Medicine

The most common remedy in rural villages is allopathic medicine. Forty-nine out of 53 participants said that at some point in their lives they had gone to hospitals, taken painkillers, or tried some other form of Western medical treatment. The majority of respondents who use Western medicine say that they resorted to allopathic remedies because these medications are easily accessible and provide fast relief. Unlike Ayurveda, homeopathy, and naturopathy, allopathic medicine does not require patients to alter their lifestyles. Pills can be taken quickly and efficiently; results are usually fast; within a matter of minutes there is a significant reduction of pain.

All participants were able to identify certain benefits of allopathic medicine. One woman, Prema,¹ admitted that she trusts allopathic medicine because the general public constantly uses it. She explained that the widespread adoption of these treatments was evidence of their reliability. Even though Prema said that she trusts Western remedies, she also noted that her “English medication” only works for a short amount of time. After Prema takes her dosage of pills she only experiences a few hours of relief from her joint pain, body pain, and continuous fevers before her symptoms return. Nonetheless, she will not forego her medical regime because she assumes that allopathic medicine is better than other remedies.

¹ All names have been changed to protect the privacy of the participants.

Many residents in the Kumaon villages complained that allopathic treatment only lasts for short periods of time. Simriti, another middle-aged woman with a bad toothache, stated that her allopathic analgesic does not provide lasting relief. Her 11-year-old daughter has also been taking allopathic medication for a skin condition, but her daughter's pain is also only alleviated for short periods of time. Simriti says that her daughter continues to visit doctors, but she worries that her daughter will never be able to find effective and affordable treatment.

A number of patients explained that even though the results of their allopathic protocol may be limited at best, they continue to rely on Western treatments. Govind, who suddenly lost the ability to walk four years ago, said that he takes medication prescribed by the doctor even though it has not helped him. He has no faith that he will ever recover given the persistence of his illness, yet he continues to blindly take the pills as he was initially instructed. Govind is not alone in this routine. Nine participants claimed that they did not benefit at all from the medication given to them by the doctor. Of these nine people, four of them said that they continue to take medicine anyway knowing that it does not alleviate the symptoms that they are feeling.

Of the participants who saw positive results while using allopathic medicine, many of them noted that relief came at a price. Lalita, who suffers from depression, has been taking an Atypride 100mg tablet, originally intended for Schizophrenia, in order to control her symptoms. In her interview, Lalita mentioned that she is suffering from side effects. She had been taking this medication for approximately ten years, but it has caused her to experience irregular menstrual cycles as well as significant weight gain. In order to control these side effects Lalita uses Dabur Ashokarishta, a type of Ayurveda medicine. Lalita explained that she had no option other than to take both medications together. Because she does not have time for yoga or other types of natural remedies, this allopathic medication is the only way that Lalita can remain "healthy."

Despite its numerous problems, allopathic medicine was most commonly used among participants in this study. (See Appendix C for complete list of medicines taken).

The Function of a Pharmacist

Instead of visiting doctors, many participants went to the pharmacist. Eight people reported to have received medicine from their pharmacist or chemist instead of going to the doctor. This number does not include those who visit pharmacists in

addition to another doctor. Those who forego visits to the doctor still learn about various types of medication through pharmacists themselves, advertisements on television, or family and friends. This informal education about how to take medicine can easily lead to an overconsumption of unregulated or dangerous drugs.

During his interview, Harish, the pharmacist, said that he normally sees about 100 people a day. Only half of his customers visit the doctor before making pharmaceutical purchases. The majority of Harish's customers buy allopathic medicine. Harish said he stocks 1,000 western medicine brands, but only 100 Ayurveda brands because they are significantly less popular. Harish himself has completed 16 years of school, and he was trained in medicine prior to becoming a pharmacist. He said that he believes in Ayurveda medicine over allopathic. When asked if he ever gives patients medicine that he thinks is dangerous, Harish said yes. He continued to say that "all medicines are dangerous, but when you take them on the [doctor's request] then it's not dangerous." Harish explained that he limits the amount of medicine that customers can buy at one time. He will not sell stronger (schedule H) drugs to any customer who does not have a prescription. Harish admitted that he believes that the locals in Berinag who visit his shop take too much medicine.

It is important to note that Harish's pharmacy is near the Berinag hospital, which is located in a bustling town. This facilitates a customer's ability to see a doctor and attain a prescription. The majority of participants who claimed to never visit the hospital live far from a road, in the rural village Degoli. It cannot be assumed that all of the pharmacists in rural areas have the same schooling as Harish. Similarly, it is unknown whether other pharmacists limit or restrict certain drugs that they sell.

In Degoli, Geeta, an elderly woman, presented medicine that she takes for her headaches, including the drug Saridon, which has been banned in various countries around the world, including Sri Lanka, Korea, Malaysia, and Turkey. Geeta's pharmacist provided her with the medicine. During her interview Geeta said that she does not go to the doctor because she believes doctors do not know how to properly treat her, but the pharmacist does.

In the village of Simgadi, there is a local pharmacist who serves as the primary doctor. He was not able to participate in this study because he was intoxicated and could not respond to questions. Several people interviewed in the town of Simgadi claim to have seen him for medical attention.

The allopathic doctor, Kamlesh, who works in Berinag, said that he meets with many patients from rural villages—some patients come from 40 kilometers away and live ten kilometers from any road. Kamlesh said that he meets with many people taking drugs that are more powerful than the medication he would prescribe. Patients can access such medicine when drugs are not strictly regulated. Kamlesh said, “If [drugs are] not regulated, then there will be more chances of misuse rather than use.” Occasionally people will visit Kamlesh having taken Tramadol, an intense painkiller. Kamlesh explained that as people continue to take Tramadol, their bodies acclimate to the drug, and the medication stops having an effect. Many similar drugs that are used incorrectly will cause a patient’s tolerance to increase, and the pain will be harder to cure. Patients, oblivious to this acclimation process, continue to use the drugs that give them the greatest relief. Kamlesh acknowledged that this is a problem caused by the lack of regulation throughout the country, not the pharmacists themselves. He credited pharmacies by saying that they are much needed in villages: “It is a problem, but it is also a solution of this area. [Villagers] don’t have any other option.” The pharmacist is a lifeline for many individuals living in pain—especially those who are far from a doctor or cannot afford treatment. Without the presence of a pharmacist, people in remote villages would have few pain-relief alternatives.

Control, or Lack Thereof

Although nearly all participants had used allopathic medicine, only a handful of the patients interviewed knew the name of the medicine that they were taking, the cause of their illness, or how the illness affected their bodies. The most common answer to the question ‘what do you think caused this sickness’ was ‘I don’t know.’ Even a rudimentary answer or a religious or mythic explanation would have shown a level of understanding, ownership, and control of the body. The inability to respond demonstrated a sense of helplessness. The cause of the sickness was unknown, and therefore the patients were unable to cure themselves.

In many cases, patients were not educated about their own sicknesses and medication. One 45-year-old woman, Tara, said that she took 11 pills a day, had bad eye pain, headaches, and body aches. She had been to the doctor before, and she wanted to go back, but she suffered from severe carsickness and did not know if she could complete the trip to town. She guessed that the cause of her illnesses could be menopausal, but she was not sure. She felt strongly that she would never recover. Her lack of understanding about what was happening within her own

body—either the natural process of menopause, or a severe untreated illness—prevented her from understanding the cause of her pain.

Many participants used allopathic remedies because these treatments were efficient. Even those who were willing to change their lifestyles—eat healthier and exercise during the day—admitted that they could only make changes that did not cut into their daily schedule. Allopathic medicine provides the gift of time, but it takes away a person's autonomy. If a person becomes dependent on medication, it may be too late to revert back to conventional remedies of healing.

The last interview conducted in this study was with one 78-year-old man, Mohan, who was dying of asthma. He struggled to breathe, speak, and even move. Mohan had lost all control in the lower half of his body and was waiting for death to come and alleviate his suffering. Mohan mentioned that he had become completely dependent on others. He could no longer fetch himself food or water. He creeps to the bathroom but cannot climb back up the stairs to his house without the assistance of someone else. When asked if he would rather be in the hospital, he said that he wished he could be under the care of medical professionals, but he cannot. Instead, he has to constantly worry about who will bring him his next round of medication—medicine which only alleviates pain for a minimal amount of time before discomfort returns. Mohan has forfeited all control: he will survive purely off of his medication, until the day that his body cannot persist any longer.

Non-Allopathic Medicine

There are a variety of treatments used in rural villages that have preceded Western medicine. These healing practices include Ayurveda, homeopathy, naturopathy, yoga, meditation, spiritual healing techniques, and homemade remedies.

Ayurveda & Homeopathy

Ayurveda and homeopathy are alluring to many patients because the medicine is derived from natural resources and has no negative side effects. A total of 19 participants claimed to use Ayurveda medicine. (One additional woman, Kumla, adamantly stated that she was not using Ayurveda medication, but when she presented all of her daily medications, Ayurveda fruit juice tonics were present.) Five participants said that they would prefer Ayurvedic medicine to allopathic medicine. Both users and non-users of Ayurveda and homeopathic remedies indicated that the hardest part of using natural medicine was altering one's lifestyle and routine. The reason that many patients who use allopathic medicine did not take

natural medicine was because they could not commit the time necessary to incorporate Ayurveda into their schedules; even still, these participants conceded that Ayurveda and homeopathy were preferable because they cure illnesses from the root of the problem instead of temporarily alleviating symptoms.

Patients also neglected to seek out Ayurveda and homeopathic treatments due to the lack of facilities in the area; many participants had never been exposed to these alternative methods of treatment. Half of the participants in this study did not know about non-allopathic types of medication. Because hospitals throughout India are based off of the Western medical system, patients assumed that allopathic treatment was the only form of care available to them.

Ayurveda and homeopathy were mostly used to treat kidney and gall bladder stones, skin diseases, high blood pressure, and diabetes. All but one person who tried this medication said that it worked. Some of these individuals had to stop their treatment due to a lack of money or time. Kamlesh, the allopathic doctor, credited natural forms of medicine: “No pathy is best. Sometimes allopathy is the best option... but if you want to modify your lifestyle, then Ayurveda is better. In chronic cases I have seen that homeopathy is working better than allopathy.” Ayurvedic medicine is typically most successful when curing specific illnesses, such as skin conditions.

Dayal, a homeopathic doctor who also works with allopathic medicine, was adamant that homeopathic medicine is most successful. With the exception of emergency cases, such as a broken bone, Dayal claimed that homeopathy can cure any illness without producing any side effects: “Homeopathic medicine takes more time, but it cures illnesses completely.” By looking at the root of the cause, Dayal is positive that he can heal people completely and permanently, something allopathic medicine cannot do.

Homemade Remedies

Natural remedies, also known as Desi medicine, are treatments that have been found in nature and are used to treat various ailments (see Appendix B). These remedies are passed down from generation to generation and can cure a variety of illnesses from chronic fever to the common cold. This method of healing is inexpensive, timely, and there are no side effects to the treatments. Twenty-three participants claimed to use Desi medicine for various sicknesses. Many of those who did not use these remedies said it was because they did not have the recipes for Desi medicine. All participants who used homemade remedies had learned

about the practices from their parents or other elders in the community. Twenty-two out of the 23 participants using Desi medicine said that they always try the remedies before going to the doctor. Gaurav, the one male who resorted to allopathy first, said that he has to use modern medicine because the herbs he needs to make Desi medicine are hard to find.

Although Desi medicine is most preferred among those who use it, it is clear that this form of treatment is becoming increasingly less common. Kumla, at 60 years old, said that the herbs that she uses to make medicine are too hard to access, and she is unable to pass down her knowledge to her family. Piyush, 26 years old, said that he used Desi medicine as a child but never asked his parents for the medical recipes; now, he is unable to use these treatments when he is sick. A lack of knowledge, both due to the influence of allopathic medicine and a shift in the local ecosystems, is phasing out the use of traditional, homemade remedies.

Many villagers have also stopped seeking out natural remedies because they are thought to be ineffective when coinciding with Western medicine. Tara, mentioned above, said that even though she knows a few homemade remedies, using them would not do her any good because her body has been weakened by “English medicine.” She echoes the doctor’s sentiment: With the use of too much modern medicine, other forms of treatment become less effective. The notion that Western medicine is used *for* weak bodies and *creates* weak bodies was reiterated throughout several interviews. After a body has begun to use modern medicine, it is harder, and maybe impossible, for Desi remedies to work.

Spiritual Practices

A large majority of participants use spiritual rituals as a form of healing. Out of all participants interviewed, only six claim to not practice any form of spiritual worship. The religious practices mentioned ranged from the use of Vibhuti, or sacred ash, placed on the forehead to serve as protection, to routine worship and prayer, to an annual sacrifice of an animal. Not everybody who believes in spiritual practices observes all of these traditions, but many participants found comfort and healing through certain ceremonies.

Some individuals who were interviewed believe that being in the Land of the Gods is beneficial to their health. Gaurav, mentioned earlier in this study, says that he believes in spiritual worship, but he does not practice it because he lives in a holy place. His environment and the prayers of his family keep him healthy. Cheetan, who is 35 years older than Gaurav, shares the same sentiment. Cheetan

claims to not believe in spiritual healers; rather, he puts his faith in the power of religion. He explained that the temple, which is a few yards away from his home, protects him and his family from diseases.

Even people who pray and do not see any beneficial results continue to participate in their regular rituals. Geeta and her husband Panjaj explained that they apply Vibhuti, or ash, to their foreheads every morning, even though they have never experienced its benefits. Their trust in such spiritual practices has been lost, but they continue to participate in the rituals in the same way that Geeta continues to take painkillers even though they have provided her with no lasting benefits. Mohan, mentioned earlier, also worships regularly even though he does not believe that he will ever recover from his sickness. Regardless of the state of his own health, he said he had no option other than to worship when living in the Land of the Gods.

Spiritual practices can often involve visiting pujaris, or spiritual priests, in the community. One female pujari, Mansa, explained that a person does not undergo any formal training to become a spiritual healer. One day a divine power informed her that she was a priest. Afterward she began working as a local healer. When asked about her work, Mansa said that everything she knows comes from a divine power. When a person comes to visit her for health advice, Mansa is able to understand their ailment before they even arrive at her home. She is also instructed, through the divine power, about how to cure the individual. She may recommend allopathic medicine, a form of worship, or a combination of healing remedies to help cure the sick person. The male pujari in the same village also declared that there are moments when he will refer his patients to the allopathic doctor. But, he only refers them to allopathic medicine because it is easier to find than Ayurvedic medicine. Neither pujari disputed other forms of medicine, yet they both said that allopathic medicine only helps certain illnesses.

In the same way that spiritual priests are open to allopathic medicine, allopathic doctors are also open to spiritual practices. Kamlesh, the allopathic doctor mentioned above, explained that he believes and participates in spiritual worship. Kamlesh will even recommend worship to his patients if he believes that it will cure their malady.

Differences within Generations

Participants over 30 years old were much more reliant on, and trusting of, allopathic medicine than the younger participants. None of the 14 people interviewed who were under 30 used allopathic remedies before trying traditional medicine.

When asked about what caused this shift in generations, Gaurav, a 27-year-old student, said that he thought the introduction of social media was changing the belief system of younger generations. Technology has made younger people in these villages more aware of risks that are associated with medicine. Thus, modern medication has become less desirable.

Those over 30 years old were not as patient with their ailments. Only two participants doubted allopathic medicine altogether: one was a homeopathic doctor, and the other did not believe in medicine at all. Students being interviewed also identified this acceptance of allopathic medicine in their parents. Many said that their older family members had a different mentality about medicine than they did. The youth explained that their parents were much more trusting of pills and other allopathic medicine. Hema, who is 25 years old, only cures her sicknesses by resting, but her parents go to the doctor immediately after experiencing any physical discomfort. Other students repeated this sentiment and claimed that their parents were much more reliant on Western medicine and drugs than they were.

Differences within Gender

In total, there were 25 male participants and 28 female participants. Throughout the interviews, 14 people explicitly stated that it was difficult for them to access the doctor. Of these 14 participants, 11 were women. Regardless of their proximity to medical care, men consistently viewed visiting the doctor as being easy whereas their female counterparts viewed it as difficult. In the village of Sukna, one man, Piyush, explained that it was not a problem to get to the doctor because it was only a one-day trip. The three subsequent women interviewed, Bharti, Prema, and Tara, all independently said that it was difficult to get to the doctor; there have been many times when the women have decided not to go because the trip would take an entire day. The duration of time that it took to get to the doctor—one day—was viewed differently based on the participant's gender. No significant difference was found in the amount of times women and men visited doctors and hospitals, only in the amount of difficulty they experienced getting to these health facilities.

Paradoxically, even though women viewed going to the doctor as a harder task, they tended to have more complaints and physical discomforts than the men who were interviewed. Table 1 shows that the combination of women's ailments totaled 59, whereas men's complaints only equaled 38. Female participants in this study were more likely than men to experience body and joint pain, headaches, fevers, typhoid, high blood pressure, anemia, and depression. The physical demands women face in the field and in the home may explain this imbalance.

An equal number of female and male participants chose to use alternative forms of medication, but the homeopathic doctor stated that he visited with more women, on average, than men. He explained that women were often times more open to altering their lifestyles for their health, whereas men were more interested in quick and fast treatments that could mend their symptoms easily. In this study, ten women and nine men claimed to use Ayurveda. But, significantly more women used Desi remedies. Fifteen women said that they used homemade medicine compared to the nine men who used local herbs to treat their sicknesses. Many men had little knowledge about how to use locally grown herbs as medicine.

Even married men and women showed vast differences in their medical practices. Pankaj and his wife Geeta were both married, older than 70, and living in Digoli. Pankaj did not believe in doctors and chose not to visit one, yet Geeta relied heavily on five medications a day, some of which she had gotten from the doctor and others which the pharmacist had given her. Pankaj also did not believe in any alternative medicine, yet Geeta uses Ayurvedic medication to help her digestion. Another couple, Kedar and his wife Rekha, also expressed differences in their medicinal habits. Rekha trusted homemade remedies, whereas her husband said that he only uses allopathic medicine. Kedar also commented on the ease of going to the doctor, whereas Rekha did not.

A student who was interviewed, Bhumi, said that she believes men are more concerned about their health than women. When asked why, she explained that women are more confined than men, and thus unable to think about their health:

[Women] are limited to their family and their society and their work only. But the men [are] concerned about their health, and they go many places, and they know how they should keep their health fit and fine. So they go to [a] doctor, they leave for check-ups, for everything. But...if any woman is suffering [from] any problems, they think it will be okay in time, so they don't go. I think that women are not concerned [with] their health, but men are concerned about their health.

The 59 collective complaints that women had can be explained by Bhumi's observation: men address their health concerns immediately, whereas women do not take care of themselves as quickly.

Often, women do not have the option of visiting the doctor when they experience a medical condition. Prabha, a 42-year-old woman, had spent the past year of her life recovering from typhoid. When asked how long she waited to see a

doctor after she had seen symptoms of sickness, she replied that it had taken her seven months until she sought out medical attention. Even though Prabha's house is less than a ten-minute walk from the Berinag hospital, Prabha did not think that her illness needed any medication stronger than painkillers. Prabha said that she suspects that the cause of her symptoms came from working in the rain wearing cold clothes and skipping meals. Even after getting sick she continued working in wet clothes and eating irregularly. When asked if she was planning on continuing these habits in the future, Prabha said that the fields that she works in are a few kilometers away; she does not think she will be able to change her old habits because she has an obligation to keep working. Prabha's sickness did not result in a lack of care that she had for her own body and health. Rather, she had no option other than to ignore her wellbeing and continue working for the sake of her family.

The allopathic doctor, Kamlesh, said that he visits with more women than men because women are overworked and do not take care of themselves. Women visit Kamlesh complaining of body aches, unconsciousness, or an inability to speak and eat. Kamlesh explained that these were unnecessary reasons to visit the doctor, but women come anyway because they need care: "Sometimes I think that [women] are very disturbed [in] their family life. They want care. They want to be a center; they feel that no one is caring for [them]. Nobody is wanting [them]." Kamlesh says that he treats these cases by prescribing counseling or offering a multivitamin injectable, IV fluids, antacids, and placebos. But, regardless of the treatment provided, the medicine will be unable to solve the root cause of this problem: Women are neglected in their households.

Analysis and Discussion

Even in the remote villages of the Himalayas, allopathic medicine has managed to find its place. This medicine is readily available, effective, and fast acting. The downsides of allopathic treatment—the side effects that it causes, and the dependency that it can create—are not well recognized. Even indigenous peoples who know about the negative effects of Western medication are willing to ignore its potential harms in exchange for its benefits. The world is becoming increasingly dependent on allopathic medicine, even though this system of medicine has not proven to be more effective than other forms of treatment.

There are two major threats to putting too much faith in modern medicine:

The first is that the drugs that work best are the most harmful. Patients seek out drugs that relieve their suffering—but these are the drugs that we should be

most concerned with. The individuals who take these medications will eventually adapt to the medicine that they use. Over time, the once-effective dosages will lose their efficacy, causing patients to increase their intake to potentially dangerous levels. The results of this study show that even elders who once used homemade remedies no longer benefit from the herbs in their local garden. By allowing their bodies to become dependent on allopathic treatment, patients inevitably do themselves a disservice over time.

The second problem is that by using modern medicine, individuals stop listening to their bodies' needs; over time people can become helpless and unable to alleviate pain in the absence of medical intervention. The pain that villagers feel while working signifies a need to reduce their workload. By masking their symptoms with Western medicine, suffering workers sever the communication that exists between their mind and body. Patients do not change their diet, rest, or exercise habits. They strive to go beyond what their un-medicated body can tolerate, but ultimately they only exhaust their abilities. After years of taking medicine, patients are unable to restore the balance between mind and body, and they feel helpless without the aid of medical assistance. Being sick becomes the equivalent of being helpless, and patients are forced to visit doctors with greater frequency, either for routine checkups or for prescriptions.

The solution is to educate residents of the Kumaon region about medicine. Rather than limit the availability of drugs, villagers should maintain the right to make informed decisions about the treatments that they choose. Schools can adopt a health curriculum where students will learn about medicine, its benefits, and its potential side effects. Ideally, children and young adults will also talk to their parents about the information that they have absorbed. Education can also be made available to adults through the use of self-help groups and advertisements.

In addition to properly educating villagers, the available medical facilities need to be re-imagined. An Ayurvedic doctor should be as easily accessible as his/her allopathic counterpart. These doctors can share the same facilities in order to ensure that patients have access to a variety of care. This approach would involve bringing traditional medicine into government health facilities. Men who have served in the army, who are entitled to free health benefits, should also have the right to choose the type of treatment they receive. When allopathic and Ayurvedic medicines can work together, patients can be sure that they are getting the most effective, personalized treatment. Not only will the patients' best interests be served, but also more people will experience sustainable results.

Conclusion

“Progress in civilization became synonymous with the reduction of the sum total of suffering. From then on, politics was taken to be an activity not so much for maximizing happiness as for minimizing pain.” –Ivan Illich

The increased use of allopathic medicine around the world has created larger amounts of dependency and suffering. The results of this study demonstrate that despite other indigenous practices, modern medicine is still the preferred choice of treatment. Not only can certain drugs be dangerous, but also they can cause patients to lose touch with their bodies and cede control of their own health. Through education and the reintroduction of non-allopathic options, it is possible to reverse the damage that has been caused by allopathic drugs in order to implement a more holistic healing platform.

Appendix A

Interview Questions

- 1) How is your health currently?
- 2) Are you currently taking medicine?
 - a. Is the medicine you are taking working?
 - b. How long have you been taking this medicine?
- 3) Have you ever been sick before?
 - a. What were you sick with?
 - b. What did you do to treat that illness?
- 4) Do you know the name of your current medicine (or any medicine that you have been asked to take in the past)?
- 5) How often do you go to the doctor?
- 6) Do you trust the doctor?
- 7) Have you ever tried any alternative medicines?
 - a. Why did you/did you not choose to take alternative types of medicine?
 - b. Did those medicines help you?
- 8) What type of medicine do you prefer to take?
 - a. Why do you prefer this type of medicine?
- 9) Have you ever tried any homemade remedies?
 - a. Where did you learn about those homemade remedies?
- 10) Do you participate in any spiritual worship?
 - a. Does this worship help your health?
 - b. Does this worship help the health of your family?
 - c. What do your spiritual practices consist of?

Demographics:

- 1) What area are you originally from?
- 2) How old are you?
- 3) Who is in your family?
 - a. Is anyone else in your family currently sick?

Appendix B

Homemade Remedies Used to Treat Illnesses in the Kumaon Region

(Note: This is not a complete list of all remedies used. This list only includes remedies mentioned by the participants in this study)

For Fever

1) *Extract of lemon stem bark*

Directions: collect the stems of lemons, grind, and mix in water. Wait until the extract of the bark has seeped into the water. Drink the water.

2) *Rati Patti (Abrus Precatorius)*

Directions: Collect leaves, clean well, grind into fine paste and mix with water. If fever is due to cold then water should be hot. Place paste on forehead and drain water on head.

3) *Neem*

Directions: Boil water and leaves together. Let water cool. Drink cold water.

4) *Manjistha*

Directions: Boil manjistha with water. Strain it. Drink it.

5) *Tulsi (Osimum sanctum)*

Directions: make extract by rubbing leaves and mixing in hot water. Drink water. Can also be eaten plain or mixed in tea. (Good for typhoid.)

For headache:

1) *Turmeric Powder*

Directions: Boil milk, sugar, and a spoon of turmeric powder. Drink.

2) *Vapor Rub*

Directions: Apply vapor rub to head. Combine with steam.

3) *Rati Patti (Abrus Precatorius)*

Directions: Collect leaves, clean well, grind into fine paste and mix with water. If it is summer then use cold water. Place paste on forehead and drain water on head.

For Migraines

1) *Scorpion Grass*

Directions: Use root to make extract using cold water. Separate the root from the plant, clean well, and grind into a fine powder. Mix with the cold water. Let sit for some time, and then filter the water. Lye on ground. If there is pain on the right side of the head, drain the extract through left nostril. If there is pain on the left side of the head then drain extract through right nostril.

For Cough and Cold:

1) *Neem*

Directions: Boil water and leaves together. Let water cool. Drink cold water.

2) *Ginger and Honey*

Directions: Grind ginger into small pieces. Mix with honey. Drink. (Basil leaves, black pepper, and lemon can also be added.)

3) *Milathi Root (Licorice Root)*

Directions: Eat like candy.

For Stomach Pain

1) *Chirata*

Directions: Boil water and leaves together. Let water cool. Drink cold water.

2) *Kutki*

Directions: Grind herb into a fine powder. Mix with 1 liter of water. Boil the water. Wait until water is cold. Drink. (This is especially good for constipation.)

3) *Kirmaru*

Directions: Collect root, clean well, cut into pieces. Soak into water for some time. Filter water and drink.

4) *Gandrain*

Directions: Grind well, mix with water, drink

For Indigestion and Constipation and Gas

1) *Rubus Idaeus*

Directions: Eat root of plant.

2) *Black Salt*

Directions: Eat plain

For Diabetes:

1) *Kirmaru*

Directions: eat the root of the plant.

For Kidney Stone

1) *Ban Supari*

Directions: Eat plain.

For Body Pain:

1) *Lemons*

Directions: Roast lemons in tin foil, and place on pained area

For Cuts and Bruises:

- 1) *Eupatorium: powerful antiseptic*

Directions: Crush the leaves of the plant and rub it on open wounds

- 2) *Frankincense—Serum from the trunk of a pine tree*

Directions: Apply over cuts and scratches

For Skin Condition

- 1) *Rati Patti (Abrus Precatorius)*

Directions: Grind with hands. Mix with water. Create a paste and apply directly to skin.

For Pimples:

- 1) *Aloe Vera Gel*

Directions: Apply directly to skin.

For Children Only

- 1) *Kutki* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 2) *Black Salt* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 3) *Gandrain* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 4) *Malati* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 5) *Atish* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 6) *Koot* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 7) *Harar* (for stomach pain)

Directions: Rub and grind herbs on a stone. Mix with mother's milk. Drink.

- 8) *Harar* (for cough)

Directions: Mix cow's urine and milk. Boil it with harar and then drink it

Appendix C

List of Allopathic and Ayurveda Medicines being used by Participants

Painkillers

Allopathic Medicine

Brufen

Disprin

Paracetamol

Crocin

Saridon

Neopar-MD tablets (Active ingredient: Nimesulide)

Numesulide

Reactin Plus Diclofenac Sodium and Paracetamol Tablets

Skin Conditions

Allopathic Medicine

Histafree (Fexofenadine HCl tablets)

Solubet

Clobetasol propionate salicylic acid ointment OLEB-S ointment

Antibiotics

Allopathic Medicine

Ocupol DC Sterile eye/ear drops

Decol

Acidity/gas/heartburn

Allopathic Medicine

Aciloc

Rebozen-DSR

Ayurveda Remedies

Digel mix fruit

Diabetes

Allopathic Medicine

Glimfal-SR

Ayurveda Remedies

Lipoic Acid

Gallstones

Allopathic Medicine
Urodeoxychloic acid

Kidney Stones

Ayurveda Remedies
Neeri

Stomach Ulcers and Cramps

Allopathic Medicine
Clidinium Bromide & Chlordiazepoxide tablets

Constipation

Ayurveda Remedies
Naturally Churna
Pachak Shodhit Harad

Common cold and cough

Allopathic Medicine
Torex cough syrup

Ayurveda Remedies
Gastro-LIV syrup

Asthma & Chronic Obstructive Pulmonary Disease

Allopathic Medicine
Salbutamol Sulphate

Heart Disease

Ayurveda Remedies
Prabhakar

Hypertension

Allopathic Medicine
Biopress-AM amlodipine & atenolol tablets

Mental Disorders

Allopathic Medicine
Atypride 100

Diabetes

Allopathic Medicine

Glimfal-SR

Menstrual Cramps

Ayurveda Remedies

Dabur

Assokarist

Other

Allopathic Medicine

Maxirich (multivitamins)

Veenat (to increase white blood cell count after a bone marrow transplant)

DETERMINANTS OF JOB SATISFACTION AND DISSATISFACTION AMONG PRACTITIONERS EMPLOYED IN INTERCOLLEGIATE SPORT ORGANIZATIONS

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MENTOR: MICHAEL DIACIN

Abstract

The purpose of this study was to gain insight into factors that influence job satisfaction and dissatisfaction among intercollegiate athletics department employees. Factors influencing job satisfaction could impact one's job performance and willingness to remain in a job. When employees are satisfied with their work, they are more likely to remain at their job and successfully complete tasks associated with the job (Kaltenbaugh, 2009; Dixon & Warner, 2010). The purpose of this study was to gain insight into factors influencing job satisfaction. Five individuals employed within intercollegiate athletics departments participated in this study. Four of the participants worked at NCAA Division I institutions. One participant worked at an NCAA Division II institution. Two themes responsible for feelings of satisfaction and two themes connected to feelings of dissatisfaction emerged from the interview data. The themes related to satisfaction were: (a) student development and achievement and (b) workplace relationships and environment. The themes related to dissatisfaction were: (a) personnel management and (b) financial pressures/lack of resources. Further examination of perspectives and experiences of current employees could be beneficial to those who are interested in pursuing a career in this profession. Understanding the elements that contribute to job satisfaction could help upper level management attract and retain quality employees. In addition, these findings can help individuals who possess an interest in entering the sport industry be better prepared for the challenges and circumstances they might encounter.

Introduction

The concept of job satisfaction has been examined over the past several decades and various authors of scholarly works have studied and discussed this concept

from different angles and dimensions. Edwin Locke's (1976) description of job satisfaction has been widely utilized in scholarly work. Locke described job satisfaction as the pleasurable or positive emotional state resulting from an appraisal of one's job or job experiences. Other scholars have also identified the affection or liking for a job as a determinant of job satisfaction. For example, Agho, Mueller, and Price (1993) stated that job satisfaction may be perceived as the extent to which employees like their work.

In addition to an affective liking for a job, other scholars have stated that job satisfaction is the product of numerous intrinsic and extrinsic dimensions. One of the most significant contributions to research related to job satisfaction has been Herzberg's (1966) dual factor job satisfaction model. This model, the "Motivation-Hygiene Theory," was developed after conducting interviews with employees and analyzing job elements that led employees to be satisfied or dissatisfied with their work. According to Herzberg, satisfaction was driven by intrinsic factors related to the nature of the job and dissatisfaction was driven by extrinsic factors that related to the environment surrounding the job. His model identified achievement, interesting work, and advancement as factors that influenced job satisfaction. Company policy, supervision, working conditions, salary, status, and lack of security were identified as factors that contributed to job dissatisfaction.

Duffy and Richard (2006) state that job satisfaction consists of two categories, work satisfaction and environmental satisfaction. They state that work satisfaction is concerned with an individual's satisfaction with the actual work they are doing. Environmental satisfaction is concerned with an individual's satisfaction with factors such as management personnel, coworkers, physical space in which the job occurs, and quantity of hours spent on the job. Furthermore, Lu and White (2011) offer a two-factor theory of job satisfaction. They state that job satisfaction is composed of two elements. Those elements consist of intrinsic job factors (e.g., the employee's desire for achievement, recognition, responsibility and advancement), and extrinsic job factors (e.g., supervision, pay, working conditions). Finally, Spector (1997) states that job satisfaction is associated with numerous internal and external factors. Internal factors include a sense of appreciation and recognition felt by the worker. External factors include compensation, fringe benefits, job conditions, the nature of the work itself, the culture within the organization, opportunities for promotion, and job security.

Although numerous factors can be responsible for one's satisfaction with his or her job, factors that result in a less satisfying experience must be acknowledged as well. Factors related to compensation that could reduce job

satisfaction include aspects such low pay, little or no increase in pay over an extended period of time, and reduction or elimination of benefits. Additional job and environmental factors including poor communication and relationships with management, disagreements with colleagues, lack of autonomy and authority, long hours, and heavy workloads could also contribute to poor job satisfaction (Higgins, 2003).

This study focused on gaining insight into the numerous internal and external factors that drive job satisfaction and dissatisfaction. Lu and White's (2011) as well as Spector's (1997) identification of numerous internal and external factors that shape job satisfaction served as the foundation of inquiry in this study. Numerous factors can shape an employee's satisfaction or dissatisfaction with his/her job. Therefore, attempts to uncover which of those factors were pertinent to the participants were made.

Literature Review

A review of literature revealed that job satisfaction studies have been conducted with employees who work on a college campus. The occupational areas in which this work has been conducted include campus recreation and coaching. The methodology of these inquiries has included quantitative (e.g., surveys) as well as qualitative (e.g., interviews, focus groups) approaches.

Kaltenbaugh (2009) surveyed 104 campus recreation administrators and found that the nature of the employees' work and relationships with supervisors were the strongest determinants of job satisfaction. Cronbach's Alpha Coefficients revealed that compensation and opportunities for promotion were factors that contributed to job satisfaction (.80 and .79, respectively).

Steir, Schneider, Kampf, and Gaskins (2010) surveyed 283 campus recreation program administrators in order to determine factors that contributed to their overall job satisfaction. Satisfaction was influenced by their supervisor's expectations, salary, and quantity of hours worked. Participants who perceived their supervisor's expectations to be realistic expressed higher job satisfaction than those who perceived expectations to be less reasonable. Those who felt underpaid and overworked with regard to quantity of hours spent on the job reported lower levels of satisfaction and also expressed a greater desire to leave their present positions. Correlation coefficients were not articulated in this study; however, percentages of respondents indicating satisfaction based on various factors was articulated. For example, the data suggested that employees working within a campus recreation

department were satisfied; however, the higher an individual's job title, the higher the level of satisfaction. This was demonstrated by respondents identified as Directors reporting a 97% overall degree of satisfaction versus an 87% overall degree of satisfaction reported by those in Coordinator positions.

Ross, Young, Sturts, and Kim (2014) surveyed 506 full-time campus recreation administrators in order to gain insight into factors influencing their job satisfaction. These participants were in charge of managing on-campus student recreation centers. They found that education, position title, salary, and years of full-time experience in the field significantly predicted overall job satisfaction. Conversely, they found that the employee's gender, age, and the size of the campus had no significant effect upon job satisfaction. An exploratory factor analysis was used to discover the factors that influenced various job satisfaction variables of campus recreational sport professionals. Four factors, including a) supervisory support and interaction, b) working conditions, c) work and environment, and d) resources and employee benefits explained the variance that emerged with regard to participants' job satisfaction.

Within the coaching setting, Chelladurai and Ogasawara (2003) investigated the satisfaction of collegiate coaches. These participants were responsible for fulfilling the head coach positions for their respective teams. Inquiry focused upon elements such as supervision, autonomy, facilities, community support, and compensation. The authors found that the highest levels of reported satisfaction were in connection with autonomy. The lowest reported satisfaction was with compensation, community support, facilities, and supervision.

Dixon and Bruening (2007) conducted focus groups with 41 female head coaches with children to examine the relationship between work-family conflict and their job and life satisfaction. Despite the difficulty the participants faced as a result of trying to juggle domestic responsibilities with occupational demands, participants were generally satisfied with their occupation. The nature of the work and relationships with colleagues and students were factors that allowed the participants to remain satisfied with their work.

Dixon and Warner (2010) interviewed 15 head coaches of intercollegiate sport programs. They found that player-coach relationships, job schedule flexibility, and opportunities to control various aspects of a program contributed to job satisfaction. Work-life balance and salary were job elements with which participants were less satisfied.

Despite the research connected to job satisfaction in the campus recreation and coaching settings, there is a lack of research seeking to explain factors responsible for job satisfaction as well as dissatisfaction among intercollegiate athletics department employees. It has been well established that there are numerous factors that could contribute to job satisfaction (or dissatisfaction). The ongoing exploration of factors influencing job satisfaction is important because job satisfaction could impact one's job performance and willingness to remain in a job. When employees are satisfied with their work, they are more likely to remain at their job (Dixon & Warner, 2010). Furthermore, employees who have a satisfying job experience often experience an enhancement in their overall well-being and are most likely to succeed in their job (Doherty, 1998; Kaltenbaugh, 2009). As a result, ongoing attempts to uncover factors influencing job satisfaction in this setting are worthwhile because every occupational setting is nuanced. Within the intercollegiate athletics setting, the work of administrators differs from the work the coaches do as administrators, as administrators' work is not connected to recruiting and game planning. The work tasks between campus recreation managers and athletics department employees can have similarities (e.g., establishing budgets); however, there is greater pressure upon athletics administrators to find new revenue streams in order to offset increasing operating expenses whereas campus recreation managers are not charged with finding new donors and/or other revenue streams to offset their operating expenses. Therefore, the purpose of this study was to gain insight into factors that influence job satisfaction and dissatisfaction among intercollegiate athletics department employees.

Method

Participants

Purposeful criterion sampling was the first strategy utilized in order to acquire participants for this study. Within purposeful criterion sampling, all cases must meet some pre-determined criterion of importance (Patton, 1990). A second form of purposeful sampling, homogeneous sampling, was also utilized. Homogeneous sampling includes selecting similar cases in order to describe some subgroup in-depth (Glesne, 2006). Individuals who were employed at intercollegiate athletics departments fit the desired criteria and were selected for this study.

Five individuals participated in this study. Four of the participants worked at NCAA Division I institutions. One participant worked at an NCAA Division II institution. The ages of the participants ranged from 29-58 years. All participants

identified themselves as Caucasian. Two associate athletics directors worked at university “A”; the athletics directors worked at university “B,” “C,” and “D.” The length of time each participant was employed within intercollegiate athletics varied. The athletics directors’ service in this field ranged from 32 to 40 years. The associate athletics directors’ length of service was 8 to 12 years.

Data Collection

Potential participants for this study were located through an initial search of their institution’s athletics department website. The websites from four university athletics departments were examined. Each employee was invited to participate in the study via email. The purpose of the study and time commitment associated with participation was provided. Recipients of this communication were asked to respond with their interest and were informed that follow-up correspondence would occur via e-mail in the event a response was not received.

Three recipients responded to the initial request. The follow-up e-mail was sent approximately two weeks after the initial request. Two additional employees agreed to participate after the follow-up e-mail was sent. These five individuals were contacted a second time via e-mail in order to arrange an interview at a time and date convenient to them.

The data collection method in this study was a semi-structured interview. This method of inquiry was utilized to obtain descriptive data that would allow for a better understanding of the factors participants perceived as reasons for satisfaction or dissatisfaction with their jobs. This method of data collection is consistent with the methodology utilized by Dixon and Warner (2010). Qualitative measures were employed in this study for several reasons. By talking with the practitioners instead of utilizing surveys, more specific information regarding the factors driving their job satisfaction and dissatisfaction could be obtained. A second related reason for the qualitative approach was that the participants could describe their experiences in their own words, not within researcher-imposed constructs. Finally, the qualitative approach allowed the researchers to gain insight on the perspective and experiences of the practitioners.

Interviews were audiotaped and lasted between 40-45 minutes. Participants were interviewed individually. The interview began with a series of pre-formatted, closed-end questions. Examples of closed-end questions included: “How long have you been employed in the profession of intercollegiate athletics administration?”

and “What operating areas have you worked in as an employee within this profession?”

After the closed-ended questions, participants were asked to elaborate on their experiences. Participants were asked to identify examples or incidents in their professional careers in order to determine sources of job satisfaction. The critical incident technique has been utilized in qualitative research studies to obtain descriptive data about significant events in a person’s life (Butterfield, Borgen, Amundson, & Maglio, 2005; Edvardsson, 1998; Stitt-Gohdes, Lambrecht, & Reddman, 2000). An example of a statement that was designed to encourage further elaboration of a critical incident was: “Please talk about a time when you felt especially good (or bad) about your job and what led you to feel like that.”

In addition to critical incidents, participants were asked to identify other factors that contributed to their job satisfaction or dissatisfaction. In these cases, a critical incident was not sought out but rather general aspects contributing to those feelings were of interest. An example of a question in which general reasons for satisfaction or dissatisfaction existed was: “What elements make you want to stay with (or leave) this job?” The goal of asking these questions was to gain insight into reasons participants perceived as significant in the development of their job satisfaction.

Upon completion of the interview, participants were asked debriefing questions. At this time, participants could ask questions with regard to the study’s purpose and also offer clarification to comments made previously.

Data Analysis

Interviews were transcribed verbatim. Analytic induction was the approach that was utilized in this study to analyze interview data. An inductive approach is utilized when some specific problem, question, or issue becomes the focus of research. When utilizing this approach, the researcher does not attempt to prove or disprove hypotheses held prior to entering the study (Bogdan & Biklen, 2003). The primary focus of this research was not to prove or disprove a hypothesis but rather gain insight into intercollegiate athletics administrators’ perceptions of factors contributing to job satisfaction or dissatisfaction.

After the interviews were transcribed, open and axial coding was utilized in order to sort the interview data into categories. Coding is a method of sorting descriptive data so that it may be more easily referenced and retrievable at a later time (Bogdan & Biklen, 2003). Coding interview data has been utilized in

qualitative research. The coding processes utilized by Dixon and Warner (2010) served as a starting point for this work. Open coding was the first activity in this process. Basic concepts and themes were identified and the data broken down, examined, and compared. During the open coding process, the authors identified keywords and statements that reoccurred in the interviews.

Once these reoccurring keywords or statements from the interviews were located, the next step was to place this content from the interview data into various categories. Axial coding was utilized to reassemble the data that had been broken down during the open coding process. Through axial coding, categories were established and then refined in order to further organize and form a precise representation of the participants' perceptions with regard to factors affecting job satisfaction.

Upon completion of the coding processes, a constant comparative method was utilized. A constant comparative method of data analysis entails the simultaneous process of coding and analyzing in order to develop emerging themes (Glaser & Strauss, 1967; Strauss & Corbin, 1994). As data were analyzed, it was constantly reviewed to ensure that the emerging themes accurately reflected participants' responses.

An important component of qualitative inquiry includes establishing trustworthiness (Glesne, 2006). This process entails utilizing various procedures to convince the reader that measures were taken to ensure the material is consistent with what participants actually said and experienced (Patton, 1990). Peer debriefing was utilized in this study in order to establish trustworthiness of the data. This process includes external reflection and input into the researcher's work (Glesne, 2006). Two colleagues experienced in qualitative inquiry examined the transcripts as well as the manuscript and subsequently provided feedback. These individuals confirmed the content in the manuscript was an accurate representation of the content in the interview transcripts.

Results and Discussion

The purpose of this study was to gain insight from athletics administration employees in order to identify factors that have contributed to their job satisfaction and dissatisfaction. Two themes responsible for feelings of satisfaction and two themes connected to feelings of dissatisfaction emerged from the responses. The themes related to satisfaction were: (a) student development and achievement and

(b) workplace relationships and environment. The themes related to dissatisfaction were: (a) personnel management and (b) financial pressures /lack of resources.

Student Development and Achievement

The potential to have a positive impact upon the experiences of student-athletes and to build meaningful relationships with this population were important factors related to the participants' job satisfaction. The participants mentioned how the most satisfying moments in their work occurred when they helped student-athletes develop and mature into responsible citizens who could not only make a positive impact upon their university but also upon society at large.

Mike, an athletics director, discussed how observing the maturation of the students was something that helped him feel especially good about his job and the role he played in their development. He stated, "Watching the student athletes mature, watching their success when they perform, and how they deal with pressure or adversity. Also seeing them become good citizens and make the right choices." In his experience, seeing the students develop their athletically related skills served as a source of satisfaction, but their development outside of the participation realm was also of significance.

Stacy, an associate athletics director, also mentioned how the development of student-athletes in several phases of their lives was a significant source of job satisfaction. She said, "I love watching students and student athletes bloom academically, athletically, and learning to give back to those less fortunate." At Stacy's institution, community service among the student-athlete population was a highly valued aspect of the overall experience and watching them develop an appreciation and understanding of the circumstances many less fortunate people deal with was a significant reason behind Stacy's job satisfaction.

Another athletics director, Brad, commented on the development of the student-athletes and identified graduation as the key event that provided him with fulfillment. He stated,

The most fulfilling time is each year at graduation, when our student athletes complete their education and reach the educational goal of graduation. Knowing what they have done for their four years or so, academic, athletically, community service and so on, that is a special moment every year.

Seeing the student-athletes succeed within their academic endeavors and contribute to the communities in which they live was highly valued and served as

one of the main aspects leading toward job satisfaction. This finding is consistent with other findings emerging in research occurring within workplaces where human development is a central focus (Martens, 2004). These participants indicated that the opportunity to impact students' lives and witness their subsequent successes not only within athletics but also in other realms was a major factor contributing to their job satisfaction. The common theme within their statements is that they seemed to derive satisfaction from their jobs if they felt they were doing well at developing human beings who could be successful in several aspects of life (e.g., serving the community, showing maturity, making the most of their education).

Workplace Relationships and Environment

The participants indicated that relationships with colleagues and the subsequent sense of community that developed within their departments served as a source of satisfaction. The following two examples illustrate this factor.

Stacy commented on the positive atmosphere in her department, largely buoyed by the relations and interactions that exist among those who work in the department, as a significant aspect that contributed to her job satisfaction. She said,

The colleagues, the collegial feel, within our department. I truly believe we have developed an environment where people are pulling for each other, you have a victory and everyone is congratulating you, we talk family but I truly believe it is. I preach family first, even ahead of the job, and it's just the environment that we have created and it's successful athletically, academically, and community engagement wise. It's special, and people who come here from the outside, they feel that and they sense it and they like it.

The positive culture within the department was echoed by Brad as one of the major sources of satisfaction in his job. In his perspective, this offsets circumstances such as being understaffed and underfunded. When a positive culture exists, it has positive effects in other ways. He stated,

The most single most satisfying thing is the culture that we have created here. We have really good people, we may be understaffed a little bit, we may wish we had more resources, more hours in our day, but we have really good people so they attract really good people or recruits that are really good people.

These comments were indicative of the important contribution the workplace environment has upon job satisfaction. These results are consistent with

findings that have emerged in other job satisfaction studies. Agho et al. (1993) argued that if individuals work in friendly environments, they would be more likely to be satisfied with and look forward to being at their workplaces. Spector (1997) also supported the notion that work environments determine the level of satisfaction that individuals experience. Consequently, how one perceives the atmosphere of the workplace contributes to the level of job satisfaction that one experiences.

Personnel Management

With regard to factors that have the potential to contribute to dissatisfaction with the job, terminating employees was understandably identified as an action that participants did not desire to engage in but rather understood as a necessary part of the job at times. For instance, Mike expressed the difficulty in having to make personnel changes. These situations were especially difficult when many positive aspects existed in the relationship between himself and the person being terminated. He acknowledged that it is a frustrating part of the job and, consequently, that makes it less pleasant and satisfying. He said,

Having to terminate or not renew a coach's contract. It is a lot of sleepless nights, a lot of lawyers to handle some situations, but the bottom line to me is nobody likes to fire or remove somebody. You know a change needs to be made, but it is tough, especially when you have a good relationship with that person.

Dealing with difficult circumstances in relation to personnel changes were also identified by other participants. Stacy indicated that dealing with personnel issues is one of the more difficult and dissatisfying aspects of the job, especially when there is knowledge that this personnel change will have an effect on others above and beyond the person being terminated. She stated, "Personnel issues that you have to take care of; when you do it, it is tough on you, your staff, the student athletes and on the person you are letting go even if you know it's the right decision."

The gravity associated with terminating one's employment and the potential impact it could have upon others was identified as an aspect of the job that was necessary but not embraced. Understandably, participants did not find satisfaction in removing someone from their livelihood. Although having to make these difficult decisions would not necessarily lead participants to leave their jobs, it was an aspect that made the job less satisfying because of the potential negative impact they knew their decisions could have upon others.

Financial Pressures/Lack of Resources

It was common for participants to express frustration with limitations of time, human resources, and finance that prevented them from accomplishing all of the objectives they had for their department. Having an extensive “to do” list and a limited amount of time in which to accomplish it was expressed by Brad. He said, “Frustration comes in not being able to do more than you are doing. Mostly that there is only 24 hours in a day, I don’t get through everything that I want to.”

The pressure to not only meet expectations but also to deal with expectations perceived as not especially realistic was identified as a factor that participants expressed dissatisfaction with. Pressure to meet objectives set by others who may not have a realistic understanding of what could be accomplished given situational factors and limitations was a source of frustration that emerged from the participants’ statements. For example, Mike stated,

Unrealistic expectations of how much that you can actually get done, how much you can increase attendance, how much money you can really raise, what corporations are willing to pay to be a corporate sponsor, all those kinds of things.

The external pressures in this profession include expectations to generate more revenue and increase attendance. To do it with limited staff and limited financial resources to support these initiatives appeared to cause dissatisfaction within this group of participants. Their dissatisfaction stemmed from the conditions that inhibited meeting those expectations. Furthermore, there seemed to be some sense of dissatisfaction with regard to the resources they were given to succeed. As a result, it seemed that satisfaction was at least partially dependent upon a match between the allotment of resources and the expectations others possess.

Implications

Circumstances that affect job satisfaction in this profession should be critically examined on an ongoing basis. Continued critical inquiry on this topic is needed because of the effect it could have upon an organization as well as the experience of the individual employee. Ross et al. (2014) stated,

Employee job satisfaction is an essential element in human resource management that provides administrators with a better understanding of their employees and a gauge as to how content they are with their jobs. For any manager of human resources,

recognizing job satisfaction components can aid in creating an atmosphere that maximizes strengths and increases productivity. (p. 70)

Understanding the job elements that contribute to job satisfaction and subsequently lead to other positive employee outcomes are worthwhile because they could help upper level management, such as athletics directors, enhance the workplace. For example, employees who have high quality relationships with their colleagues report this occurrence as significant to their job satisfaction; therefore, creating opportunities for employees to develop those relationships could help attract and retain quality employees. Finally, it could be helpful in reducing employee turnover and minimizing costs associated with recruiting and training new employees. As a result, it is important to be aware of how various job elements contribute to job satisfaction so that attention can be placed upon developing and retaining those employees.

Conclusions, Limitations, and Future Directions

The purpose of this study was to gain insight into factors that influenced job satisfaction and dissatisfaction among intercollegiate athletics department employees. Numerous factors were identified by the participants with regard to job satisfaction. Student achievement was a significant determinant of satisfaction. Whether it was watching students develop over their time at the university or actively helping students achieve their goals and ambitions, helping students become successful in their college careers and helping them develop as good citizens and representatives of the university were major sources of satisfaction.

In addition, the culture of the workplace and relationships with co-workers were significant sources of satisfaction. Participants repeatedly mentioned that the relationships they enjoyed with their co-workers contributed to their satisfaction with their jobs. The informal, welcoming culture was also significant and was mentioned repeatedly.

Conversely, there were frustrating aspects that led participants to be at least somewhat dissatisfied with their jobs. First, dealing with personnel changes in the form of dismissals was one aspect that participants found unpleasant. In addition, ongoing financial pressures and doing “more with less” was another factor that led toward stronger feelings of dissatisfaction.

As with any study, there were limitations to this work. Although this study provided in-depth information, the information was collected from a small quantity

of employees who were employed in one setting within the vast sport management field. Within this one setting, participants represented a total of four universities. Therefore, the findings from this study are not intended to represent the experiences of employees above and beyond those who were interviewed for this study. Future studies will need to expand the size and breadth of the sample.

Another potential limitation is that single interviews were conducted with each participant. It is possible that participants' perspectives will change over time. For example, participants who did not see certain aspects as problematic at this time might feel differently in the future. A suggestion for future research is to conduct longitudinal studies. These could reveal changing perspectives over the course of a career.

In closing, further examination of perspectives and experiences of current employees could be beneficial to those who are interested in pursuing a career in this profession. By learning from those who are already employed, individuals who possess an interest in entering this profession could be better prepared for the challenges and circumstances they might encounter. Conducting ongoing critical inquiry within these settings with additional practitioners could be useful in uncovering additional elements that contribute to one's satisfaction or dissatisfaction with his or her job.

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INDIVIDUALIZED MUSIC IMPROVES SOCIAL INTERACTION OF WOMEN, BUT NOT MEN, WITH DEMENTIA

EMILY FARRER AND DIANA HILYCORD, BUTLER UNIVERSITY
MENTOR: TARA LINEWEAVER

Dementia is a neurodegenerative disease characterized by declines in memory, decision-making and judgment, and language skills (American Psychiatric Association, 2000). The corresponding emotional symptoms, including agitation, aggression, depression, and anxiety (Vasionyté & Madison, 2013; Solé, Mercadal-Brotos, Galati & De Castro, 2014), make treatment difficult for both professional caregivers and the patient's family members. According to the World Health Organization (2016), 29 million adults currently suffer from dementia, and the number of diagnosed cases is expected to increase. Thus, dementia is a growing public health concern.

There is no known cure for dementia, but beyond medications that may slow the progression of the disease, music therapy is one of several types of treatment that has proven to be valuable in combating symptoms (McDermott, Orgeta, Ridder & Orrell, 2014; Spiro, 2010; Vasionyté & Madison, 2013). Music therapy is a relatively new field of study. It was established as a profession in 1950 and is often used as an alternative to pharmacological treatments for dementia patients, since it tends to result in many fewer negative side effects than medications (Vasionyté & Madison, 2013). Solé and colleagues (2014) argue that although pharmacological treatment is important to reduce the effects of dementia, non-pharmacological therapeutic programs are critical to increase mood and improve quality of life in patients suffering from dementing disorders. Music therapy has also proven to increase alertness and enhance the well-being of dementia patients in several studies (McDermott, Orgeta, et al., 2014; Solé et al., 2014).

Music therapy can take two forms: passive (receptive) versus active. In passive therapy participants listen to music without actively contributing, whereas in active therapy the patient is required to participate by singing, playing musical instruments, or clapping (Blackburn & Bradshaw, 2014). Regardless of the type of music therapy, however, individualized music, music that is tailored to the tastes of the individual with dementia, is frequently utilized instead of classical music or calming sounds in order to stimulate reminiscence and emotional responses (Garland, Beer, Eppingstall & O'Connor, 2007; Gerdner & Swanson, 1993; Park,

2010). A study by Gerdner (2000) helped support the importance of utilizing individualized music in music interventions. Family members of patients selected music they believed the patient would enjoy, and music therapists selected relaxing classical music from an anthology. Gerdner divided her sample of 39 patients with Alzheimer's disease into two groups. The first group listened to individualized music for six weeks, followed by two weeks of no music and six weeks of classical music. The second group received the same protocol in reverse, receiving six weeks of classical music first, a two-week washout period, and then six weeks of individualized music. Agitation significantly decreased in both groups within the first 10 minutes of individualized music listening and lasted for approximately 30 minutes following the individualized music. In comparison, classical music did not result in a significant reduction in agitation in either group until 20 minutes into the intervention. Furthermore, improvements lasted only 10 minutes after the classical selections.

Like Gerdner's study (2000), many studies focused on the benefits of music have examined its impact on agitation. In 1993, Gerdner and Swanson investigated how individualized music listening would affect the agitation of five elderly patients by having family members select music for the patients to listen to for 30 minutes for two weeks. The results indicated a decrease in agitated behaviors in four of the five residents, although the magnitude of the reduction and the length of musical effects varied. Specifically, 47% of agitated behaviors decreased during the intervention, and the improvement was enhanced after the intervention with an 80% decrease in agitated behaviors one-hour post intervention.

A study conducted by Sakamoto, Ando, and Tsutou (2013) supports these findings but also indicates that the improved mood and behavior following passive music listening is a relatively short-term result. Patients with dementia listened to individualized music for half an hour once a week for 10 weeks. The music was selected after in-depth interviews with patients and their families. Five minutes before and after each intervention, behavioral and psychological symptoms of dementia were measured. The results indicated that patients were much less agitated after the intervention than before, but when retested two weeks later, the reduction in symptoms was no longer evident.

Based on this literature, an inter-professional group of professors at Butler University, together with several outside consultants, implemented a study called Music First in collaboration with Harrison Terrace Nursing Home (Shiltz et al., 2016). This study used patient-selected music from their late teens to early twenties as a first treatment for agitation in dementia patients. Agitation was measured

through nurse and staff reports using the Cohen-Mansfield Agitation Inventory (Cohen-Mansfield, Marx & Rosenthal, 1989). Additional potential effects of music intervention were measured, including its impact on memory, attention, and language skills assessed with the Mini-Mental State Examination (Folstein, Folstein & McHugh, 1975), as well as its effect on hostility, depression, and anxiety, measured using a revised version of the Profile of Mood States (McNair, Lorr & Droppleman, 1992). One hundred and four out of 108 Harrison Terrace residents, all with mild to severe dementia, were enrolled in the study. The results indicated a significant interaction between antipsychotic exposure and music listening in influencing agitation across time. Patients who had been receiving an antipsychotic drug at baseline showed similar levels of agitation to those not on antipsychotics once music listening was added to their care. In contrast, patients who had been receiving an antipsychotic medication at baseline but who did not experience music during the study were significantly agitated across the five-month intervention. Together, these results support the hypothesis that individualized music listening may reduce agitation and suggest it may be an effective adjunct to treatment with medication.

The Music First study was similar to many past studies in its focus on the emotional and behavioral effects of listening to music on dementia patients. However, very little research has assessed the value of the music listening on dementia patients from other people's perspectives. In one such study, McDermott, Orrell, and Ridder (2014) interviewed four separate groups: care home residents with dementia and their families, day hospital clients with dementia, care home staff, and music therapists. McDermott asked the patients questions such as: "What does music mean to you?" She asked families, staff, and therapists questions like: "How do you know when music is meaningful to the person?" McDermott found that music helped preserve the self-identity of the patient, decrease the patient's feelings of loneliness, and connect the patient to other people. She also found that both staff and families welcomed the improved mood and increased alertness exhibited by patients after they listened to music.

Taken together, the results of past studies indicate that passive music listening can positively affect dementia patients by increasing their mood and decreasing agitation. Utilizing individualized music rather than general music selections for this intervention is most beneficial, and care providers and family members notice the positive responses residents with dementia have to music. However, the duration of the effects after music listening is typically short-lived. Thus, we have designed the current study to determine whether having residents

with dementia listen to music immediately prior to a visit with family members could positively affect the quality of their social interactions during the visit. This would result in a more fulfilling visit for both patients and their loved ones and could lead to the development of more formalized utilization of this inexpensive and simple intervention on a wide-scale basis.

Method

Participants

Twelve individuals (4 men, 8 women; age $M=78.67$, $SD=12.09$) participated in this study. All participants were residents at Harrison Terrace Nursing Home, a senior living community in Indianapolis that specializes in memory care, and all had been diagnosed with mild to severe dementia based on their scores on the Mini-Mental State Examination (MMSE: Folstein, et al., 1975; $M=5.00$, $SD=7.25$). The residents' healthcare proxies and all visiting family members and loved ones gave informed consent before the study began. Fourteen loved ones participated by completing a questionnaire at the conclusion of a visit. Participation was voluntary, and each family received \$50 as a thank you at the conclusion of the study.

Materials

Mini-mental state examination (Folstein, et al., 1975). This dementia screening measure provides a baseline to determine the level of dementia severity in each participant. It consists of 30 questions that assess the cognitive abilities of patients, including learning and memory, orientation to time and place, language skills, constructional skills, and attention.

Visitation and listening log (see Appendix A). This log, created for the purposes of this study, recorded information about each visit, including the date, visitor name, length of visit, whether or not music preceded the visit, length of music, and any behaviors exhibited during the music listening. The 11 behaviors documented included, but were not limited to, opening and closing eyes, lifting the head, producing sounds, and moving the body.

Social interaction questionnaire (see Appendix B). At the conclusion of each visit, one member of the visiting family completed a 12-item questionnaire, also created for the purposes of this study, about the patient's behavior and emotional state during the visit. The questionnaire included nine behavioral descriptors such as how alert, engaged, talkative, and relaxed the resident was

during the meeting with their family, from the family member's perspective. Because the exact duration of the positive effects of music therapy is unknown (McDermott, Orgeta, et al., 2014; McDermott, Orrell, et al., 2014; Spaul, Leach & Frampton, 1998), this questionnaire requested ratings for the part of the visit when the patient was most interactive.

Personal playlist. Many participants already had individualized playlists from the Music First study (Shiltz et al., 2016). We created playlists for the remaining participants by playing hit songs from their late teens to early twenties on an iPad and downloading the songs that generated a behavioral reaction, such as head nodding or snapping. Two families also brought in personal CDs to add to their residents' playlists. At the conclusion of the process, each participant received their own iPod loaded with their personal playlist and a set of headphones.

Procedure

Data collection occurred from May 2015 to October 2015 at Harrison Terrace Nursing Home. Participants were recruited through collaboration with Omar Johnson, the Executive Director; Jeannie Keenan, RN, the former Director of Nursing Services; and Heather Johnson, LPN, the former Memory Care Specialist. Healthcare proxies of the participants granted consent on the participants' behalf. We administered the Mini-Mental State Examination (Folstein, et al., 1975) to all residents in the study to establish a baseline dementia severity. We quasi-randomly determined whether or not residents listened to music before each visit with family members by flipping a coin while assuring that no more than three consecutive visits were of the same type (music versus non-music visit). Families enrolled in the study notified us an hour in advance of their visit by phone or email so that we could administer the music or non-music session immediately before the visit without the families' knowledge.

All 12 participants experienced five music and five non-music visits, except for one resident who passed away after three music visits and four non-music visits. For music visits, we played selections from the patient's personal playlist for 15 minutes prior to the visit. For non-music visits, we spoke to the resident for approximately five minutes and then returned to the lobby. During all visits, we completed a Visitation Log in order to monitor the length of the visit, whether or not music was played, and any behavioral reactions the music generated. Family members did not know whether or not the residents heard music before the visit. This was to reduce the likelihood that expectancy effects would bias the results of the study. At the conclusion of each visit, one member of the visiting family

completed the 12-item Social Interaction Questionnaire. Residents' scores were averaged on each item of the Social Interaction Questionnaire separately for music and non-music visits.

Results

To determine the effect of music versus non-music visits on social interaction, we ran a series of repeated measures ANOVAs for each item on the Social Interaction Questionnaire. We analyzed ratings for each of the nine behavioral descriptors separately to determine which aspects of social interaction were affected by music. Due to the exploratory nature of this research, we treated each item on the Social Interaction Questionnaire as a stand-alone variable. None of the nine analyses yielded a significant difference between the music and non-music conditions, all $F(1,11) < 2.07$, all $ps > .17$.

Because there were no significant results in the primary analysis, we decided to further explore the data by analyzing the effect of gender. This series of exploratory analyses involved nine 2 (Music: music vs. non-music) x 2 (Gender: male vs. female) mixed-model ANOVAs. Music was a within-subjects factor, whereas gender was a between-subjects factor. Table 1 summarizes the means and standard deviations for male and female residents under each music-listening condition, and Table 2 summarizes the results of these analyses. There were no significant main effects of gender on any of the nine behaviors. There were also no significant main effects of music, although the music main effect neared significance for appropriateness, $F(1,10)=4.46$, $p=.061$, $\eta_p^2=.308$.

Although the main effects failed to reach significance, there was a significant interaction effect between music and gender for alertness ($F(1,10)=5.41$, $p=.042$, $\eta_p^2=.351$) and happiness, $F(1,10)=5.16$, $p=.046$, $\eta_p^2=.341$. Near significant interactions with moderate effect sizes additionally emerged for engagement ($F(1,10)=3.30$, $p=.099$, $\eta_p^2=.248$) and appropriateness, $F(1,10)=3.41$, $p=.094$, $\eta_p^2=.254$. (See Table 2.) Figure 1 illustrates the significant and near significant results. Across all of these behaviors, after music visits, female residents' social interactions were rated more positively, but male residents' social interactions were rated more negatively.

To determine whether residents' reaction to music while they were listening to it predicted the quality of the social interaction that followed, we calculated correlations between the number of observed behaviors during music listening and total scores on the Social Interaction Questionnaire associated with that visit. Table

3 shows the resulting correlation coefficients. Although these correlations were not significant for the first four visits, at the fifth music visit, a significant correlation emerged between residents' behavioral response to music-listening before the visit (e.g., dancing, singing, straightening body/head) and their social interaction during the visit, $r=.65$, $p<.05$.

Discussion

The primary goal of this study was to determine whether individualized music listening would increase the social interactions of dementia patients as perceived by their visitors. We hypothesized that residents who listened to individualized music prior to visits would be rated as more socially interactive than residents who did not listen to music prior to visits. The initial analysis indicated there were no significant differences in the nine behavioral descriptors between the music and non-music conditions. However, further analysis of the interaction between music and gender indicated women with dementia demonstrated significantly more happiness and alertness in their social interactions after listening to music than during non-music visits, which supports our hypothesis, but only for female residents. These improvements in the women in our study are consistent with past research that indicates music listening can result in positive changes in mood and behavior (Gerdner, 2000; Gerdner & Swanson, 1993; McDermott, Orgeta, et al., 2014; McDermott, Orrell, et al., 2014; Sakamoto, et al., 2013; Vink, Birks, Bruinsma & Scholten, 2013). Our results help to support the use of passive music therapy as a means to enhance social relationships in female dementia residents.

In contrast to the improvements we observed in women, loved ones rated male residents' social interactions more negatively after music than non-music visits, which was unexpected. One possible explanation for this finding is that men showed better social interaction than women in the non-music condition, possibly giving them less room for improvement when music preceded the visit. This may be due to the control condition involving social interactions with the researchers. Even though both researchers made a conscious attempt to keep the interaction short and basic in the control condition, greeting the residents may have produced a positive response and alerted the residents that a family visit was imminent. If this was truer for men than women in the study, this could explain the difference in the findings across the two groups. Additionally, our sample only included four men (half the number of female residents), which likely limited our ability to document significant differences in the social interactions of men, but not women.

Like past research, our study utilized individualized music in treating dementia patients. Past studies by Garland et al. (2007), Gerdner and Swanson (1993), Gerdner (2000), and Ragneskog, Asplund, Kihlgren and Norberg (2001) demonstrate that utilizing individualized music affects dementia patients' mood and behavior more positively than classical or relaxing music. Our study applied individualized music listening toward improving social interactions and suggests that this approach can also have a positive effect on nursing home residents' interactions with others. Although past studies have shown that the effects of music listening are temporary (Sakamoto et al., 2013), our study shows that the positive effects of the music may last long enough to influence the social interactions that follow.

Because patients with dementia can have varying reactions to the music, we also wanted to determine if their response to music before each visit predicted the quality of their subsequent social interactions. Although there were no significant correlations for the first four visits, at the fifth visit a significant correlation emerged between residents' behavioral responses to the music and the following social interactions. This result suggests that behavioral changes due to music listening may have a cumulative effect over time, although further research is warranted. A study conducted by Solé et al. (2014) supports these findings. In this study, the researchers measured quality of life in patients and found that over the course of 12 weekly music therapy sessions there was a significant improvement in median subscale scores for emotional well-being from pre-test to post-test. This suggests multiple sessions of music therapy may be necessary to elicit behavioral or emotional changes in patients. Although other studies also report that the effects of music listening emerge after four to twelve sessions (Garland, Beer, Eppingstall & O'Connor, 2007; Gerdner, 2000; Park, 2010; Sakamoto et al., 2013; Sung, Chang & Lee, 2010), no past studies have examined changes in response to music listening on a trial-by-trial basis. The results of our study point to potential cumulative effects over the course of music listening sessions, which could be examined in more depth in future studies.

While interpreting this data, some limitations should be acknowledged. Our sample size was modest; only 12 out of 108 residents at Harrison Terrace participated. We might have been able to detect more changes in social interactions with a larger sample. Additionally, one of the residents passed away during the study, so we did not have data from as many visits for that participant. Due to the small sample size, we also took an exploratory approach to our analyses. Therefore, we did not correct for multiple comparisons when examining each item on the

Social Interaction Questionnaire. As such, our Type 1 error rate may be inflated. Future research with larger samples and a more rigorous statistical approach could verify the findings from our study.

Since gender played a primary role in music's effect on happiness and alertness, it is important to acknowledge that there were twice as many women as men enrolled in the study (8 women, 4 men). As previously mentioned, this ratio may have affected the findings that music was an effective treatment for women but not men with dementia. With more men in the sample, we could determine whether the decreased ratings following music listening in men was a robust or a chance finding.

A variety of factors may have influenced the accuracy of reported behaviors. The Social Interaction Questionnaire was developed for the purposes of this study and was therefore not a standardized measurement of social interaction. Also, visitation times varied across visitors so that they completed the questionnaire at different times of the day. Since the behavior of patients with dementia is variable and often dependent on external factors such as meals or sleep, this variation in timing may have affected behavioral ratings (Smith, Gerdner, Hall & Buckwalter, 2004). Individual differences and expectancy effects in visitors who completed the questionnaire may have also affected their behavioral ratings, although we attempted to minimize these by blinding family members to the residents' condition.

The scope of this study was limited since only residents who had frequent and consistent visitors could participate. Future studies could analyze the effects of individualized music listening on all residents displaying agitation, not just those with frequent visitors. Measuring social interaction at various times of the day would help determine when music listening is most beneficial, and monitoring social interactions with other groups of individuals, such as other residents or staff, could evaluate the generalizability of these results. Further research should also assess the optimal length of music listening. For this study residents listened for 15 minutes, but longer listening sessions might have led to larger effects on social interactions. Finally, because some residents displayed irritation after just a few minutes of listening, particularly due to the discomfort of using headphones, sometimes residents listened to music without headphones. Future studies could target the best method to utilize for individualized music listening.

In conclusion, this study is one of the first to examine the effects of gender on individualized music listening, so further investigation into this phenomenon is necessary. However, these results support using individualized music listening to

improve the social interactions of at least some individuals with dementia and suggest that music listening may be a simple and inexpensive way to improve the social relationships women with dementia share with others.

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Appendix A

Visitation and Listening Log

Participant ID Number: _____

Visit # Time in/out	Date	Visitor Name	Length of Visit	Music Yes or No?	Length of Music	Please circle and note any <u>changes</u> in behavior while listening to music*					
						O	L	V	NV	MA	C
1 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
2 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
3 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
4 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
5 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
6 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
7 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
8 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
9 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
10 In: Out:						O C	L S	V SW	NV SNW	MA ML	D
*Notes Key for behavior changes while listening to music – if more than these are observed, please indicate											
Eyes		Un-coiling		Sounds				Body Movement			
O = Opens C = Closes		L = Lifts Head S = Straightens upper torso		V = Verbal NV = <u>NonVerbal</u> SW = Singing w/ intelligible Words SNW = Singing/humming w/o Words				MA = Moves Arms ML = Moves Legs D = Dancing (in any position)			

Appendix B

Social Interaction Questionnaire

Patient Number: _____

Visit Number: _____

Date: _____

1. How long was your visit? Approximately _____ minutes
2. Based upon the visit you just concluded, how would you say the resident's social interactions with you changed over the course of the meeting?

worsened		remained		improved
1	2	the same	4	5
		3		
3. Based on the time you just spent with the resident, please indicate the amount of that time the resident was at his or her "best" during your visit.
Approximately _____ minutes

Based on the time when the resident was *most interactive* during your visit, please circle your answer for the following questions.

4. How alert was the resident?

not alert		somewhat		very
at all		alert		alert
1	2	3	4	5
5. How engaged was the resident?

not engaged		somewhat		very
at all		engaged		engaged
1	2	3	4	5
6. How talkative was the resident?

not talkative		somewhat		very
		81		

at all		talkative		talkative
1	2	3	4	5

7. How appropriately did the resident respond to comments during conversation?

not appropriately at all		somewhat appropriately		very appropriately
1	2	3	4	5

8. How physically responsive (eye contact, head and body movement) was the resident?

not responsive at all		somewhat responsive		very responsive
1	2	3	4	5

9. How relaxed was the resident?

not relaxed at all		somewhat relaxed		very relaxed
1	2	3	4	5

10. How happy was the resident?

not happy at all		somewhat happy		very happy
1	2	3	4	5

11. How agitated was the resident?

not agitated at all		somewhat agitated		very agitated
1	2	3	4	5

12. To what extent did the resident's repetitive behaviors or thoughts interfere with your interaction?

not at all		somewhat		very much
1	2	3	4	5

Table 1

Social Interaction Ratings for Men and Women with Dementia for Visits Not Preceded by (No Music) or Preceded by (Music) Music

Behavioral Descriptors	Males		Females	
	No Music	Music	No Music	Music
Alert ^a	3.95 (.30)	3.60 (.23)	3.40 (.51)	3.84 (.72)
Engaged ^b	3.75 (.30)	3.35 (.25)	3.20 (.71)	3.48 (.54)
Talkative	3.20 (.78)	2.90 (.90)	2.78 (1.30)	3.12 (.83)
Appropriate ^b	3.55 (.60)	3.05 (.84)	3.30 (.44)	3.27 (.59)
Physically Responsive	3.70 (.62)	3.55 (.19)	3.34 (.72)	3.45 (.91)
Relaxed	3.85 (.30)	3.70 (.35)	3.58 (.57)	3.91 (.78)
Happy ^a	3.95 (.30)	3.65 (.19)	3.18 (.80)	3.64 (.71)
Agitated	1.90 (.38)	1.80 (.16)	1.95 (.75)	1.85 (.87)
Repetitive	1.85 (.84)	2.15 (.50)	2.06 (.40)	2.04 (.52)

^aThe Gender x Music interaction was significant ($p < .05$).

^bThe Gender x Music interaction neared significance ($p < .1$).

Table 2

Music Main Effect, Gender Main Effect, and Music x Gender Interaction for Each Item on the Social Interaction Questionnaire

Behavioral Descriptors	Music Main Effect			Gender Main Effect			Music x Gender Interaction		
	<i>F</i> (1, 10)	<i>p</i>	η_p^2	<i>F</i> (1, 10)	<i>p</i>	η_p^2	<i>F</i> (1, 10)	<i>p</i>	η_p^2
Alert	.07	.793	.01	.29	.600	.03	5.41	.042	.35
Engaged	.10	.763	.01	.56	.470	.05	3.30	.099	.25
Talkative	.02	.903	.00	.03	.870	.00	2.65	.135	.21
Appropriate	4.46	.061	.31	.00	.962	.00	3.41	.094	.25
Physically Responsive	.01	.938	.00	.37	.557	.04	.31	.589	.03
Relaxed	.28	.607	.03	.01	.920	.00	1.96	.192	.16
Happy	.24	.632	.02	1.21	.298	.11	5.16	.046	.34
Agitated	.36	.564	.03	.02	.901	.00	.00	.100	.00
Repetitive	.46	.514	.04	.04	.846	.00	.60	.455	.06

Table 3

Correlations Between Behaviors During Music Listening and Scores on the Social Interaction Questionnaire at Each Visit

Social Interaction					
Questionnaire Score at Each Visit	Number of Observed Responses to Music Prior to Each Visit				
	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5
Visit 1	.12 (p=.70)				
Visit 2		.17 (p=.57)			
Visit 3			.00 (p=.99)		
Visit 4				.31 (p=.36)	
Visit 5					.65 (p=.03)

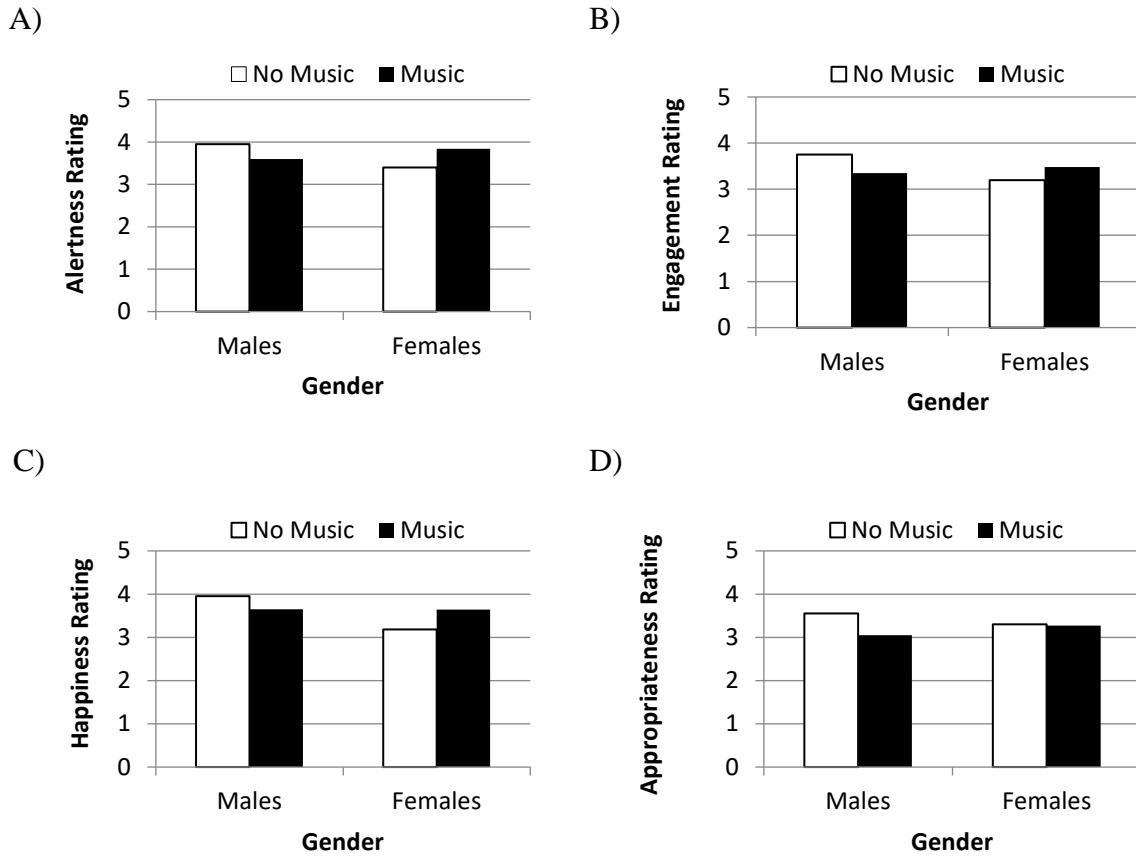


Figure 1. Differences in social interactions of dementia patients as measured during visits not preceded by (No Music) or preceded by (Music) music. Behavioral descriptors were measured using the Social Interaction Questionnaire, which used a Likert-type scale ranging from 1 (not at all) to 5 (very). The Gender x Music interaction was significant for alertness ($p=.042$) and happiness ($p=.046$) and neared significance for engagement ($p=.099$) and appropriateness ($p=.094$).

INFERENCES ON CRIMINALITY BASED ON APPEARANCE

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MENTOR: REBEKAH BENJAMIN

Abstract

In this research study, we tested whether people can tell if someone is a criminal based on a photograph of the person's face. The importance of the subject lies in the fact that many people are unfairly judged as criminals based on stereotypes such as race. In this study, we wished to eliminate race and see if any purely facial characteristics are stereotypically defined as criminal or if a person's initial judgment is an accurate predictor of someone's character. Extensive research has been dedicated to finding if people have facial features that portray some characteristic about them; this study will focus on criminality. Through the use of a face modulating program, neutral faced photographs were shown to participants with a question that asked if the person in the photograph is a criminal or not. The data gathered will be beneficial in either identifying facial features that are associated with criminals or that show the interesting phenomena of gut instinct.

Inferences on Criminality Based on Appearance

Past research has been conducted pointing to people's ability to make accurate inferences about personality based on appearance. The research conducted has focused on both a person's overall appearance and more specifically on which facial features affect one's perceptions of the person's personality. Though much research has focused on our ability to detect personality in general, little research has focused on a person's ability to make inferences about criminality based on appearance. The focus of our study was to determine if people can detect whether or not a person is a criminal based on appearances. The aforementioned research alludes to the detection of criminality being possible through our abilities to make personality inferences based on overall appearance and, more specifically, which facial features affect our perceptions of personality traits. Perceptions matter, so understanding the human predisposition for making judgments based on outward characteristics is important if such biases are to be taken into account in areas such as hiring processes.

Detecting Personality

Humans appear to have the striking ability to detect each other's personalities simply by looking at one another. Petrican, Todorov, and Grady (2014) tested how strangers and spouses perceived certain personality traits, such as those from the Big Five Inventory, from the participants' photographs. Researchers found that there was a high correlation between the characteristics detected by a stranger's first impression and the features identified by the same person's spouse. They had the photographed participants provide a self-evaluation and those scores corresponded with both the strangers' and the spouse's responses.

We tend to make inferences on what type of person someone is based on facial appearance. We tend to treat this person a certain way based off of this first impression. Wolffhechel et al. (2014) attempted to generate a more complete picture of the relationship between a person's facial features and how the person's personality is perceived through evaluation of a photograph. The researchers found that more attractive people were rated to have better personalities, women were rated to be more trustworthy, and men were rated to be more rationally stable (Wolffhechel et al., 2014). Others have evaluated how accurate first impressions are (Naumann, Vazire, Rentfrow, & Gosling, 2009). Researchers showed participants photographs of a person and asked them to rate the individual's character traits. When judged by the participants, characteristics such as extraversion, emotional stability, openness, and self-esteem were able to accurately be detected from the neutral position, and judgments were more accurate when the photographs were in a posed position.

Specific Facial Features Relating to Personality Traits

Research has demonstrated that specific facial characteristics as well as gender stereotypes play a part in perceptions of a person's personality attributes. Hack (2014) wanted to know whether gender played a part in a person's perceived warmth. He had participants rate faces of smiling and non-smiling males and females. He found that smiling faces on average were considered warmer than non-smiling faces. He also found that female smiling faces were perceived as warmer than male smiling faces.

Certain facial features affect people's perceptions of a person's personality characteristics more than others. Paunonen, Ewan, Earchy, Lefave, and Goldberg (1999) set out to find which facial features affected these perceptions. After using facial manipulation software, they had participants rate the untouched and

computer-edited versions of faces for different personality characteristics. The results showed that people with larger eyes give off more friendly impressions related to nurturing, honesty, likability, empathy, agreeableness, popularity, and extraversion. Smaller eyes gave impressions of masculinity, dominance, and strength. Similarly, Todorov, Baron, and Oosterhove (2008) explored how facial features may be linked to perception of one's trustworthiness. Using facial manipulation software, they edited eyebrows, cheekbones, chins, and noses, and had participants judge the trustworthiness of the edited and unedited faces. They found that low inner eyebrows, shallow cheekbones, and thin chins were perceived traits of an untrustworthy face.

Later, Flowe (2012) looked at whether a 2D face evaluation model could account for why some faces are more criminal-looking than others. Participants rated different aspects of a person pictured, such as emotional state, personality traits, and criminality. The facial expressions of the people pictured varied. Results demonstrated that angry faces were rated as appearing most criminal, then neutral, followed by happy faces. Neutral faces were also perceived as being less trustworthy if the neutral face appeared angry. The males and females who were rated high in criminal appearance were also perceived as being less trustworthy and more dominant. In conjunction with the aforementioned study, this suggests that people with low inner eyebrows, shallow cheekbones, thin chins, and small eyes give stronger impressions of anger, criminality, and untrustworthiness.

Physical Characteristics Associated with Criminals

We have discussed the accuracy of people's ability to determine others' personality traits, but often certain physical characteristics that are not facial features determine someone's impression of another person. For example, does facial hair play a significant role in influencing impression formation? Reed and Blunk (1990) focused on determining if facial hair affected others' perceptions of one's credibility, competency, and other personal attributes. They found that facial hair positively contributed to impressions of social/physical attractiveness, personality, competence, and composure (Reed & Blunk, 1990). They also found that females rated males with facial hair more positively than other males did.

Again and again we see that people tend to form their impressions of a person's character based on race, attractiveness, age, and sex, all of which can truly impact our first impressions of the people we meet. Adams et al. (2012) believed that ultimately no one sees a face as neutral, but because of certain characteristics such as race, age, and sex, a face takes on an emotional tone. In fact, characteristics

such as age, race, and sex were associated with a specific emotion that the respondents perceived from a photograph (Adams et al., 2012). Looking more closely at race, Kleider, Cavrak, and Kniycky (2012) delved into the stereotypes associated with criminality, particularly toward black males, by having participants act as casting directors. The results demonstrated that the pictures of black males with more stereotypically black features were significantly more likely to be cast as a drug dealer than pictures of white males.

Detecting Criminality

Due to the bias that exists from labeling and stereotypes, some researchers have attempted to examine whether people can accurately predict someone's criminality based on a photograph when various confounding factors are eliminated. Focusing on criminals that were white males to eliminate racial and gender bias, Thornton (1939) had participants take a test to determine what crime the person photographed had committed from a list of four. The photographs portrayed the faces of males and showed no clothing, but the researcher commented that objects such as accessories or facial hair could have influenced the results. The findings showed that there was a significant degree of correct responses as opposed to incorrect responses.

Similarly, but with some key changes, Valla, Ceci, and Williams (2011) asked participants if a person in a photograph was a criminal and if they were or were not violent. To accomplish this, the experimenters obtained photographs of criminals and non-criminals and then asked the participants to rate how likely the person shown was to be a criminal and whether the person was violent or nonviolent. In contrast to Thornton (1939), the results did not support the hypothesis that participants could tell the difference between a violent or non-violent criminal, but participants could tell the difference between a criminal and non-criminal. This study also considered the question of whether women could spot a rapist, and the answer was no.

Previous research has shown that the more detailed the questions of the experiment, the less likely that people will answer them correctly. Some of the studies had a significant degree of accuracy but others did not, which may be attributable to factors like glasses or facial hair on the person in the picture and the complicated means of answering, such as rating scales. To account for these weaknesses, in the present study we only asked if the photograph portrayed a criminal and only included stimuli featuring violent criminals and non-criminals to increase the power of the test. Along with determining whether people have the

ability to know if someone is a criminal, the data was examined to see if the gender or career path of a participant made a difference. The proposed study asked the following questions: Do people have an ability to tell if someone is a criminal simply from facial appearance? Does the gender of the participant affect the outcome? Do other characteristics of the participant, such as career choice, relate to differences in accuracy in judging criminality?

Method

Participants

The participants of the study (N = 141; Males = 70, Females = 71) were comprised of undergraduate students from a small Midwestern private university (n = 36) and a large public Western university (n = 105). We recruited participants through the use of an online participant pool management system as well as a student online newspaper and flyers. All of the participants took part on a volunteer basis but received either course credit or extra credit in a course for participating in the study.

Materials

This study required participants to complete a survey consisting of images of white males who had been convicted of a crime as well as white men who had not been convicted of a crime. Pictures of both criminals and non-criminals were obtained through the website Crime and Capital Punishment (n.d.) and through the use of photos obtained from the NimStim photo catalog (Tottenham, 2007), respectively. The questionnaire consisted of 28 total headshots of white males between the ages of 18 and 40, with no jewelry or other distinguishable markings. The criminals in the photos all had been convicted of serious, violent crimes. The photos were edited on Windows Paint to make sure that only the head was shown; all the pictures were in black and white, and were of a consistent quality. We used Google Forms to create a survey asking participants' gender, major, and university attended. Our survey on criminality inferences required our participants to simply select yes or no when asked whether the male pictured on the screen was a criminal. Each question in the survey showed one picture at a time. Example photos are shown in Figure 1.



Figure 1. Sample images from NimStim (Tottenham, 2007).

Procedures

The survey was sent to participants through an online newsletter and information posted on flyers, and it was also made available to some via an online participant pool management system. The survey was created and administered through Google Forms, with the stimuli presented in random order. Along with each image, participants were asked the simple question, "Is this person a criminal?" Participants selected the answer "yes" or "no" for each image. Each photo was presented on a separate page.

Results

Our first objective was to find out whether people are able to detect criminality from a photograph. We measured this by looking at whether participants were more accurate than chance at determining whether an image depicted a criminal. Since our survey consisted of 28 questions with a fifty percent chance of answering correctly just by guessing, the average number of correct answers was projected to be 14 out of the 28 possible questions. A one-sample t-test demonstrated that the responses of our participants were significantly more accurate than chance, $t(139)=13.38, p < .01$. We later found that ten of our participants answered "no" to all questions, and two answered "yes" to all questions. We eliminated these outliers in order to have more accurate results. This increased our total mean accuracy to 18.37, $t(129)=14.25, p < .01$. The results of participants' responses are illustrated in Figure 2A with columns for the correct and incorrect responses to criminals and

non-criminals. From this, we conclude that people seem to have the ability to detect criminality based on facial features.

Our second objective was to find whether participant attributes such as gender, career path, and school attended affected accuracy. We measured career path by separating participants into two broad categories: social science majors versus non-social science majors. After running three separate independent-group t-tests for gender, career path, and school attended, we found that there were no significant differences between the groups in their ability to detect criminality ($p > .05$). After eliminating outliers and retesting, we still found no significant differences between groups of participants.

We found that the average accuracy score for detecting criminals was 8.3 out of the total fourteen criminals. The accuracy of predictions for each criminal photograph is illustrated in Figure 2B. This is significantly greater than chance, which would have predicted 50 percent accuracy (seven out of fourteen criminals), $t(128) = -14.87, p < .05$. The average accuracy score of non-criminals was 10.1 out of the possible fourteen, $t(128) = -21.33, p < .05$. Figure 2C illustrates the accuracy of participants' responses for each photograph of the non-criminals. It makes sense that identification of non-criminals was more accurate than identification of criminals as participants were more likely to label the person pictured as a non-criminal. Fifty-six percent of the total answers from the survey were "no," indicating that participants were more likely to believe that the image depicted a non-criminal than a criminal. We expand on this in the discussion section.

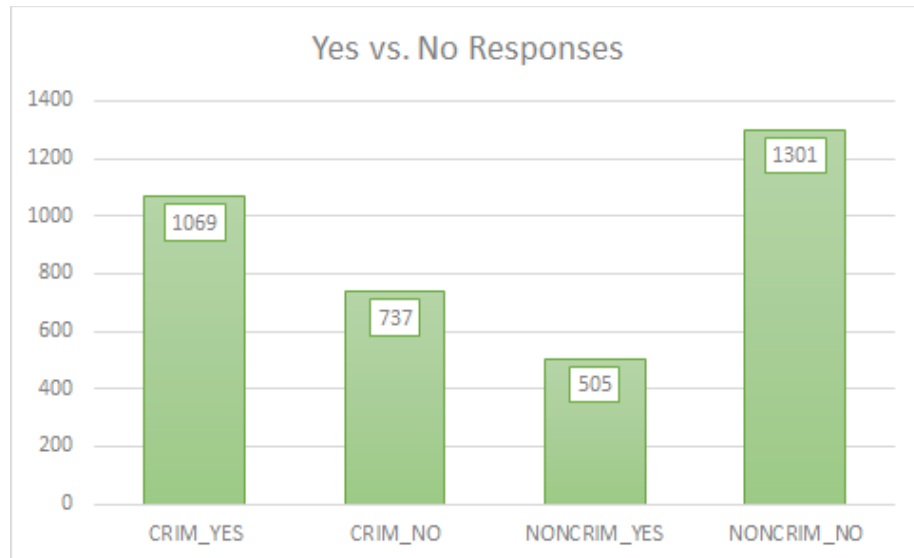


Figure 2A. Shows the number of people who correctly answered “yes” to the photograph of a criminal or “no” to the photograph of a noncriminal and those with incorrect responses of “no” to the photograph of a criminal and “yes” to the photograph of a noncriminal.

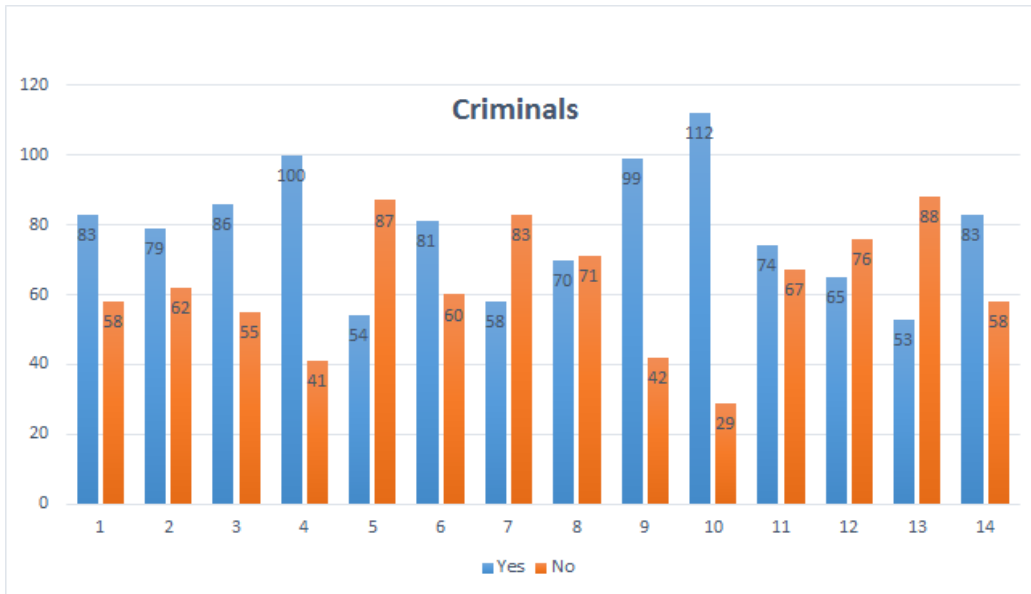


Figure 2B. Illustrates the “yes” and “no” responses to specific criminal photographs used in the questionnaire.

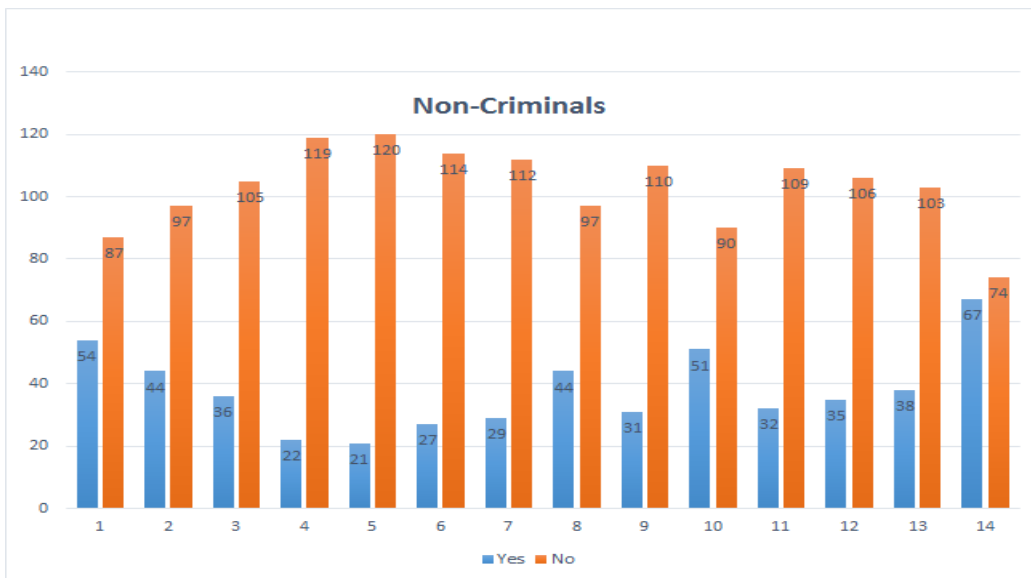


Figure 2C. Illustrates the “yes” and “no” responses to the specific photographs of non-criminals used in the questionnaire.

Discussion

It would appear from our results that people can indeed identify criminals' facial features with a level of accuracy greater than chance. We also looked at whether gender and career choice of the participant played a role in the perception of a criminal. Our subject pool was divided into social sciences and non-social sciences. Neither gender, career choice, nor institutional affiliation had an effect on the number of correct responses. So, our original research question asking if people are able to determine whether someone is a criminal based on facial appearance is supported. Our second research question, asking if other participant characteristics make a difference in accuracy levels, showed no effect regarding the characteristics we examined.

From past research, we have seen that certain characteristics such as extraversion, self-esteem and openness have been found to be detectable with accuracy based on facial features (Naumann et al., 2009). We have also seen that certain characteristics (e.g., race, presence of a beard or shaggy hair) have been found to influence others' views of who that person is (Reed & Blunk, 1990). From research, we consistently see that people can accurately make inferences regarding who someone is simply by looking at a face.

More specifically, for nearly eight decades there has been evidence that people can distinguish between criminals and non-criminals (Thornton, 1939). When participants were shown pictures of criminals or non-criminals and asked which was which, it was found that participants were correct more often than they were incorrect. This coincides with the findings from our research showing that, with greater-than-chance accuracy, people are able to detect criminality based on facial features alone. Other research, as discussed in our earlier review of the literature, supports what our study concluded.

We found that participants were more likely to say someone was not a criminal rather than a criminal. Figures 2B and 2C illustrate this bias. In Figure 2C, we see that participants were significantly more inclined to answer no than yes. In Figure 2B, the answers were much more even. So, it seems that people are predisposed toward judging a person as a non-criminal, even in ambiguous circumstances.

There were a number of limitations to our study. One limitation was our participants and how seriously they took the survey. We found after taking a closer look at our statistics that some people exclusively answered yes or no to every question. We can interpret this in multiple ways; perhaps these participants truly

thought all were criminals or all were not criminals, or perhaps they just clicked through the survey to get it over with. Either way, we chose to exclude these answers from our final statistics to ensure accuracy of our findings. We did not specify how many of our stimuli depicted criminals. Specifying the ratio of criminals to non-criminals could potentially affect responses by letting participants know that there is indeed a mixture of criminals and non-criminals. We were not able to manipulate facial features in the images, which is limiting because it did not allow us to determine which facial features led to our participants determining the person pictured as a criminal or non-criminal. Past research has shown that certain features are perceived as less trustworthy than others (Flowe, 2012). We did not control for such features in our study, but performing such manipulations would provide interesting insight for future research. Finally, the external validity of our study is limited due to the fact that we limited our participants to college students and our stimuli to head shots of white males. However, this choice was made to increase internal validity.

In sum, we have concluded that we indeed can determine if someone is a criminal or not based on facial features with accuracy levels greater than chance; however, there is still a substantial amount of error involved. Future research may look into aspects of the entire look of a person instead of just the face. Furthermore, researchers should explore specific facial features that are most likely to influence perceptions of criminality. Overall, the most important conclusion from this study is that we have some ability to accurately infer others' characteristics and even criminality based on facial characteristics. However, we should not go around labeling people based on their looks, as the amount of error involved in making such judgments is substantial.

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A BLEND OF ABSURDISM AND HUMANISM: DEFENDING KURT VONNEGUT'S PLACE IN THE SECONDARY SETTING

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Behind a glass case in the Kurt Vonnegut Memorial Library on Senate Avenue in downtown Indianapolis sits an unopened, yellowed envelope addressed to Kurt Vonnegut. The letter was written by Kurt Vonnegut, Sr., during World War II but was never delivered to his son, who at the time was a prisoner of war in Dresden, Germany. The words "Missing: 1-7-45" are written in large letters across the bottom. Eventually, the letter found its way to Kurt Vonnegut, Jr., after the war, but he never opened it. Vonnegut later gave it to his son, claiming "I never opened this, and I'd appreciate if you didn't either" (Lafave).

I saw the letter on a sunny October afternoon when I visited the Memorial Library to interview the curator. Like many of Kurt Vonnegut's protagonists, I had set out to find the truth of an uncertainty, but unlike those characters, the truth I was searching for centered around their creator and not my own. As I stood above the letter, having attempted to read some words through the envelope and finding myself unsuccessful, I realized that the envelope was not simply a letter, but a metaphor for my research. The letter represented an unanswerable question that I desperately wanted to understand; it stood for everything I could not know. As I left the library that afternoon, I felt as though Vonnegut, like his writing, was asking me to be a kind person by respecting the mystery the letter represented.

Kurt Vonnegut's work tells tales of ridiculous people in bizarre places; yet in the midst of his fantastical stories, he proves that hope endures in the strangest of places. His brilliance remains in his ability to integrate absurd and humanist philosophies to create charismatic stories that encourage his readers to better the communities in which they exist. This unique postmodern outlook places Vonnegut as a prime candidate for the secondary English curriculum, as adolescents are developing the ability to process the philosophical questions that Vonnegut's characters explore throughout his novels. *God Bless You, Mr. Rosewater*, *Cat's Cradle*, and *Slaughterhouse-Five* are most often used, if at all, to introduce Vonnegut to American students, and these novels clearly embody this harmonization of absurdism and humanism that Vonnegut captures so vividly, urging his readers to first question and then improve their society.

To comprehend Kurt Vonnegut's interpretation of the absurd, one must first understand a brief history and a general explanation of the absurd philosophy. Albert Camus' *The Myth of Sisyphus and Other Essays* describes the internal impression of absurdity as "a universe suddenly divested of illusions and lights, man feels an alien, a stranger... he is deprived of the memory of a lost home or the hope of a promised land. This divorce between man and his life, the actor and his setting, is properly the feeling of absurdity" (6). From this definition, one can determine that the absurd hero suffers from the separation between his mind and the ideal of significant existence. Although physically present on Earth, his essence is alienated from the connection that holds meaning to his life.

Michael Y. Bennett, in *The Cambridge Introduction to Theatre and Literature of the Absurd*, claims that absurd literature embodies three characteristics: It "discusses the senseless and meaningless of life," it is always existential, and it employs "ridiculous plots" (9). Bennett also explains the modern application of the absurd, declaring that the horrors of World War II and the Holocaust forced society to question the reality of God and the purpose of existence (9). Bennett's explanation of the absurd is directly applicable to Vonnegut's work, as the author was drafted and captured in World War II (Shields 61). Much of Vonnegut's work attempts to make sense of his personal encounter with war, and many of his characters are based on men he observed as a prisoner in Dresden, Germany (Shields 76). While not all of Vonnegut's novels explicitly relay his experiences in World War II, one must note that his confrontation with war serves as a foundation for his philosophy of absurdism and humanism.

In an interview with Robert Musil in 1980, Vonnegut expressed his view on the condition of life, a condition that strongly correlates with the idea of the absurd:

I think that at least half the people alive, and maybe nine-tenths of them, really do not like this ordeal at all. They pretend to like it some, to smile at strangers, and to get up each morning in order to survive, in order to somehow get through it. But life is, for most people, a very terrible ordeal. They would just as soon end it anytime. And I really think that is more of a problem really than greed or machismo or anything like that. I think that's the fundamental thing that's going on. (Musil 129)

With these words, Vonnegut poses the conflict of the absurd, a conflict with which nearly all of his characters will suffer. He reiterates that life has become meaningless for a great deal of people and that absurdity is a central issue in our society; his novels incorporate this same theme.

At the same time, however, Vonnegut's novels surpass absurdism and transcend to a hopeful stage of humanity, making Vonnegut's work genuinely distinct. Vonnegut's unique characteristic, the one trait that sets him apart from his postmodern contemporaries, remains in his response to the absurd. Vonnegut presents broad philosophical questions about religion, war, time, money, life, and death; however, he does not abandon the reader at the end of this presentation. Instead, Vonnegut blends a unique humanist stance into the absurd, urging his readers to confront it with a kindness and human decency that his characters find rare. Todd F. Davis claims that Vonnegut "offers a hopeful solution to the postmodern condition. In his novels, speeches, and essays, he presents the potential for reassociations, for creation, for a world beyond fragmentation" (31). While Vonnegut posits unanswerable questions, he also encourages hope for the human race in the spaces of his words.

Vonnegut offers a personal definition of humanism in his autobiographical essay collection *A Man Without A Country*: "We humanists try to behave as decently, as fairly, and as honorably as we can without any expectation of rewards or punishments in an afterlife... We serve as best we can the only abstraction with which we have any real familiarity, which is our community" (80). It is with these humanist attributes that Vonnegut creates the charismatic draw of readers to his ridiculous plots and fantastical characters. His unparalleled blending of humanism and absurdism establish his genius as both author and societal critic in a demoralized world.

Vonnegut reveals humanist themes in three ways throughout *God Bless You, Mr. Rosewater*, *Cat's Cradle*, and *Slaughterhouse-Five*: through the direct words of a character, through the invitation to view imminent fate humorously, and through the absurd situations of his characters. His humanism asks readers to consider the society in which they live and ponder the methods in which they can better it. His unique narration forces readers to see the ingrained value of human worth, through the depictions of a ridiculous humanity.

One of Vonnegut's recurring characters, Eliot Rosewater, serves as the absurdist hero in the novel *God Bless You, Mr. Rosewater*. Vonnegut's commentary on money, greed, charity, and the American monopoly are central foci in the novel. Rosewater, an extremely wealthy man with a missionary-esque attitude settles in Rosewater County, Indiana, to aid its citizens with anything they could need. Rosewater's absurdity exists in the alienation from his life as the wealthy heir of the Rosewater Foundation. His separation from his familial life and existence as a charitable benefactor in Rosewater County forces him to question his purpose.

Rosewater's absurd question comes from the voice of Kilgore Trout at the end of the novel: "It was quite possibly the most important social experiment of our time...The problem is this: How to love people who have no use?" (332). Rosewater's attempt to find meaning through the people of Rosewater County in spite of the absurd in which he lives is ultimately the cause of his mental collapse. However, the effectiveness of his "experiment" to study and help the people of Rosewater County is put into question at the end of the novel when the women of the county claim their children as Eliot's biological offspring, thus furthering Eliot's question of meaning and purpose (336).

The humanism in *God Bless You, Mr. Rosewater* exists in a passage that serves as a moral for the novel. The quote comes from Eliot as he plans what to say at a baptism for a set of twins: "Hello, babies. Welcome to Earth. It's hot in the summer and cold in the winter. It's round and wet and crowded. At the outside, babies, you've got about a hundred years here. There's only one rule that I know of, babies --: 'God damn it, you've got to be kind'" (260). Although this phrase comes from Eliot Rosewater, Vonnegut seems to be explicitly addressing his readers in this call to kindness, using his characters as vehicles in his exodus toward a better humanity.

In an interview toward the end of his life, Vonnegut claimed "while there is a lower class, I am in it, and while there is a criminal element I am of it, and while there is a soul in prison, I am not free" (Shields 351). This declaration correlates directly with the humanistic theme he employs in *God Bless You, Mr. Rosewater*. Eliot Rosewater lives by the same notion in his attempt to help those of Rosewater County. Brian McCammack makes a note of this theme in his article on socialism in *Rosewater*, claiming that the novel explores the question of "what happens when you give poor people money" and that through the novel, Vonnegut "decides that it is not money the poor need, but love" (161). This theme reflects Vonnegut's definition of humanism, as Eliot embraces the community of Rosewater County and encourages others to behave decently as well. Ultimately, Vonnegut blends humanism into the absurdity of Eliot's alienation through his determination to unconditionally love the people of Rosewater County.

While Vonnegut presents an explicit moral message to combat the absurdity of *God Bless You, Mr. Rosewater*, his exploration of absurdism and humanism in *Cat's Cradle* relies on different devices. Jonah of *Cat's Cradle* becomes an absurd hero through his attempt to understand morality in spite of the depravity of science. Due to Jonah's quest, *Cat's Cradle* becomes what John R. May calls "a novel of the discovery of purpose" (31). Through Jonah's retrospective narrative, the reader

travels with the protagonist on his expedition to understand Dr. Felix Hoenikker's creation of the atomic bomb dropped on Hiroshima in 1945 and the events that transpire as a result of his journey.

Absurdity exists in several facets in *Cat's Cradle*, first appearing in the institution of Bokononism, a religion created, spawned, and then outlawed by the leaders of San Lorenzo in an attempt to inspire hope in the indigenous people of the island through the secret practice of religion. Bokonon's poem on the creation of religion expresses this in a more euphonious manner: "So I said good-bye to government, / And I gave my reason: / That a really good religion / Is a form of treason" (115). Bokonon's invented religion has many absurd qualities; one story in the Books of Bokonon greatly exemplifies the absurd: "Man blinked. 'What is the purpose of all this?' he asked politely. 'Everything must have a purpose?' asked God. 'Certainly,' said man. 'Then I leave it to you to think of one for all this,' said God. And He went away" (174). This deistic view of God and religion is something all of the characters of *Cat's Cradle* attempt to process throughout their time in San Lorenzo. While all of the characters understand the ploy of Bokononism and accept Bokonon's claim that the entire religion is *foma*, or "lies," they convert to the outlawed religion regardless. The absurd exists in this situation through man's innate need to find meaning, to find the connection between himself and his "alien universe" despite his knowledge of its fabrication.

The second facet of absurdity in *Cat's Cradle* lies in the literal end of the world. On what Jonah terms "The Day the World Ended," the title of the novel he writes in his post-apocalyptic survival, ice-nine covered the planet Earth, turning everything to ice and killing nearly all of its inhabitants. Thus, Jonah's "discovery of purpose" becomes insignificant with the end of the world. Absurdism is evident in the immediate spread of ice-nine which establishes an actual separation between man and his universe. Ice-nine becomes the tangible symbol of the absurd condition.

Cat's Cradle is arguably one of Vonnegut's most humorous novels, but this humor does not exist without the absurdity he employs. Vonnegut asks his readers to "laugh at the inevitable" by embracing the humanistic quality of goodness despite the absurd separation of man and the universe (May 26). Vonnegut once claimed that "joking is [his] response to misery that [he] can't do anything about" (Klinkowitz 67). This phrase embodies the humor of *Cat's Cradle* by implying that if man cannot find amusement in his fate, he will not be able to cope with the absurdity that surrounds him.

Vonnegut's purpose in writing *Cat's Cradle* was to make a statement about both science and religion, and in doing so, he created a satirical and comedic tragedy that forces readers to think about the morality of their choices. In my interview, Chris Lafave, curator of the Kurt Vonnegut Memorial Library, spoke of the therapeutic nature of Vonnegut's humor: "When you read Vonnegut's work, you're either going to have the sense of humor that thinks that's sick and say 'I don't like that. I'm depressed now.' Or you're going to burst out laughing. That laugh for me is therapeutic." This therapy Vonnegut provides amidst his description of the end of the world is yet another humanist quality.

The second humanist aspect of *Cat's Cradle* is apparent through the overarching moral of the novel. Jonah's study on Felix Henniker comes to the conclusion that scientists should not be allowed unrestricted power without any moral consideration. Vonnegut's message insinuates that if man does not care about the consequences of his actions, the world will come to an end. Although this is a literal end for the characters of *Cat's Cradle*, Vonnegut is urging his readers to realize that they must consider their decisions before society devolves into chaos.

Lastly, I arrive at *Slaughterhouse-Five*, Vonnegut's most complex and passionate novel, alternately taught and banned in numerous schools across the country. The protagonist of this novel is Billy Pilgrim, second in fame only to Vonnegut's Kilgore Trout; the narration of this science-fiction, anti-war novel follows Pilgrim as he becomes unstuck in time throughout the decades of his life. A unique study, Pilgrim will be in bed with his wife in his forties, and the next minute, he will be present in his twenty-year-old body as a prisoner in Dresden, Germany. Billy's time-jumping represents the power that war has on the mind and how that power consume soldiers' lives after they return home. Billy only becomes unstuck in time with the aid of the Tralfamadorians, the aliens who capture him and place him on display in a zoo on their home planet, Tralfamador, for several years.

The Tralfamadorians ultimately serve as the catalyst that provokes Billy's absurdist epiphany through their description of the end of the world:

"We know how the Universe ends—" said the guide, "and Earth has nothing to do with it, except that it gets wiped out, too."

"How-how does the Universe end?" said Billy.

"We blow it up, experimenting with new fuels for our flying saucers. A Tralfamadorian test pilot presses a starter button, and the whole Universe disappears." So it goes.

“If You know this,” said Billy, “isn't there some way you can prevent it? Can't you keep the pilot from pressing the button?”

“He has always pressed it, and he always will. We always let him, and we always will let him. The moment is structured that way.”

“So,” said Billy gropingly, “I suppose that the idea of, preventing war on Earth is stupid, too.” (423)

In this conversation, Billy confronts the absurd as he accepts the inevitability of war and the nonexistence of free will. The Tralfamadorians claim that all men are “trapped in the amber of the moment,” implying that all moments exist separately from man’s chronological construct of time (396). Life becomes endless in these moments that exist eternally. Billy’s recognition of determinism forces him into an absurd state where he fails to perceive meaning in a world in which he has no control. Camus’ definition of the absurd claims that “man feels an alien” in an absurd world, and in *Slaughterhouse-Five*, Billy is disconnected from meaning by a literal alien.

Vonnegut connects the absurdism of Billy Pilgrim to Eliot Rosewater, stating:

They had both found life meaningless, partly because of what they had seen in war. Rosewater, for instance, had shot a fourteen-year-old fireman, mistaking him for a German soldier. So it goes. And Billy had seen the greatest massacre in European history, which was the firebombing of Dresden. So it goes. (Vonnegut, *Slaughterhouse-Five* 412)

In this, Vonnegut indicates the origination of the absurd as a direct result of war. The overarching topic of *Slaughterhouse-Five*, war, becomes the root of absurdism and the rationale for humanism.

The humanism Vonnegut employs in *Slaughterhouse-Five*, however, is not so simple to express. Vonnegut’s genuine portrayal of the absurd grittiness of war both captivates and repulses readers, while at the same time asks them to reconsider the society in which they exist. One quote or a simple moral cannot embody Vonnegut’s complex hunger for a better humanity in *Slaughterhouse-Five*. Rather, the novel as a whole becomes the work of art that ignites the reader into the humanist passion Vonnegut conceives. The unique quality of the novel remains in Vonnegut’s indifferent portrayal of the world he describes, as his satirical narration

presents atrocities to the reader without attempting to manipulate them into morality.

Vonnegut establishes multiple characteristics that contribute to the humanist capacity of *Slaughterhouse-Five*. The reader is first introduced to the narrator of the novel, which one immediately assumes is Vonnegut himself. In this first chapter introduction, Vonnegut refrains from his satirical humor and speaks plainly to the reader. This voice embodies the *real*; it distinguishes this novel from Vonnegut's others in a way that tells the reader this book will be different, that this book is not a joke about existence, but a novel exploring the painful truth of it.

Even through Vonnegut's description of the cruelties of war, the narrator maintains a forgiving tone that promotes the redemption of humanity. In the first chapter, the narrator recalls a story from Genesis 19 about the destruction of the cities Sodom and Gomorrah: "And Lot's wife, of course, was told not to look back where all those people and their homes had been. But she did look back, and I love her for that, because it was so human. She was turned to a pillar of salt. So it goes" (359). In this passage, Vonnegut seems to say that while humans are the cause of their own destruction, they are not villains, but ignorant in their fatal decisions. Lafave commented on this merciful tone: "His satire had an oddly forgiving sense. His father used to critique him, saying 'you [Vonnegut] never write a story with a villain in it.' He tried to be forgiving of his characters even when he was making them look like buffoons." Vonnegut's forgiveness contributes to the unique sense of hope to which he alludes in *Slaughterhouse-Five*.

This unique quality of Vonnegut's can somewhat be related to postmodern humanist value of the human life. Davis clarifies the difference between the modernist and postmodernist goals for humanity: "Unlike the modernist, the postmodernist does not believe in the perfectibility of humanity or a final, static position such as utopia; rather the postmodern humanist concentrates on daily, local activity that may improve human life" (32). All of Vonnegut's works prove this statement of postmodern humanists to be true. Vonnegut values the human life, even if the indifferent tone of *Slaughterhouse-Five* seems to suggest otherwise.

Vonnegut employs this indifferent tone as he describes every death in the novel with a particular phrase. After every sentence featuring death, one can expect to find the words "so it goes." Billy explains the origin of the phrase in a letter, claiming that the Tralfamadorians use it to describe the dead (362). Billy explains in the letter that the aliens see time differently than humans: "The most important thing I learned on Tralfamadore was that when a person dies, he only appears to die. He is still very much alive in the past, so it is very silly for people to cry at his

funeral. All moments, past, present and future, always have existed, always will exist” (362). Therefore, the words “so it goes” change meaning with the different constructs of time.

Humans do not have the capability to see all moments and are restricted to the cruelty of chronology; thus the phrase “so it goes” implies the idea that life moves regardless of death. Vonnegut’s repetition of the words, told in the unsympathetic tone of the narrator, suggests the insignificance of death. This is *Slaughterhouse-Five*’s humanism. The indifferent tone of the author nearly forces the reader to react, to say that deaths matter, and that to move on immediately in the face of death is an inhumane atrocity. With these three, small words, Vonnegut convinces the reader to question the justification of war.

Perhaps the most significant “so it goes” is the one that follows Edgar Derby’s death: “Somewhere in there the poor old high school teacher, Edgar Derby, was caught with a teapot he had taken from the catacombs. He was arrested for plundering. He was tried and shot. So it goes” (490). This scene’s significance remains in the complete insignificance of the teapot. Derby’s death is the final “so it goes” in the novel and is the breaking point for the reader. The character, Edgar Derby, was based on a fellow prisoner Vonnegut knew in Germany, a man named Michael Palaia, who was shot for taking a jar of string beans when the men were gathering the pieces of Dresden (Shields 82). Vonnegut saw the absurdity of the “so it goes” notion in person, and in *Slaughterhouse-Five*, he portrays the inhumanity with the same insensitive manner he witnessed as a prisoner.

Vonnegut’s humanism in *Slaughterhouse-Five* is unlike his other novels, as Vonnegut offers it to his readers with a peaceful outstretched hand, pleading with them to realize that war invites absurdism to destroy the soul. Vonnegut’s writing encourages a better humanity, one that accepts the existence of the absurd but relies on human decency to find meaning. His humanism in all three novels begs readers to resist the absurd by recognizing that hope exists in the innocence of kindness and decency. This unique blend of humanism and absurdism makes Vonnegut a prime candidate for the secondary curriculum, as his characters’ journeys correlate thematically with the growth and process of postmodern adolescents and encourage moral responsibility without sentimental manipulation.

Vonnegut has continued to fascinate adolescents for decades; perhaps his unapologetic irreverence or his bizarre plot structures contain a certain teenage magnetism. The author once posed a theory on his charismatic draw for youth: “Maybe it’s because I deal with sophomoric questions that full adults regard as settled. I talk about what is God like, what could He want, is there a heaven, and, if

there is, what would it be like?" (Davis 7). Vonnegut's hypothesis on these abstract questions directly correlates with many psychologists' theories regarding adolescent development.

For instance, Jean Piaget, a Swiss psychologist often studied in the education field, is known for his theory of cognitive development. In the Formal Operations stage, an individual at typically eleven to fifteen years old transitions from concrete thought to processing abstract ideas and hypothetical concepts (Wadsworth 111). Adolescents in this stage begin to open their minds to the unknown and unseen, asking questions that Vonnegut's characters also implicitly ask. Secondly, in Erik Erikson's eight general stages of life, adolescents age eleven to eighteen enter the stage "Identity vs. Confusion." In this stage, adolescents are in a "state of suspended morality as they begin to formulate personal ideologies based upon values that differ from their parents'" (Berzoff 111). At the secondary level, students begin to process values and ideas that create meaning for them, an attempt that can often result in the absurd.

Michael Nakkula, a professor of psychology and human development at University of Pennsylvania Graduate School of Education, expands on the adolescent's inherent need to process this unknown:

Reality, for many adolescents, becomes a subset of possibility. This new mode of cognition carries with it the potential for an expansion of ethical decision making, empathy, considerations of justice, and comprehensions of ultimate meaning, but it also ushers in waves of doubt, threats of meaninglessness, and struggles with the multiplicity of religious expression and meaning. It is easy to see, then why so many adolescents are so eager to engage in conversations about truth, reality, and the nature of life itself. (Nakkula 205)

From Nakkula's description of the adolescents' thought processes, one can see the connection between adolescence and the absurd. While the absurd is characterized by life's meaninglessness and Nakkula claims that adolescence can merely ponder it, the two states are incredibly similar, particularly in Vonnegut's writing.

Nakkula's description of adolescence is comparable to Vonnegut's characterization of the absurd heroes in his novels. Eliot Rosewater's absurd alienation forces him to reconsider ethics as he cares for the people in Rosewater County without the approval of his father. Jonah's absurd journey, ultimately leading to the apocalypse, reevaluates how societal justice works in conjunction to science. Billy Pilgrim's absurd life forces him, and the reader, to consider the

meaning of life and how war fits into human purpose. Much like these characters, the adolescent embarks on an absurdist quest to find ethics, justice, and meaning while attempting to piece together discoveries to create a personal identity.

Furthermore, Kurt Vonnegut's work connects to youth even today, more than twenty years after the publication of his last novel, through the relevance of his topics. Robin Roberson's "Helping Students Find Relevance" reiterates that relevance is a determining factor in content retention for students in the classroom. Students often ask, "How will I use this in *real life*?" Their inherent need to connect to the real world is a crucial factor teachers must consider in choosing curriculum material. Vonnegut's writing remains culturally relevant because his novels address continuous problems in our society. At some point in their lives, students are going to face some of the issues Vonnegut questions in his work, whether that is war, political injustice, monetary greed, scientific immorality, or so on. Vonnegut's novels address the same big questions adolescents are beginning to process, therefore making his work personally relevant for secondary students.

Despite Vonnegut's draw for young readers, relatable characters, and genuine relevance to adolescents, his work continues to be censored in secondary schools across the country. *Slaughterhouse-Five* is listed on the American Library Association's 100 Most Frequently Challenged Books from the 1990-1999 list and the 2000-2009 list. Additionally, both *Cat's Cradle* and *Slaughterhouse-Five* are listed on Radcliffe Publishing Course Top 100 Banned Novels of the 20th Century for their references to "religious matters, explicit sexual scenes, violence, obscene language, depictions of torture, ethnic slurs, and negative portrayals of women."

So, why then, should Kurt Vonnegut be an integral component of the secondary English curriculum? The reasons for the censorship of Vonnegut's work are not false accusations; his novels do address uncomfortable topics. However, these descriptions of his novels do not include the holistic nature of Vonnegut's work. Those in favor of banning Vonnegut's stories do not recognize his humanist nature, which kindles kindness and asks readers to do the same.

Vonnegut himself was not ignorant of the censorship of his work. In 1973, Vonnegut wrote a letter to the chairman of the Drake School Board in North Dakota in response to the burning of *Slaughterhouse-Five* in the school furnace, a letter he later included in his collection of essays *Palm Sunday*. After calmly explaining his situation and credible character, Vonnegut expresses the purpose of his novels:

If you were to bother to read my books, to behave as educated persons would, you would learn that they are not sexy, and do not

argue in favor of wildness of any kind. They beg that people be kinder and more responsible than they often are. It is true that some of the characters speak coarsely. That is because people speak coarsely in real life. Especially soldiers and hardworking men speak coarsely, and even our most sheltered children know that. And we all know, too, that those words really don't damage children much. They didn't damage us when we were young. It was evil deeds and lying that hurt us...Perhaps you will learn from this that books are sacred to free men for very good reasons, and that wars have been fought against nations which hate books and burn them. If you are an American, you must allow all ideas to circulate freely in your community, not merely your own...You should acknowledge that it was a rotten lesson you taught young people in a free society when you denounced and then burned books—books you hadn't even read. You should also resolve to expose your children to all sorts of opinions and information, in order that they will be better equipped to make decisions and to survive. (Vonnegut, "The First" 4)

As Vonnegut claims in his letter, his novels urge his readers to better humanity and ask that people be kind; the humanist aspects of his novels teach readers to be good individuals. His works do not, however, trick them into doing so; students must wade through the thick layer of satire before they can thoroughly understand Vonnegut's values.

From my observations of adolescents in the classroom, I have discovered that students often rise to the expectations set for them. If teachers expect students to be wise, critical thinkers and show them how to do so correctly, they should have no reason to believe that Vonnegut's work will create vulgar-speaking, violent teens. By shielding students from ideas, censors are not protecting them from the problems of the world, but hiding them in naiveté. Adolescents are very clever beings; they know about the problems of the world, and acting as if those obstacles do not exist can be detrimental once they arrive at adulthood.

Teaching Vonnegut's novels gives students the opportunity think critically about the society in which they exist and to engage in conversations about relevant problems in a safe, educational setting. Kurt Vonnegut responds to the absurd through kindness despite the unknown, and by integrating his work into the secondary curriculum, teachers can encourage their students to be humane and compassionate beings as they begin to process deep, philosophical questions. Erikson claims that students must be supported in their search for identity, and

when teachers give students material that encourages their abstract thought process and the guidance to direct those processes, they provide the foundation adolescents need to forge their own thoughts and values (Berzoff 113).

As long as entities such as war, science, religion, money, or any of Vonnegut's topics prevail in our society, Kurt Vonnegut's writing will remain a relevant call to action. While Vonnegut retains the postmodern stance that despair does exist in our world, he transcends this absurd notion by reminding his readers that the kindness of humans can redeem hope in humanity. Despite their absurd plotlines, *God Bless You, Mr. Rosewater*, *Cat's Cradle*, and *Slaughterhouse-Five* prove that one man can instill optimism in the minds of readers. Vonnegut will continue to excite curiosity, hope, and kindness in those fortunate enough to encounter him. Adolescents deserve the opportunity to ponder the possibilities Vonnegut provokes in a setting that encourages them to foster individual ideas. If we embrace Vonnegut in our classrooms, perhaps his call to kindness and notions of human decency will exist outside of them.

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DO BLACK AND WHITE AMERICANS HOLD DIFFERENT VIEWS ON MARIJUANA LEGALIZATION? ANALYZING THE IMPACT OF “THE WAR ON DRUGS” ON RACIALIZED PERCEPTIONS OF LEGALIZING MARIJUANA

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Introduction

For nearly half a century, aggressive drug criminalization policies have inordinately affected Black American communities.² Sentencing laws for non-violent drug crimes, colloquially known as the “War on Drugs,” have led to the mass incarceration of thousands of Americans, stripped thousands of their basic civil rights, and decimated the social, economic, and familial structure of neighborhoods throughout the country (Alexander, 2012). Though figures from the Household Survey on Drug Abuse and Health show that Black and White Americans use marijuana at virtually equal rates, Blacks are 3.5 times more likely to be arrested for marijuana possession than are Whites (Matthews, 2013). In recent years, one policy that has been continually proposed to ameliorate the racial effects of the War on Drugs is the legalization of marijuana. Proponents reason that marijuana legalization would lead to a large decrease in the number of Blacks arrested for drug use, and would subsequently alleviate some of the racial effects of drug policy. Since Black Americans tend to align themselves politically based on a conception of linked fate, or the belief that their political interests are bound by race, one would presume that Black Americans would overwhelmingly support the legalization of marijuana and maintain higher support for marijuana legalization than White Americans.

In actuality, an October 2016 survey from the Pew Research Center reveals that 59% of both Black and White Americans support the legalization of marijuana

² Throughout this paper, I use the term “Black American” rather than “African-American” to be inclusive of all Americans who racially identify as Black. Many Blacks in America identify as Black Americans instead of African-Americans because they have no conception of African heritage: the majority of Blacks in America are descendants of former slaves who were forced to create a new Black American culture, distinct from African culture, in America.

(Geiger, 2016). While the majority of Black and White Americans tend to support marijuana legalization, I hypothesize that the explicit reasons that Blacks and Whites approve or disapprove of marijuana legalization are vastly different. I hypothesize that Black Americans support marijuana legalization based primarily on a recognition of group interests and the realization that legalization would mitigate the racist effects of the War on Drugs and only disapprove of legalization because of a lack of thinking about the racial implications of legalization. On the other hand, I hypothesize that White Americans support marijuana legalization based on more typical reasons related to personal freedom and knowledge of the drug's benign effects, but disapprove of legalization because of fears related to drug abuse or the dangers of marijuana.

In order to investigate this hypothesis, I conducted a qualitative research study, which interviewed several Black and White Americans about their perspectives toward the legalization of marijuana. In speaking with the study participants, I attempted to not only gauge individuals' stated justifications for their points of view, but also the underlying life experiences that likely impacted the development of their perspectives regarding marijuana legalization.

The Racial History of Drug and Crime Policy in America

When President Richard Nixon took office, he initiated the War on Drugs in a manner that effectively eliminated the political power of Black Americans. Nixon increased the size of federal drug control agencies and enacted tougher mandatory sentencing laws for using and dealing illicit drugs that resulted in increases in the arrests, sentencing, and incarceration of Blacks (Alexander, 2012; Borden, 2016; Marion & Oliver, 2015). In 1969, Nixon vowed to restore America's first civil right—the alleged “right to safety”—by fighting “narcotics peddlers” and “merchants of crime” (Murakawa, 2014). Nixon's usage of the word “civil right” directly after Blacks were first guaranteed their innate civil rights with the passage of the 1965 Civil Rights evoked a clear racial message. In vowing to re-establish Whites' right to safety, Nixon carefully rejected the struggle of Black Americans and other racial minorities to acquire their basic civil rights. A recording of President Nixon's discussion with one of his staffers prior to the passage of stricter mandatory sentencing laws reveals him saying, “It's all about law-and-order and the damn Negro-Puerto Rican groups out there” (Mendelberg, 2001; Murakawa, 2014). As this recording suggests, Nixon's “Southern Strategy” used coded appeals under the guise of “law-and-order” to strengthen criminal laws negatively affecting Black American communities in an attempt to appease Southern White working

class voters who felt threatened by Blacks' acquisition of civil rights (Mendelberg, 2001). Indeed, Nixon's War on Drugs led to pervasive racial disparities in the criminal justice system. While three Black Americans were incarcerated for every white American before Nixon became President, six Black Americans were incarcerated on average for every White person after he left office (Murakawa, 2014). By this time, one in 71 Black Chicagoans were arrested for drug use compared with one in 1,000 White Chicagoans (Murakawa, 2014). Likewise, 95% of Cleveland residents and 89% of Detroit residents arrested for drug use were Black (Murakawa, 2014).

In the half century since Nixon initiated the War on Drugs, policies criminalizing the non-violent offense of drug use have been strengthened and resulted in the increased incarceration of Black Americans and other minorities. Under President Ronald Reagan, Congress passed the Anti-Drug Abuse Act in 1986, which created long mandatory minimum sentences for low-level drug offenses. The Anti-Drug Abuse Act resulted in a typical prison term of five or more years for a first-time federal drug offense (Alexander, 2012; Marion & Oliver, 2015; Neill, 2014). These mandatory minimum sentence statutes granted prosecutors an enormous amount of power in incarcerating drug offenders. According to legal scholar Michelle Alexander (2012), "Simply by charging someone with an offense carrying a minimum sentence of ten to fifteen years or life, prosecutors are able to force people to plead guilty rather than risk a decade or more in prison." Prosecutors also confess that they commonly charge drug offenders with crimes that they doubt they can win in court in order to gain convictions (Alexander, 2012; Borden, 2016; Hessick & Saujani, 2012).

This mandatory minimum sentencing scheme has led to massive increases in the number of individuals, and specifically Black individuals, involved in the criminal justice system for drug crimes. In 2000, Black Americans constituted 80 to 90% of all Americans sent to prison for drug offenses (Alexander, 2012). Research suggests that the vast majority of individuals sentenced to prison are there for low-level drug crimes, and that over half of the arrests for drug offenses are for marijuana possession (Matthews, 2013; Borden, 2016). In 2010 alone, the New York City Police Department (NYPD) made 50,300 arrests for possession of marijuana, and of those 50,300 arrests, Blacks were arrested five times more than Whites (Alexander, 2012). While researchers in 2001 estimated that one in 17 white males born that year will be incarcerated during their lifetimes, they estimated that one in three black males born that year will become incarcerated (Bonczar, 2003). And in more than fifteen states, Black men are admitted to prison at a rate that is

from 20 to 57 times greater than that of White men (Alexander, 2012). Lastly, while Black and Latino prisoners are most likely to be in prison for drug crimes, White prisoners are most likely to be in prison for property or violent crimes (Burch, 2013). These statistics regarding arrest and incarceration likely stem from the racial profiling of minorities. In 2012, for example, 84% of the 450,000 people that were stopped by the NYPD were Black or Latino (Burch, 2013). With nearly two million drug arrests taking place each year under the racialized War on Drugs, more Black Americans are in jail or on probation in the United States today than were enslaved in the 1850s (Alexander, 2012).

The Lasting Racial Implications of the War on Drugs

The War on Drugs disproportionately affects Black American communities long after individuals receive their punishments for drug offenses. After a former drug offender re-enters society, they are considerably stigmatized and segregated as “second-class citizens” because of regulations discriminating against ex-offenders. After an individual convicted of a small amount of marijuana possession finishes his or her prison or probation sentence, he or she will likely be “ineligible for many federally-funded health and welfare benefits, food stamps, public housing, and federal educational assistance” (Alexander, 2012). Additionally, he or she will likely lose the ability to vote, obtain a driver’s license, enlist in the military, and possess a firearm (Alexander, 2012; Borden, 2016). In 1996, President Bill Clinton signed “One Strike and You’re Out” legislation, which effectively denied public housing to anyone with a criminal record. The law compelled public housing authorities to screen applicants for criminal histories and bar public housing to anyone who has committed a crime irrespective of the crime’s severity (Alexander, 2012; Borden, 2016). As the majority of drug offenders are poor and cannot afford private housing, this law has been particularly disadvantageous (Dietrich & Vallas, 2014).

A criminal conviction also often precludes individuals from finding gainful employment. Nearly every state in the country allows employers to be prejudiced against individuals with criminal convictions (Alexander, 2012; Borden, 2016). Individuals who are arrested for marijuana possession, but are never charged or convicted, can still have their names show up on criminal databases (Alexander, 2012; Uggen et al., 2014). Employers in most states are also allowed to deny jobs to people who are arrested but never convicted of crimes (Alexander, 2012). This discrimination requires anyone with a criminal record to inform employers about their arrests and try to become employed although the odds are against them. One

survey reveals that less than 40% of employers are even willing to hire an ex-offender (Alexander, 2012). The negative impact of criminal records has been found to be more detrimental to Black Americans than White Americans. In researching the impact of criminal records on 350 job applicants, Devah Pager found that Blacks in the study were discriminated against for a criminal record at a rate that was double the rate of their equally qualified white counterparts (Pager, 2003). Such disparities make it difficult for Black American communities plagued by interactions with the criminal justice system to succeed economically. An inability to live in public housing and find a job are just two of the many ways in which individuals who are predominantly Black are disadvantaged after already being punished for low-level drug offenses.

As previously mentioned, one policy that has often been proposed to mitigate some of the effects of the War on Drugs is the complete legalization of marijuana. The legalization of marijuana would perhaps lower the disproportionately high number of Blacks arrested for marijuana use and therefore prevent many of the disadvantageous impacts of arrest and incarceration on Black communities. Though marijuana decriminalization has been proposed and implemented in many localities, marijuana legalization would conceivably be more effective at reducing the racial disparities of the War on Drugs than marijuana decriminalization. When marijuana was decriminalized in Massachusetts, the total number of arrests for possessing marijuana fell, but the racial disparities in marijuana arrests did not change at all in Massachusetts (Matthews, 2013). While marijuana was decriminalized at the end of 2008, Blacks were arrested for possessing marijuana in 2009 at a rate that was 5.4 times the rate of Whites in Massachusetts (Matthews, 2013). The failure of marijuana decriminalization to ameliorate the racial biases of the criminal justice system in Massachusetts suggests that the complete legalization of marijuana is more likely to mitigate the racial effects of drug policy. According to Alexander (2012), the complete legalization of marijuana needs to be the first reform to end the racial discrepancies in the criminal justice system.

Linked Fate and the Case for Black Support of Marijuana Legalization

Black Americans tend to participate politically in a unified and cohesive manner. Blacks consider politics based on group interests, determining if a particular policy is positive or negative for their entire racial group. Political scientist Michael Dawson's (1994) theory of "linked fate" suggests that as long as race is the primary determinant of the lives of Blacks in America, the political interests of Blacks will

be bound by race and they will maintain high levels of political unity irrespective of socioeconomic differences. In 2016, for example, 88% of Black Americans voted for Hillary Clinton for President, the largest percentage of any racial or ethnic group voting for a particular candidate (Tyson & Maniam, 2016). Additionally, since 1980, Blacks have supported Democratic candidates in presidential and congressional elections with an average of 88% of support (Tyson & Maniam, 2016).

Blacks not only show unity electorally, but also in their support for individual political positions, and specifically policies related to race. A Pew Research Center survey from 2013, for example, concluded that 70% of Blacks believed the criminal justice system needed to be reformed (Anderson, 2014). According to Dawson, Black American political behavior adheres to “the Black utility heuristic,” or the view among Blacks that their personal utility is ultimately tied to the success of Black Americans as a whole (Dawson, 1994). Since one’s racial identity as Black has been so “linked” to the social and economic status of all Black Americans throughout American history, it is rational for Blacks to perceive whether particular policies or political candidates will be beneficial by considering whether they provide utility for their entire race (Dawson, 1994). Institutions in Black American communities, such as the Black church and civil rights organizations like the NAACP, also often mobilize Blacks to recognize their linked fate and utilize the Black utility heuristic in acting politically. In order to best advance group interests, leaders from these organizations grant important cues to Black Americans about who to vote for and which policies to support (Dawson, 1994).

In recognizing the disproportionately negative impacts of the War on Drugs and specifically marijuana laws on Black Americans, one would presume that the Black utility heuristic would compel Blacks to deem that the legalization of marijuana would be beneficial for their group interests and overwhelmingly support marijuana legalization. Though only 59% of Black Americans currently support the legalization of marijuana, I believe that the explicit reasons that Blacks have for supporting marijuana legalization are based on their conception of racial group interests related to the criminal justice system. Katherine Tate (2014) reasons that for Black Americans, “the legalization of marijuana today is linked to Black demands for racial justice.” Indeed, leaders of prominent Black American institutions, such as the president of the California NAACP, have openly demanded the legalization of marijuana as a means to diminish the frightening level of Blacks arrested for drug possession (Tate, 2014). While actual levels of support for

marijuana may not differ among Whites and Blacks, Tate argues that marijuana legalization is a racialized issue, and consequently, Blacks have been found to maintain more polarized views about legalization than other groups.

Among Black Americans, there are clear divisions regarding racism that likely impact opinions regarding marijuana legalization. Tate's research concluded that over 30% of Black Americans agreed with a racially antagonistic statement arguing that Blacks maintain a poor work ethic, and that the same proportion of Blacks who held this viewpoint also opposed the legalization of marijuana. Additionally, Tate found that Blacks who believed that the American criminal justice system was too harsh were more likely to support marijuana legalization. As marijuana legalization becomes elevated as a racial justice issue, support for marijuana legalization has increased in the Black community to an all-time high (Tate, 2014). Such conclusions suggest that Black Americans consider policies legalizing marijuana based on their conceptions of linked fate and a desire to promote group interests. The previous scholarship on Black American political group interests and the War on Drugs leads to the following hypothesis:

Hypothesis 1: Black Americans support marijuana legalization based primarily on a recognition of group interests and the realization that legalization would mitigate the racist effects of the War on Drugs and only disapprove of legalization because of a lack of thinking about the racial implications of legalization.

The Basis for White Public Opinion on Marijuana Legalization

Unlike Black Americans, White Americans have begun to support marijuana legalization in higher numbers as legalization has been increasingly framed as a civil liberties issue rather than a racial justice issue. Before the 1970s, Whites overwhelmingly denounced marijuana users as being outside society's mainstream (Musgrave & Wilcox, 2014). With the advent of the countercultural movement in the 1970s, many middle-class Whites began using the drug and public opinion for legalization increased (Musgrave & Wilcox, 2014). However, just as the War on Drugs strengthened in the 1980s, conservative activists successfully portrayed marijuana use as a vicious threat to "law-and-order" and public opinion for legalization accordingly decreased dramatically among White Americans (Musgrave & Wilcox, 2014).

Since the mid-1990s, however, support for marijuana legalization has steadily increased among White Americans. As mainstream culture downplays marijuana's role in threatening law-and-order and instead highlights the benign effects of marijuana and accepts marijuana use as a personal choice, White Americans have increasingly supported legalization (Musgrave & Wilcox, 2014). According to a 2014 Survey from the Pew Research Center, the most cited reasons for supporting the legalization of marijuana among White Americans are its medicinal benefits and harmless nature (Smith, 2015). Whites also oppose legalization because it poses a danger to society through increasing drug abuse and harming the country's youth (Smith, 2015). White Americans have chosen to support marijuana legalization based on their individual notions of free will and personal choice. Paul Musgrave and Clyde Wilcox (2014) caution that since marijuana legalization is increasingly framed today as a racial justice issue instead of a personal liberty issue, White public opinion for legalization of marijuana might very well decline. Musgrave and Wilcox's analysis further indicates that views on marijuana legalization are racialized and thus, an individual's reasons for supporting or disapproving of legalization is closely aligned with their racial identity. An analysis of the previous scholarship on White Americans views on legalization leads to the following hypothesis:

Hypothesis 2: White Americans support marijuana legalization based on more typical reasons related to personal freedom and knowledge of the drug's benign effects, but disapprove of legalization because of fears related to drug abuse and the dangers of marijuana.

Methods

In analyzing whether the War on Drugs has created a racialized divide on support for marijuana legalization, I conducted seven qualitative interviews asking individuals about their views of marijuana legalization. Three of the individuals identified themselves as Black Americans and four of the individuals identified themselves as White. In an attempt to conduct a research study that controlled for age and regional variation, all of the study's participants were over the age of 35 and resided in the Northeast region of the United States. In order to allow for the possibility of study participants disapproving of marijuana legalization, the study only interviewed individuals over the age of 35. Public opinion research suggests

that upwards of 70% of Americans under 35 support marijuana legalization (Geiger, 2016). Participants were selected via snowball sampling as informants with whom contact had already been made utilized their social networks to refer other people who could potentially participate.

Each of the interviews took place over the phone in March and April 2017. The interviews lasted approximately thirty minutes. Participants were initially asked basic demographic questions, their position on the legalization of marijuana, and their reasons for approving or disapproving of legalization. Participants were also asked whether they had used marijuana themselves. In order to ascertain knowledge about the racial effects of the War on Drugs, participants were asked about whether they or someone they know had gotten in trouble for drug use or been involved in the criminal justice system. Additionally, participants were asked about their views regarding the fairness of the criminal justice system and what role race played in the criminal justice system.³

The interviews were semi-structured in nature. Participants were asked follow-up questions that deviated from the list of specific questions when more information was needed to determine their opinions. In the following sections of the paper, the seven participants are identified by letter, such as “Participant A.”

Results

White Disapproval for Marijuana Legalization Laws

Two of the White individuals interviewed indicated stark disapproval of laws legalizing marijuana. One of the White individuals, Participant A, is a 69-year-old small-business owner who lives in a well-off suburb of Philadelphia. Participant A does not support marijuana legalization because he believes marijuana is a gateway drug that leads individuals to become addicted to more dangerous drugs. He fears that marijuana legalization will eventually cause greater numbers of individuals to try more addictive drugs, such as opioids, and become addicted to those drugs. Further, Participant A fears that marijuana legalization will allow younger individuals who do not currently have access to marijuana to gain access to the drug because it will be more readily available. When trying marijuana during college, Participant A did not enjoy the drug’s effects on himself and therefore believes that there is no societal benefit for individuals to use marijuana recreationally.

³ See Appendix A for a list of specific questions asked of study participants.

Participant B is a 53-year-old White woman from a wealthy suburb in Bergen County, New Jersey, but she grew up in Colorado and has never smoked marijuana. She disapproves of the legalization of marijuana because she believes it is a much more dangerous drug than proponents let on, and feels that the negative consequences of the drug will fall disproportionately on the youth in states like Colorado that have already legalized marijuana. Like Participant A, Participant B is nervous that marijuana legalization will make the drug much more readily available to young people. She fears that if marijuana is legalized, children will mistakenly eat edible marijuana products. When her daughter thought about attending the University of Colorado (Participant B's alma mater), she advised her not to attend partially out of a fear that she would be in an environment with easy access to legalized marijuana.

Both Participant A and Participant B believe that the criminal justice system and the enforcement of drug laws are conducted fairly for the most part. When asked about the racial biases of the country's criminal justice system, Participant A and B both argued that socioeconomic status accounts more for the criminal justice system's unjustness than race because wealthier individuals have access to better legal representation and their communities are targeted by the police less so than poorer communities. While Participant B did not know anyone arrested for drug use, Participant A does. Participant A's son was found smoking marijuana in their suburban community by a police officer, but was released at the police station and received no penalty. Participant A also has a relative who was arrested for transporting marijuana across state lines and incarcerated for 36 months in federal prison. When reminded that marijuana legalization would have kept his relative out of federal prison, Participant A was unmoved. He believes in the notion of "law-and-order" and thinks that his relative was rightfully incarcerated for dealing marijuana across state lines.

Interestingly, both Participant A and Participant B supported the legalization of medical marijuana because they recognize that research supports its use to alleviate the effects of diseases and other medical conditions, specifically to mitigate pain.

White Support for Marijuana Legalization Laws

Two of the White individuals that were interviewed indicated support for marijuana legalization laws based on notions of personal liberty. Participant C is a 58-year-old who lives in New Jersey, but works in finance in New York City and approves of marijuana legalization because he believes its dangers are equal to that of

alcohol. Like alcohol, he believes that individuals should have the freedom to decide whether or not to use marijuana without state intrusion. Participant D is a stay-at-home mother in Long Island, New York, who also approves of marijuana legalization because of its benign, stress-relieving effects. Since research suggests that marijuana does not pose health risks, and instead has medicinal benefits, Participant D thinks that individuals should have the personal choice to use marijuana if they wish.

Both Participant C and Participant D did not know anyone who has gotten in trouble for drug use or who has been arrested for any crime. While both participants acknowledge that the criminal justice system is not the most just system, they think that it is relatively fair. Like Participants A and B, Participant D said that socioeconomic differences are likely the major cause of disparities in the criminal justice system rather than race and that she does not think race impacts the enforcement of drug laws. Participant C acknowledged that poorer individuals and racial minorities are likely worse-off in the criminal justice system, but when asked whether their disparate treatment impacted his view of marijuana legalization, he said it did not.

Black Support for Marijuana Legalization Laws

All three Black individuals who were interviewed as part of the study indicated support for laws legalizing marijuana. Participant E is a 51-year-old Black male living in the relatively working-class city of Plainfield, New Jersey. His highest level of education is high school; he works as a building manager in the Bronx. Though he was initially hesitant to acknowledge his support for legalizing marijuana, Participant E said he strongly favors marijuana legalization after being asked whether race plays a role in the enforcement of drug laws, including marijuana possession. Participant E acknowledges that Black Americans are almost certainly arrested more often than Whites for drug use and that the legalization of marijuana would likely lower the number of Black Americans arrested and involved in the criminal justice system. He believes that the disproportionate arrest and incarceration of Black Americans for drug crimes tarnishes entire neighborhoods and that marijuana legalization would also likely ameliorate some of the negative effects of the criminal justice system on neighborhoods like the one he works in. Like Participant C, he also thinks that marijuana is no more dangerous than alcohol, and thus should be legalized. Further, Participant E argues that legalization would allow the government to check marijuana for quality assurance before it is distributed instead of allowing it to be tampered with in the underground market.

Participant F is a 65-year-old Black woman who lives in the South Bronx and works as an HIV support counselor. She thinks that police officers disproportionately target Black males for smoking and dealing marijuana where she lives, and that the legalization of marijuana would lessen the number of Black Americans arrested for drug use. Like Participants C and E, she finds marijuana to be no more dangerous than alcohol and thinks people should have the freedom to decide whether or not to use marijuana, just as they do with alcohol.

Participant G is a 50-year-old Black woman who works as a criminal defense attorney and lives in Manhattan, New York. She approves of marijuana legalization because she thinks people should have the right to use marijuana if they wish, and that legalization will create business opportunities and increase tax revenues. Additionally, from her experience as a criminal lawyer, Participant G knows that Blacks are arrested for smoking marijuana at much higher rates than Whites, and hopes that legalization will ameliorate some of the racial discrepancies in the criminal justice system.

Participants E, F, and G all believe that the criminal justice system in this country is systematically unjust. They acknowledge statistics about the disproportionate number of Black Americans and other minorities arrested by the police and the racialized disparities in incarceration. In her view as a lawyer, Participant G believes that the criminal justice system is extremely corrupt because it only sees individuals' race. She believes that the criminal justice system gives White people the benefit of the doubt irrespective of the crimes they are accused of. On the other hand, she finds that regardless of their socioeconomic status, Black Americans are treated disproportionately worse by police officers and other actors in the criminal justice system, such as prosecutors. When asked about the enforcement of drug laws, Participant G said that she knows from her personal experience as a lawyer that NYPD police officers regularly stop and frisk Black Americans for drug possession, but never stop and frisk Whites. She described examples of Black middle school children being stopped and frisked even though the NYPD's "stop and frisk" practice was deemed unconstitutional.

After being asked about personal experiences with the criminal justice system, Participant E shared a distinct incident from when he was 13 years old. While walking home from school one day, he was stopped by a police officer. The officer accused Participant E of robbing a dry-cleaners in the area and pulled his gun on him. When Participant E told his school's principal, the school inquired about the incident and the police department denied that it had occurred. Similarly, Participant F says that she continuously sees members of her neighborhood racially

profiled by the police. While she sees many Black Americans getting arrested for drinking alcohol out of open containers in her neighborhood, she lives near Yankee Stadium and says that White fans who drink alcohol in open containers are never arrested. Participant F shared a personal experience about her granddaughter, who was pulled over by a police officer a week earlier while driving with her friends in Westchester, New York. The officer claimed that her granddaughter had something wrong with her taillight, but her granddaughter knew that there was nothing wrong with her taillight. According to Participant F, her granddaughter was undeniably pulled over because she was Black and driving in a predominantly White area.

Discussion

The seven qualitative interviews indicate a clear racial divide on support for the legalization of marijuana. While the survey data from the Pew Research Center and the views expressed in the seven interviews do not indicate substantial differences between White Americans and Black Americans on their specific support or disapproval of marijuana legalization, there do appear to be differences among White and Black Americans in their explicit reasons for supporting the legalization of marijuana. Though the study's four white participants (Participants A-D) differed in their views regarding legalization, they all expressed disapproval or approval of legalization based on opinions regarding drug abuse or personal freedom, respectively, and did not consider the racial disparities in the criminal justice system. On the other hand, the study's three Black participants (Participants E-G) all expressed support for marijuana legalization based on their beliefs of racial disparities in the criminal justice system in conjunction with their attitudes regarding personal freedom. While it is unclear if the study's Black participants recognize the racist intent of drug laws evoked by President Nixon's "law-and-order" campaign, the Black participants do recognize the racist effects of drug laws, and appear to support legalization in order to alleviate those effects.

While the study did not include any Black individuals who disapproved of marijuana legalization, two of the study's White participants (Participants A and B) disapprove of marijuana legalization. Though it is important to note that two individuals are hardly a large enough of sample size to draw wide-sweeping conclusions, since both Participants A and B disapprove of marijuana legalization out of fears related to drug abuse and the drug's dangerous effects on society, my hypothesis regarding the reasons for White disapproval of marijuana legalization is largely confirmed. Participant A disapproves of legalization out of a fear that marijuana allows individuals to become addicted to more harmful drugs and

Participant B disapproves out of a fear that the drug will fall into the hands of young people. Both Participant A and Participant B's reasons for disapproval of marijuana legalization are strikingly similar to much of the "law-and-order" rhetoric conservative activists used in establishing the War on Drugs, which cautioned that drugs like marijuana pose dangerous threats to society (Musgrave & Wilcox, 2014, 90). In his interview, Participant A even explicitly says that he believes in the notion of "law-and-order."

Although both the study's White and Black participants who support marijuana legalization point to notions of personal choice and the drug's benign effects as reasons for their support, only the Black participants also indicate that they support marijuana legalization because of a hope that it will mitigate the racist effects of the War on Drugs. Just as White Participant C compared marijuana to alcohol and said that individuals should be free to use marijuana like alcohol, White Participant D indicated that the drug has benign stress-relieving effects and that people should have the freedom to decide whether or not to use it. Similarly, Black participants E-G said that marijuana should be treated like alcohol and that the government should not dictate its use as people have the right to use it without government intrusion if they wish. However, each of the Black American participants also explicitly discussed the racial biases in arresting individuals for marijuana use in explaining their support for legalizing marijuana. Participant E said that since Blacks are arrested more often than Whites for marijuana, legalization would hopefully lower the number of Blacks involved in the criminal justice system. Likewise, Participant F mentioned the disproportionate number of Black males arrested for drug use in her neighborhood and that she thought legalization would lower the number of Blacks arrested. Finally, Participant G acknowledged that legalization would hopefully mitigate some of the criminal justice system's racial discrepancies in arrest levels.

My hypotheses regarding the reasons for White and Black support for marijuana are therefore largely confirmed. As I hypothesized, the study's White participants support marijuana legalization solely as a consequence of notions related to personal freedom. On the other hand, the study's Black participants support marijuana legalization due to a recognition of the racialized enforcement of drug laws. However, it is not entirely clear whether the knowledge of the racial bias in the enforcement of marijuana laws is the only reason that the study's Black participants support marijuana legalization as they all additionally discuss the personal freedom argument in their interviews. Regardless, since only the Black participants mention the ability for marijuana laws to mitigate biases in the criminal

justice system, it appears that a knowledge of racial group interests impacted the Black participants' development of support for marijuana legalization.

The differences in the White and Black study participants' opinions on the criminal justice system also suggest that each group's genesis of marijuana legalization views differ because of dissimilar experiences with the criminal justice system. All of the study's White participants argued that the criminal justice system is relatively fair or that its unfairness results from socioeconomic differences rather than racial biases. On the other hand, all of the study's Black participants expressed beliefs that the criminal justice system is significantly unjust and that its unjustness arises from racial prejudices. While only one of the White participants has a relative who has been involved with the criminal justice system, all of the study's Black participants have either been involved with the criminal justice or have relatives that have been. The study's Black participants have all also witnessed instances of police bias towards the Black American community. For the study's Black participants, it appears that the War on Drugs and a racist criminal justice system are aspects of daily life. The study's Black participants have a vested interest in believing marijuana legalization will alleviate some of the unjustness of the criminal justice system because they have witnessed the system's injustice. Conversely, the study's White participants have no reason to think that marijuana legalization will reduce racial biases in the criminal justice system because they either do not believe the system is racially discriminatory, or if they do believe it is discriminatory, they have not directly been impacted by its discrimination.

While each of the study's Black participants have neither been arrested for drug use themselves nor had family members arrested for drug use, they have all witnessed the racial inconsistencies in the enforcement of marijuana laws. Each of the individuals acknowledged beliefs that Blacks are stopped and arrested more often for marijuana possession or use than Whites. Additionally, although the Black participants did not specifically describe the effects of the War on Drugs in creating a host of problems for Black communities in their interviews, they all believe that the criminal justice system in the country treats Black American communities unjustly. Indeed, each of the study's Black participants specifically mentioned instances where either they themselves, members of their family, or members of their community have been racially profiled by police officers. Therefore, the study's Black participants utilized conceptions of group interests and linked fate in generating their views regarding marijuana legalization. Since the study's Black participants explicitly mentioned that marijuana legalization would be beneficial for Black American communities in lowering the number of Blacks arrested, the

participants made use of Dawson's Black utility heuristic—the belief that their utility as individuals correlates with the utility of all Black Americans—in deciding to support marijuana legalization.

Although the seven study participants are certainly not a representative sample of White Americans and Black Americans, their interviews provide genuine evidence of the reasons for White and Black Americans' views regarding marijuana legalization. The interviews preliminarily suggest that Black Americans support marijuana legalization because of linked fate beliefs related to the racial effects of the War on Drugs. Future research should study a much larger sample of White and Black Americans in ascertaining opinions related to marijuana legalization with quantitative analyses.

Appendix A

Questions Asked of Study Participants

Demographic Questions

- What is your age?
- Where were you born? Where do you live now?
- What is your occupation?
- What is the highest level of education you completed?

Research Questions

- Do you approve or disapprove of marijuana legalization? Why do you hold that particular viewpoint?
- Do you approve or disapprove of the legalization of medical marijuana?
- Have you smoked marijuana? How does that impact your view of legalization?
- Have you or someone you know closely gotten in trouble for drug use?
- Do you think the criminal justice system in this country is fair or not?
- Have you or members of your family or close social circle been involved in the criminal justice system? How does your answer to question impact your views on marijuana legalization?
- What factor do you think race plays in the criminal justice system, particularly in the enforcement of drug laws such as smoking marijuana?
- Do you think Black Americans are more prone to being arrested for drug use than Whites?
- Do you support or disapprove of the legalization of other recreational drugs?

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MIGUEL DE UNAMUNO: THE RELATIONSHIP AMONG WOMEN, HIS LIFE, SPANISH SOCIETY AND EL MARQUÉS DE LUMBRÍA

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MENTOR: STEPHEN HESSEL

Twentieth century Spain was characterized by social change with respect to the role of women in society. The feminist movement during this period attempted to obtain for women a role outside of the home, and one more involved in matters of public life. One author whose works were published in this environment of social change was Miguel de Unamuno. His ideology, which was influenced by the women in his own life, criticized the change, although it was not against all aspects of the movement. Unamuno's complicated philosophy can be seen in his writings, for example in *El Marqués de Lumbría*. In this work, the author uses the three main characters, Carolina, Luisa, and Tristán, and their distinct characteristics, which are divided according to gender, to demonstrate his opinion that women could have more power, but at the expense of the men in Spanish society.

One factor that influenced Unamuno's beliefs about women in society was his relationship with the women in his life. From a young age, his world was dominated by women, since his father died before Unamuno was six years old. The death of Unamuno's father during the author's childhood meant that he grew up in a household headed by his mother (Pérez 622). Unamuno himself described his mother as “una señora tan severa en el cuerpo como en el espíritu, alta, seca, de ternura envuelta en dureza, y la ausencia de manifestaciones efusivas de amor maternal es posible que contribuyese a mantenerme de niño en cierto modo ausente y alejado de la feminidad” (Sandoval Ullán 29). Despite this coldness, he was very attached to his mother (Pérez 622) and his relationship with her influenced both his beliefs about how women in society should be, and later his portrayal of them in his work *El Marqués de Lumbría*.

Another woman who influenced his works, and perhaps whose influence was even more important in Unamuno's life, was his wife, Concepcion “Concha” Lizárraga. The couple met during the writer's adolescence and later married. Unamuno saw Concha as “a serene, healthy, warm spirit in a world of stupidity, selfishness, and routine,” and also someone who was able to “provide a refuge from

the nonsense all around him and refreshment from the arduous tasks that lay ahead” (Nozick 23). For example, Concha provided refuge for her husband when the author suffered existential crises. During one of his episodes, while he was crying intensely, Concha embraced him and cried out, “¡Hijo mío!” (Pérez 622). Despite her influential presence in Unamuno’s life, however, Concha always remained in the background, although Unamuno did call her “Concha, mi costumbre” (Nozick 23). In this way, the author showed his great admiration for her.

The relationships Unamuno had with the two principal women in his life are what formed his philosophy that woman equates to mother, a fairly traditional role. When one has a strong maternal figure in life, many times it causes the love of every other woman to be seen as maternal as well (Pérez 622). For this reason, the feminine identity is replaced with maternal identity. This inability to distinguish between the feminine and the maternal typifies Unamuno’s relationship with his wife. Unamuno glorified her, and along with calling her “su costumbre,” he also called her his “esposa-madre” (Pérez 622). Through this nickname, it can be seen that, to Unamuno, the two types of love were the same. It can also be seen that he could not differentiate the role of Concha as a wife and only a mother in relation to their children. Unamuno himself was one of her children, which Concha recognized and highlighted by what she called him during the author’s existential crisis.

Unamuno’s personal belief that women are mothers converted itself into his opinion about women in Spanish society: that they should also have traditional roles and stay “in the background,” the same as his wife Concha. He wrote: “Una mujer puede ser fiel, y amante esposa, muy ama de casa, muy señora de su hogar, muy devota de sus hijos y ser, sin embargo, una muy imperfecta ciudadana y un elemento de estancación social” (qtd. in Sandoval Ullán 43). These words show that the author believed being a woman and being a mother were equivalent, as well his belief that all the things a woman should do were to be based on her antiquated role. He also offered something that women should not do because of their traditional role: involve themselves in public life, because in his view, their qualities did not allow them to contribute to life outside of the home.

According to Unamuno’s ideology, a woman also should not vocalize her opinion. In fact, “la mujer debe estar callada, debe hacer lo que el *hombre* de la casa diga y hará lo que él le mandé. Además, habrá tantos hijos como el semental, es decir, el hombre, quiera, porque la mujer es un simple recipiente” (Sandoval Ullán 45). From this, it can be clearly seen that the domestic work of women was not valued as much as men’s work. Because their work was not valued, women

were not afforded the same right as men to make decisions. From this philosophy, it is evident that male dominance was part of Unamuno's ideology, one which prescribed a submissive role for women.

Additionally, Unamuno once wrote, “Lo femenino tiene más su campo de acción en la esfera privada y doméstica – en la domesticidad –, pero no en la civilización, que es la civilidad, la vida civil. Esta vida civil tiene orígenes militares y una constitución política, y la milicia es masculina y masculina es la política. La mujer no ha sido ni guerrera ni ciudadana” (qtd. in Sandoval Ullán 47). Again, the author writes about his idea that women should remain in their homes and retain their traditional functions, not functions outside of the home. He affirms that the domestic role of women is rooted in the fact that women's characteristics make them more suitable for a life dedicated to housework and the family instead of participation in the social sphere of Spain during this period.

Between 1898 and 1936, Spanish society was characterized by a feeling of uncertainty because of the perception that the nation was at a turning point with regard to the definition of the people's identity. There was a lack of cohesiveness in the public's concept of what the nation should be, which caused the various conceptualizations of what Spain should be like to clash. These at-odds ideals included conservatism versus liberalism and traditional values versus modern thinking, as well as ideas surrounding urbanization and governance. Additionally, the Basque, Catalanian, and Galician regions were looking to change their relationship with the central government of Spain, vying for increased independence. Due to the presence of the ideologies, agendas, and movements associated with these concepts, Spanish society was divided and tense (Paredes Méndez 467). But these concepts were not the only ones that had Spanish society in disagreement.

Another point of contention during this period, dubbed the “Second Spanish Golden Age,” had to do with the traditional beliefs about the role of women in society, which according to Antonio Sandoval Ullán “estaban en contra del progreso de la mujer, de su desarrollo” (44). Despite the established societal norm, women were fighting for their rights to contribute to society outside of their homes. The feminist movement in Spain during the beginning of the twentieth century focused on gaining more civil and social rights for women, specifically with respect to education (Leggott 36). During this time, various organizations fought for those rights, for example la Asociación Nacional de Mujeres Españolas. This organization worked to obtain the right to vote for women; to improve their economic and social situations by increasing educational and professional

opportunities; and to end the discrimination against married women in the workforce. Additionally, there were the organizations headed by writer and feminist Carmen de Burgos, the Liga Internacional de Mujeres Ibéricas e Hispanoamericanas and the Cruzada de Mujeres Españolas (Leggott 37). With organizations and people like these present at the same time Unamuno was writing and spreading his beliefs about women, obviously there was tension over which ideas would prevail.

Unamuno's philosophy was in line with the norms of society during this period. The ideology in the beginning of the twentieth century was that a woman had to be *la perfecta casada* and *un ángel del hogar*. These ideals, as well as the ideology of Unamuno, held that women were destined to be domestic beings and mothers, and that marriage and motherhood were key to their cultural identities. The role of *la perfecta casada* was to maintain the home, but the status that this role carried did not have as much importance during this century as it had had before. The ideal of the *ángel del hogar* is characterized by the idea that women belong within the home by nature, and additionally, that a woman who dares to cross the boundary between domestic life and the public sphere would be dishonored. The archetype of a woman who represents the *ángel del hogar* is described in this way: “The ideal woman is ultimately defined... by the space which she occupies. The frontier of her existence as a virtuous woman begins and ends at her doorstep” (Leggott 31). This portrayal of how a Spanish woman should have been during the twentieth century was represented in the beliefs of Unamuno, who thought that the traditional roles of women should be retained.

However, that Unamuno had this philosophy about women in society did not mean he was against the feminist movement. What the author did not agree with was that “las mujeres luchan con las mismas armas que los hombres” (Sandoval Ullán 47). He showed his disdain for the use of masculine tools by women when he wrote, “Lo peor que encuentro en ese movimiento que se llama femenino es que las mujeres que se dejan arrastrar por él protestan de los hombres en hombre y no mujer y pretenden oponerse a sus evidentes abusos y brutalidades con armas masculinas, hechas por hombres y para hombres” (qtd. Sandoval Ullán 47). For Unamuno, women had to find their own ways of obtaining change instead of using the same methods as men, since their movement had the goal of liberating women from the control of men. Although Unamuno had this opinion, he gave lectures at the Lyceum Club, an organization for women that aimed to “defend the moral and material interests of women” (Leggott 39). His participation in the

organization demonstrates that his doubts were about how women were fighting for their rights, not with the feminist movement itself.

One work that Unamuno wrote in the midst of the growing fight for women's rights was *El Marqués de Lumbría*, published in 1920. Its main characters are sisters Carolina and Luisa, who dominate the main male character, Tristán. Throughout the book's plot, both sisters demonstrate their power over the man. Luisa, Tristán's first wife, shows her power directly in a conversation she has with her husband after their child is born. Tristán says, "Si volviésemos a poner flores en tu balcón, Luisa," to which she replies, "Aquí no hay más flor que el marqués" (Paredes Méndez 478). Luisa has the last word in this short conversation because she refuses to listen to her husband. Her reaction to Tristán's suggestion is an example of how she is the one with the power to decide what will happen in her house, and that what she says is more important.

Additionally, the conversation the two have before Luisa dies is also an example of how she dominates him. First, Luisa gives Tristán orders about what to do following her death. She says that he must take care of and sacrifice for the marqués (Paredes Méndez 478). Then, Tristán asks her a question: whether she forgives him. It is inferred that this question is in reference to the relationship he has with her older sister before marrying Luisa. That he asks her this question also demonstrates how Luisa has the power in the relationship. Questions are only posed to those who have the power to answer, and whose answers are respected and viewed as legitimate. For those reasons, the conversation on Luisa's death bed is another example of her power over Tristán.

Another woman who dominates Tristán is Carolina. First, she imposes her will when she returns home as Tristán's wife and demands that the house's coat of arms be uncovered, which was against what her husband, as well as her father, wanted. Although her husband does not want her to uncover it and protests a bit, Carolina does not listen to him and does what she wants, because his desires are not important, and the person who makes the decisions in the relationship is the woman, this time Carolina. Then, when she insists that the child she has with Tristán is the real marqués, Tristán does not agree, but she does not care and her child becomes the marqués. Additionally, she initiates their relationship, and she tells her husband that she is the one who seduced him, that it was not the reverse, which shows that Carolina also controls the relationship sexually as well.

In contrast to the strong and dominating roles of the female characters in the work, the main male character, Tristán, is portrayed as very weak. During the entire story, he never affirms himself as a husband or a man. He allows his wives to do

whatever they want without debate. He only cries and begs them not to do a certain thing. Also, he is referred to as “el pobre hombre,” and the irony of his name in itself is another example of his weakness (Nozick 153). The tone of the work with regard to him is one of lament, especially the last sentence: “Tristán inclinó la cabeza bajo un peso de siglos” (Paredes Méndez 482). Tristán’s self-esteem is also portrayed as low; in one part of the story, he says to himself, “Soy como una dependencia de la casa, casi un mueble” (Paredes Méndez 478). At one point, he even expresses his desire to cease living: “Sólo me queda prepararme a bien morir” (Paredes Méndez 477).

Tristán is also portrayed as a child in the work. One strong example of this is when Carolina is by his side playing tresillo and says that her husband cannot play by himself, and then gives him little slaps on the cheek (Horowitz 57). Other childlike instances can be seen with how Tristán’s wives (mothers) do not allow him to make decisions or pay attention to his wishes, along with his cries and pleas mimicking those of an upset child.

The difficulty that Tristán has with separating himself from the influence of the women in his life mirrors what happened in Unamuno’s own life with respect to his wife-mother, Concha. Both men were incapable of reaching what is called the “process of masculine individuation” by the Swiss psychologist Carl Gustav Jung (Pérez 622). This process involves the male freeing himself from subordination to the maternal archetype. Being unable to separate themselves, both men remain in an infantile state of psychological dependence on their wife-mothers (Pérez 622). In Tristán’s case, he does not even try to carry out this process. With neither wife is there an attempt to affirm himself as a separate being; both are therefore more like mothers to Tristán because of his inability to distinguish mother from wife, which are subconsciously conflated if the process of masculine individuation is not completed.

Moreover, the power dynamic between the characters has to do with the psychology of the maternal archetype, which forms the base of the mother complex. According to Jung, when this complex causes an exaggeration of the feminine side of a daughter, this exaggeration causes an intensification of all feminine instincts, above all the maternal instinct. This hypertrophy can produce a woman whose only goal is to have children. For this woman, her husband is secondary in importance. He is only an instrument of procreation, and the woman sees him as an object to take care of, the same as the children, the pets, and the furniture of the house (336, 339). This description fits Carolina exactly in the story. Besides using Tristán as an instrument, which according to Jung demonstrates a negative consequence of her

strong motherly instinct, she is also able to use her maternal power over her husband because she reduces him to the role of object, thing, instead of human being or man.

These examples of the weakness and dependence of Tristán, juxtaposed with the power and dominance of the women in the story, show how he, the main male character, “es limitado al papel de instrumento biológico y voluntad” (Spires 201). First, Carolina and Luisa only use Tristán to try to win the competition between themselves – the competition to give birth to the marqués. Being used only for procreation creates a subordinate role for Tristán. Furthermore, during the rest of the story, Tristán is controlled by these dominating women. His inability to liberate himself from their influence, along with his inability to play the part of a strong man and husband, causes Tristán not to have the right to exercise his free will. From his inability to do these two things comes a possible message of the story: that if women leave their traditional roles within the home and begin to have more power, such as being able to make important decisions, men will end up like Tristán, a desperate man without control of his life, reduced to allowing the women in his life to always walk all over him.

Unamuno’s experience with women in his own life had a great impact on how he portrayed the protagonists of his works. Additionally, his own beliefs about women, determined by the women in his personal life, influenced the portrayals of women in his works, as well as his opinions about their role in society. Unamuno wrote amid a social context where the role of women was changing, and the feminist movement also influenced the portrayal of female characters in his works. In *El Marqués de Lumbría*, the author reversed the traditional gender roles of twentieth century Spanish society. In this story, it is the women, Carolina and Luisa, who have the power, and the male, Tristán, who is submissive. From this complicated dynamic comes the portrayal of Carolina and Luisa as dominant wife-mothers and Tristán as childlike and weak. The message of the story seems to be that, just like Tristán, the men of Spanish society would not have a happy ending if they allowed women to have more power than they already did.

USING RANDOM FORESTS TO DESCRIBE EQUITY IN HIGHER EDUCATION: A CRITICAL QUANTITATIVE ANALYSIS OF UTAH'S POSTSECONDARY PIPELINES

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Introduction

The goal of this work is to make a methodological contribution to the study of higher education. The Random Forest (RF) algorithm has proven useful in many fields due to its efficiency and accuracy in making predictions with large datasets (Breiman, 2002). Within the field of education, researchers are increasingly interested in the applications of large-scale, complex information systems (Daniel, 2015). As higher education data become more readily available, machine learning techniques such as RF have the potential to improve our understanding of student enrollment and success. For these reasons, RF is tested against more traditional models, using a state-wide longitudinal dataset. In order to contribute to the existing knowledge-base of higher education research in the United States in general and in Utah in particular, the methodological contributions of this work are grounded within a substantive context. This means that statistical techniques are discussed within the framework of critical quantitative scholarship, with the explicit motive of improving race, class, and gender equity in pathways to higher education. The results and implications of this work should be widely accessible for audiences with statistical, educational, or sociological interests.

Access to postsecondary education is an area of great import, due to the abundance of individual and societal benefits that accompany higher education. In addition to increased civic engagement and health, higher education spurs productivity and opens access to economic mobility (Perna and Swail, 2001). In 2014, those with Bachelor's degrees earned 66% more than those with High School diplomas. For each subsequent education level, median incomes increased significantly (Kena et al., 2016). This is particularly meaningful in the context of social mobility because students from low and high income families who attend the same university have similar economic outcomes (Turner and Treasury, 2017). As a result, those who study education are becoming increasingly interested in access to postsecondary institutions.

While a college education is increasingly important in the global marketplace, state policies and practices are often ineffective at—and in fact discriminatory in—funneling well-qualified students into higher education (Kirst and Venezia, 2004). In order to improve the design of higher education access, it is crucial to dissect and critique the existing process. The following section will outline the racial, economic, and gender nuances of Utah’s higher education pipeline, in addition to reviewing national trends and common metrics for student success. The Introduction continues by situating the discussion within the critical quantitative framework, pointing out research gaps, and finally addressing the expected research contribution.

Race, Class, and Gender Context

Two relentless threats to equity in the U.S. education system are structural racism and class discrimination. The re-segregation of Black and Latinx public school students, combined with the lack of resources in high-poverty, high-racial minority school districts, has contributed to unyielding achievement gaps (Wald and Losen, 2003). Racial segregation is tied to the black-white achievement gap for a variety of reasons, most notably the disparity in poverty rates between black students’ and white students’ schools (Reardon, 2016). Nationally, Black students reside in classrooms where 64% of their classmates are low-income (Frankenberg and Orfield, 2012). Race and class inequities such as unequal access; underrepresentation in Science, Technology, Engineering and Mathematics (STEM) fields (which tend to be the most lucrative); dissimilar retention efforts; and disparate degree attainment continue to plague the mission of higher education (Bensimon and Bishop, 2012). Race gaps in educational opportunity are detrimental not only to students, but to society at large: inferior higher education and STEM pipelines for underrepresented minority (URM) students inevitably hurt U.S. competitiveness in a global market. This problem has been exacerbated by the growing populations of Non-White U.S. citizens (Hurtado, 2007; Chambers, 2009), for despite significant increases in the population of URM citizens, racial diversity at selective, public universities has declined (Garces and Cogburn, 2015). While advances in representation have been made, racial disparities continue to stymie equity in higher education.

Economic barriers to postsecondary education also diminish the integrity of education pipelines. Students whose parents are in the top 1% of the income distribution are roughly 77 times more likely than students whose parents are in the bottom quintile of the income distribution to attend an Ivy League institution

(Chetty et al., 2017). Students from low income families are underrepresented in every section of the education pipeline, and income disparities increase with each subsequent education level after high school (Jacobson and Mokher, 2009). Even controlling for student ability and familial background, neighborhood effects further contribute to students' educational attainment (Garner and Raudenbush, 1991). Lack of financial information often contributes to depressed college enrollment for well-qualified low-income students (Kelchen & Goldrick-Rab, 2015). These gaps are striking in the college application process: Hoxby and Avery (2012) estimate that while high-achieving, high-income students outnumber high-achieving low-income students 2:1 in the general population, the high-income high achievers outnumber their low-income counterparts 15:1 in college applications to selective institutions. In addition to the financial barriers, students from low income families and communities often experience education pipelines and information networks not structured to maximize their academic potential.

Gender barriers in postsecondary education are nuanced: women fare well in terms of access to higher education, but often do not achieve similar outcomes. Nationally, women obtain degrees at higher rates than men. In 2015, half of women aged 25-29 and 41% of men aged 25-29 had completed an Associate's degree or higher, while 39% of women and 32% of men had completed a Bachelor's degree or higher (Kena et al., 2016). However, higher degrees do not translate into similar levels of success across genders. This problem is exaggerated in Utah, where female graduates are dramatically undervalued in the workplace: When compared to similarly qualified individuals, women earn 97% of what men earn nationally, and only 86% of what men earn in Utah. Interestingly, inequality due to different endowments - the gender discrepancy in wages due to measurable education and career differences - is increasing (Miller, 2016). Within the heavily Mormon religious environment of Utah, higher education is deemed by some scholars as a form of embedded resistance for Latter Day Saints (LDS) women to negotiate the patriarchal hegemony (Mihelich and Storrs, 2003). Nevertheless, while women are attaining higher education at historic rates, Utah's pipelines are fraught with inequities that detract from higher education's mission of equal opportunity.

Finally, the influence of tools for measuring academic achievement cannot be over-stated. Although many admissions offices weight the two similarly, High School GPA typically predicts first year college GPA more accurately than standardized test scores (Sawyer, 2013). In addition to being a better predictor of initial student success, High School GPA has been shown to contain less bias against URM students than standardized test scores. In fact, when race and class

are ignored in post-secondary GPA predictive models, their effects are often absorbed into the standardized test component, calling into question the validity of such universal standards (Geiser and Santelices, 2007). Critics of standardized tests claim that test scores reflect Socio-Economic Status (SES) rather than ability, but there does seem to be a strong association between test scores and academic potential. In fact, test scores may predict success at more selective institutions with greater accuracy than High School GPA (Sawyer, 2013; Noble and Sawyer, 2004). When accounting for SES, test scores still are able to explain approximately $\frac{1}{5}$ of the variation in postsecondary grades (Sackett et al., 2009). Goals of this work include interrogating the utility and effectiveness of High School GPA, ACT scores, and AP scores in predicting postsecondary GPA. Additionally, this work seeks to critique the process via which demographic inequities may be reified by each assessment tool.

Critical Quantitative Framework

This work seeks to contribute to the field of critical quantitative inquiry in higher education. A critical perspective advances higher education research by countering false narratives, challenging previous work, and presenting alternative lenses (or methods). Originating from scholars of the Frankfurt School, critical theory focuses on identifying latent power structures and oppressions, and often manifests itself in efforts to change existing hierarchies. The work of critical theorists includes changing the methods used to interpret society as well as changing society itself (Kincheloe, McLaren, and Steinberg, 2012). This section defines the quantitative critical research model and points to the relevance of critical work for this manuscript.

Critical education theory has previously been associated with qualitative studies, which typically focus on presenting alternative social narratives in order to center the experience of marginalized individuals (Stage, 2007). The most important stage of the critical research process is widely considered the interpretation of results; critical scholars often reject notions of objectivity in research (Kincheloe and McLaren, 2002). Many qualitative critical theorists view quantitative work as reductive in nature (Stage, 2007). However, these critics may underestimate the importance of interpretation around statistical results. Statisticians often caution that their methods are not representations of objective reality, but rather a lens through which one can view data. Leo Brieman and Adele Cutler, the authors of the RF algorithm, the primary tool of analysis used in this

project, offer the following warning for consumers looking for objectivity in RF results:

RF is an example of a tool that is useful in doing analyses of scientific data. But the cleverest algorithms are no substitute for human intelligence and knowledge of the data in the problem. Take the output of random forests not as absolute truth, but as smart computer generated guesses that may be helpful in leading to a deeper understanding of the problem.

By providing novel insights through careful analysis rather than seeking objective measures of truth, critical quantitative theorists can add value to current education research. Critical approaches advance the field of education studies by measuring inequities and challenging oppressive narratives which rely on false objectivities. Thus, the quantitative critical theorist will (1) investigate equity of the educational world using data and (2) interrogate the usage of current empirical models in educational studies, in an effort to better represent marginalized groups (Stage, 2007). Advances in statistical algorithms (such as RF) are becoming useful for the quantitative critical scholar. The goals of the quantitative critical theorist, namely documenting inequities and challenging methods for representing those inequities, are increasingly viable due to surges in information and advances in statistical methodology.

Research Gaps

Previous researchers have used techniques such as Hierarchical Generalized Linear Modeling or Multi-level Modeling (Hurtado, 2007; Raudenbush and Bryk, 2002; You and Nguyen, 2012), Structural Equation Modeling (Zajacova, Lynch, and Es-penshade, 2005), Network Analysis (Gerber and Schaefer, 2004), and Data Mining (Slater et al., 2017) to measure educational access and success. A small number of studies have used RF to predict students outcomes in Spanish, Brazilian, British, and Portuguese education systems (Blanch and Aluja, 2013; Cortez and Silva, 2008; Golino and Gomes, 2014; Hardman, Paucar-Caceres, and Fielding, 2013; Golino, Gomes, and Andrade, 2014). However, there is a lack of research examining the U.S. postsecondary system with machine learning techniques such as RF. Top journals such as *Sociology of Education* and *The Journal of Educational and Behavioral Statistics* have yet to publish studies using RF to describe inequality in higher education.

Location is an important factor in the progression to higher education (Turley, 2009). Topics such as racial, gender, and economic inequality in postsecondary education have not been thoroughly investigated for their influence in this process as well, and there is little research on the confluence of such factors in the state of Utah, where cultural processes such as the LDS mission disrupt traditional high school- to-college pipelines. Additionally, there is little quantitative work around higher education and gender in LDS environments, although the existing qualitative work suggests that higher education is a form of resistance for some Mormon women (Mihelich and Storrs, 2003). Simply put, Utah's unique religious and gender context contributes to college-going in multifarious ways, raising important questions of demographic access and equity. The aforementioned traits also make Utah an interesting environment to test novel methods with complex data.

Lastly, the relevance of machine learning in the canon of critical quantitative studies in higher education remains unexplored. The RF framework aligns well with the critical quantitative model of inquiry, which seeks to interrogate both substantive and methodological assumptions. The RF model subverts notions of linearity in effects, allowing for new interpretations of demographic relationships. Both critical scholarship and RF research depend heavily on the interpretation of results. This work challenges assertions that quantitative work is reductive in nature, instead pointing toward similarities in quantitative and critical work, and exemplifying critical interpretations of RF analyses. While there is a growing body of critical quantitative higher education research, and RF is an established method in machine learning, the author is unaware of any previous work that synthesizes these two approaches.

Research Contribution

The goal of this work is to explore the RF algorithm as a method for making predictions in higher education. In this work, methods are tested within the context of race, class, and gender inequalities in higher education. Substantively, this work will further current knowledge on access to postsecondary education systems, with a focus on demographic inequities in the state of Utah. Methodologically, this work compares three quantitative models according to their efficacy in predicting student success. Results are interpreted through a quantitative critical lens. This work adds to a growing body of quantitative research on higher education access. As a non-linear, decision-tree-based, ensemble predictor, the RF model is structurally dissimilar from common prediction models, and offers some unique advantages.

Instead of using distance on an n-dimensional plane to maximize predictive efficacy, RF agglomerates large amounts of split-points. In each tree, a random subset of variables are used to make decisions, allowing the RF algorithm to capture some of the nuances of variable relationships. RF models have proven to be optimal predictors in a wide range of fields such as finance, biology, and chemistry. Given the accuracy, precision, simplicity and benefits of the RF model (Hastie, Tibshirani, and Friedman, 2001), the lack of studies using RF as a tool to predict student success in the U.S. higher education system is surprising.

Following Frances Stage's model of critical quantitative inquiry, the goals of this work are to interrogate both the equity of Utah's education pathways and the methods which are generally used to study higher education pathways. The present research attempts to answer the following questions:

- (1) What inequities in access to higher education for Utah high school students are shown by Random Forest, logistic, and linear models?
- (2) Can Random Forest predict student access success in higher education more accurately than logistic or linear estimators?
- (3) How can the Random Forest algorithm advance quantitative critical higher education scholarship?

This paper is structured in the following manner: data organization, cleaning, and imputations are covered in Section 2. RF, linear, and logistic models are described in section 3. Research questions (1) and (2), which focus on substantial and methodological conclusions, respectively, are covered in Section 4. This work finds that the RF algorithm outperformed the logistic model, performed similarly to linear models, and in some cases offered a more complete understanding of student variables than other models. Finally, Section 5 answers research question (3), focusing on the broader importance of quantitative education studies. RF is considered useful in quantitative critical higher education research because it provides novel interpretations of data, allows for challenges to previous models, and can be used to advance equity.

Data

Source, Structure

Data were obtained from the Utah System of Higher Education, and include information on 43,947 students from the 2008 cohort of Utah high school graduates. Every student who was recorded in a Utah high school as part of this cohort was

included, regardless of actual high school graduation status. Demographic information such as school district, school, gender, race, low income status, mobility, English learner status, migrant status, and special education status was included. Gender was denoted as binary (male/female). Race was divided into ten categories: Caucasian, White not of Hispanic Origin, Black, Asian, Hispanic or Latino, American Indian, Pacific Islander, Multiple Race, and missing. This work is limited by the fact that gender and race categories available are not exhaustive, and do not represent every identity of interest. Low income status was indicated for students who qualify for the National School Lunch Program (free or reduced price lunch) or who have been identified as economically disadvantaged on another measure during their final year of high school enrollment. Mobile status was indicated if a student did not attend the same high school for the entirety of that student's final year of enrollment. Migrant status was indicated if the student has been identified as the child of migratory agricultural workers. Special Education status was indicated if students participated in special education during their final year of high school. The English Language Learner variable indicates whether a student participated in a Limited English Program during their final year of high school. Student achievement information such as Advanced Placement (AP) test scores, ACT test scores, High School GPA, and High School college enrollment was included. ACT test scores are disaggregated by Reading, English, Mathematics, Science and Composite results. Postsecondary information such as Pell Grant eligibility, Pell Grant reception, postsecondary GPA, semester start date, and Classification of Instructional Program (CIP) were also provided for each semester a student was enrolled in an institution of higher education.

Data were received from the Utah Data Alliance, through the National Student Clearinghouse, in four sets, with rows corresponding to student ID, semester, degree, and standardized test result, respectively. In order to test the variety of relationships between student variables provided, data were merged such that each row pertained to one of the 41,303 students. This merged dataset included 186 variables, many of which were ultimately not pertinent to the research question. In figure 1, one can see a visual representation of the data used to measure college pathways. The complexity of using pathways to describe college access is readily ascertained, as many students attend college at different times, take breaks, and graduate on different schedules. For this reason, students may be counted in multiple stages of the pathways. Even so, there is a basic structure to the institutions and opportunities that accessible to students.

Variables Created

Many variables were created in order to summarize the students' higher education experiences. A URM indicator was created based on whether students' race was one of the following categories: Caucasian, White not of Hispanic origin, or Asian, based on previous research on URM students (Hurtado et al., 2009). Semester start dates were sorted from oldest to newest, and Cumulative GPA was created using the most recent GPA result from a student's postsecondary career. Earliest Enrollment was created using the year that each student first enrolled in postsecondary classes. College Semesters in High School was created using the number of postsecondary-level courses that the student took prior to High School graduation. Two college enrollment variables were generated based on the 28,878 unique Person ID values which had college enrollment data: College in High School, indicating whether students had taken postsecondary courses prior to Summer 2008, and College Attainment, indicating whether students had attained college after Spring 2008.

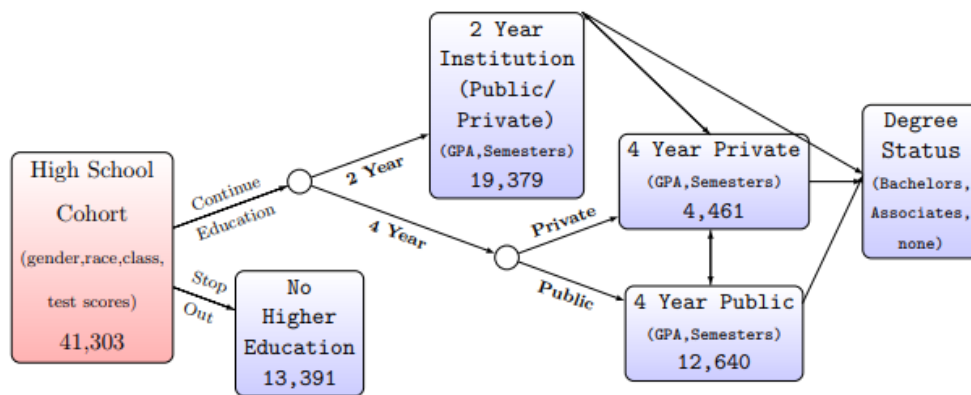


Figure 1. A summary of pathways to higher education for students in the state of Utah; the number of students enrolled in various institutions is indicated (students may transfer, and thus be counted in multiple institutions).

Classification of Instructional Programs (CIP) codes were used to identify STEM majors, based on the U.S. Immigrations and Customs Enforcement STEM-Designated Degree Program List 2012. STEM students were identified based on

the National Center for Education Statistics definition of STEM students, which includes any student who has participated in at least one semester of a STEM major (Chen and Weko, 2009). STEM status was indicated if a student had participated in a STEM major. The creation of STEM status and other variables allowed the researcher to summarize meaningful student information so that it could be incorporated in predictive models.

Missing Data

Missing data is a common problem in education studies. Many items in the present dataset were missing, such as district, school, gender, race, low income status, mobile status, High School GPA, ACT scores, and Pell Grant eligibility. Observations which were missing information for district, school, gender, race, migrant status, mobile status, English learner status, and Special Education status ($n = 2644$) were removed using listwise deletion. This technique refers to the removal of entire rows of data with missing values. Although listwise deletion is typically not recommended in the case of missing data, there was little advantage in keeping cases which had no demographic information. Additionally, cases in which the individual had no High School GPA ($n = 56$) were removed using listwise deletion. Because n is small, in this case 0.15% of the data, such removal is not problematic.

Six Number Summaries: HS GPA						
	Min	1 st Quartile	Median	Mean	3 rd Quartile	Max
Students with ACT	0.000	3.100	3.510	3.387	3.810	4.000
Students without ACT	0.000	1.830	2.430	2.405	3.060	4.000

Table 1. Students without ACT scores are academically different than those with ACT scores.

Many students (44.3% of the 28,878 students who had a record of higher education) were missing ACT scores, likely because they did not take the test. Test scores can be an important predictor of academic success, and in order to utilize this predictor without removing large amounts of data, estimation of missing data was necessary. There is reason to believe that ACT test scores are not missing at random (MAR): students who do not have ACT scores exhibit notable academic differences from their peers. Thus missing data are classified as nonignorable, as

the probability of missing data may depend on the value of the data. In Table 1, one can observe that mean High School GPA for the students who have ACT scores recorded is 3.39, while the mean High School GPA for students who do not have ACT scores is 2.41. It is assumed that any differences in academic fortitude that may change the probability of missing ACT scores can be attributed to changes in GPA and other High School achievement variables. This allows the researcher to proceed with imputation.

Multiple Imputation

Multiple Imputation (MI) was performed using the Amelia package in R to estimate ACT scores and Pell Grant status. One of the assumptions of MI is that the data follow a multivariate normal distribution. If X is an nxq matrix with missing and observed portions, and $\theta = (\mu, \Sigma)$ are mean and covariance parameters, then:

$$(2.1) \quad X \sim N_q(\mu, \Sigma)$$

Although this method works best with multivariate data, MI can also work well with non-normal data (Allison, 2001). The multivariate assumption tends to perform fairly well compared to more complex models, even when data follow other distributions.

Another assumption for MI is that the data are MAR. In this case, it is assumed that the missing status of ACT and Pell Grant Status Variables are dependent on other observed data, such as High School GPA and demographic indicators. Given that M indicates the missing data and X^{obs} are observed data:

$$(2.2) \quad p(M|X) = p(M|X^{obs})$$

After using the Law of Iterated Expectations, and assuming a flat prior on θ , we arrive at the following, where X^{mis} are the actual missing data values.

$$(2.3) \quad p(\theta|X^{obs}) \propto p(X^{obs}|\theta) = \int p(X|\theta)dX^{mis}$$

The Expectation–Maximization (EM) algorithm has been used in previous education studies to estimate missing values (Hurtado et al., 2008). The Amelia package uses EM in combination with bootstrapping in order to find the mode of (2.3) and estimate θ . Then X^{mis} is predicted based on X^{obs} and θ using a linear regression. (For more on Amelia MI specifications, see Honaker, King, and Blackwell, 2011).

The Amelia algorithm was specified such that the range of ACT scores is restricted to 0–36, and the range of Pell Grant statuses is restricted to 0–1. The algorithm achieves this by discarding any estimated values that appear outside of these ranges. Because the estimated parameters of ACT scores and Pell Grant eligibility are discrete, the estimated values were rounded to the nearest integer. The imputations were performed five times. MI estimations generally become more accurate after each iteration is performed (Allison, 2001), so the fifth imputation was used in order to replace missing data.

Methods

Random Forest Background

A myriad of measures related to postsecondary access and success are common in education literature, and still many institutions are unaware of the variables that best predict student progress. While many methods have been used to represent student progression in higher education, a growing body of research seeks to understand this process through large datasets of interrelated variables. RF algorithms are increasingly popular in the prediction of student achievement due to their accuracy and fluency in analyzing large amounts of information (Blanch and Aluja, 2013; Cortez and Silva, 2008; Golino and Gomes, 2014; Hardman, Paucar-Caceres, and Fielding, 2013). Hardman and Paucar-Caceres used RF in order to predict a student's progression in higher education, evaluating indicators for success in a virtual learning environment. RF was promoted for its utility in higher education research in this study due to its efficacy with large datasets (2013). Golino, Gomes, and Andrade (2014) state that RF is of particular interest to the field of educational research due to its ability to identify predictive variables and address the non-linearity in predictive power of individual variables, referring to the partial plot feature of RF. In Golino, Gomes and Andrade's (2014) study predicting the academic success of high school students, RF is commended due to its fluency and lack of assumptions (such as normality, collinearity, homoscedasticity, independence between variables). Additionally, Hardman, Paucar-Caceres, Urquhart, and Fielding use RF to make two contributions to the study of information systems in higher education: (1) defining key variables for university student progression in a VLE and (2) introducing RF as an optimal method for analyzing such information (2010). Variable importance and partial plots are used in order to distinguish critical variables for advancement in the VLE, such as usage time and staff page visits. Of the aforementioned works using RF, all evaluate educational systems outside the United States, and none use RF to critically

interrogate demographic influence. Therefore, the RF model remains relatively unexplored as a tool for describing equity in higher education in the United States.

RF is a powerful prediction tool in fields outside of education. In terms of accuracy, Leo Breiman and Adele Cutler state that the RF algorithm is unexcelled by other modern algorithms (2001). The algorithm does remarkably well in prediction, even without much tuning (Hastie, Tibshirani, and Friedman, 2001). In addition to accuracy, Classification and Regression Trees (CART) such as RF are optimal estimators due to their intuitiveness, fluency and ease of use (Golino and Gomes, 2014). Although RF algorithms were developed in statistics (Breiman et al., 1984) and machine learning (Quinlan, 1993), RF methods have been used effectively to make predictions in a wide range of fields, including systems biology (Geurts, Irrthum, and Wehenkel, 2009), molecular biology (Guerts, Irrthum, & Wehenkel, 2009), ADHD diagnosis (Skogli et al., 2013), medicinal chemistry (Naeem, Hylands, and Barlow, 2012), and finance (Khaidem, Saha, and Dey, 2016). In an influential study of cheminformatics, Svetnik et al. show that RF is among the most accurate predictors available, lauding its features of built-in performance assessment and relative importance measures (2003). A seminal work in gene selection used RF due to its ability to predict despite many variables being noisy (Díaz-Uriarte and De Andres, 2006). Many researchers have used RF algorithms in order to predict credit risk, a field in which misclassification can be costly (Brown and Mues, 2012; Iturriaga and Sanz, 2015; Wang et al., 2011). The use of Random Forest algorithms in diverse and complex fields illustrates the power and utility of the algorithm.

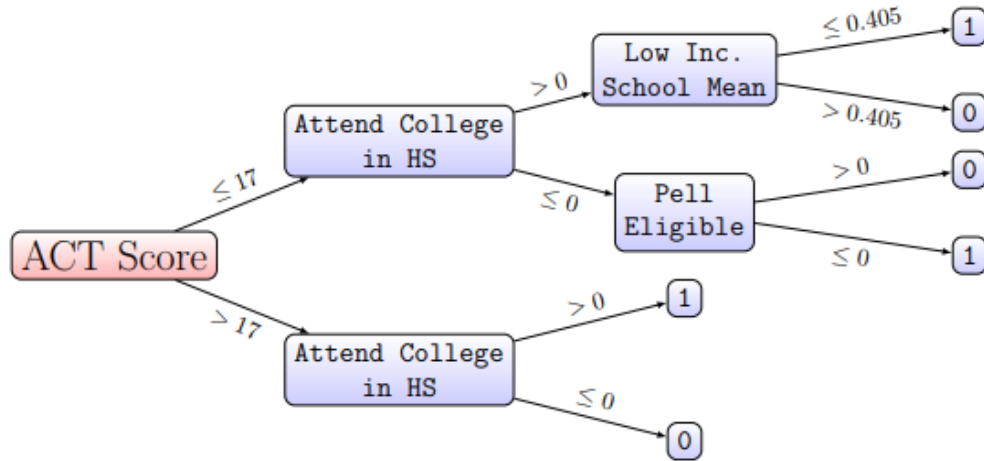


Figure 2. A decision tree using ACT Score, early college attendance, school low-income proportion and Pell eligibility to predict postsecondary enrollment. In the rightmost branches of the tree, 1 refers to a prediction of postsecondary enrollment, whereas 0 refers to a prediction of no enrollment.

The RF regression is an ensemble learning algorithm, similar to methods such as bagging and boosting. Each type of ensemble learning can be used in prediction, involving the aggregation of individual learners (such as trees). The RF model uses random samples of predictor variables to generate many individual decision trees (forests) that are aggregated in order to make a single estimation. While boosting typically dominates bagging, RF performs similarly to boosting and is easier to adjust (Hastie, Tibshirani, and Friedman, 2001). The forest can make estimations for nominal variables (regressions) and continuous variables (classifications). For regression problems, the algorithm uses the average of individual trees; for classification problems, a weighted vote of the decision trees is used (Breiman, 2001). Aggregating over many trees has been shown to produce accurate predictions for large and complex data (Hastie, Tibshirani, and Friedman, 2001). The RF model is ideal for college access data because it performs well with large datasets and has robust algorithms for dealing with missing values (Hardman, Paucar-Caceres, and Fielding, 2013). In addition to its fluency, RF is able to identify the predictive power of variables, and can be used to return decision trees with split points.

The method for obtaining a random forest predictor is as follows:

- (1) Take K bootstrap samples from the training data.
- (2) For each bootstrap sample, grow a random forest tree:
 - (a) Select m_{try} variables at random.
 - (b) Pick the best variable/split point among the m_{try} variables.
 - (c) Split the node into two daughter nodes.
- (3) Repeat step 2 until minimum node size n_{min} is reached
- (4) Predict new data by aggregating predictions from sample trees

Let an ensemble of K trees be represented as $\{T_k\}_1^K$. For a point x , a new prediction is generated as follows:

$$(3.1) \text{ Regression : } \hat{f}_{rf}^K(x) = \frac{1}{K} \sum_{k=1}^K T_k(x)$$

Classification : Given that $\hat{C}_k(x)$ is the class prediction of the k^{th} tree, $\hat{C}_{rf}^K(x)$ is the majority vote of the random forest trees ($\{\hat{C}_k(x)\}_1^K$)

In this work, student outcomes are predicted with an RF decision tree algorithm generated by the Random Forest package using R statistical software (Liaw and Wiener, 2002a).

Tuning

Although the RF algorithm is known for creating accurate predictions without much tuning, and many researchers adhere to the default settings, some education studies have used larger K values for prediction. In their estimation of secondary student performance, Cortez and Silva (2008) compare several Data Mining methods, including RF, which is specified to its default parameters. In Cortez and Silva's study, $K = 1,000$ was used in computing variable importance. Golino, Gomes and Andrade (2014), who also use the random Forest R package, set m_{try} to the default value, but increase K to 10,000. Superby and Meskins (2006), also using R, opt for $K = 800$ trees in their RF analysis of final year achievement in Belgian universities. While $K = 500$ is generally an ample number of trees for prediction purposes, more trees can provide more stable variable importance scores (Breiman and Cutler, 2014). Even so, variable importance rankings are found to be similar despite volatile importance scores (Liaw and Wiener, 2012). In this work $K = 500$ is used for all RF analysis. Figure 3 shows that errors stabilize after 250 trees, so the default setting of $K = 500$ is considered adequate. Additionally, the default value for m_{try} ,

$\frac{p}{3} = \frac{22}{3} = 7$ is used for the number of variables to try at each split point. While tuning of K and m_{try} values was considered, ultimately the default settings were considered adequate for the purposes of this work.

RF Variable Importance, Partial Plots

The RF algorithm can be used evaluate variable importance, a measure of the influence of a particular variable on outcomes of prediction trees. Variable importance is a measure of the increase in Out of Bag (OOB) error, with a permutation of the variable of interest (Liaw and Wiener, 2002b). The OOB error refers to the error of the trees which do not include the variable of interest as a predictor. (Recall that because m_{try} is roughly $\frac{1}{3}$ the total number of predictive variables, roughly $\frac{2}{3}$ of the trees generated will not include the variable of interest).

The partial plot provides a powerful visual representation of the marginal effect a predictor has on the response variable. It allows the researcher to isolate one real-valued variable x and view its partial dependence, $\tilde{f}(x)$. Partial plots are obtained using the average values for all other variables, x_{iC} in order to measure the change in prediction that occurs when the variable of interest, x , is manipulated (Liaw and Wiener, 2012). While the shape of the partial plots and relative scale of the vertical axis are important, the vertical axis values are not meaningful, as results represent change after integration over all other variables (Liaw, 2009). For regression, the change in prediction is measured with the following formula:

$$(3.2) \quad \tilde{f}(x) = \frac{1}{n} \sum_{i=1}^n f(x, x_{iC}),$$

where x is the variable of interest, and x_C is simply the complement of x , such that $x \cup x_C = X$, or every variable in the model (Hastie, Tibshirani, and Friedman, 2001).

Linear Models

Two linear models are used to estimate student success in higher education. The Ordinary Least Squares (OLS) regression method is a common tool in educational and sociological multivariate analysis (Dismuke and Lindrooth, 2006). OLS is a linear estimator that minimizes squared residuals in order to estimate new data. The OLS regression is denoted:

$$(3.3) \quad Y_{ij} = \beta_0 + \sum \beta_j X_{ij} + \epsilon_{ij}$$

such that β are coefficients, X_j represent individual student variables, and ϵ_{ij} are error terms.

The OLS model does not control for groupings in data, such as districts or schools, which have been shown to significantly influence a child's educational trajectory (Burtless, 2011). The Hierarchical Linear Model (HLM) adds new levels of analysis to the linear regression. In this model, coefficients estimated at one level become out-comes at the next level (Raudenbush and Bryk, 1986). The multi-level nature of this model allows one to nest students within schools, and schools within districts. This is helpful in separating the effects of individual characteristics and group characteristics. The nlme package in R was used to perform analysis, using Random Effects (RE) for district- and school-level characteristics and Fixed Effects (FE) for individual-level characteristics. The RE model allows for the estimation of the effects of group-level characteristics, such as racial and socioeconomic composition, and thus is quite popular in the social sciences for measuring higher-order effects. The FE model is based on the assumption that one true effect exists across studies, and thus do not estimate the sampling error variance. Therefore, FE models cannot suffer from heterogeneity bias, and are often used in econometrics to control for individual-level qualities (Bell and Jones, 2015; Snijders and Bosker, 1999). To account for high school-level differences in post-secondary retention and success, a random-intercept model is used where i are students, j are schools, and k are districts. The within-group error, ϵ_{ijk} , between-school error r_{pjk} , and between-district error u_{pqk} , are assumed to be normal such that:

$$\epsilon_{ijk} \sim N(0, \sigma_\epsilon^2), r_{pjk} \sim N(0, T_\beta), \text{ and } u_{pqk} \sim N(0, T_\Theta).$$

Level one:

$$(3.4) \quad y_{ijk} = \beta_{0jk} + \sum_{p=1}^P \beta_{pjk} X_{pjk} + \epsilon_{ijk}$$

Level two:

$$(3.5) \quad \beta_{pjk} = \Theta_{p0k} + \sum_{q=1}^{Q_p} \Theta_{pqk} W_{qjk} + r_{pjk}$$

Level three:

$$(3.6) \quad \Theta_{pqk} = \Theta_{pq0} + \sum_{s=1}^{S_{pq}} \gamma_{pqs} V_{sk} + u_{pqk}$$

W and V represent school- and district-level predictors, respectively (Steiger, 2009).

Logistic Model

The Logistic model is often used to estimate binary outcomes. The Logistic Regression assumes that the binary outcome variable follow a binomial distribution, and can be modeled as a function of the independent variables. The variance of this distribution changes as a result of the observation (Cabrera, 1994). The Logistic model is presented in probabilities, in order to interpret the effect of independent predictor variables on a binary outcome:

$$(3.7) \quad E[Y_i = 1|X = x] = P(y_i = 1)$$

The variance, σ_i^2 , can also be understood probabilistically:

$$(3.8) \quad \sigma_i^2 = P(y_i = 1)(1 - P(y_i = 1))$$

The intercepts and coefficients are estimated by Maximum Likelihood (ML) estimation, which minimizes the error using prior distributions of these variables (Cabrera, 1994). Thus, the predicted probability can be calculated as follows:

$$(3.9) \quad P(Y) = \frac{e^{\beta_0 + \beta_1 X_1}}{1 + e^{\beta_0 + \beta_1 X_1}}$$

In this case, a logistic model is used to predict college attainment. Y_i represents a student’s success (1) or failure (0) to enroll in postsecondary education after Spring 2008. The model is performed using the glm package in R.

Results

In order to assess the accuracy of predictive models, it is appropriate to split data into training and test sets (Breiman, 2001). For the purposes of this study, a random sample of 3,740 data points (10% of viable observations) were selected as test data, and the remainder of the data were used as the training set. After using the training data to specify each model, test set values were predicted. Comparisons between methods are based on the accuracy of predictions for the test data. The tables and figures in this section present the results of linear, logistic, and RF predictions.

It is difficult to directly compare the results of linear and RF regression models. In order to do so, a variety of measures were invoked to gauge the predictive qualities of each. Tables 2 and 4 display the results of OLS and HLM prediction of student success (GPA). The six number summaries (Tables 3 and 5) capture the accuracy of the linear and RF models, depicting measures of centrality and ranges for each model’s estimated values and error terms. Figure 3 represents the success of the RF model in predicting GPA (the average error as trees increase), as well as the importance of each variable to the predictive trees. Figure 4 expands our understanding of each variable’s predictive utility by showing the relationships between value and importance. Figure 5 adds visual context to the six number summaries, presenting a histogram and a density plot of the linear and RF error terms. In figure 6, predicted GPA is mapped onto actual GPA, displaying the variation in predictions for each model. The comparison of enrollment predictors was much more straightforward. Confusion matrices, displaying the number of correct and incorrect classifications, are used in figure 6 to compare the Logistic model and RF model.

Variable	Coef.	Std. Err	t	p> t
(Intercept)***	0.997	0.039	25.863	0.000
Female**	0.029	0.012	2.474	0.013
High School GPA***	0.489	0.011	45.594	0.000
Low Income***	-0.074	0.016	-4.511	0.000
Migrant*	0.513	0.294	1.742	0.081
Special Education	-0.035	0.031	-1.115	0.265

Mobile***	0.039	0.014	2.797	0.005
Limited English	-0.011	0.057	-0.194	0.846
Attend College HS***	0.036	0.003	11.228	0.000
Pell Eligible	0.048	0.040	1.191	0.234
Pell Grant***	0.113	0.041	2.775	0.006
AP Scores > 3***	0.057	0.005	10.761	0.000
URM**	-0.051	0.020	-2.588	0.010
ACT Read	-0.004	0.004	-0.971	0.332
ACT Math**	0.010	0.004	2.373	0.018
ACT English	0.006	0.004	1.389	0.165
ACT Science	-0.003	0.004	-0.653	0.514
ACT Composite	0.004	0.016	0.250	0.803
STEM***	-0.078	0.015	-5.180	0.000
Low Income District	-0.916	0.127	-7.211	0.000
Low Income School Mean	-0.003	0.117	-0.022	0.983
URM District Mean***	1.038	0.138	7.506	0.000
URM School Mean	-0.012	0.121	-0.101	0.919

Table 2. Coefficients for OLS estimation of Postsecondary GPA *=significant at $\alpha = 0.1$, **=significant at $\alpha = 0.05$, ***=significant at $\alpha = 0.01$

Six Number Summaries: GPA Estimation						
	Min	1 st Quartile	Median	Mean	3 rd Quartile	Max
Actual Data	0.029	2.550	3.133	2.952	3.570	4.000
Random Forest	1.115	2.573	2.884	2.921	3.280	3.961
Linear Model	1.346	2.672	2.974	2.933	3.233	4.181
Hierarchical Linear Model	1.228	2.656	2.979	2.930	3.251	4.274

Table 3. The RF estimator outperforms OLS and HLM models in all prediction metrics except mean and median.

Variable	Coef.	Std. Err	DF	t	p> t
(Intercept)***	0.963	0.096	18106	10.055	0.000
Female	0.013	0.012	18106	1.146	0.251
High School GPA***	0.556	0.011	18106	48.717	0.000
Low Income***	-0.069	0.016	18106	-4.274	0.000
Migrant*	0.560	0.290	18106	1.930	0.054
Special Education	-0.025	0.031	18106	-0.806	0.420

Mobile	0.018	0.016	18106	1.160	0.246
Limited English	-0.044	0.056	18106	-0.791	0.429
Attend College HS***	0.030	0.004	18106	8.669	0.000
Pell Eligible	0.018	0.040	18106	0.473	0.636
Pell Grant***	0.149	0.041	18106	3.638	0.000
AP Scores > 3***	0.054	0.005	18106	10.109	0.000
URM	-0.031	0.019	18106	-1.591	0.112
ACT Read	-0.003	0.004	18106	-0.758	0.448
ACT Math**	0.008	0.004	18106	1.971	0.049
ACT English	0.007	0.004	18106	1.578	0.115
ACT Science	-0.002	0.004	18106	-0.473	0.637
ACT Composite	0.001	0.015	18106	0.038	0.970
STEM***	-0.073	0.015	18106	-4.894	0.000
Low Income District Mean *	-0.697	0.398	52	-1.752	0.086
Low Income School Mean*	-0.339	0.180	103	-1.877	0.063
URM District Mean	0.334	0.445	52	0.750	0.457
URM School Mean*	0.331	0.199	103	1.665	0.099

Table 4. Coefficients for HLM estimation of Postsecondary GPA *=significant at $\alpha = 0.1$, **=significant at $\alpha = 0.05$, ***=significant at $\alpha = 0.01$

Six Number Summaries: Error Terms (Predicted GPA–Actual GPA)						
	Min	1 st Quartile	Median	Mean	3 rd Quartile	Max
Random Forest	-2.029	-0.440	-0.107	-0.031	0.274	2.749
Linear Model	-2.316	-0.445	-0.125	-0.019	0.308	2.833
Hierarchical Linear Model	-2.511	-0.451	-0.122	-0.022	0.312	2.912

Table 5. The RF estimator outperforms OLS and HLM models in all error metrics except mean.

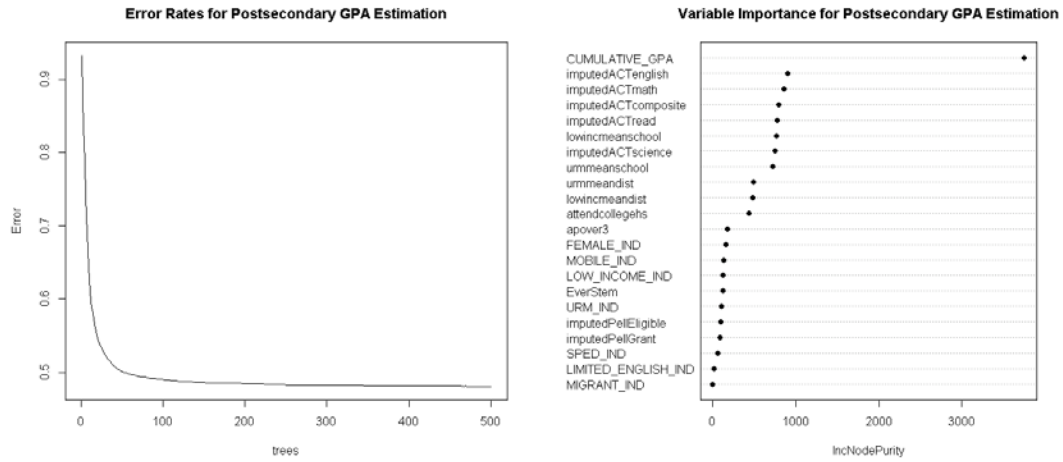


Figure 3. Error and Variable Importance for Postsecondary GPA Estimation. Error rates stabilize after 250 trees. Even so, the estimates in this paper were all performed with $K = 500$. The most important variable in postsecondary GPA prediction was unquestionably HS GPA (CUMULATIVE GPA). ACT scores were also important, but on a lesser scale than HS GPA. Interestingly, low income School proportion was more important than ACT Science score. URM School and District proportions, as well as low income District proportion rank slightly less important than the ACT scores. Earliest Year Enrolled, and AP Scores Above 3 are deemed slightly more important than the demographic variables, which in order of importance, are: Female, mobile, low income, STEM, URM, Pell Eligible, Received Pell Grant, Special Education, Limited English, and migrant.

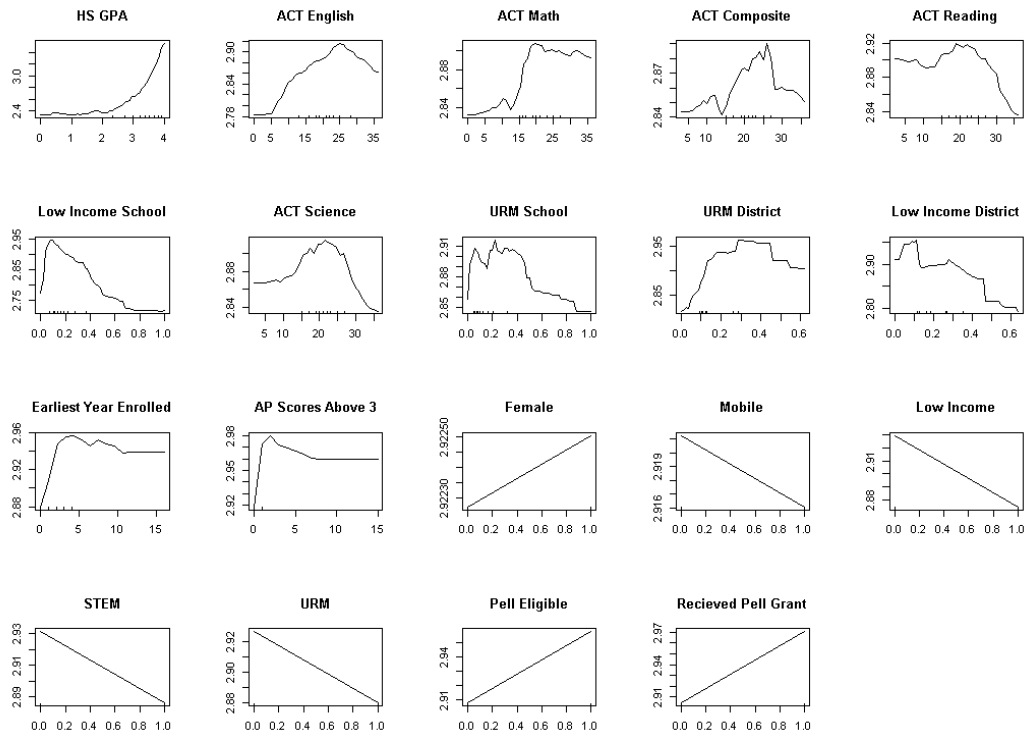


Figure 4. Partial plots of RF Postsecondary GPA Prediction, in order of variable importance (left to right, top to bottom). Predictions of postsecondary GPA surge when HS GPA increases, as well as ACT scores. Interestingly, GPA predictions decline after most ACT scores pass the 20-30 range. GPA predictions decline as low income School, URM School, and low income District percentages rise. URM District percentage follows a slightly different pattern, peaking between 30-40%. Lesser Earliest Year Enrolled values are associated with an increase in postsecondary GPA prediction. Additionally, predictions peak for 2 AP scores above 3. Female status, Pell Eligibility, and Pell Grant reception, are all associated with an increase in postsecondary GPA predictions, while mobile status, low income status, STEM field status, and URM status are associated with declines in postsecondary GPA predictions.

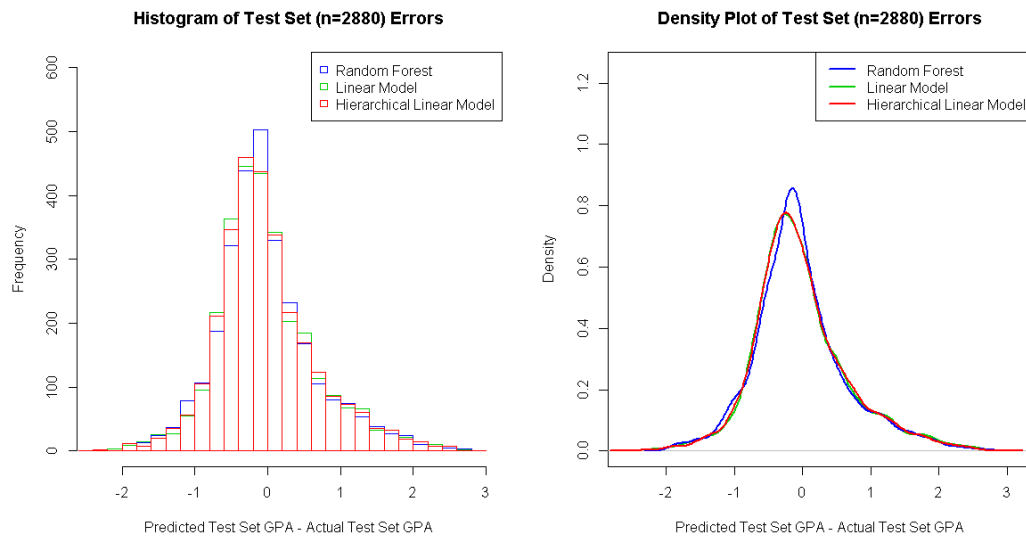


Figure 5. Histogram and density plot of test set errors for linear models as well as RF model. Although the mean error for the RF model is slightly larger than the others, clearly the RF model is the more accurate estimator.

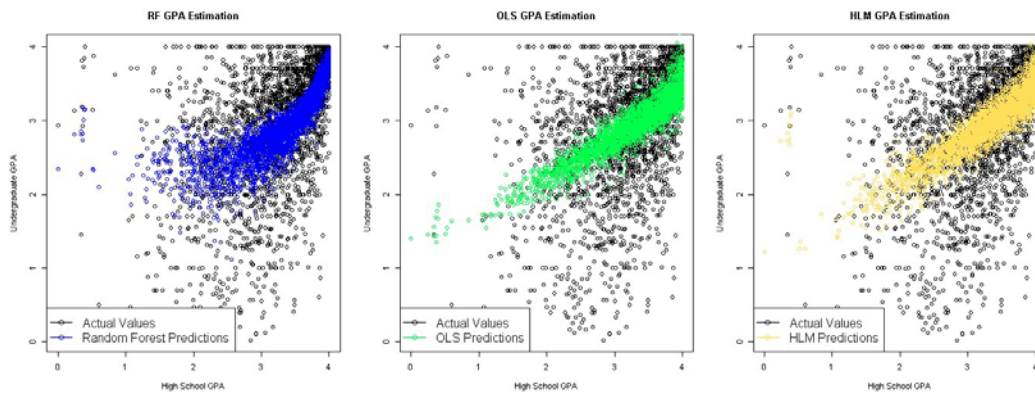


Figure 6. Visualization of Actual and Predicted Values, for Random Forest (left), Ordinary Least Squares (middle), and Hierarchical Linear Modeling (right). One may note the similarities between the estimations for both linear models. The RF model appears to more accurately estimate low performing college students, although it tends to underestimate high performers.

Logistic Model: Test Set Confusion Matrix				
Predicted Values				
		0	1	Class Error
Actual	0	821	557	0.4042
Values	1	366	1996	0.1550

Random Forest Model: Test Set Confusion Matrix				
Predicted Values				
		0	1	Class Error
Actual	0	921	457	0.3316
Values	1	388	1974	0.1643

Table 6. In order to create the confusion matrices, Logistic model probabilities were rounded to the nearest integer, which were always 0 or 1 due to the constraints. The total error rate for the logistic estimations of college attainment is 24.68%. The total error rate for the RF estimations of college attainment is 22.59%. Importantly, the RF model is more successful in predicting non-enrollment.

Discussion

Two aspects of higher education progression were predicted in this work: (1) postsecondary success, measured by GPA, and (2) postsecondary access, measured by enrollment. Cumulative GPA is a widely used metric for student success in higher education (Geiser and Santelices, 2007; Noble and Sawyer, 2004). Enrollment is an important measure of students’ educational mobility, as well as the education system’s ability to retain and empower students (Dowd, 2007; Garces and Cogburn, 2015; Hoxby and Avery, 2012; Hurtado, 2007; Karen, 2002). Each of these measures was chosen due to its previous usage in the field of higher education, as well as its objectivity and relevance to education pipeline inequalities. The OLS, HLM, and RF regression models predicted GPA, while logistic and RF classification models predicted attainment. The following subsections detail substantive and methodological interpretations of model results. The substantive discussion focuses on the demographic inequalities shown in each model, and the methodological discussion considers favorable and unfavorable qualities of the

models. As noted in the introduction, interpretation is the crux of quantitative critical analysis, and is crucial in contextualizing the RF model.

Substantive Discussion

What inequities in access to higher education for Utah high school students are shown by Random Forest, logistic, and linear models?

According to both RF and linear models, High School GPA is the most important predictor of postsecondary GPA. In Tables 2 and 4, one can observe that every unit increase in High School GPA is associated with approximately a half-unit increase in postsecondary GPA. Figure 3 shows that ACT scores are the most important predictors following High School GPA, although the most predictive ACT Scores (English and Math) were less than one-third as important as High School GPA. Linear models indicate that ACT Math is the strongest predictor of postsecondary GPA, and is a significant positive predictor in both OLS and HLM models at the $\alpha = 0.05$ level but not the $\alpha = 0.01$ level. The effects of AP scores are highly significant ($p < 0.001$), although the GPA increase associated with each AP score above 3 is approximately one-tenth that of a one unit increase in High School GPA (0.054 units compared to 0.556 units, according to the HLM model). Similarly, OLS and HLM models indicate that High School college attendance is significant at the $\alpha = 0.01$ level, but each course is associated with less than a 0.04 unit increase in GPA. In figure 4, one can observe that postsecondary GPA predictions continue to increase as High School GPA reaches its upper limit, while postsecondary GPA predictions decline as the ACT, AP, and High School college attendance variables approach their respective upper limits. This finding calls into question the use of ACT and AP scores as measures of potential success for high achieving students. When modeling postsecondary success, as measured by Cumulative GPA, AP scores, ACT scores, and High School college attendance are marginally predictive compared to High School GPA.

The importance plot in figure 3 suggests that gender is more important than all other demographic factors in modeling postsecondary GPA. According to partial plots, female gender is positively associated with predictions in postsecondary GPA. While the OLS model supports the notion that female gender is a positive predictor of academic success (significant at the $\alpha = 0.05$ level), the HLM model suggests that gender is not a significant predictor. Additionally, previous studies suggests that this relationship does not hold across many areas of study such as STEM fields (Beede et al., 2011). The OLS model associates female status with less than a 0.03 unit increase in GPA. The goals of this work do not include

predicting STEM involvement or post-college outcomes, although it is clear that further exploration of the gender impact on college success could enhance this work. Female status appears to be a positive predictor of postsecondary success, yet results are mixed around the size and scope of this relationship.

Pell Grants were fairly important relative to other demographic traits; both OLS and HLM models list Pell Grant reception as a positive coefficient. Additionally, partial plots show that Pell Grant reception is a positive predictor of postsecondary

GPA in the RF algorithm. These relationships indicate that Pell Grants may have a compensatory effect for the consistent disadvantage that low income students face (low income status was associated with a 0.07 unit decline in GPA according to OLS and HLM models). Pell Eligibility was not significant in OLS or HLM models, while Pell Grant reception was significant at the $\alpha = 0.01$ level in both models, corresponding to more than a 0.1 unit increase in GPA in each case. Pell Grants may be an incredibly effective tool in mitigating the structural burdens that plague economically disadvantaged students. However, in the RF estimation, Pell Eligibility was also a positive predictor of GPA, and slightly more important than Pell Grant reception. Reasons for this finding are unclear. Although Pell Grants appear to significantly increase the success of low income students, it may be useful to further study students who are eligible for Pell Grants but do not receive them.

Some of the most important variables under consideration were the proportions of URM and low income students housed within a school or district. The OLS model suggests that the proportion of URM students in a school district is positively associated with Postsecondary GPA, and the HLM model finds no relationship between these variables. The RF model shows that the effect of URM student proportion is not linear; the predicted success of students declines if they originate from a district with more than 30% URM students. Similarly, RF postsecondary GPA predictions decline as the proportion of URM students in a High School rises past 30%, although this relationship is insignificant in the OLS model and positively significant at the $\alpha = 0.1$ level in the HLM model. According to OLS and HLM models, High School low income proportion was a negative predictor of postsecondary success (significant at $\alpha = 0.01$ and $\alpha = 0.1$, respectively). District low income proportion was significantly negative at the $\alpha = 0.1$ level in the HLM model as well. Partial plots showed steadily declining postsecondary GPA predictions as High School and District low income proportions increased. RF and linear models suggested that higher proportions of

low income students in both districts and high schools were associated negatively with Postsecondary GPA; the same finding was true for URM school and district proportions above 30%, indicating that students from districts and schools serving high proportions of URM or low income students are less prepared to succeed in higher education when compared to their peers. Students from districts with extremely low URM proportions may be at a disadvantage as well. These findings point to a nuanced lack of equal opportunity at the school- and district-levels.

The effects of variables such as mobility and STEM participation were not considered central to the purpose of this work, but were likely related to structures of equity in higher education. Mobile status is a significant positive predictor of success according to the OLS model, insignificant in the HLM model, and a negative indicator of postsecondary success according to RF. Regardless of direction, the effect of mobility appears to be quite small; OLS model suggests that mobile status is associated with only a 0.04 unit reduction in postsecondary GPA. STEM participation was identified by OLS and HLM models as a significant ($\alpha = 0.01$) negative predictor of postsecondary success, accounting for 0.08 and 0.07 unit decreases in GPA, respectively. Similarly, the RF model identifies STEM participation as a negative predictor of postsecondary GPA. Variables such as migrant status, Special Education status, and Limited English status were largely unimportant in RF and linear models, perhaps due to small population sizes.

Methodological Discussion

Can Random Forest predict student success in higher education more accurately than logistic or linear estimators?

A major goal of this work is to assess the predictive accuracy of the RF algorithm in comparison to OLS, HLM, and logistic models. The RF algorithm is evaluated against the logistic model in estimation of postsecondary enrollment (access), and is evaluated against OLS and HLM models in estimation of postsecondary GPA (success). Each model has favorable and unfavorable qualities. The RF algorithm is more accurate than the logistic model in prediction of postsecondary access, but less accurate than linear models in prediction of postsecondary success. Linear and logistic models feature readily interpretable coefficients that specifically describe the impact of any particular variable. However, the RF model includes its measure of variable importance, as well as representation of the varying impact that individual predictors assert on the model (visualized through partial plots). Such features of the RF allow the researcher to

better understand non-linear relationships between variables. This section delves into the advantages and disadvantages of each model.

Partial plots provide greater context around the influence of variables, allowing for comparisons between the directionality of predictors in RF and linear models. Figure 3 displays the partial plots for the 19 most important predictors of postsecondary GPA. In this work, partial plot results show the same directional relationship as linear model coefficients in 10 out of the 12 and 7 out of 7 significant ($\alpha = .05$) relationships identified by the OLS model and HLM model, respectively. Compared to linear model results, partial plots produce more information about the shape of relationships between variables. In the case of District URM proportion, the partial plot shows that the relationship with postsecondary GPA is positive for values less than 0.3 and negative for values greater than 0.3, whereas OLS and HLM models denote this relationship as strictly positive. Perhaps students situated in districts with very low and high percentages of URM students both experience some sort of disadvantage, but linear models are unable to make this distinction. Based on linear models alone, one may be led to believe that postsecondary GPA predictions should increase uniformly as District URM proportion rises. RF suggests that such a conclusion would be false. Despite its drawbacks, the RF model adds a level of detail to the relationships between predictor variables and postsecondary GPA which is impossible to ascertain using linear models.

In figure 6, one can observe that the linear models have trouble predicting noisy data. While OLS and HLM models create similar predictions, the RF model can be distinguished as a fundamentally different prediction method. By visual inspection, one can see that RF captures more randomness in the data, while also making precise estimates. Because the RF model is based on aggregated decision trees which are calculated from randomly sampled data, the RF model will not estimate GPA under 0 or above 4. Both predictors slightly underestimate the GPA for many high achieving students (HS GPA near 4.0). However, this appears to be especially true for the RF model. Upon visual inspection, it seems that the RF model better captures noise among students with low High School GPAs, while linear models better predict the success of students with greater High School GPAs. Visual observation shows that the RF and linear models are structurally different, although neither is clearly superior.

Table 3 provides insight in the distribution of predictions made by the models tested. Minimum values of RF, OLS, and HLM predictions were much higher than the actual test set minimum value, but measures of centrality were similar to test set values (the median and mean predictions for all three models fell

within 0.25 and 0.031 of the test set values, respectively). While the distribution of linear model estimations was closer to the distribution of actual values in terms of their mean and median, the RF was closer to approximating the 1st and 3rd quartiles, as well as the minimum and maximum. Linear models both predict GPA values above 4.0, an undesirable quality as this is impossible. In Table 5, one can observe that the RF model had a larger mean absolute error term in predicting the test data (0.03, compared to 0.02 for OLS and HLM models each). However, the 1st and 3rd quartile values, as well as minimum and maximum values, for the RF model error terms were closer to 0. Additionally, the median error value in the RF model was -0.107, compared to -0.125 for the OLS model and -0.122 for the HLM model. By visual inspection of figure 5, one can see that the error terms generated by RF are more densely centered around 0 than those of linear models, suggesting that RF produces estimates that are slightly closer to the actual test set values. However, these differences were small. Without much specification, the RF model figures the shape of postsecondary GPA data better than linear models, but linear models provide more accurate estimations of centrality.

In predicting college attainment, the RF model clearly outperforms the logistic model. To create the confusion matrices in Tables 6, probabilities were rounded to the nearest integer, which were always 0 or 1 due to the constraints of the logistic model. The RF model performs slightly better than the logistic model in estimating college attainment, with an error rate that is 2.1 percentage points lower (22.6% compared to 24.7%). Additionally, the RF model has a much smaller class error rate predicting those who did not enroll (33.3% as opposed to 40.4%). Predictions are more difficult for this group, as it is smaller than those who enrolled (36.8% of the sample size). The logistic model has a slightly lower error rate than RF for those who enrolled in college (15.5% compared to 16.4%), although this only represents 22 individuals. Overall, the RF model predicts postsecondary success more accurately than the logistic model.

This work compares RF to linear and logistic models in their abilities to make predictions and critically interrogate relationships between variables. RF models provide further insights into higher education data, particularly with features such as partial plots and variable importance, which can provide information around predictive power and non-linear relationships between predictors and outcomes. While the RF model underperformed linear models in mean predictions errors of postsecondary GPA, the RF model did have a smaller median prediction error. The RF algorithm appears to capture the shape of postsecondary data well, based on visual inspection and quantile comparisons,

although linear models may perform slightly better for students with greater High School GPAs. While the logistic model predicts enrollees slightly better than the RF algorithm, overall RF is superior in terms of estimating college access. Although the RF model did not outperform the other models in every application, it offered distinct advantages and was generally preferable to linear and logistic models.

Conclusions

How can the Random Forest algorithm advance quantitative higher education scholarship?

Following Frances Stage's model of critical quantitative inquiry, this work makes an effort to (1) further the understanding of current educational inequities using data and (2) challenge the current models being used to assess equity in higher education. Specifically, educational inequities in postsecondary access and success in the state of Utah were evaluated using four different models. The RF algorithm was then compared to the other three models in terms of its ability to describe relationships between education variables, as well as its accuracy in predicting student outcomes. This section describes substantial and methodological contributions to critical quantitative education research.

Substantially, this work identifies several trends in Utah's higher education pipelines. Factors such as race, gender, low income status, mobile status, school, and district are investigated as potential drivers of student success. Of the variables included, low income status is consistently the most significant demographic predictor of success in higher education, reflecting the significant academic potential that is mitigated by economic circumstance. The academic barriers that accompany economic vulnerability are starkly evidenced by the negative relationships between the proportion of low income students in a district and the postsecondary success of students from that district. In fact, a school's proportion of low income students is found to be more important than ACT Science scores in predicting college success. Other community effects, such as the proportion of URM students or low income students in an individual's school or district, were found to be important predictors of college success, outweighing individual-level demographic measures. Persistent demographic inequities exist in Utah's higher education pipelines. The present research particularly shows the disadvantage faced by low income students, as well as students who attend largely low income schools and districts.

Those concerned with economic gaps in higher education pipelines might be interested in the predictive qualities of High School GPA and Pell Grant reception. In addition to being a better predictor of college success, High School GPA typically contains less bias toward wealthier students than many other college entrance metrics, such as ACT scores, AP scores, and High School college attendance. Both RF and linear models show that High School GPA is the most significant predictor of postsecondary GPA. The RF model finds ACT scores as somewhat important predictors of postsecondary GPA, while linear models find ACT scores to be fairly insignificant. AP scores were even less important in each model. Relative to ACT and AP results, as well as High School college enrollment, High School GPA had by far the largest impact on predictions of postsecondary success in every model. Additionally, Pell Grants should be further studied as a potential tool for dismantling income-related barriers to higher education. Linear models indicate that Pell Grant reception is a significant positive indicator of postsecondary success, while RF models show that both Pell Eligibility and Pell Grant reception are positively associated with postsecondary success. Pell Grants and GPA-based admissions should be further investigated as potential tools for ameliorating the demographic inequities in Utah's higher education pipelines.

Methodologically, this work evaluates the RF algorithm as a tool for predicting student enrollment and performance within higher education. The RF algorithm predicted student enrollment with greater accuracy than logistic estimation. Linear models outperformed RF in mean error terms, but the RF algorithm had smaller median and quartile error terms. Additionally, the RF model provided a myriad of novel applications for viewing and understanding the data. This paper used the partial plot and variable importance features to enrich discussion around higher education variables. While OLS and HLM methods were unable to capture the nuances in the relationships between predictions and school- or district-level variables, RF clearly modeled these relationships, allowing for a better understanding of the effects of low income and URM proportion in schools and districts. The RF model was useful not only in its ability to predict student access and success, but also in its abilities to critically interrogate variable importance and predictive impact.

Therefore, the author advocates for the use of RF in critical quantitative higher education research. In addition to making quality predictions, the RF output is interpretable, with variable importance readily ascertained from its decision trees. Partial plots are useful in deducing the directionality of predictor variables, even when directionality is dependent on specific values. Although variable importance

plots and partial plots may stand alone, it is beneficial to compare such results with linear model coefficients.

While empirical in nature, RF results are not meant to be utilized as objective measures of reality. Instead, the algorithm provides information around student experiences, information which can be used to supplement the results of other models and give researchers a broader depiction of intricate relationships between predictors and outcomes. Critical quantitative studies on higher education stand to benefit from the RF algorithm's novel prediction framework, accurate predictions, detail in describing predictive importance, and emphasis on interpretation.

Within the field of critical quantitative higher education, interpretation of results is widely considered the most important part of the research process. The RF model contributes new interpretations of student data to the field of critical quantitative research in higher education, some of which were not possible with linear or logistic models. Using the RF model, non-linear changes in predictive power can be viewed, allowing one to better grasp the effects of changes to individual variables on predicted outcomes. Variable importance can be understood in terms of out of bag errors, which are fundamentally different than traditional significance tests.

A second tenet to critical quantitative research is that it challenges previous work. Throughout this work, RF models contradict linear and logistic models' conclusions around issues such as predictive directionality and variable significance or importance.

Lastly, critical research is motivated by the desire to change society. This work identifies GPA-based admissions and Pell Grants as potential tools for critically improving student access and success. Works that evaluate the use of such tools, and leaders who implement such policies, will inevitably change the structure of higher education. This work's methodological and substantial findings are intended to expand the possibility of equitable education systems, as well as the notion that education pipelines might be advanced with quantitative design. Future studies comparing the efficacy of predictive algorithms and interpreting results critically to describe postsecondary pipelines will further current conceptions of equity within postsecondary education.

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PUBLIC FINANCING AND THE UNDERREPRESENTATION OF WOMEN IN UNITED STATES ELECTED POLITICAL OFFICES

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Women have historically been underrepresented in elected offices throughout the United States. Although many women are active in political organizations and exercise their right to vote, this underrepresentation remains constant across all levels of government. The lack of female representation in elected offices of the United States is detrimental to the future of our country as we work toward building a more inclusive environment for all citizens. Women are often successful when they choose to seek office. However, women are not choosing to run for political office. Several factors contribute to this decision not to run for elected political office including the political ambition gap, a state's political culture, and perceived difficulty in campaign fundraising for women. This paper focuses on the role that campaign finance plays in a woman's decision to seek elected political office. Through analysis of existing research and a comparative case study of Minnesota and Iowa, my thesis will prove that public funding of campaigns can reduce gender equality in state legislative offices.

Women Aren't in Office Because Women Don't Run for Office

The existing literature on the topic of female inequality in politics and specifically serving in state legislatures is extensive but not yet conclusive. Undoubtedly, women are proportionally underrepresented in American politics. However, research on the cause of this inequality is conflicting. A variety of sources credit partisanship, race, state district structure, women's lack of ambition, political culture and ideology, fundraising difficulties, and gender stereotypes for the lack of female representation (Lawless and Fox; Arceneaux; Dolan; Rule; Pyeatt and Yanus; Sanbonmatsu, "Political"; King). One common focus of the literature is that women might be less likely to run for office due to difficulty raising money (Lawless and Fox; Mann; Sanbonmatsu, "Do Parties"; Burrell). However, sources disagree on whether female candidates are truly at a disadvantage in fundraising. Some researchers claim that fundraising difficulties for women are simply perceived and not actual obstacles to being elected to office (Sanbonmatsu, "Political"; Lawless and Fox). My thesis attempts to connect existing research and

prove that public financing can increase gender representation in state legislatures by helping women seek political office.

In general, women win political seats at a similar rate as men, yet women still are consistently underrepresented in elected office (Sanbonmatsu, "Political" 432). Women have experienced recent success at the ballot box. For example, 1992 was considered the "Year of the Woman," symbolizing a shift toward a view of women in elected political office as acceptable. The 1992 federal election resulted in the number of female Senators doubling and women in the House increasing from 28 to 47 (Tumulty).

The success of women at the polls could be related to the fact that gender does not seem to directly affect choices at the ballot boxes. Negative gender stereotypes do not directly affect women's chances of winning elected office according to Kathleen Dolan. Negative gender stereotypes in this context include views that consider women unfit or unqualified for political office. However, gender stereotypes do play a role in conducting a campaign and voter evaluations of a female candidate's qualifications. Nevertheless, Dolan's research suggests that these stereotypes do not affect voter behavior at the polls.

Through surveys on voter behavior in the 2010 U.S. House of Representatives election, Dolan found no empirical evidence that abstract gender stereotypes impact voter behavior for real-world candidates (Dolan 104). Dolan finds that gender stereotypes do not play a large role in voter behavior at the polls because of party loyalty: Most Democrats will vote for Democrats, and most Republicans will vote for Republicans regardless of the gender of the candidates. In other words, in practice, while voters may perceive candidates differently based on gender in campaign season, candidate gender does not play a major role in the choice voters make at the polls. This inequality exists not because women cannot win when they seek office but because women do not run for political seats.

When women choose to seek office, they realistically can fundraise as well as men although they fundraise in different ways. Female candidates also are raising as much or more in campaign funds as male candidates. Despite perceptions that women lack the skills and network needed to fundraise successfully, many women are matching their male opponents dollar for dollar or are raising substantially more than them (Burrell 119). For example, in the 2016 general election, Hillary Clinton raised more than \$2.35 million more than Donald Trump.⁴ Research conducted by

⁴ In the example of the most recent presidential election, Donald Trump self-funded almost 20 percent of his own campaign with over \$66 million in campaign

Barbara Burrell did not find any inequalities among genders within party spending on behalf of congressional candidates or the ability for men and women to raise early money for campaigns. She even goes as far as to say that women are advantaged in terms of financing congressional campaigns (120). As with both genders, the ability to fundraise effectively can depend on a candidate's personal connections and personal wealth, as is obvious with the examples of Clinton and Trump.

In sum, gender representation in elected office has increased over the past century, and "The Year of the Woman" illustrated the rate at which women can win political seats. Women win elected office and fundraise as well as men, and negative stereotypes do not seem to influence voters at the polls. If the gender difference is not a product of women not winning, the question still remains: Why are women underrepresented in elected political offices? Further research suggests that gender inequality in elected office exists simply because women are not seeking political office. The lack of desire to run for office is caused by a lack of political ambition, political culture and ideology, negative gender stereotypes, and perceived fundraising difficulties for female candidates (Lawless and Fox; Arceneaux; Sanbonmatsu, Carroll, and Walsh; "Money and Women Candidates").

The gender gap in political ambition or the "ambition gap" causes young women to be less likely to consider running for public office than young men (Lawless and Fox 2). A 2013 study conducted by Jennifer Lawless and Richard Fox shows female underrepresentation in politics exists because women are not running for office, and the underrepresentation is not a result of voters choosing male candidates over female candidates at the polls. Through online surveys of college students, Lawless and Fox were able to attribute the gender gap to the socialization of young women, including young women's limited exposure to political information and discourse, limited participation in organized and competitive sports, lack of encouragement to run for office, and lack of confidence in their qualifications to run for office in comparison to men. Women are less likely to believe they are qualified to run for office, perhaps due to the lack of encouragement they receive to seek office, or the explicit fact that most politicians are not women. Inherently, due to a lack of political female representation, women are less likely to be included in political discourse.

funding. In comparison, Hillary Clinton self-funded less than 1 percent of her campaign with almost \$1.5 million in campaign funding (Sultan).

A state's attitudinal characteristics, estimated based on measures of ideology and political culture, can have negative consequences on a woman's desire to seek political office and, as a result, the representation of women in state legislature. Kevin Arceneaux defines state political culture as "an orientation toward political action" (144). One attitudinal characteristic refers to a state's view of appropriate gender roles for women. If a majority of a state's voters do not believe political office is an appropriate position for a woman, less women are likely to seek the position than if a state viewed female political representatives positively. This negative gender role attitude may also deter party leaders and political elites from recruiting women for office (Arceneaux 145). If party leaders assume voters will not support a female candidate, they are not likely to recruit a woman to run for office and provide resources for her campaign. According to Kira Sanbonmatsu, "party leaders are misperceiving women's electability" ("Do Parties" 434). The misperception is not consistently overly pessimistic or overly optimistic. Some party leaders overestimate voter support of female candidates while other party leaders underestimate voter support for female candidates. This misconception of women's political electability can lead to party leaders recruiting female candidates at a lower rate than male candidates and allocating less resources to the recruitment of female candidates.

Lawless and Fox's discussion of the ambition gap applies to gender role attitudes as well. If women serving in politics are viewed negatively, less women will have the desire to run for political office, and gender inequality in political elected office is maintained. Consequently, the lack of women in elected office will reinforce the perception that women are not fit for politics and lack the skills necessary for winning campaigns. These negative gender role attitudes stem from the stereotypes of women as too weak or nurturing to be political leaders. States that have a political culture that reinforces these negative stereotypes toward women as leaders are less likely to have equal female representation in the state legislature than states that view female political leaders more positively (Arceneaux 147). Although negative gender stereotypes do not directly affect female candidates' chances of winning, these negative stereotypes may deter women from seeking elected office (Dolan). Ridicule of female candidates as mothers, criticism of their appearance, and a lack of support from other women during the campaign season often keeps women from pursuing a career in politics (Tumulty). These critiques that do not similarly effect male candidates.

Once women make the decision to run for office, they may raise campaign funds at similar rates as their male counterparts, yet there may still be a salient

difference in how campaign fundraising affects potential female candidates. The 2008 Center for American Women and Politics recruitment study found that many women still perceive fundraising to be harder for women than men (Sanbonmatsu, Carroll, and Walsh 38). Women are less likely to be able to self-fund their campaigns and are less reliant on receiving gifts from established donors. Women, if they decide to run for office, also are most likely to campaign against a male incumbent based on the existing gender gap. Incumbents have a built-in fundraising advantage compared to challengers (“Money and Women Candidates”). In order for a woman to be competitive, she needs to cultivate a larger base of individual donors which requires more time and may prove to be too burdensome (Lawless and Fox; Sanbonmatsu, “Do Parties” 447; Ruel and Hauser).

Because the perception of a gendered difficulty in raising campaign funds deters women from seeking political office, some have questioned whether implementing a state-level public financing program could encourage more women to run for elected office. Public funding involves campaigns that are financed by the government rather than private individual donors or organizations. Thirteen states currently utilize some system of public financing for campaigns (Cruikshank). This method of funding political campaigns has been cited as a possible way to encourage more women to seek elected office because women are more likely to believe that political office is more attractive if campaigns are publicly financed (Lawless and Fox; Werner and Mayer). Public financing programs can entice more women to seek elected office and, as a result, reduce the gender inequality in political elected office. Removing the hurdle of asking for substantial donations, reducing the time commitment of raising substantive funds to run, often against a male incumbent, and seeing more female elected officials should result in more women seeking office and a reduction in gender inequality in elected office. My study of Minnesota and Iowa focuses specifically on state legislature gender representation over a period of time following the implementation of a public financing program.

Research Design

My hypothesis is that public campaign financing programs can increase the opportunity for women to run for and win state legislative seats. For the purpose of my study, I am assuming that this hypothesis is true across all states. In order to test this hypothesis, I would need to collect data on all 50 state campaign finance

systems and all 50 state legislatures, which involves 99 legislative chambers.⁵ This type of analysis would need to be conducted over time.

Due to time and resource limits, I cannot examine every state legislative election outcome and every state campaign finance system. Instead, I used a sample to test my hypothesis. I conducted a comparative case study utilizing John Stuart Mill's method of difference. Mill's method of difference is a research design in which the cases that are selected differ on the key explanatory variable – in this case, two states must vary on whether or not they have public financing of campaigns. Those same cases must be similar in all but one independent variable (Malici and Smith 27-28). This method allowed me to select two cases, or states, that were similar in important aspects that affect gender equality in political office and to draw inferences about the relationship between public financing and gender inequality by using a sample of two cases to examine gender inequality on a small, more manageable scale.

Because states are tasked with running and regulating elections, evaluating the success of public financing policies in states in relation to political gender equity can shed light on policies that could be applied in more states or nationally. To test my hypothesis, I selected Minnesota and Iowa as my two cases for comparison. This method allowed me to evaluate the large scale issue of gender inequality in political representation at a smaller level in order to draw broader conclusions and make policy recommendations for the future.

As stated previously, the primary independent variable in my case study is the presence or absence of public financing for state legislatures. Essentially, public financing of campaigns is a system in which political candidates can use public money to fund their campaigns. These systems usually require candidates to follow certain rules or raise a certain amount of money independently in order to establish credibility. Thirteen U.S. states currently provide a public financing option for candidates of certain state offices.⁶ By accepting public money in each of these

⁵ Nebraska employs a unicameral system which accounts for the odd number of legislative chambers.

⁶ Arizona, Connecticut, Florida, Hawaii, Maine, Maryland, Massachusetts, Michigan, Minnesota, Rhode Island, and Vermont have some form of public financing for the election of governor and lieutenant governor. Arizona, Connecticut, Hawaii, Maine, and Minnesota also have public financing options for candidates for state legislative offices. New Mexico and West Virginia offer public financing for candidates for state supreme court and other state offices (Cruikshank).

options, the candidate is promising to limit how much they spend on their campaign and how much they accept in donations from a group or individual (Cruikshank).

I chose Minnesota as my case with public campaign finance programming because I am interested in politics in the Midwest on a state level. Minnesota created its public financing program in 1974 following the Watergate Scandal (Novak and Ammons 14). Minnesota offers a matching funds program for qualifying candidates for governor, lieutenant governor, and state legislative offices. With this program, candidates must raise a certain amount in contributions from private individuals in order to qualify for the program. For example, candidates for State Senate must raise \$3,000 and candidates for the State House of Representatives must raise \$1,500. After meeting that requirement, candidates may receive up to 50% of their campaign spending limits in public funds ("Public Financing of Campaigns").

After choosing Minnesota, I needed to choose a state that does not have public financing programs but is substantively similar to Minnesota in all other competing explanations. I chose Iowa because of its similarities and proximity to Minnesota. Iowa does not have a public financing program for state legislature candidates; private individuals, Political Action Committees (PACs), unions, and political parties can make unlimited contributions to Iowan candidates for State Congress, while single candidate committees, Super PACs, and corporations are prohibited from making campaign contributions to State Senate and State House of Representative candidates ("Campaign Finance Requirements in Iowa").

My cases must be similar in other plausible explanations for political gender equity. For example, women are slightly more likely than men to vote for female candidates (Newman 12). Therefore, it is important for my case study to include states that are relatively balanced in terms of their population's gender make-up. According to the 2010 United States Census, Minnesota's population is 50.4% female, and Iowa has a population that is 50.5% female ("QuickFacts from the US Census Bureau").

Party identification also affects the gender make-up of legislative bodies. Federally, women comprise nearly one-third of the Democratic Party in the House and the Senate. On the other hand, the Republican party is made of only 10% women in Congress. On a state level, 16.9% of Republican legislators are women, and 33% of Democratic legislators are women ("Women's Election to Congress" 3). For these reasons, my case study must include states that are relatively balanced in terms of their partisan make-up. A 2015 Gallup poll classifies both Iowa and Minnesota as "competitive" states. This classification means that the Democratic

and Republican Parties are within five points of each other in terms of adult population party affiliation. In Minnesota, 42.9% of adults polled identified as Democratic or Lean Democratic while 39.6% of adults polled in Iowa identified as Democratic or Lean Democratic ("Red States Outnumber Blue").

The dependent variable in my case study is gender representation in state legislative offices in Iowa and Minnesota. Specifically, I observed the percentage of women serving in the State Senate and State House of Representative in both the Iowa and Minnesota Congresses. The Minnesota Senate has 67 seats, and the Minnesota House of Representatives has 134 seats. The Iowa Senate consists of 50 members, with 100 seats in the Iowa House of Representatives. In total, Minnesota has 201 state legislative seats and Iowa has 150. Because of the variance in the number of seats in each of the legislatures, I chose to use as my measurement the percentage of women as opposed to the raw number of women serving in each legislature.

To test my hypothesis, I compared the percentage of women serving in the Minnesota state legislature from the creation of the public financing program in 1974 through the most current election in 2016 to the percentage of women serving in the Iowa state legislature in that same time period. This time period includes 24 election cycles per state, because state legislative elections occur every two years in these states. I collected data for 48 data points. For my hypothesis to be correct, the percentage of women in legislature seats in Minnesota should increase following the implementation of the public financing program. The percentage should also be consistently higher than the percentage of women serving in Iowa legislature seats after 1974. If the percentage of women serving in Minnesota and Iowa both increase but the percentage in Minnesota increases more rapidly, my hypothesis suggests that public campaign financing is the primary cause of this growing gap in gender representation.

I utilized resources from Rutgers Center for American Women and Politics to collect my data. The site has a downloadable document containing the raw numbers of women serving in state legislatures in all 50 states from 1975 to 2014. The document includes percentages for women in all 50 state legislatures for 1979 and beyond, and a separate factsheet with raw numbers and the percentages for women in all 50 state legislatures in 2017. I figured the percentages for Iowa and Minnesota in 1975 and 1979 using the raw numbers provided by the document.

The independent variable in my experiment is the existence of public financing. Minnesota has public financing program and is coded as 1. Iowa does not have public financing and is coded as 0. To test my hypothesis, I used a T-test,

or a difference in means test, to compare women's representation in state legislatures in Iowa against women's representation in Minnesota. The T-test allows me to test whether the dependent variables are different and whether Minnesota or Iowa has more women's representation. By analyzing the results of the T-test, I can make inferences regarding the influence of public financing programs on gender representation in state legislatures.

Results

To examine whether public financing of campaigns can reduce gender inequality, I examined the percentage of women elected to state office in Minnesota and Iowa between 1975 and 2017. My comparison of the two cases used the percentages of women in each chamber and in total. By conducting a T-test on the data, I determined that the difference in gender representation between Minnesota and Iowa is statistically significant. Over time, gender representation in Minnesota increased more rapidly than in Iowa. Following the 2016 general election, Minnesota ranks ninth and Iowa ranks thirty-first in terms of gender equality in state legislative chambers in the United States. The data suggests that public finance can increase gender representation in state legislatures.

In order to test the statistical significance of the difference in the cases' gender representation, I conducted a two-sample T-test assuming equal variances using each state's average percentage of women's representation from 1975 to 2017. On average, the Minnesota state legislature is 23% female, and Iowa's is 18%. This is a 5% difference which is statistically significant at the 99%-level. The T-test showed that my data findings are significantly and substantively different.

As seen in Figure 1, in the first years after Minnesota instituted its public financing program, Iowa had a higher proportion of women in state legislative office. In 1975, Iowa's state legislature was 9% women, more than double Minnesota's state legislature (4% women). However, after Minnesota's public financing program was in place for a decade, the state's gender representation reached higher levels than in Iowa and has remained above Iowa since 1989. This trend proves my hypothesis is correct. Gender representation increased in Minnesota under a public financing program at a higher rate than in Iowa without public financing.

After the most recent election in 2016, Minnesota leads Iowa in percentage of female representation by ten percentage points. Minnesota's state legislature is 32% women compared to Iowa's 22%. Overall, the percentage of women in state

legislative office is increasing in both states. In 2017, state legislatures in Iowa and Minnesota were 27% female, compared to 6.5% in 1975. This is a 20.5% increase over the last 42 years.

Individually, Minnesota increased by 28 percentage points while Iowa increased by only 13 percentage points over the 42-year period. This data follows my theory because Minnesota's gender representation increased following the state's implementation of a public financing program. As women had easier access to public financing, more women chose to run for office and were successful. Other women saw these successes and chose to run for office themselves, which in turn increased gender representation in Minnesota legislative office. Iowa did not experience an increase in gender equality at the same rate of Minnesota because women in that state did not have the opportunity to take advantage of a public financing program.

In 1981, Minnesota reached the same percentage as Iowa of women in state legislative office. From 1989 to 2017, Minnesota remained above Iowa in terms of percentage of female state legislators. Following the 1992 election, gender representation increased by 6 percentage points. 1992 became known as "The Year of the Woman" after a record four women had been elected to the U.S. Senate. The highest percentage between the two states was 35% in Minnesota in 2007 and 2009. The Democratic Party and liberals did well in the elections of 2006 and 2008, and the Republican Party did not fare well in those years due to the unpopular Iraq war.

Gender representation has grown much slower in Iowa. The state did not reap the benefits of "The Year of the Woman" as Minnesota did. In 1993, Iowa did not see an increase in gender representation in the state legislature. Iowa saw the greatest increase in gender representation in the 1984 election, an increase of 6 percentage points. In this election, Ronald Reagan swept the presidential election with every state except Minnesota and Washington, D.C. Iowa reached the height of its gender representation in 2007, 2009, 2013, and 2015, at 23%.

The trend of Minnesota overtaking Iowa in gender representation following the implementation of public financing is true regardless of legislative chamber. In 2017, the state House of Representatives in both Minnesota and Iowa had a higher percentage of female leaders than the state Senate in each state. Minnesota House of Representatives was 36% women while the Minnesota Senate trailed at 24%. In Iowa, women made up 27% of the state House of Representatives and 12% of the state Senate. This trend has varied over the past 42 years.

As women have gained more power in the workforce and the public sphere, their numbers have grown steadily in American politics. Correspondingly, gender representation grew in Iowa and Minnesota from 1975 to 2017. Iowa began with a higher percentage of women in the state legislature than Minnesota at the start of Minnesota's public financing program. However, once the public financing program was implemented, Minnesota quickly overtook Iowa in terms of gender representation. On average, since 1981 Minnesota has led Iowa in state gender representation by 7 percentage points. My hypothesis that public financing increases gender representation is proven correct as gender representation did increase in Minnesota following the implementation of public financing, and it increased at a faster rate in Minnesota than in Iowa, a state without public financing. I conclude that the public financing program in Minnesota allows women to take advantage of a program that eases the perception that women cannot raise funds as well as men. As women began to win public office at increased rate, other women chose to seek elected office, which has resulted in an increase in female representation in the Minnesota state legislature.

Discussion and Conclusion

The United States representative democracy ought to be representative of the genders that are governed by it, yet women are consistently underrepresented in legislative and executive offices although women are better political representatives of women than male representatives. Studies have shown that a correlation exists between women legislators and progressive policy on issues such as the environment and incarceration, and female legislators of both major parties introduce more bills related to civil rights, labor, and education than male legislators (Arceneaux; Hill). By implementing a public financing program, states can increase gender representation in elected office. Women perceive campaign fundraising to be more difficult for them as a gender, and public financing programs can give women the opportunity to overcome this obstacle. As more women are elected to political office, more women will be empowered to seek political office. I hope that my research will help shape policy concerning women and campaign finance. America cannot foster a truly inclusive environment for all citizens until women are on the same political playing field as men.

Appendix

Table 1: Average Levels of Female Representation

	Minnesota	Iowa	
Mean	23%	18%	5%***
Variance	0.0085	0.0021	
p<0.01			

Table 2: Minnesota Gender Representation 1975 to 2017

Minnesota									
Year	# in House	Total House Seats	% Women in House	# in Senate	Total Senate Seats	% Women in Senate	Total # of Women	Total Seats	Total % in Legislature
1975	7	134	5.22%	1	67	1.49%	8	201	4.0%
1977	10	134	7.46%	2	67	2.99%	12	201	6.0%
1979	15	134	11.19%	3	67	4.48%	18	201	9.0%
1981	19	134	14.18%	5	67	7.46%	24	201	11.9%
1984	19	134	14.18%	9	67	13.43%	28	201	13.9%
1985	20	134	14.93%	9	67	13.43%	29	201	14.4%
1987	22	134	16.42%	9	67	13.43%	31	201	15.4%
1989	27	134	20.15%	10	67	14.93%	37	201	18.4%
1991	29	134	21.64%	14	67	20.90%	43	201	21.4%
1993	35	134	26.12%	20	67	29.85%	55	201	27.4%
1995	32	134	23.88%	18	67	26.87%	50	201	24.9%
1997	40	134	29.85%	22	67	32.84%	62	201	30.8%
1999	35	134	26.12%	22	67	32.84%	57	201	28.4%
2001	35	134	26.12%	23	67	34.33%	58	201	28.9%
2003	32	134	23.88%	23	67	34.33%	55	201	27.4%
2005	37	134	27.61%	25	67	37.31%	62	201	30.8%
2007	43	134	32.09%	27	67	40.30%	70	201	34.8%
2009	43	134	32.09%	27	67	40.30%	70	201	34.8%
2011	44	134	32.84%	19	67	28.36%	63	201	31.3%
2013	45	134	33.58%	23	67	34.33%	68	201	33.8%
2015	45	134	33.58%	23	67	34.33%	68	201	33.8%
2017	48	134	35.82%	16	67	23.88%	64	201	31.8%

Table 3. Iowa Gender Representation 1975 to 2017

Iowa									
Year	# in House	Total House Seats	% Women in House	# in Senate	Total Senate Seats	% Women in Senate	Total # of women	Total Seats	Total % in Legislature
1975	10	100	10%	4	50	8%	14	150	9.3%
1977	13	100	13%	4	50	8%	17	150	11.3%
1979	11	100	11%	4	50	8%	15	150	10.0%
1981	16	100	16%	2	50	4%	18	150	12.0%
1984	16	100	16%	1	50	2%	17	150	11.3%
1985	19	100	19%	3	50	6%	22	150	14.7%
1987	18	100	18%	4	50	8%	22	150	14.7%
1989	19	100	19%	6	50	12%	25	150	16.7%
1991	16	100	16%	6	50	12%	22	150	14.7%
1993	16	100	16%	6	50	12%	22	150	14.7%
1995	17	100	17%	10	50	20%	27	150	18.0%
1997	20	100	20%	12	50	24%	32	150	21.3%
1999	21	100	21%	11	50	22%	32	150	21.3%
2001	22	100	22%	11	50	22%	33	150	22.0%
2003	25	100	25%	7	50	14%	32	150	21.3%
2005	25	100	25%	5	50	10%	30	150	20.0%
2007	28	100	28%	6	50	12%	34	150	22.7%
2009	26	100	26%	9	50	18%	35	150	23.3%
2011	24	100	24%	8	50	16%	32	150	21.3%
2013	25	100	25%	10	50	20%	35	150	23.3%
2015	27	100	27%	7	50	14%	34	150	22.7%
2017	27	100	27%	6	50	12%	33	150	22.0%

Figure 1. Overall Female Representation

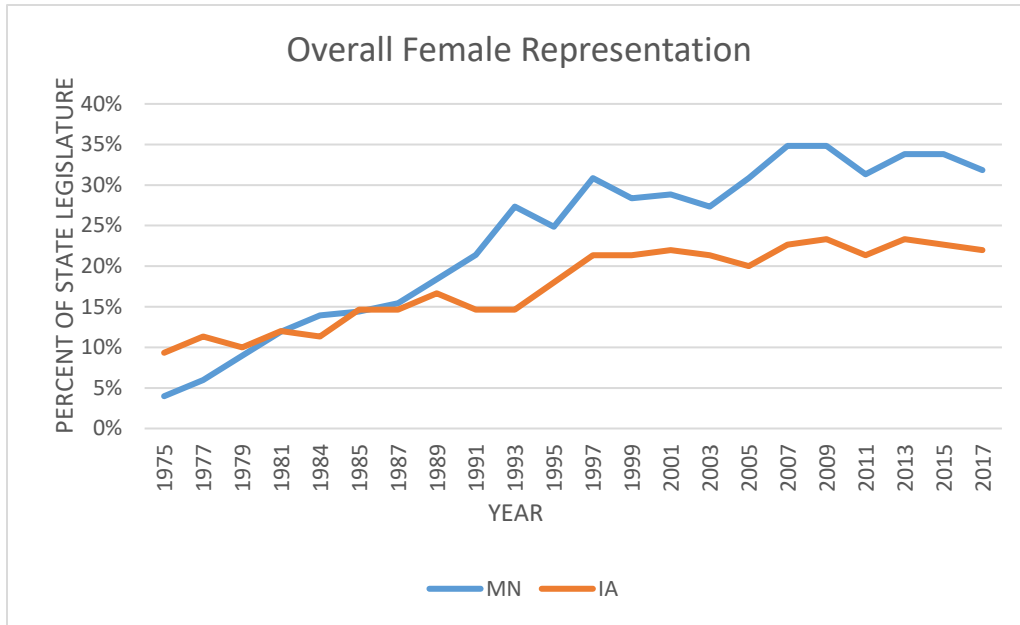
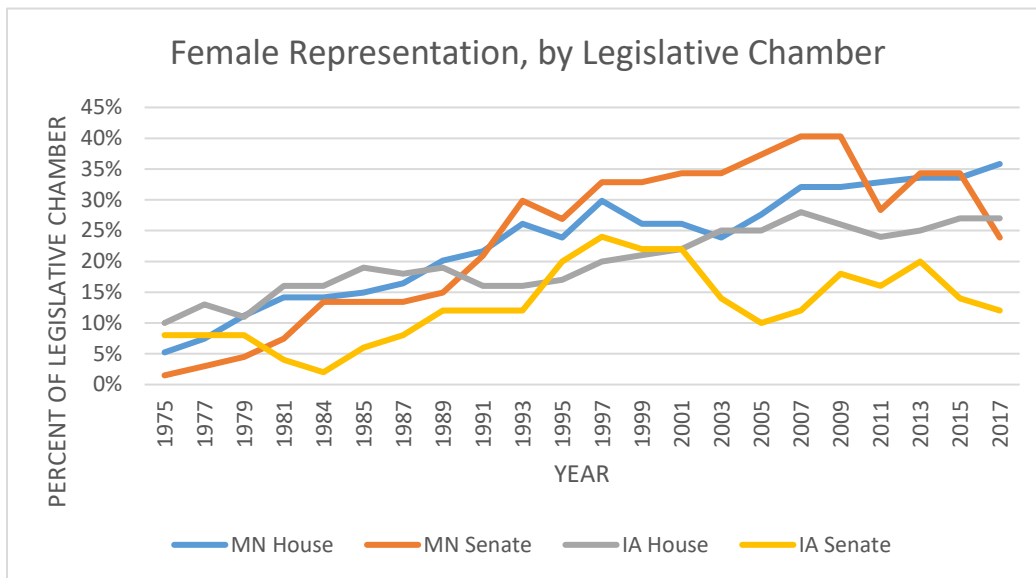


Figure 2. Female Representation by Legislature Chamber



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HOLDING ON TO CULTURE: THE EFFECTS OF THE 1837 SMALLPOX EPIDEMIC ON MANDAN AND HIDATSA

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When I was a young girl growing up in North Dakota, history surrounded me. I walked ditches and craters left in Mandan and Hidatsa villages that once boasted hundreds of members. Now, their former glory is preserved only in the journals of trappers and explorers and in family legends.

How could the most influential trading civilizations of the Northern Plains disappear in a matter of decades? This question sparked my exploration of the Mandan and Hidatsa cultures and how they changed during the 1837 smallpox epidemic. Before this time, American and European fur traders built economic connections with the settled tribes to acquire beaver pelts and other hides for the European fashion industry. However, these traders brought more than trade goods; they brought smallpox. The Mandan and Hidatsa had little natural immunity to European diseases, and in the winter of 1837, two-thirds of the Hidatsa and 98% of the Mandan died in a smallpox epidemic. This tribal decimation altered both social and ceremonial structures, resulting in both a new cultural identity and ceremonial structure.

The Settled Nations

The Mandan and Hidatsa were among the first tribes in present-day North Dakota. The earliest Mandan settlements along the Missouri River and its tributaries date between 1100 and 1400 AD. The Hidatsa (comprised of the Hidatsa Proper, Awaxawi, and Awatixa) arrived in North Dakota between 1400 and 1600 AD, and as shown in figure 1.1¹, settled along the Heart, Knife, and Little Missouri Rivers.² Unlike the nomadic tribes of the Great Plains, the Mandan and Hidatsa built permanent villages on the high banks of the Missouri River and its tributaries. All sides of these villages were protected from attack. One side dropped to the river; the other three sides were enclosed within wooden palisades. Beyond the palisade were ditches three to four feet deep.³ These unique village structures protected the villages from raids by hostile tribes and created stable trade centers whose influences spanned the continent.

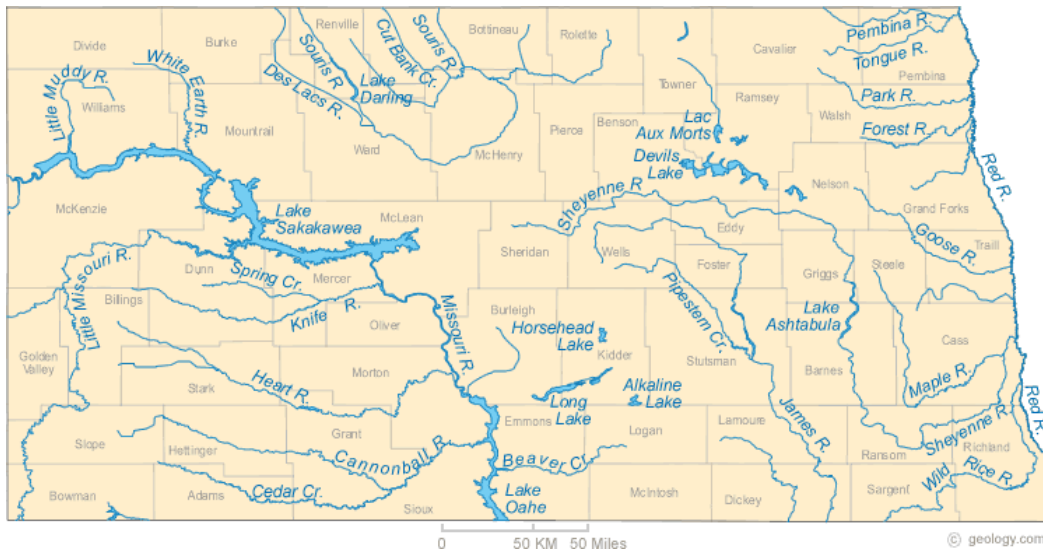


Figure 1.1. North Dakota lakes, rivers, and water sources (geology.com)

The size and location of these villages are recorded in the journals of fur traders and explorers including the Corps of Discovery and Chardon. By 1797, the Mandan had between nine and 13 villages; in 1802, the Hidatsa had two large villages.⁴

Mandan and Hidatsa villagers lived in earth lodges. These circular dwellings were built of willow branch mats covered in sod.⁵ The dwellings intrigued the American and European traders who visited these villages. George Catlin, who visited the Mandan in his quest to paint and describe the customs of the Great Plains tribes in 1832, was amazed by the comfort and “civilization” of the earth lodges. Despite their unique appearance, Catlin said that the way of life in these lodges was similar to European homes.⁶

These lodges were more than uniquely shaped dwellings. They also served important roles in Mandan and Hidatsa society. Lodges formed the center of village life and emphasized the matriarchal structure of the Mandan and Hidatsa. Each lodge belonged to a household and was passed from mother to daughter. When a man married, he moved into his wife’s lodge and became part of her family. The women in the lodge worked the fields and helped look after the lodge’s children. If a husband fell out of favor with his wife or did something to warrant divorce, she

would remove his belongings from the lodge; after this, he could not return to the lodge or be part of its society.

These lodge relationships had implications beyond family structure.⁷ Both the Mandan and Hidatsa were divided into clans based on genealogy. Every clan had a male clan leader, but was matrilineal in nature; that is, children belonged to their mother's clan, and clan was involved in every aspect of a tribal member's life. The clans trained children to be productive members of the tribe and chastised unconstructive behavior, while also encouraging children's participation in ceremonial dances and fasting. If a clan member was killed, the clan avenged his death. The clan cared for their elders, and prepared the dead for burial. From their first to last breath, a Mandan or Hidatsa's clan was present to assist them through life's journey.⁸

Age Grade Societies

One of the clan's most vital tasks came as their children prepared to enter the ceremonial age grade systems present in both Mandan and Hidatsa society. The age grade system involved a series of organizations that promoted tribal participation and responsibility. A person's clan determined which societies the individual joined, and the clan helped supply goods to pay the society's entry fees. Although the age grade system was present in both the Mandan and Hidatsa prior to the 1837 smallpox epidemic, the specific societies were unique to each tribe.⁹

For instance, the Mandan age grade system began when individuals turned eight or nine. At this age, boys fasted for short periods during important ceremonies and selected an older man to be their clan father (a mentor in spiritual and tribal matters). Every year, their fasting times increased, until the boy turned seventeen or eighteen and fasting lasted for long periods; the boy then also began ritual bloodletting. At this time, the boy became a man and would join the first society of his clan, taking on more responsibility in the tribe.¹⁰

Once the man married, took part in war parties and hunts, and showed great bravery, he entered the Black Mouth Society. This society acted as the village police force and relayed decisions from the tribal leaders. Its members also organized the village when it came under attack. Married women, on the other hand, joined the Goose Society. The Goose Society's ceremonies revolved around crops and harvest.

From these middle-age societies, Mandan men and women transitioned into societies for elders. Men joined the Bull Society, and women joined the White Buffalo Cow Society. Both societies took part in calling the buffalo before hunts.¹¹

The Hidatsa had their own age grade societies, although the progression followed the same pattern as the Mandan system. First, boys between the ages of eight to ten years and girls ages 12 to 13 joined primary societies to learn about tribal life, fasting, and ceremonies. Once married, men and women moved to young adult societies. Men joined the Half-Shaved Head Society, which taught men to defend the village and lead war parties. Women, depending on their clan, joined the River or Enemy Societies. Both societies danced when the men came back from war and took part in celebratory rituals.¹²

From these young adult societies, men and women progressed to middle-aged and elder societies. Like the Mandan, the next society for Hidatsa men was the Black Mouth Society, while women entered the Goose Society and danced for rain. Before men reached the elders' society, the Hidatsa had one more step, the Dog Societies. Members of these societies were proven warriors and walked without moccasins in honor of the dogs in their sacred legends. Finally, Hidatsa men and women entered the Bull and White Buffalo Cow Societies. The Bull Society danced four times a year to call the buffalo.¹³

The Okipa

American and European visitors to the Mandan and Hidatsa villages provided vivid descriptions of the buffalo calling ceremonies. In just one instance, Philippe Regis de Torbirand, a United States Army officer stationed in the Dakota Territory, recorded his reaction to the Mandan dances. Torbirand did not understand the legends or traditions behind the dances; instead, he saw the intricate regalia and movement. To him, the songs were only "barbarous chants...howling...[and] shrieking."¹⁴ Similarly, for F.A. Chardon, the bull dances at Fort Clark were annoyances and little more than begging, as Chardon did not understand the ceremony or the significance of paying for ceremonial knowledge in Mandan society.¹⁵ In the eyes of the tribes, however, these dances were essential to survival.

Before a buffalo hunt, the Bull Society preformed a buffalo calling ceremony. The society members and other, selected young men dawned buffalo robes and reenacted a buffalo hunt. Whenever a man grew too tired to dance, his fellow dancers shot him with blunt arrows. Then, as shown in figure 1.2¹⁶, the man fell to his knees like a dying buffalo bull, and the spectators dragged him from the

dance and “skinned him” by removing his robe.¹⁷ After the day’s dances concluded, the men entered the village’s ceremonial lodge. There the old men sat in a circle and smoked the ceremonial pipe while young men brought their wives to the elders to “walk the buffalo.” The tribes believed that, if a woman had sexual intercourse with the elder men (the personifications of the buffalo), she would be able to transfer the buffalo’s power to her husband.¹⁸

The Corps of Discovery, the exploratory expedition sent by President Jefferson to find the source of the Missouri River (which included William Clark), experienced this ceremony at Fort Mandan. When the expedition visited the Mandan villages, they joined the Bulls in the lodge. Young men presented their wives to the Americans to obtain some of their power. Although they did not fully understand the meaning of “walking the buffalo,” many of the men were eager to participate.¹⁹

For the Mandan, the summer buffalo calling ceremony coincided with their most sacred ceremony, the Okipa. Mandan villages were designed around this ceremony. The center of a Mandan village was a 150-foot dancing ground with a cedar enclosure at its center called the Ark of the Lone Man. To the north of this dancing ground was the Okipa lodge. This village construction dated back to the earliest villages along the Heart and Grand Rivers, which were founded in the 1500s. The Okipa ceremony told the Mandan creation story and the history of the tribe. Many men participated in this ceremony, fulfilling the roles depicted in the legends. There was the Lone Man (the Mandan creator), the Foolish One (the trickster), the giver of ceremony, singers, drummers, the bull dancers, and fasters.²⁰

Okipa ceremonies lasted four days and followed a complex series of stories, reenactments, dances, fasting, and bloodletting. Lone Man entered the village and described his creation of the world in the ancient Mandan language and fought Foolish One.²¹ Then the Bull Society preformed their buffalo dance.²² Young men participated in ritualistic piercing of the skin with wooden skewers. These skewers were fastened to ropes and the men were suspended from the central poles of the Okipa lodge. The men reportedly hung in the lodge until they lost consciousness.²³

The Okipa ceremony formed the core of Mandan historical and ceremonial culture,²⁴ but this tangible connection to spiritual and historical culture extended beyond elaborate ceremonies. The Mandan and Hidatsa believed the supernatural was in all aspects of life, and actively sought spiritual guidance.²⁵ This guidance came during times of fasting and bloodletting both in ceremonies like the Okipa and on solitary vision quests. According to Calf Woman, a Mandan interviewed by Alfred Bowers during his anthropological research, “People don’t get visions every

time they fast and don't expect to. Even though the gods send no instructions, they show appreciation by sending good luck."²⁶

When visions came, however, the animals or spirits in the vision became the faster's personal god and gave him instructions to create a sacred bundle.²⁷ Outside observers like George Catlin called these bundles "medicine bags." "Medicine" referred to anything supernatural or mysterious, but Catlin never fully grasped the full significance of the bundles.²⁸

According to the Mandan and Hidatsa interviewed by Alfred Bowers during his anthropological studies, bundles were essential to Mandan and Hidatsa culture. They were divided into two categories: tribal bundles like the Okipa and Old-Woman-Who-Never-Dies bundles that held the instructions for the Mandan and Hidatsa's sacred ceremonies, and personal



Figure 1.2. *Bison-Dance of the Mandan Indians in Front of Their Medicine Lodge in the Mih-Tutta-Hangkus* (Karl Bodmer) Source: North Dakota State Historical Society Archives

bundles that were made in honor of personal spirits.²⁹ Regardless of whether they were tribal or personal in nature, each bundle had several common attributes, such as: items representing a myth or vision; instructions and rites for acting out the myth; and specific songs to be performed in the ceremony. Individuals acquired bundles through payment and preserved the bundle by hosting feasts. Only the owner of the bundle knew the significance of its contents and could perform the ceremonies, and it was common for bundles to remain within a clan or family line unless there were no heirs to inherit the bundle.³⁰ These factors make analyzing individual bundles difficult. Without owning the bundle, a person did not know the details of its story or the significance of the contents. Personal bundles are especially difficult to analyze because they often died with their owners, as few if any understood the vision that had inspired the bundle.

Although they are difficult to study, bundles formed the center for personal worship and provided instructions for elaborate ceremonies in the Mandan and Hidatsa cultures.³¹

Economic Prosperity and Vulnerability

In addition to their religion, the Mandan and Hidatsa were defined by their economy. John MacDonell called the tribes the “best husbandmen in the whole New World” because they managed their crops so they not only provided for their villages but also had more than enough to trade.³² Because of their position along the Missouri River, Mandan and Hidatsa villages became trade centers with influence that spanned the continent. Before Europeans came to the Missouri River, the tribes traded with the many tribes of the Great Plains. After European settlement, in 1738, Pierre Gaultier de Varennes visited the Mandan and established trade relations between the tribes and French-Canadian fur traders.³³

Originally, individual traders living among the Mandan and Hidatsa exchanged manufactured goods for native crafts and furs.³⁴ When the European market created a high demand for beaver pelts, however, this system changed rapidly. By the 1790s, the North West and Hudson Bay companies were sending expeditions to the Missouri.³⁵ Although these trade relations were essential to the fur trade’s success, the European traders abused their Mandan and Hidatsa partners, such as the deal described in Philippe Regis de Trobriand’s journal between the Mandan and Hidatsa and his fort. In exchange for the fresh meat and furs brought by the tribe, Trobriand gave moldy crackers and spoiled salt pork that the fort had condemned shortly after receiving the supplies.³⁶

Unfortunately, spoiled supplies were not the only dangerous trades between the village tribes and the fur traders.

Epidemic

The fur traders brought more than guns and manufactured goods; they brought disease. Thus, from the beginning of the fur trade, epidemics ravaged the native populations. The most deadly of these was smallpox.

Smallpox, a highly contagious disease characterized by fever, aches, chills, and the characteristic “pox,” was transmitted through contact with infected people, contaminated objects, and infected corpses.³⁷ The Mandan and Hidatsa were extremely vulnerable to smallpox. The prevailing theory holds that their ancestors migrated from Asia during the ice ages and came from cold climates with few diseases. As a result, they did not have the same level of immunity as the European traders.³⁸ In addition to their genetic risk, Mandan and Hidatsa earth lodges were built close together, with up to forty people living in each lodge. These tight quarters made quarantine nearly impossible and fostered the spread of smallpox.³⁹

The deadliest smallpox outbreak in the tribes’ histories began in July 1837.

As with many tragedies, conspiracy theories developed to explain the 1837 outbreak, with claims that smallpox was deliberately introduced to the Native Americans through infected blankets in an attempt to decrease native populations.⁴⁰ Although captivating, the historical record does not support this claim. F.A. Chardon, a trader who lived at Fort Clark, kept a detailed journal throughout the epidemic and detailed the disease’s progression.

In June 1837, the steamboat *St. Peters* arrived at Fort Clark. Everything was normal, but there had been several cases of smallpox aboard the boat since it left St. Louis.⁴¹ Within weeks, on July 14, 1837, the first smallpox death occurred; by then, many others were infected. For the next year, each day Chardon recorded smallpox deaths. This disease struck both young and old, outsider and chief. Just when it looked like a village had escaped, the pox regained strength and claimed more lives. Chardon was helpless. He administered doses of Epsom salt, a supposed treatment, to anyone he could, but the remedy had little impact; the deaths continued to mount to the point that Chardon could no longer record the names or numbers of the dead.

Among the dead were Chardon’s Sioux wife and many of his friends and trading partners. Before long, the death toll overwhelmed the living, and bodies

were left in their earth lodges or on the outskirts of the village because there were not enough healthy people to preform burial rites.⁴²

Chardon records three distinct reactions in the face of almost certain death. Some clung to their fractured sense of normality and turned to the spirit world for guidance. The tribes preformed their ceremonies and dances in the face of death. These men and women realized they did not have long to live, so they turned to their religion for comfort. For others, their grief turned to anger.⁴³ Chardon records, “They swore vengeance against all the whites, as they say the smallpox was brought by the [steamboat].”⁴⁴ These individuals understood the origins of the epidemic, and acted on their anger. Over the course of the smallpox year, Chardon records numerous assassination attempts. Finally, some Mandan and Hidatsa, overcome by grief and fear, committed suicide to escape the disease, a phenomena almost unheard of before 1837. On August 31, 1837, Chardon recorded one woman’s tale: “A young Mandan that died 4 days ago, his wife having the disease also, killed her two children, one a fine Boy of eight years and the other six, to complete the affair she hung herself.”⁴⁵ There was no escape from the disease, except for death.

When the smallpox epidemic subsided, the Mandan and Hidatsa were decimated. The epidemic killed 33% of Hidatsa and 98% of the Mandan.⁴⁶ In the Mandan village at Fort Clark, only 14 of the original 600 villagers survived. Mandan were too few to remain independent or defend themselves against attack.⁴⁷ To preserve their culture and remaining members, the Mandan and Hidatsa took drastic measures.

Adaptation and Resilience

Because of the population loss, the villages were indefensible. Some Mandan and Hidatsa moved to Crow villages, while others built a new village, called Like-A-Fishhook, at the mouth of the Knife River and created a new, composite culture.

In the new village, the tribes created a governing council comprised of chiefs from every tribe and band.⁴⁸ Like-A-Fishhook’s design was a composite of Mandan and Hidatsa traditional construction and the building styles of the American settlers. The village had a central dancing ground and Okipa lodge like a Mandan village,⁴⁹ yet traditional lodge construction decreased. By the 1860s, as figure 1.3⁵⁰ shows, log cabins replaced earth lodges as the primary dwellings at Like-A-Fishhook.⁵¹

Although the earth lodge construction was lost after 1837, families at Like-A-Fishhook continued the communal family structure. Men joined their wives’

households and children joined their mother's clan.⁵² However the clan system was irrevocably altered by the epidemic.

The Mandan's thirteen clans were reduced to four. Hidatsa clans faced similar extinction.⁵³

Although the clans were diminished, their importance increased after the smallpox. Many children were orphaned during the epidemic, but members of their parents' clans adopted them.⁵⁴ This was essential for cultural preservation. Mandan and Hidatsa culture was conveyed via oral tradition embedded in the clan system, so children without clans missed valuable portions of their culture. By adopting these children into the clan, surviving members insured their culture and traditions would continue through future generations.

Although much of the tribes' cultures were lost to the smallpox, Mandan and Hidatsa spiritual life was perhaps hardest hit by the 1837 epidemic. Some age grade societies like the Raven, Black-Tail Deer, Old Wolf, and Half-Shaved Head societies disappeared during the smallpox because there was no one alive who remembered the ceremonies and rituals. However, some societies persevered through adaptation and cultural diversity. Men from both the Mandan and Hidatsa purchased other societies. For example, the Kit Fox Society was exclusively Mandan, but only one man, Bears-Look-Out, survived the smallpox. He sold the society's rites to a group of Awaxawi Hidatsa to preserve the society when there were no remaining members, and thus the society continued in the Hidatsa families until the early 1900s. A few societies, for instance the Wolf Society, even grew in numbers after the smallpox. These societies were associated with well-known myths and had no private ceremonies, so they could be performed easily.⁵⁵ Thus, although the age grade system, which was at the heart of Mandan and Hidatsa spiritual life, faced near extinction after the 1837 smallpox epidemic, through adaptation it persevered in a fractured state for nearly a century.

With the combined tribes at Like-A-Fishhook, the Mandan and Hidatsa ceremonies continued post-smallpox. However, like the age grade system, these ceremonies experienced significant alterations. Ceremonies continued their pivotal role in Mandan and Hidatsa culture but opened to multicultural participation. The Okipa is a prime example of this cultural change.



Figure 1.3. *The Real Site of Fish Hook Village* (Martin BearsArm) Source: North Dakota State Historical Society

The Mandan Okipa replaced the Hidatsa buffalo ceremonies and became sacred to both tribes. At Like-A-Fishhook, there were as many Okipa fasters from the Hidatsa as there were Mandan. To accommodate both cultures, Okipa rituals took place outside and diminished in severity.

However, this ceremony would not endure long. The last true Okipa ceremony was held in the 1870s.⁵⁶

What was Lost?

Unfortunately, not every ceremony survived the smallpox. On many occasions, smaller ceremonies died with their owners. One such ceremony was the Corn Pipe

ceremony that brought favorable winds for the gardens and drove away mosquitos. Although people in Bower's study said their parents remembered the ceremony being performed, the details faded from memory. When the legends and practices were not transmitted to the next generation, vital aspects of Mandan and Hidatsa culture disappeared.⁵⁷

The fragility of oral tradition was especially evident with the sacred bundles. Many bundles, including all but one chief bundle, were lost during the 1837 smallpox epidemic. Those bundles that did survive were passed between the Mandan and Hidatsa. When Alfred Bowers conducted his studies among the Mandan and Hidatsa in 1910, there were only seven bundle owners among the Mandan. When Bowers inquired about the ceremonies surrounding these bundles, the owners said they still held feasts for the bundles, not out of personal devotion, but out of respect for the elders who remembered the ceremonies from the old days. Nevertheless, the practice of keeping bundles was almost completely lost in the smallpox and would fade away before the 1950s.⁵⁸

Conclusion

The Mandan and Hidatsa inhabited the land along the Missouri River for hundreds of years. They developed intricate cultures based on family structures, oral traditions, ceremonial rites, and trade. Because of the Mandan and Hidatsa religions' secret nature and the system of purchasing bundles, societies, and ceremonies, these cultures were vulnerable when there was no one to pass on the traditions. During the 1837 smallpox epidemic, both tribes lost large portions of their population, and the Mandan were almost eradicated. The loss of life altered every aspect of their culture. The clan and age grade systems were diminished. Ceremonies were combined and many spirit bundles were lost. Incredibly, despite this hardship, the Mandan and Hidatsa maintained aspects of their culture which lasted into the twentieth century.

Endnotes

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- ⁵⁵ *Ibid.*, 175, 178, 180–182, 194–195, 397.
- ⁵⁶ *Ibid.*, 441; Bowers, *Mandan Social and Ceremonial Organization*, 130.
- ⁵⁷ Bowers, *Mandan Social and Ceremonial Organization*, 205.
- ⁵⁸ *Ibid.*, 34, 105.

REIFYING HEGEMONIC MASCULINITY IN TKE RECRUITMENT VIDEOS

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Abstract

Fraternity members constitute a large percentage of men who hold highly influential jobs in politics, large corporations, and the like. Since fraternities are limited to men-only, it is important to examine how masculinity is both rhetorically constructed and subsequently performed. Tau Kappa Epsilon (TKE), the fraternity with the largest amount of chapters nationwide, is the focus of my analysis. Its popularity among college campuses signifies that its recruitment is successful and that, regardless of initiation into the fraternity, many men (and women) view TKE as an example of masculinity. In my analysis, I examine TKE recruitment videos from various universities that span the Northeastern, Southern, Midwestern, and Western regions of the United States. My analysis identified five markers that indicate an abundance to hegemonic masculinity, or the varying construction of the “ideal” man that is impossible to fully achieve: dominance (ascendancy), sexual objectification of women, heteronormativity, alcohol use, and recreational movement of the body. These markers demonstrate how TKE’s reification of hegemonic masculine ideals is problematic to society as a whole given the influence of fraternities beyond campus borders.

Rushing TKE is a choice to belong, but a challenge to become.

—TKE member, 2008

There are over nine million Greek Life members nationwide (“Greek Life Statistics,” 2011). Fraternity men, in particular, hold impressive leadership positions. For example, according to Greek Life Statistics (2011), all but two U.S. Presidents and Vice Presidents born since the first social fraternity was founded in 1825 have been members of a fraternity; since 1910, 76% of all Congressmen and 40 of 47 U.S Supreme Court Justices have belonged to a fraternity; and currently,

43 of the nation's 50 largest corporations are led by fraternity men, while 85% of Fortune 500 executives belong to a fraternity.

Given the leadership successes of fraternity members, and following from the assumption that belonging to a fraternity played some part in these successes, it is important to examine how fraternities rhetorically construct and subsequently encourage the performance of masculinity, since fraternities will have an impact on how their members perceive and perform gender. Since recruitment videos are most likely to be one of the members' first introductions to the fraternity, these videos are ideal rhetorical artifacts to analyze. Given that Tau Kappa Epsilon has the most active chapters, 290 to be exact (Geno, 2016), TKE serves as the ideal fraternity to analyze. Its nationwide popularity makes TKE the ideal fraternity to analyze because the fraternity successfully recruits members who are, from recruitment onward, subjected to TKE's views of masculinity and femininity.

Recruitment videos are meant to showcase the chapter in the best light possible; therefore, they are significant rhetorical artifacts for analyzing the performance of masculinity. After conducting my analysis, it is clear that presenting traditional forms of masculinity offers the key to effective promotion and successful recruitment. Like all fraternities, TKE chapters try to gather the best quality men to become future members, as those members will successfully continue the legacy of their brotherhood. Therefore, TKEs are highly intentional in the selection of video clips, photos, sound bites, and caption for, as well as the editing of, their recruitment videos in order to promote a performance of masculinity that will compete with what other fraternities have to offer.

In this essay, I begin by explaining the significance of fraternity recruitment videos as artifacts for rhetorical analysis. Next, I analyze TKE recruitment videos using the concept of hegemonic masculinity. Finally, I present the overall significance of my findings and provide directions for future research.

Context

Gender plays a large role in fraternities, as a fraternity is a unique single-gender community that has the potential to powerfully perpetuate a specific type of gender performance. West and Zimmerman (1987) establish a clear distinction between three concepts: *sex*, *sex category*, and *gender* (p. 127). They state, "*Sex* is a determination made through the application of socially agreed upon biological criteria for classifying persons as females or males" (p. 127). Depending on classification of one's sex, either through classification of genitalia or chromosomal

typing, one is placed in a binary sex category of either female or male. *Sex category* “presumes one’s sex and stands as proxy for it in many situations” (West & Zimmerman, 1987, p. 127). Society typically expects biological males to perform their gender in masculine ways, and biological females to perform their gender in feminine ways. According to West and Zimmerman (1987), “Gender activities emerge from and bolster claims to membership in a sex category” (p.127). Therefore, sex category establishes a binary view of gender. Butler (1988) describes *gender* as “an identity instituted through a stylized repetition of acts” (p. 519), and with a community of men living under the same roof, these desired stylized repetitions of acts, in most gender situations, become so heavily engrained in life that they seem natural and unquestionable.

As Foss (1989) discusses, *rhetoric* is the “the use of symbols to influence thought and action” (p. 4). Symbols assume a variety of forms which include both verbal and nonverbal elements (Foss, 1989, p. 4). Finely-tuning verbal and nonverbal elements in the performance of gender contributes to the feeling that gender is “natural” instead of a rhetorically-created performance. Foss (1989) states, “[R]eality or knowledge of what is in the world is the result of communicating about it” (p. 4). Therefore, performance of gender becomes an unquestionable reality for the individual who frequently communicates their gender using both verbal and nonverbal elements.

As each sorority or fraternity exists as a single-gender community of either women or men, respectively, Greek Life solidifies the binary view of gender. One way the binary view of gender is held in place is by *symbolic interactionism*, which “claims that through communication with others we learn who we are” (Wood, 2014, p. 50). The brotherhood bond a fraternity offers is directly connected to this concept given that brothers constantly communicate, verbally and nonverbally, when living under the same roof. Regarding verbal communication, Wood (as cited in Verderber, 1995) indicates that “[m]asculine speech communities define the goals of talk as exerting control, preserving independence, and enhancing status. Conversation is an arena for proving oneself and negotiating prestige” (p. 23). Through the construction of masculine communities in the fraternity setting, masculine traits are thus repeatedly reinforced through symbolic interaction.

The male and female gender binary led to Connell’s concept of hegemonic masculinity for males and emphasized femininity for females. *Hegemonic masculinity* is described as “a range of popular ideologies of what constitute ideal or actual characteristics of ‘being a man’” (Connell & Messerschmidt, 2005, p. 841). Unfortunately, the “ideal or hegemonic man in contemporary Western

societies has been described as EA [European American], young, heterosexually active, economically successful, athletically inclined, and self-assured” (Peralta, 2007, p. 742). This is unfortunate because "hegemonic masculinities can be constructed that do not correspond closely to the lives of any actual men. Yet these models do, in various ways, express widespread ideals, fantasies, and desires. (Connell & Messerschmidt, 2005, p. 839). Therefore, these criteria pressure men to strive for unrealistic and/or unobtainable ideals of masculinity.

Complementary to hegemonic masculinity is *emphasized femininity*, which enables men to be dominant in their idealized masculine roles through the subordination of women. Often, women are subordinated through sexual objectification permitted by the concept of the *male gaze*. Mulvey (1999) states that "[i]n their traditional exhibitionist role women are simultaneously looked at and displayed with their appearance coded for strong visual and erotic impact so that they can be said to connote *to-be-looked-at-ness*" (p. 19). The sexual objectification of women through the male gaze targets heterosexual men as the audience. Hegemonic masculinity favors heterosexuality; therefore, *heteronormativity* is established: the “taken-for-granted norm against which other forms of human sexuality are defined, measured, and judged” (Westerfelhaus & Lacroix, 2006, p. 428). When women are constantly presented as subordinate to (heterosexual) men, the belief that women are to assume a complementary role to hegemonic masculinity is communicated.

Fraternities sustain hegemonic masculinity through their prescriptions of gender performances. Anderson (2007) states, “Men must maintain and sustain a host of achieved and ascribed variables to obtain hegemonic power. Accordingly, previous investigations of the masculine construction among men in the American fraternity system consistently show that these men revere hegemonic masculinity” (p. 1). Thus, fraternity men are not expected to merely embody hegemonic masculinity; Anderson goes a step further to describe them as being expected to *revere* it. This is significant in that it reinforces the argument that hegemonic masculinity forms the backbone of TKE recruitment videos. Taking this into account, it becomes clear that the community setting in fraternities fosters hegemonic masculinity as the “ideal” man. Wood (2014) writes, “Within institutional settings, men are also stereotyped in ways that reflect cultural views of masculinity” (p. 213). Given the institutional setting of a university/college and a fraternity house, TKEs will therefore aim to present themselves in their most idealized version of man within their institution with hopes of attracting like-minded potential new members. The idealized version is also a social stereotype,

which Anokhina (2016) defines as “simplified, schematized, emotionally colored, and extremely stable images of a particular social group or community” (p. 1). Even though masculinities are fluid, as “‘masculinity’ represents not a certain type of man, rather, a way that men position themselves through discursive practices” (Connell & Messerschmidt, 2005, p. 841), social stereotypes perpetuate a rigid concept of what it means to be a man. Social stereotypes are also a “simplified” version of a group; therefore, they do not always represent individual members. In the fraternity setting, a symbiotic relationship thus exists between social stereotypes and group identity that becomes the lifeblood of sustaining hegemonic masculinity.

Fraternities oftentimes perceive women as sexual objects to be obtained. Anderson (2007) notes that “the fraternity system fosters stereotypical views of male dominance and female submissiveness, so that women solely represent objects to be sexually conquered” (p. 604-605). Fortunately, Anderson (2007) studies a different type of masculinity in the fraternal setting where chapter members challenge traditional forms of masculinity performance by being “overtly required” (Anderson, 2007, p. 616) to respect women. Such chapter members consider themselves as being the “new age man” (Anderson, 2007, p. 608) when they challenge stereotypical male dominant behavior. Moreover, this view is not limited to fraternities. Ciasullo and Magill (2015) note women as sexual objects is a deeply rooted concept within traditional masculinities, and they analyze the renewed masculinity type created within the films *21 Jump Street* and *22 Jump Street*, stating that the films “offer us a possible new form of twenty-first century masculinity in their celebration of male emotional intimacy and acceptance of multiple forms of masculinity” (Ciasullo & Magill, 2015, p. 317). Thus, exerting control over women through sexual objectification appears to be progressively diminishing through men’s consideration of non-traditional forms of masculinity. However, Anderson (2007) also writes that “[m]any of the men [in the fraternity] do sexually objectify women in constructing their heterosexual identities” (p. 613), and Ciasullo and Magill (2015) confess that “they [the *Jump Street* films] offer up moments of misogyny and sexual objectification” (p. 305). Therefore, despite efforts to challenge traditional forms of masculinity in the fraternal and non-fraternal setting, the sexual objectification of women persists.

In addition to exerting dominance over women, fraternity men exert dominance over alcohol through heavy consumption; in turn, alcohol becomes an instrument for constructing hegemonic masculinity. Alcohol usage is labelled as being “only one vehicle” for communicating hegemonic masculinity and sustaining it through society’s gender classification of men overall (Peralta, 2007, p. 754).

Cho, Wilkum, King, Bernat, and Ruvarac (2010) note that fraternity members drink more than both nonmembers (and their sorority counterparts) and “efforts to improve the health of a community (e.g., fraternities) can be most effective when they are grounded in the beliefs, values, and lifestyles of the community” (p. 212). Capone (2007) provides reasoning as to why fraternity members drink more than nonmembers, as “students who enter the Greek system will be exposed to a social environment that encourages heavy drinking” (p. 7). Peralta (2007) reveals that “empty bottles of liquor are displayed [by fraternity men] much like athletic trophies might be displayed as a measure of athletic accomplishment” (p. 747). Representative of heavy consumption, empty bottles become tokens of successful domination of alcohol. The more successful fraternity men are at accumulating “trophies,” the more successful they are at reifying hegemonic masculinity.

Lastly, demonstration of athleticism is used as a way of depicting hegemonic masculinity. Researchers indicate that males demonstrate healthy behaviors and glorify body usage as a means of emphasizing an abidance to hegemonic masculinity (Peralta, 2007, p. 743; Courtenay, 2000, p. 1388). Thus, demonstrations of athletic activity are essential to performing the “ideal” man, but only when success is expressed—the scoring of points, effective teamwork, and no acquiring of injury, as it “undercuts the power of the body” (Peralta, 2007, p. 743). Thus, demonstrations of athletic achievement serve the function of highlighting men’s strength, success, and superiority.

In sum, fraternity men sustain performance of hegemonic masculinity through revering traditional displays of masculinity, in which they become the “ideal man”—one who exerts dominance, sexually objectifies women, abides by heteronormativity, “conquers” alcohol, and demonstrates successful usage of the body.

Analysis

My findings indicate that TKE does not meet their goal of creating “Better Men for a Better World” (“TKE Official Recruitment Guide,” 2016, pg. 1), given that hegemonic masculinity is constantly reified among the almost non-differentiating recruitment videos. These videos emphasize five markers of hegemonic masculinity: exertion of dominance (ascendency); sexual objectification of women expressed through concepts of emphasized femininity and the male gaze; heteronormativity; alcohol use; and recreational movement of the body.

I examined five recruitment videos from four regions of the United States. Each TKE chapter is hosted by a public or private university/college, and considered large (with over 10,000 undergraduates) or small (with under 10,000 undergraduates). The institutions and their characteristics are as follows:

Region	Institution	Public/Private	Small/Large
Northeast	St. Francis College	Private	Small
Northeast	Long Island University (LIU)	Private	Large
South	Nicholls State University (NSU)	Public	Small
Midwest	University of South Dakota (USD)	Public	Small
West	Sonoma State University (SSU)	Public	Small

Table 1. Institution Profile

Selecting various geographic regions also allowed me to discover if there was diversity in the performance of gender based on region. All of the videos analyzed were posted on YouTube, making the videos available to a wide audience, not just the recruits. YouTube also immortalizes videos, in a sense. The videos date back to 2007, with the most recent being 2016. Therefore, alongside the diversity in region, diversity is also enacted through time. Regardless of the university and its regional location, however, I expected that each chapter would remain uniform in its values, such as upholding the “honest convictions of the Fraternity: Love, Charity and Esteem” (“TKE Official Recruitment Guide,” 2016, pg. 10), as this is an expectation of TKE chapters nation-wide.

To conduct my performative analysis, I transcribed each video, aiming to determine how these videos encourage the performance of gender. Transcriptions were divided into time segments and analyzed for markers of hegemonic masculinity/emphasized femininity. For example, a recruitment video featuring a scene of TKEs playing a sport for five seconds constitutes one marker of hegemonic masculinity, which, in this case is recreational movement of the body.

A common theme within the recruitment videos is the element of domination, or ascendancy in life, which perpetuates hegemonic masculinity. Connell and Messerschmidt (2005) state, “Hegemony did not mean violence, although it could be supported by force; it meant ascendancy achieved through

culture, institutions, and persuasion” (p. 832). Thus, through highlighting leadership roles within recruitment videos, ascendancy is promoted. In the St. Francis 2014 TKE recruitment video, 17% of the video features individual members and their achievements in a slideshow form. The University of South Dakota (USD) 2007 recruitment video similarly features individual TKE members, mentioning the previous year’s “Strollers” President (who directs campus competition events between Greek houses), their current Student Association President, and former president Ronald Reagan, a once-active TKE member. The USD 2007 video concludes the leadership segment with a member stating: “Leadership is definitely something TKE excels in.”

The Nicholls State University (NSU) 2008 video also emphasizes leadership. The TKE president declares, “TKE’s involvement on campus is—everywhere.” Another member says: “Much of the older members are involved in different organizations like SGA [Student Government Association], SPA [Student Progress and Achievement], IFC [Interfraternity Council]—and these older members push you to get involved; start small and then eventually work your way up to the e-board [executive board] positions most current TKEs hold.” Undoubtedly, active leadership within the TKE house and on campus is highly encouraged and well-received, thus reifying hegemonic masculinity. TKEs are men who enjoy power and influence on campus—and they want people to know about it.

Ascendancy is also exerted through direct control of individuals who are figuratively, and literally, below TKE members. In the Sonoma State University (SSU) 2016 recruitment video, members are featured dragging a swordfish by its bill through the water while on a boat during a fishing trip. There is no clear purpose for this besides exerting control (through animal cruelty). The TKEs figuratively and literally place themselves above the swordfish, as they only value it as a commodity for exerting their own control. Furthermore, in the Long Island University (LIU) 2016 recruitment video, a Snapchat picture of a TKE wearing a blazer and khakis is featured. The member wears flip-flops and holds his leg out to have his pant legs folded up by another man. The caption on the picture reads, “When you have a guy to fold your pants.” It is unclear whether the man folding his pants is a TKE, but either way, the TKE is literally standing above him, while exerting control to have a task completed—one that most people do themselves. The song playing in background throughout the entirety of this recruitment video (including the presentation of the photo at 0:59) repeats the lyric, “I am the God”

(The Game & Skrillex, 2015), which aims to compare the ascendancy of TKE members to that of a god's—a figure with the ultimate level of ascendancy.

Given this self-proclaimed comparison to god, it is no surprise that another TKE video, the St. Francis 2014 video, features a T-Shirt with the words, "Rise Above the Rest" (at 3:48). This statement can be interpreted as making a comparison to god, as god is typically portrayed as "rising above the rest." This intense level of control, demonstrated through ridiculous and unique ways, correlates to TKE's desire to achieve in the symbolic hierarchy of men built by hegemonic masculinity.

TKEs also sexually objectify women in order to sustain hegemonic masculinity. Connell and Messerschmidt (2005) explain that "women are central in many of the processes constructing masculinities," in particular those which use femininity to encourage compliance with the patriarchy. Under the patriarchal umbrella is the concept of the male gaze, which assumes a target audience of heterosexual men; in other words, women adhere to the male gaze by looking attractive and being sexually objectified. This phenomenon is most accurately depicted in the 2008 NSU recruitment video. The video poses the question (at 5:07): "Are there any other reasons to join TKE?" Afterwards, at 5:15, the picture of a TKE member appears grasping the buttocks of two bent-over girls. The caption reads: "We can think of a couple," insinuating that the two girls (and others like them) are a reason for joining. Following this photo is video footage of girls, aware and unaware that they are being filmed, dancing provocatively at parties. This footage constitutes over a fourth of the video (between 5:27- 7:49, which equates to roughly 25.8%).

The featuring of girls dancing alone, with other girls, or grinding on TKEs connects back to the male gaze and women's sexual objectification as this segment becomes a showcase of women. A similar scene in the SSU 2016 recruitment video occurs when the video pans to five couples (of TKEs and girls) kissing and grinding (between 2:05-2:33). In addition to this, attractive girls clad in swimsuits make up the TKE sign with their hands. One girl wears a bright orange bikini, another a Hawaiian shirt. The "beach" theme itself encourages little clothing, which has the ability to invite sexual objectification of women as they wear bikinis and shorts and often display bare midriffs, cleavage, and legs.

The USD 2007 video also caters to the male gaze when at 5:31, a picture of five girls appears, in which one girl holds the breast of another. The line in the other woman's arm leads the viewer's eye directly to the girl's breast. When this occurs, the primary focus becomes the woman's breast held by the other woman, who

appears to be comfortable with the woman to the point of intimacy, sexual or otherwise. Ultimately, this focus enables sexual objectification as her body becomes the primary focus, catering to the male gaze and insinuating an eroticism between the two women.

The male gaze promotes heteronormativity by following the assumption that heterosexual men are the default target audience. This phenomenon is illustrated in subtle ways throughout the TKE recruitment videos. Connell and Messerschmidt (2005) state that the subordination of homosexual men has been a central issue in discourse of hegemonic masculinity that has sparked "the policing of heterosexuality" (p. 837). In the St. Francis 2014 video, between 3:38-3:55, the TKE narrator reveals that the fraternity is situated among four sororities: Alpha Zeta, Kappa Alpha Theta, Alpha Phi, and Pi Beta Phi. At the credits portion of the video (at 8:42) appears the caption: "Top 10 Reasons to Rush TKE," in which "Location" is an answer twice mentioned in the listing, with the second time written in all capital letters. Ultimately, this insinuates that TKEs benefit from close relations with sorority women—in other words, the message becomes: *join TKE and girls will surround you*. This falls under heteronormativity as it glorifies closeness between (fraternity) men and (sorority) women and uses this closeness as a selling point to attract potential new members; it must assume that heterosexuality is the default sexual identity of TKE members.

The LIU 2016 recruitment video also expresses heteronormativity with the emphasis of a particular picture at 0:40. The Snapchat photo becomes the main feature as various other pictures move out of the frame behind it in an animated picture montage. The picture features an attractive blonde woman with her tongue sticking out, standing next to a TKE who is making a silly face, revealing that they are comfortable with each other. Above the picture is the username display: "Dat Fine Hoe." The name itself is enough to sexually objectify the woman in the photo, as the contemporary word for "hoe" is synonymous with the word "slut"—with both terms usually used to insult a woman who partakes in sexual intercourse. Therefore not only does this photo sexualize the woman, it also promotes heteronormativity in that the main feature of the animated video montage is that of an assumed heterosexual couple.

TKE also displays alcohol frequently to express hegemonic masculinity. Cho et al. (2010) straightforwardly declare, "Results suggest that the meaning of public drinking is to express a form of masculinity" (p. 741). Therefore, paying attention to alcoholic drinks in the videos is crucial when examining masculinity in the fraternal setting. The NSU 2008 recruitment video features alcohol in 31

different pictures/scenes: in the background in a bar-type setting, or through members holding bottles, cans, or cups of alcohol, constituting 36.18% of the video (199 seconds out of 550 total). Furthermore, even the background music for the video glorifies alcohol: “Sippin’ whiskey out the bottle, not thinkin’ bout tomorrow” (Kid Rock, 2008), with a picture of TKEs posing in a group photo holding their beverage of choice (at 3:09). In addition, not even a minute passes before alcohol is introduced, as the first frame showing alcohol is at 0:54.

The LIU 2016 recruitment video does not differ much: Although it features alcohol less – only six times throughout the video – alcohol is first shown 0:43 seconds into the video, and there are moments when alcohol is emphasized more than in the NSU 2008 video. For instance, at 2:55 a very demonstrative picture of bottles of alcohol in the hands of TKE members in formalwear appears. Alcohol seems to be an accessory to their outfits, as three members each hold a bottle of alcohol in front of them. This photo lasts for four seconds (until 2:59), which may not seem like a long time, but comparatively—it is. The picture is among an animated picture montage, where pictures move behind the frame in various directions. This montage reveals 10 pictures, overlapping from the animation, in the time span of 15 seconds. On average, each of the 10 pictures appears on the screen for 1.5 seconds, making the alcohol photo prominent as it is featured $2\frac{2}{3}$ times longer than the other photos (for four seconds). Such findings reveal that alcohol plays a prominent role in TKE promotion. Photos and videos of alcohol are not rare to witness, even though many members or guests may be underage, not paying much attention to the fact that the video will be displayed openly on YouTube, a public-viewing platform. It appears alcohol is a taken-for-granted, naturally accepted part of the fraternity experience. Given the connection between alcohol and hegemonic masculinity, TKEs clearly communicate that they desire to reify hegemonic masculinity through their displays and glorification of alcohol consumption.

Finally, TKE recruitment videos feature hegemonic masculinity through recreational movement of the body: athletics, dancing, and risky backflips. Connell and Messerschmidt (2005) describe bodies as “both objects of social practice and agents in social practice” (p. 851), especially in youth as “skilled bodily activity becomes a prime indicator of masculinity, as we have already seen with sport” (p. 851). Therefore, when TKEs feature their athleticism, they promote their masculinity.

In the SSU 2016 recruitment video, athletic scenes are shown 10 times throughout—including scenes of baseball, basketball, football, fishing, and corn-

hole. The NSU 2008 video poses the question: “What made you rush TKE?” The first answer glorifies TKE’s athleticism: “Athletics is what brought me in to TKE. I was an athlete my whole life and TKE’s full of athletes.” The LIU 2016 recruitment video also features sports (basketball, soccer ball tricks, and football) for 38 seconds; 17 seconds of dancing; and 9 seconds of back-flipping (4 seconds off a cliff, 5 seconds off the roof of a house). In total, that is 64 seconds of a three-minute-and-fourteen second video, meaning that nearly 33% of the video features movement of the body.

It is clear that recreational movement is common in TKE recruitment videos. However, unlike watching a sporting event, these videos display movement for the sole purpose of displaying achievement; they do not take the audience through the ups and downs of a sports game. Thus, these brief glimpses of athleticism perpetuate the idea of athleticism as masculine performance. It appears as if each video adds these scenes as merely a way to demonstrate and emphasize members’ masculinity, as there is no other purpose to the clips. The strategy could be compared to an actor highlighting certain traits of a character in a performance to get the message across of what type of character being played. Thus, the various fragmented displays of bodily movement directly contribute to TKEs’ reification of hegemonic masculinity.

Conclusion

TKE recruitment videos reify hegemonic masculinity through the prominent portrayals of dominance (ascendancy), sexual objectification of women expressed through emphasized femininity and the male gaze, heteronormativity, alcohol use, and recreational movement of the body. Each of the five recruitment videos emphasize one or more of these markers of hegemonic masculinity. It is as though the creators of the recruitment videos have gone through the motions of performing their masculine gender—making sure to display each marker as a way of stressing their masculinity. The uniformity of the videos is the ultimate indicator that region did not make a significant difference in the way gender was performed, only the intensity with which it was performed; that is, by region videos varied in their degree of emphasis on certain hegemonic masculinity markers.

Moreover, the foils of hegemonic masculinity, the “new age man” (Anderson, 2007, p. 5) and the “new form of twenty-first century masculinity” (Ciasullo & Magill, 2015, p. 317), have yet to be upheld as the standard in TKE recruitment videos. The consequences of reifying hegemonic masculinity are also likely to reach beyond TKE, as other fraternities, hoping to be as successful at

recruiting members and expanding chapters as TKE, are likely to look to TKE's example when creating their own recruitment videos. As mentioned previously, the recruitment videos reveal a similar abidance to hegemonic masculinity constructs in the span of various regions across the United States and a relatively wide span of time (between 2007 and 2016). Efforts to combat traditional forms of hegemonic masculinity therefore appear to be decelerated; progress is slow, and change is small. Given the impact of fraternities on society as a whole (e.g. through leadership positions in jobs), TKEs (and other fraternity members) transcend the borders of university/college, as members graduate with hegemonic masculinity concepts firmly engrained into their gender performance. Time will only tell when the "new age man" will be considered the "common man."

Future research in this area could focus on the impact of "new" forms of masculinity on traditional, hegemonic values if individual members who reject the hegemonic model – and consequently uphold stated fraternity expectations – could be found. In addition, future research focusing on emphasized femininity in sorority recruitment videos could potentially provide a unique perspective on hegemonic masculinity; basically, this would be an analysis of masculinity through feminine gender expression. Questions to delve into would include, but not be limited to: Do sororities abide by the concept of emphasized femininity? Do sororities encourage traditional performance of femininity? Analysis of these questions could act as a stepping stone to research on why fraternities have significantly less content posted on YouTube than sororities when it comes to recruitment videos—does that speak to gender expression, or is it negated by the secretiveness preferred by the Greek chapter/house? Lastly, research on multiple TKEs from the recruitment videos, those individual members who have graduated and now make a living through professional, leadership positions, would be a great follow-up to the currently presented information, as it could ask whether the TKE alumni follow mostly traditional masculine concepts emphasized in the videos, or whether their masculinity has developed into the acclaimed new form of the twenty-first century.

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